

opposition	8600 Mar 04 13:35	15° 11 45'23	-10°01'15	conjunction	8606 Sep 07 17:57	22° 11 08'32	-8°04'51
min. Earth dist.	8600 Mar 05 01:47	15° 11 44'48	46.54852 AU	minimum elong	8606 Sep 07 18:07	22° 11 08'33	8°04'53
direct	8600 May 25 06:01	14° 11 46'00		max. Earth dist.	8606 Sep 06 22:46	22° 11 07'25	47.67331 AU
evening set	8600 Aug 19 21:50	15° 11 56'42		morning rise	8606 Sep 21 04:58	22° 11 27'16	
				retrograde	8606 Dec 19 05:46	23° 11 40'16	
conjunction	8600 Sep 01 04:33	16° 11 13'34	-9°29'59	opposition	8607 Mar 12 03:27	22° 11 39'42	-8°18'08
minimum elong	8600 Sep 01 04:45	16° 11 13'35	9°30'03	min. Earth dist.	8607 Mar 12 21:23	22° 11 38'50	45.62140 AU
max. Earth dist.	8600 Aug 31 15:59	16° 11 12'51	48.45934 AU	direct	8607 Jun 01 16:56	21° 11 39'34	
morning rise	8600 Sep 13 12:50	16° 11 30'33		evening set	8607 Aug 26 11:27	22° 11 49'58	
retrograde	8600 Dec 12 12:18	17° 11 43'57		max. Earth dist.	8607 Sep 08 04:34	23° 11 07'41	47.52982 AU
opposition	8601 Mar 05 18:37	16° 11 43'56	-9°47'16				
min. Earth dist.	8601 Mar 06 07:18	16° 11 43'20	46.42515 AU	conjunction	8607 Sep 09 00:40	23° 11 08'51	-7°49'50
direct	8601 May 26 12:50	15° 11 44'25		minimum elong	8607 Sep 09 00:50	23° 11 08'52	7°49'52
evening set	8601 Aug 20 23:14	16° 11 55'00		morning rise	8607 Sep 22 15:40	23° 11 27'52	
				retrograde	8607 Dec 20 14:35	24° 11 40'51	
conjunction	8601 Sep 02 10:28	17° 11 12'10	-9°16'23	opposition	8608 Mar 12 09:29	23° 11 40'12	-8°02'25
minimum elong	8601 Sep 02 10:39	17° 11 12'11	9°16'26	min. Earth dist.	8608 Mar 13 05:15	23° 11 39'14	45.47420 AU
max. Earth dist.	8601 Sep 01 20:01	17° 11 11'20	48.33578 AU	direct	8608 Jun 01 20:54	22° 11 39'57	
morning rise	8601 Sep 14 23:33	17° 11 29'27		evening set	8608 Aug 26 14:32	23° 11 50'22	
retrograde	8601 Dec 13 21:02	18° 11 42'43		max. Earth dist.	8608 Sep 08 10:20	24° 11 08'17	47.38147 AU
opposition	8602 Mar 06 23:50	17° 11 42'36	-9°33'02				
min. Earth dist.	8602 Mar 07 13:12	17° 11 41'58	46.29871 AU	conjunction	8608 Sep 09 07:41	24° 11 09'33	-7°34'37
direct	8602 May 27 15:32	16° 11 42'58		minimum elong	8608 Sep 09 07:51	24° 11 09'33	7°34'39
evening set	8602 Aug 22 00:36	17° 11 53'28		morning rise	8608 Sep 23 02:36	24° 11 28'50	
				retrograde	8608 Dec 20 21:22	25° 11 41'49	
conjunction	8602 Sep 03 16:29	18° 11 10'56	-9°02'33	opposition	8609 Mar 13 15:22	24° 11 41'03	-7°46'29
minimum elong	8602 Sep 03 16:40	18° 11 10'56	9°02'37	min. Earth dist.	8609 Mar 14 11:30	24° 11 40'04	45.32199 AU
max. Earth dist.	8602 Sep 03 01:31	18° 11 10'04	48.20910 AU	direct	8609 Jun 03 02:20	23° 11 40'40	
morning rise	8602 Sep 16 10:07	18° 11 28'30		evening set	8609 Aug 27 17:52	24° 11 51'07	
retrograde	8602 Dec 15 03:29	19° 11 41'40					
opposition	8603 Mar 08 05:13	18° 11 41'26	-9°18'33	conjunction	8609 Sep 10 14:47	25° 11 10'34	-7°19'10
min. Earth dist.	8603 Mar 08 19:55	18° 11 40'44	46.16929 AU	minimum elong	8609 Sep 10 14:57	25° 11 10'35	7°19'11
direct	8603 May 28 19:47	17° 11 41'42		max. Earth dist.	8609 Sep 09 15:11	25° 11 09'11	47.22795 AU
evening set	8603 Aug 23 02:17	18° 11 52'08		morning rise	8609 Sep 24 13:39	25° 11 30'08	
				retrograde	8609 Dec 22 02:44	26° 11 43'07	
conjunction	8603 Sep 04 22:38	19° 11 09'53	-8°48'29	opposition	8610 Mar 14 21:37	25° 11 42'13	-7°30'18
minimum elong	8603 Sep 04 22:49	19° 11 09'53	8°48'32	min. Earth dist.	8610 Mar 15 19:54	25° 11 41'08	45.16479 AU
max. Earth dist.	8603 Sep 04 07:12	19° 11 08'59	48.07978 AU	direct	8610 Jun 04 10:17	24° 11 41'42	
morning rise	8603 Sep 17 20:42	19° 11 27'45		evening set	8610 Aug 28 21:11	25° 11 52'11	
retrograde	8603 Dec 16 08:34	20° 11 40'49					
opposition	8604 Mar 08 10:33	19° 11 40'30	-9°03'49	conjunction	8610 Sep 11 21:56	26° 11 11'54	-7°03'29
min. Earth dist.	8604 Mar 09 01:05	19° 11 39'48	46.03722 AU	minimum elong	8610 Sep 11 22:05	26° 11 11'54	7°03'31
direct	8604 May 29 01:17	18° 11 40'39		max. Earth dist.	8610 Sep 10 22:08	26° 11 10'29	47.06966 AU
evening set	8604 Aug 23 04:11	19° 11 51'03		morning rise	8610 Sep 26 00:20	26° 11 31'44	
max. Earth dist.	8604 Sep 04 11:38	20° 11 08'05	47.94760 AU	retrograde	8610 Dec 23 07:59	27° 11 44'44	
				opposition	8611 Mar 16 03:49	26° 11 43'42	-7°13'53
conjunction	8604 Sep 05 04:51	20° 11 09'05	-8°34'10	min. Earth dist.	8611 Mar 17 02:35	26° 11 42'35	45.00305 AU
minimum elong	8604 Sep 05 05:02	20° 11 09'06	8°34'14	direct	8611 Jun 05 18:43	25° 11 43'00	
morning rise	8604 Sep 18 07:28	20° 11 27'15		evening set	8611 Aug 30 00:55	26° 11 53'32	
retrograde	8604 Dec 16 14:30	21° 11 40'16		max. Earth dist.	8611 Sep 12 03:14	27° 11 11'59	46.90722 AU
opposition	8605 Mar 09 16:10	20° 11 39'52	-8°48'50				
min. Earth dist.	8605 Mar 10 08:30	20° 11 39'05	45.90223 AU	conjunction	8611 Sep 13 05:08	27° 11 13'31	-6°47'35
direct	8605 May 30 07:17	19° 11 39'56		minimum elong	8611 Sep 13 05:17	27° 11 13'31	6°47'36
evening set	8605 Aug 24 06:20	20° 11 50'18		morning rise	8611 Sep 27 11:17	27° 11 33'37	
				retrograde	8611 Dec 24 17:50	28° 11 46'40	
conjunction	8605 Sep 06 11:25	21° 11 08'38	-8°19'38	opposition	8612 Mar 16 10:07	27° 11 45'28	-6°57'13
minimum elong	8605 Sep 06 11:35	21° 11 08'38	8°19'39	min. Earth dist.	8612 Mar 17 09:58	27° 11 44'18	44.83760 AU
max. Earth dist.	8605 Sep 05 18:13	21° 11 07'37	47.81230 AU	direct	8612 Jun 05 22:22	26° 11 44'36	
morning rise	8605 Sep 19 18:07	21° 11 27'04		evening set	8612 Aug 30 04:45	27° 11 55'11	
retrograde	8605 Dec 17 20:00	22° 11 40'04		max. Earth dist.	8612 Sep 12 10:06	28° 11 13'52	46.74111 AU
opposition	8606 Mar 10 21:40	21° 11 39'35	-8°33'36				
min. Earth dist.	8606 Mar 11 14:26	21° 11 38'47	45.76377 AU	conjunction	8612 Sep 13 12:34	28° 11 15'26	-6°31'26
direct	8606 May 31 14:01	20° 11 39'33		minimum elong	8612 Sep 13 12:43	28° 11 15'26	6°31'26
evening set	8606 Aug 25 08:53	21° 11 49'56		morning rise	8612 Sep 27 22:07	28° 11 35'48	
				retrograde	8612 Dec 25 02:24	29° 11 48'53	

opposition	8613 Mar 17 16:38	28° <u>17</u> 47'32 -6°40'18	direct	8619 Jun 13 16:44	4° <u>06</u> '16	
min. Earth dist.	8613 Mar 18 17:47	28° <u>17</u> 46'18 44.66873 AU	evening set	8619 Sep 06 16:20	5° <u>17</u> '53	
direct	8613 Jun 07 03:31	27° <u>17</u> 46'29	max. Earth dist.	8619 Sep 20 11:24	5° <u>17</u> '51	45.50327 AU
evening set	8613 Aug 31 08:58	28° <u>17</u> 57'10				
			conjunction	8619 Sep 21 20:57	5° <u>17</u> '54	-4°31'28
conjunction	8613 Sep 14 20:07	29° <u>17</u> 17'40 -6°15'03	minimum elong	8619 Sep 21 21:04	5° <u>17</u> '54	4°31'28
minimum elong	8613 Sep 14 20:16	29° <u>17</u> 17'40 6°15'03	morning rise	8619 Oct 07 03:20	6° <u>02</u> '02	
max. Earth dist.	8613 Sep 13 16:58	29° <u>17</u> 16'03 46.57200 AU	retrograde	8620 Jan 02 14:20	7° <u>15</u> '59	
morning rise	8613 Sep 29 09:01	29° <u>17</u> 38'18	opposition	8620 Mar 24 18:12	6° <u>13</u> '34	-4°34'25
	8613 Oct 15 12:33	0° <u>05</u> '25	min. Earth dist.	8620 Mar 26 01:34	6° <u>12</u> '00	43.41360 AU
retrograde	8613 Dec 26 10:17	0° <u>05</u> '25	direct	8620 Jun 14 01:01	5° <u>11</u> '19	
	8614 Mar 10 08:30	30° <u>17</u> 30'40	evening set	8620 Sep 06 22:51	6° <u>12</u> '10	
opposition	8614 Mar 18 23:02	29° <u>17</u> 49'54 -6°23'07	max. Earth dist.	8620 Sep 20 20:08	6° <u>12</u> '20	45.31314 AU
min. Earth dist.	8614 Mar 20 00:10	29° <u>17</u> 48'41 44.49713 AU				
direct	8614 Jun 08 09:30	28° <u>17</u> 48'42	conjunction	8620 Sep 22 06:06	6° <u>12</u> '25	-4°13'21
evening set	8614 Sep 01 13:26	29° <u>17</u> 59'29	minimum elong	8620 Sep 22 06:12	6° <u>12</u> '25	4°13'19
	8614 Sep 01 22:26	0° <u>05</u> '25	morning rise	8620 Oct 07 14:47	7° <u>07</u> '47	
max. Earth dist.	8614 Sep 14 22:56	0° <u>05</u> '18'31 46.40019 AU	retrograde	8621 Jan 02 20:43	8° <u>21</u> '55	
			opposition	8621 Mar 26 02:04	7° <u>19</u> '19	-4°15'24
conjunction	8614 Sep 16 03:44	0° <u>05</u> '20'14 -5°58'24	min. Earth dist.	8621 Mar 27 09:51	7° <u>17</u> '43	43.22022 AU
minimum elong	8614 Sep 16 03:52	0° <u>05</u> '20'15 5°58'24	direct	8621 Jun 15 11:35	6° <u>16</u> '52	
morning rise	8614 Sep 30 19:56	0° <u>05</u> '41'08	evening set	8621 Sep 08 05:56	7° <u>02</u> '56	
retrograde	8614 Dec 27 17:15	1° <u>05</u> '54'20	max. Earth dist.	8621 Sep 22 02:49	7° <u>02</u> '49'11	45.11833 AU
opposition	8615 Mar 20 05:54	0° <u>05</u> '52'39 -6°05'40				
min. Earth dist.	8615 Mar 21 08:38	0° <u>05</u> '51'21 44.32314 AU	conjunction	8621 Sep 23 15:19	7° <u>05</u> '12'26	-3°54'59
	8615 May 12 17:54	30° <u>17</u> 30'40	minimum elong	8621 Sep 23 15:25	7° <u>05</u> '12'26	3°54'58
direct	8615 Jun 09 16:42	29° <u>17</u> 51'17	morning rise	8621 Oct 09 02:26	8° <u>14</u> '02	
	8615 Jul 07 11:37	0° <u>05</u> '25	retrograde	8622 Jan 04 06:34	9° <u>28</u> '22	
evening set	8615 Sep 02 17:55	1° <u>05</u> '02'10	opposition	8622 Mar 27 10:07	8° <u>25</u> '34	-3°56'07
max. Earth dist.	8615 Sep 16 07:00	1° <u>05</u> '21'29 46.22615 AU	min. Earth dist.	8622 Mar 28 19:33	8° <u>23</u> '53	43.02236 AU
			direct	8622 Jun 16 18:48	7° <u>02</u> '22'54	
conjunction	8615 Sep 17 11:30	1° <u>05</u> '23'12 -5°41'31	evening set	8622 Sep 09 13:09	8° <u>03</u> '51'12	
minimum elong	8615 Sep 17 11:38	1° <u>05</u> '23'12 5°41'32	max. Earth dist.	8622 Sep 23 11:45	8° <u>03</u> '55'37	44.91906 AU
morning rise	8615 Oct 02 06:40	1° <u>05</u> '44'20				
retrograde	8615 Dec 28 22:52	2° <u>05</u> '57'39	conjunction	8622 Sep 25 00:51	8° <u>05</u> '57'55	-3°36'23
opposition	8616 Mar 20 12:47	1° <u>05</u> '55'50 -5°47'57	minimum elong	8622 Sep 25 00:56	8° <u>05</u> '57'55	3°36'21
min. Earth dist.	8616 Mar 21 15:23	1° <u>05</u> '54'31 44.14687 AU	morning rise	8622 Oct 10 13:57	9° <u>20</u> '45	
direct	8616 Jun 10 01:35	0° <u>05</u> '54'17	retrograde	8623 Jan 05 15:52	10° <u>35</u> '18	
evening set	8616 Sep 02 23:03	2° <u>05</u> '05'19	opposition	8623 Mar 28 18:27	9° <u>32</u> '17	-3°36'34
			min. Earth dist.	8623 Mar 30 05:01	9° <u>30</u> '32	42.82030 AU
conjunction	8616 Sep 17 19:29	2° <u>05</u> '26'35 -5°24'23	direct	8623 Jun 18 02:49	8° <u>02</u> '29'23	
minimum elong	8616 Sep 17 19:37	2° <u>05</u> '26'36 5°24'22	evening set	8623 Sep 10 20:40	9° <u>41</u> '57	
max. Earth dist.	8616 Sep 16 13:14	2° <u>05</u> '24'46 46.04985 AU	max. Earth dist.	8623 Sep 24 20:03	10° <u>02</u> '30	44.71599 AU
morning rise	8616 Oct 02 17:48	2° <u>05</u> '47'59				
retrograde	8616 Dec 29 08:14	4° <u>01</u> '01'26	conjunction	8623 Sep 26 10:21	10° <u>04</u> '52	-3°17'33
opposition	8617 Mar 21 19:47	2° <u>05</u> '59'28 -5°29'57	minimum elong	8623 Sep 26 10:25	10° <u>04</u> '53	3°17'31
min. Earth dist.	8617 Mar 22 23:28	2° <u>05</u> '58'05 43.96838 AU	morning rise	8623 Oct 12 01:32	10° <u>27</u> '56	
direct	8617 Jun 11 07:16	1° <u>05</u> '57'45	retrograde	8624 Jan 07 03:46	11° <u>42</u> '43	
evening set	8617 Sep 04 04:25	3° <u>08</u> '08'57	opposition	8624 Mar 29 02:53	10° <u>39</u> '29	-3°16'46
max. Earth dist.	8617 Sep 17 21:10	3° <u>08</u> '28'38 45.87096 AU	min. Earth dist.	8624 Mar 30 13:52	10° <u>37</u> '42	42.61474 AU
			direct	8624 Jun 18 09:12	9° <u>36</u> '19	
conjunction	8617 Sep 19 03:50	3° <u>08</u> '30'29 -5°06'59	evening set	8624 Sep 11 04:43	10° <u>49</u> '11	
minimum elong	8617 Sep 19 03:58	3° <u>08</u> '30'29 5°07'00	max. Earth dist.	8624 Sep 25 04:18	11° <u>09</u> '51	44.50941 AU
morning rise	8617 Oct 04 04:52	3° <u>08</u> '52'08				
retrograde	8617 Dec 30 18:42	5° <u>05</u> '05'44	conjunction	8624 Sep 26 20:15	11° <u>12</u> '20	-2°58'27
opposition	8618 Mar 23 03:05	4° <u>03</u> '37 -5°11'42	minimum elong	8624 Sep 26 20:19	11° <u>12</u> '20	2°58'26
min. Earth dist.	8618 Mar 24 08:01	4° <u>02</u> '11 43.78703 AU	morning rise	8624 Oct 12 13:16	11° <u>35</u> '36	
direct	8618 Jun 12 12:16	3° <u>01</u> '01'45	retrograde	8625 Jan 07 15:01	12° <u>50</u> '38	
evening set	8618 Sep 05 10:06	4° <u>13</u> '09	opposition	8625 Mar 30 11:31	11° <u>47</u> '11	-2°56'42
max. Earth dist.	8618 Sep 19 04:32	4° <u>13</u> '33'00 45.68907 AU	min. Earth dist.	8625 Apr 01 00:22	11° <u>45</u> '18	42.40610 AU
			direct	8625 Jun 19 17:05	10° <u>43</u> '46	
conjunction	8618 Sep 20 12:11	4° <u>13</u> '34'55 -4°49'21	evening set	8625 Sep 12 13:04	11° <u>56</u> '56	
minimum elong	8618 Sep 20 12:18	4° <u>13</u> '34'55 4°49'20	max. Earth dist.	8625 Sep 26 14:28	12° <u>17</u> '49	44.30008 AU
morning rise	8618 Oct 05 15:57	4° <u>13</u> '56'48				
retrograde	8619 Jan 01 06:02	6° <u>10</u> '34	conjunction	8625 Sep 28 06:24	12° <u>20</u> '19	-2°39'07
opposition	8619 Mar 24 10:28	5° <u>08</u> '19 -4°53'11	minimum elong	8625 Sep 28 06:28	12° <u>20</u> '19	2°39'05
min. Earth dist.	8619 Mar 25 15:38	5° <u>06</u> '52 43.60237 AU	morning rise	8625 Oct 14 00:59	12° <u>43</u> '47	

retrograde	8626 Jan 08 23:24	13° <u>♁</u> 59'07	conjunction	8632 Oct 06 13:00	20° <u>♁</u> 36'08 -0°16'53
opposition	8626 Mar 31 20:22	12° <u>♁</u> 55'26 -2°36'21	minimum elong	8632 Oct 06 13:00	20° <u>♁</u> 36'08 0°16'50
min. Earth dist.	8626 Apr 02 08:59	12° <u>♁</u> 53'33 42.19496 AU	morning rise	8632 Oct 22 14:07	21° <u>♁</u> 00'58
direct	8626 Jun 21 03:41	11° <u>♁</u> 51'47	retrograde	8633 Jan 17 09:13	22° <u>♁</u> 19'10
evening set	8626 Sep 13 21:48	13° <u>♁</u> 05'17	opposition	8633 Apr 08 18:19	21° <u>♁</u> 13'59 -0°06'29
max. Earth dist.	8626 Sep 27 22:46	13° <u>♁</u> 26'14 44.08839 AU	min. Earth dist.	8633 Apr 10 13:29	21° <u>♁</u> 11'42 40.65552 AU
			direct	8633 Jun 28 21:31	20° <u>♁</u> 08'37
conjunction	8626 Sep 29 16:30	13° <u>♁</u> 28'52 -2°19'32	asc. node	8633 Jul 24 02:18	20° <u>♁</u> 16'25
minimum elong	8626 Sep 29 16:34	13° <u>♁</u> 28'52 2°19'30	evening set	8633 Sep 22 01:10	21° <u>♁</u> 25'24
morning rise	8626 Oct 15 12:42	13° <u>♁</u> 52'34	max. Earth dist.	8633 Oct 06 00:44	21° <u>♁</u> 47'06 42.54125 AU
retrograde	8627 Jan 10 09:20	15° <u>♁</u> 08'12			
opposition	8627 Apr 02 05:34	14° <u>♁</u> 04'18 -2°15'45	conjunction	8633 Oct 08 01:38	21° <u>♁</u> 50'18 0°04'30
min. Earth dist.	8627 Apr 03 19:29	14° <u>♁</u> 02'21 41.98181 AU	minimum elong	8633 Oct 08 01:37	21° <u>♁</u> 50'18 0°04'34
direct	8627 Jun 22 12:22	13° <u>♁</u> 00'25	behind sun begin	8633 Oct 07 19:15	21° <u>♁</u> 49'54
evening set	8627 Sep 15 06:55	14° <u>♁</u> 14'17	behind sun end	8633 Oct 08 07:59	21° <u>♁</u> 50'41
max. Earth dist.	8627 Sep 29 09:26	14° <u>♁</u> 35'26 43.87472 AU	morning rise	8633 Oct 24 03:02	22° <u>♁</u> 15'18
			retrograde	8634 Jan 18 23:10	23° <u>♁</u> 33'59
conjunction	8627 Oct 01 03:09	14° <u>♁</u> 38'04 -1°59'42	opposition	8634 Apr 10 05:33	22° <u>♁</u> 28'32 0°15'58
minimum elong	8627 Oct 01 03:12	14° <u>♁</u> 38'05 1°59'39	min. Earth dist.	8634 Apr 12 01:46	22° <u>♁</u> 26'12 40.42268 AU
morning rise	8627 Oct 17 00:30	15° <u>♁</u> 01'58	direct	8634 Jun 30 06:16	21° <u>♁</u> 22'53
retrograde	8628 Jan 11 19:45	16° <u>♁</u> 17'58	evening set	8634 Sep 23 13:59	22° <u>♁</u> 40'13
opposition	8628 Apr 02 14:57	15° <u>♁</u> 13'51 -1°54'52	max. Earth dist.	8634 Oct 07 12:20	23° <u>♁</u> 01'58 42.30643 AU
min. Earth dist.	8628 Apr 04 05:25	15° <u>♁</u> 11'52 41.76680 AU			
direct	8628 Jun 22 20:57	14° <u>♁</u> 09'44	conjunction	8634 Oct 09 14:30	23° <u>♁</u> 05'16 0°25'57
evening set	8628 Sep 15 16:38	15° <u>♁</u> 24'01	minimum elong	8634 Oct 09 14:29	23° <u>♁</u> 05'15 0°26'01
max. Earth dist.	8628 Sep 29 19:06	15° <u>♁</u> 45'17 43.65936 AU	morning rise	8634 Oct 25 15:45	23° <u>♁</u> 30'24
			retrograde	8635 Jan 20 14:02	24° <u>♁</u> 49'37
conjunction	8628 Oct 01 14:00	15° <u>♁</u> 48'00 -1°39'37	opposition	8635 Apr 11 17:13	23° <u>♁</u> 43'52 0°38'40
minimum elong	8628 Oct 01 14:02	15° <u>♁</u> 48'00 1°39'35	min. Earth dist.	8635 Apr 13 15:06	23° <u>♁</u> 41'26 40.18619 AU
morning rise	8628 Oct 17 12:38	16° <u>♁</u> 12'06	direct	8635 Jul 01 15:12	22° <u>♁</u> 37'53
retrograde	8629 Jan 12 09:47	17° <u>♁</u> 28'29	evening set	8635 Sep 25 03:26	23° <u>♁</u> 55'48
opposition	8629 Apr 04 00:36	16° <u>♁</u> 24'10 -1°33'43	max. Earth dist.	8635 Oct 09 01:02	24° <u>♁</u> 17'38 42.06836 AU
min. Earth dist.	8629 Apr 05 15:18	16° <u>♁</u> 22'10 41.55008 AU			
direct	8629 Jun 24 02:45	15° <u>♁</u> 19'49	conjunction	8635 Oct 11 03:48	24° <u>♁</u> 20'59 0°47'41
evening set	8629 Sep 17 02:51	16° <u>♁</u> 34'33	minimum elong	8635 Oct 11 03:46	24° <u>♁</u> 20'59 0°47'46
max. Earth dist.	8629 Oct 01 05:09	16° <u>♁</u> 55'55 43.44186 AU	morning rise	8635 Oct 27 04:48	24° <u>♁</u> 46'16
			retrograde	8636 Jan 22 04:56	26° <u>♁</u> 06'01
conjunction	8629 Oct 03 01:12	16° <u>♁</u> 58'44 -1°19'17	opposition	8636 Apr 12 04:54	24° <u>♁</u> 59'58 1°01'37
minimum elong	8629 Oct 03 01:14	16° <u>♁</u> 58'44 1°19'14	min. Earth dist.	8636 Apr 14 02:48	24° <u>♁</u> 57'31 39.94678 AU
morning rise	8629 Oct 19 00:44	17° <u>♁</u> 23'01	direct	8636 Jul 02 02:10	23° <u>♁</u> 53'38
retrograde	8630 Jan 13 22:28	18° <u>♁</u> 39'50	evening set	8636 Sep 25 17:35	25° <u>♁</u> 12'10
opposition	8630 Apr 05 10:35	17° <u>♁</u> 35'19 -1°12'18	max. Earth dist.	8636 Oct 09 12:40	25° <u>♁</u> 33'58 41.82741 AU
min. Earth dist.	8630 Apr 07 02:59	17° <u>♁</u> 33'13 41.33113 AU			
direct	8630 Jun 25 11:23	16° <u>♁</u> 30'44	conjunction	8636 Oct 11 17:25	25° <u>♁</u> 37'29 1°09'39
evening set	8630 Sep 18 13:30	17° <u>♁</u> 45'57	minimum elong	8636 Oct 11 17:23	25° <u>♁</u> 37'29 1°09'44
max. Earth dist.	8630 Oct 02 16:34	18° <u>♁</u> 07'29 43.22201 AU	morning rise	8636 Oct 27 18:00	26° <u>♁</u> 02'53
			retrograde	8637 Jan 22 18:49	27° <u>♁</u> 23'12
conjunction	8630 Oct 04 12:46	18° <u>♁</u> 10'19 -0°58'43	opposition	8637 Apr 13 17:09	26° <u>♁</u> 16'50 1°24'49
minimum elong	8630 Oct 04 12:48	18° <u>♁</u> 10'19 0°58'40	min. Earth dist.	8637 Apr 15 16:51	26° <u>♁</u> 14'16 39.70494 AU
morning rise	8630 Oct 20 13:00	18° <u>♁</u> 34'48	direct	8637 Jul 03 15:03	25° <u>♁</u> 10'09
retrograde	8631 Jan 15 10:24	19° <u>♁</u> 52'02	evening set	8637 Sep 27 08:08	26° <u>♁</u> 29'19
opposition	8631 Apr 06 20:47	18° <u>♁</u> 47'19 -0°50'37	max. Earth dist.	8637 Oct 11 02:54	26° <u>♁</u> 51'14 41.58424 AU
min. Earth dist.	8631 Apr 08 13:14	18° <u>♁</u> 45'13 41.10954 AU			
direct	8631 Jun 26 23:06	17° <u>♁</u> 42'30	conjunction	8637 Oct 13 07:26	26° <u>♁</u> 54'46 1°31'50
evening set	8631 Sep 20 00:47	18° <u>♁</u> 58'14	minimum elong	8637 Oct 13 07:24	26° <u>♁</u> 54'46 1°31'56
max. Earth dist.	8631 Oct 04 02:01	19° <u>♁</u> 19'47 42.99897 AU	morning rise	8637 Oct 29 07:06	27° <u>♁</u> 20'17
			retrograde	8638 Jan 24 06:29	28° <u>♁</u> 41'11
conjunction	8631 Oct 06 00:32	19° <u>♁</u> 22'48 -0°37'55	opposition	8638 Apr 15 05:35	27° <u>♁</u> 34'30 1°48'16
minimum elong	8631 Oct 06 00:33	19° <u>♁</u> 22'48 0°37'50	min. Earth dist.	8638 Apr 17 05:19	27° <u>♁</u> 31'55 39.46126 AU
morning rise	8631 Oct 22 01:29	19° <u>♁</u> 47'27	direct	8638 Jul 05 06:05	26° <u>♁</u> 27'28
retrograde	8632 Jan 16 22:42	21° <u>♁</u> 05'10	evening set	8638 Sep 28 23:27	27° <u>♁</u> 47'18
opposition	8632 Apr 07 07:29	20° <u>♁</u> 00'13 -0°28'41	max. Earth dist.	8638 Oct 12 15:27	28° <u>♁</u> 09'12 41.33957 AU
min. Earth dist.	8632 Apr 09 01:53	19° <u>♁</u> 58'00 40.88453 AU			
direct	8632 Jun 27 09:50	18° <u>♁</u> 55'09	conjunction	8638 Oct 14 21:40	28° <u>♁</u> 12'52 1°54'13
evening set	8632 Sep 20 12:38	20° <u>♁</u> 11'24	minimum elong	8638 Oct 14 21:36	28° <u>♁</u> 12'51 1°54'19
max. Earth dist.	8632 Oct 04 14:04	20° <u>♁</u> 33'05 42.77209 AU	morning rise	8638 Oct 30 20:29	28° <u>♁</u> 38'29
				8639 Jan 24 06:29	0° <u>♁</u>

retrograde	8639 Jan 25 21:35	0° \mathbb{M} 00'02		direct	8645 Jul 14 01:58	5° \mathbb{M} 57'14	
	8639 Jan 27 12:56	30° $\mathbb{R}\mathbb{A}$		evening set	8645 Oct 09 06:29	7° \mathbb{M} 23'11	
opposition	8639 Apr 16 18:27	28° \mathbb{A} 53'01	2°11'56	max. Earth dist.	8645 Oct 22 02:43	7° \mathbb{M} 44'53	39.59605 AU
min. Earth dist.	8639 Apr 18 18:58	28° \mathbb{A} 50'23	39.21654 AU				
direct	8639 Jul 06 17:28	27° \mathbb{A} 45'38		conjunction	8645 Oct 24 14:34	7° \mathbb{M} 49'09	4°36'18
evening set	8639 Sep 30 15:11	29° \mathbb{A} 06'11		minimum elong	8645 Oct 24 14:26	7° \mathbb{M} 49'08	4°36'25
max. Earth dist.	8639 Oct 14 05:55	29° \mathbb{A} 28'08	41.09380 AU	morning rise	8645 Nov 08 22:34	8° \mathbb{M} 15'08	
				retrograde	8646 Feb 04 19:52	9° \mathbb{M} 42'27	
conjunction	8639 Oct 16 12:22	29° \mathbb{A} 31'50	2°16'50	opposition	8646 Apr 26 00:38	8° \mathbb{M} 33'17	5°03'33
minimum elong	8639 Oct 16 12:18	29° \mathbb{A} 31'50	2°16'56	min. Earth dist.	8646 Apr 28 06:06	8° \mathbb{M} 30'15	37.47372 AU
morning rise	8639 Nov 01 09:48	29° \mathbb{A} 57'34		direct	8646 Jul 15 15:19	7° \mathbb{M} 23'26	
	8639 Nov 02 22:39	0° \mathbb{M}		evening set	8646 Oct 11 03:52	8° \mathbb{M} 50'26	
retrograde	8640 Jan 27 11:30	1° \mathbb{M} 19'48		max. Earth dist.	8646 Oct 23 19:39	9° \mathbb{M} 11'59	39.33935 AU
opposition	8640 Apr 17 07:49	0° \mathbb{M} 12'29	2°35'51				
min. Earth dist.	8640 Apr 19 09:05	0° \mathbb{M} 09'46	38.97092 AU	conjunction	8646 Oct 26 08:46	9° \mathbb{M} 16'22	5°00'06
	8640 Apr 26 20:23	30° $\mathbb{R}\mathbb{A}$		minimum elong	8646 Oct 26 08:37	9° \mathbb{M} 16'21	5°00'14
direct	8640 Jul 07 05:38	29° \mathbb{A} 04'44		morning rise	8646 Nov 10 13:21	9° \mathbb{M} 42'19	
	8640 Sep 14 05:58	0° \mathbb{M}		retrograde	8647 Feb 06 15:06	11° \mathbb{M} 10'39	
evening set	8640 Oct 01 07:50	0° \mathbb{M} 26'04		opposition	8647 Apr 27 17:13	10° \mathbb{M} 01'07	5°28'48
max. Earth dist.	8640 Oct 14 20:38	0° \mathbb{M} 48'02	40.84739 AU	min. Earth dist.	8647 Apr 30 00:13	9° \mathbb{M} 57'58	37.21734 AU
				direct	8647 Jul 17 06:08	8° \mathbb{M} 50'51	
conjunction	8640 Oct 17 03:32	0° \mathbb{M} 51'48	2°39'38	evening set	8647 Oct 13 02:01	10° \mathbb{M} 18'56	
minimum elong	8640 Oct 17 03:28	0° \mathbb{M} 51'48	2°39'44	max. Earth dist.	8647 Oct 25 14:07	10° \mathbb{M} 40'24	39.08093 AU
morning rise	8640 Nov 01 23:31	1° \mathbb{M} 17'36					
retrograde	8641 Jan 28 05:07	2° \mathbb{M} 40'34		conjunction	8647 Oct 28 03:23	10° \mathbb{M} 44'50	5°24'02
opposition	8641 Apr 18 21:20	1° \mathbb{M} 32'56	2°59'58	minimum elong	8647 Oct 28 03:13	10° \mathbb{M} 44'49	5°24'09
min. Earth dist.	8641 Apr 20 22:27	1° \mathbb{M} 30'14	38.72482 AU	morning rise	8647 Nov 12 04:18	11° \mathbb{M} 10'45	
direct	8641 Jul 08 17:07	0° \mathbb{M} 24'51		retrograde	8648 Feb 08 12:34	12° \mathbb{M} 40'05	
evening set	8641 Oct 03 01:12	1° \mathbb{M} 47'01		opposition	8648 Apr 28 10:07	11° \mathbb{M} 30'11	5°54'11
max. Earth dist.	8641 Oct 16 10:49	2° \mathbb{M} 08'57	40.60020 AU	min. Earth dist.	8648 Apr 30 16:55	11° \mathbb{M} 27'02	36.95952 AU
				direct	8648 Jul 17 23:06	10° \mathbb{M} 19'30	
conjunction	8641 Oct 18 19:09	2° \mathbb{M} 12'50	3°02'37	evening set	8648 Oct 14 01:15	11° \mathbb{M} 48'44	
minimum elong	8641 Oct 18 19:03	2° \mathbb{M} 12'50	3°02'43	max. Earth dist.	8648 Oct 26 07:23	12° \mathbb{M} 09'58	38.82110 AU
morning rise	8641 Nov 03 13:20	2° \mathbb{M} 38'42					
retrograde	8642 Jan 29 23:31	4° \mathbb{M} 02'27		conjunction	8648 Oct 28 22:33	12° \mathbb{M} 14'34	5°48'04
opposition	8642 Apr 20 11:33	2° \mathbb{M} 54'32	3°24'18	minimum elong	8648 Oct 28 22:22	12° \mathbb{M} 14'33	5°48'13
min. Earth dist.	8642 Apr 22 14:17	2° \mathbb{M} 51'43	38.47798 AU	morning rise	8648 Nov 12 19:31	12° \mathbb{M} 40'24	
direct	8642 Jul 10 05:07	1° \mathbb{M} 46'07		retrograde	8649 Feb 09 09:11	14° \mathbb{M} 10'49	
evening set	8642 Oct 04 19:04	3° \mathbb{M} 09'09		opposition	8649 Apr 30 03:33	13° \mathbb{M} 00'32	6°19'42
max. Earth dist.	8642 Oct 18 03:06	3° \mathbb{M} 31'09	40.35209 AU	min. Earth dist.	8649 May 02 12:01	12° \mathbb{M} 57'16	36.70085 AU
				direct	8649 Jul 19 15:39	11° \mathbb{M} 49'25	
conjunction	8642 Oct 20 11:08	3° \mathbb{M} 35'02	3°25'47	evening set	8649 Oct 16 01:13	13° \mathbb{M} 19'51	
minimum elong	8642 Oct 20 11:02	3° \mathbb{M} 35'02	3°25'54	max. Earth dist.	8649 Oct 28 03:36	13° \mathbb{M} 40'58	38.56067 AU
morning rise	8642 Nov 05 03:08	4° \mathbb{M} 00'57					
retrograde	8643 Jan 31 15:28	5° \mathbb{M} 25'33		conjunction	8649 Oct 30 18:20	13° \mathbb{M} 45'35	6°12'12
opposition	8643 Apr 22 02:05	4° \mathbb{M} 17'19	3°48'50	minimum elong	8649 Oct 30 18:08	13° \mathbb{M} 45'34	6°12'20
min. Earth dist.	8643 Apr 24 04:35	4° \mathbb{M} 14'31	38.22995 AU	morning rise	8649 Nov 14 10:42	14° \mathbb{M} 11'20	
direct	8643 Jul 11 20:38	3° \mathbb{M} 08'34			8649 Dec 15 06:11	15° \mathbb{M}	
evening set	8643 Oct 06 14:06	4° \mathbb{M} 32'33		retrograde	8650 Feb 11 03:43	15° \mathbb{M} 42'51	
max. Earth dist.	8643 Oct 19 17:40	4° \mathbb{M} 54'24	40.10235 AU		8650 Apr 11 10:02	15° $\mathbb{R}\mathbb{M}$	
				opposition	8650 May 01 21:32	14° \mathbb{M} 32'11	6°45'19
conjunction	8643 Oct 22 03:41	4° \mathbb{M} 58'28	3°49'08	min. Earth dist.	8650 May 04 05:43	14° \mathbb{M} 28'55	36.44198 AU
minimum elong	8643 Oct 22 03:34	4° \mathbb{M} 58'28	3°49'14	direct	8650 Jul 21 11:05	13° \mathbb{M} 20'37	
morning rise	8643 Nov 06 17:27	5° \mathbb{M} 24'26		evening set	8650 Oct 18 02:04	14° \mathbb{M} 52'18	
retrograde	8644 Feb 02 08:48	6° \mathbb{M} 49'54			8650 Oct 22 11:46	15° \mathbb{M}	
opposition	8644 Apr 22 17:04	5° \mathbb{M} 41'23	4°13'33	max. Earth dist.	8650 Oct 29 22:15	15° \mathbb{M} 13'10	38.30035 AU
min. Earth dist.	8644 Apr 24 21:09	5° \mathbb{M} 38'27	37.98021 AU				
direct	8644 Jul 12 10:53	4° \mathbb{M} 32'17		conjunction	8650 Nov 01 14:17	15° \mathbb{M} 17'55	6°36'23
evening set	8644 Oct 07 09:50	5° \mathbb{M} 57'13		minimum elong	8650 Nov 01 14:05	15° \mathbb{M} 17'55	6°36'32
max. Earth dist.	8644 Oct 20 10:42	6° \mathbb{M} 19'04	39.85039 AU	morning rise	8650 Nov 16 02:02	15° \mathbb{M} 43'32	
				retrograde	8651 Feb 13 00:12	17° \mathbb{M} 16'15	
conjunction	8644 Oct 22 21:00	6° \mathbb{M} 23'11	4°12'38	opposition	8651 May 03 16:04	16° \mathbb{M} 05'11	7°11'00
minimum elong	8644 Oct 22 20:53	6° \mathbb{M} 23'10	4°12'46	min. Earth dist.	8651 May 06 00:49	16° \mathbb{M} 01'51	36.18372 AU
morning rise	8644 Nov 07 07:54	6° \mathbb{M} 49'10			8651 Jun 30 15:04	15° $\mathbb{R}\mathbb{M}$	
retrograde	8645 Feb 03 00:45	8° \mathbb{M} 15'32		direct	8651 Jul 23 04:33	14° \mathbb{M} 53'11	
opposition	8645 Apr 24 08:40	7° \mathbb{M} 06'42	4°38'28		8651 Aug 14 11:46	15° \mathbb{M}	
min. Earth dist.	8645 Apr 26 13:34	7° \mathbb{M} 03'43	37.72807 AU	evening set	8651 Oct 20 03:56	16° \mathbb{M} 26'10	

max. Earth dist.	8651 Oct 31 19:19	16° \mathbb{M} 46'52	38.04064 AU	min. Earth dist.	8658 May 17 06:45	27° \mathbb{M} 36'48	34.40641 AU
				direct	8658 Aug 02 23:25	26° \mathbb{M} 25'23	
conjunction	8651 Nov 03 11:11	16° \mathbb{M} 51'39	7°00'37	evening set	8658 Nov 03 00:57	28° \mathbb{M} 09'33	
minimum elong	8651 Nov 03 10:58	16° \mathbb{M} 51'38	7°00'45	max. Earth dist.	8658 Nov 12 12:27	28° \mathbb{M} 27'34	36.25067 AU
morning rise	8651 Nov 17 17:36	17° \mathbb{M} 17'06					
retrograde	8652 Feb 14 20:07	18° \mathbb{M} 51'03		conjunction	8658 Nov 15 07:41	28° \mathbb{M} 32'56	9°49'00
opposition	8652 May 04 11:11	17° \mathbb{M} 39'36	7°36'44	minimum elong	8658 Nov 15 07:22	28° \mathbb{M} 32'55	9°49'11
min. Earth dist.	8652 May 06 20:25	17° \mathbb{M} 36'13	35.92644 AU	morning rise	8658 Nov 27 13:10	28° \mathbb{M} 56'16	
direct	8652 Jul 23 21:47	16° \mathbb{M} 27'10			8659 Jan 04 01:43	0° \mathbb{A}	
evening set	8652 Oct 21 07:00	18° \mathbb{M} 01'32		retrograde	8659 Feb 27 00:52	0° \mathbb{A} 40'47	
max. Earth dist.	8652 Nov 01 16:24	18° \mathbb{M} 21'58	37.78224 AU		8659 Apr 23 10:42	30° \mathbb{R} \mathbb{M}	
				opposition	8659 May 16 19:25	29° \mathbb{M} 26'38	10°35'45
conjunction	8652 Nov 04 08:37	18° \mathbb{M} 26'49	7°24'51	min. Earth dist.	8659 May 19 07:32	29° \mathbb{M} 22'55	34.15458 AU
minimum elong	8652 Nov 04 08:23	18° \mathbb{M} 26'48	7°25'01	direct	8659 Aug 04 21:45	28° \mathbb{M} 11'07	
morning rise	8652 Nov 18 09:30	18° \mathbb{M} 52'05		evening set	8659 Nov 05 12:29	29° \mathbb{M} 57'08	
retrograde	8653 Feb 15 18:43	20° \mathbb{M} 27'21			8659 Nov 07 00:30	0° \mathbb{A}	
opposition	8653 May 06 06:51	19° \mathbb{M} 15'32	8°02'29	max. Earth dist.	8659 Nov 14 14:30	0° \mathbb{A} 14'35	35.99674 AU
min. Earth dist.	8653 May 08 15:40	19° \mathbb{M} 12'09	35.67069 AU				
direct	8653 Jul 25 15:21	18° \mathbb{M} 02'40		conjunction	8659 Nov 17 10:05	0° \mathbb{A} 20'02	10°12'33
evening set	8653 Oct 23 10:57	19° \mathbb{M} 38'29		minimum elong	8659 Nov 17 09:46	0° \mathbb{A} 20'00	10°12'44
max. Earth dist.	8653 Nov 03 13:34	19° \mathbb{M} 58'36	37.52514 AU	morning rise	8659 Nov 29 06:35	0° \mathbb{A} 42'51	
				retrograde	8660 Feb 29 03:54	2° \mathbb{A} 29'08	
conjunction	8653 Nov 06 06:37	20° \mathbb{M} 03'33	7°49'04	opposition	8660 May 17 19:46	1° \mathbb{A} 14'34	11°00'48
minimum elong	8653 Nov 06 06:22	20° \mathbb{M} 03'32	7°49'13	min. Earth dist.	8660 May 20 07:35	1° \mathbb{A} 10'50	33.90368 AU
morning rise	8653 Nov 20 01:25	20° \mathbb{M} 28'36			8660 Jul 26 20:23	30° \mathbb{R} \mathbb{M}	
retrograde	8654 Feb 17 18:35	22° \mathbb{M} 05'16		direct	8660 Aug 05 20:54	29° \mathbb{M} 58'32	
opposition	8654 May 08 03:18	20° \mathbb{M} 53'04	8°28'13		8660 Aug 15 21:16	0° \mathbb{A}	
min. Earth dist.	8654 May 10 13:12	20° \mathbb{M} 49'36	35.41636 AU	evening set	8660 Nov 07 01:10	1° \mathbb{A} 46'31	
direct	8654 Jul 27 09:18	19° \mathbb{M} 39'46		max. Earth dist.	8660 Nov 15 16:41	2° \mathbb{A} 03'17	35.74375 AU
evening set	8654 Oct 25 16:06	21° \mathbb{M} 17'08					
max. Earth dist.	8654 Nov 05 12:58	21° \mathbb{M} 37'00	37.26943 AU	conjunction	8660 Nov 18 13:16	2° \mathbb{A} 08'52	10°35'52
				minimum elong	8660 Nov 18 12:56	2° \mathbb{A} 08'50	10°36'04
conjunction	8654 Nov 08 05:22	21° \mathbb{M} 41'57	8°13'15	morning rise	8660 Nov 30 00:11	2° \mathbb{A} 31'08	
minimum elong	8654 Nov 08 05:07	21° \mathbb{M} 41'56	8°13'25	retrograde	8661 Mar 02 07:32	4° \mathbb{A} 19'15	
morning rise	8654 Nov 21 17:38	22° \mathbb{M} 06'45		opposition	8661 May 19 21:07	3° \mathbb{A} 04'14	11°25'36
retrograde	8655 Feb 19 19:42	23° \mathbb{M} 44'51		min. Earth dist.	8661 May 22 10:10	3° \mathbb{A} 00'25	33.65419 AU
opposition	8655 May 10 00:12	22° \mathbb{M} 32'17	8°53'54	direct	8661 Aug 07 19:32	1° \mathbb{A} 47'42	
min. Earth dist.	8655 May 12 09:30	22° \mathbb{M} 28'50	35.16327 AU	evening set	8661 Nov 09 15:10	3° \mathbb{A} 37'43	
direct	8655 Jul 29 06:04	21° \mathbb{M} 18'34		max. Earth dist.	8661 Nov 17 21:16	3° \mathbb{A} 53'53	35.49256 AU
evening set	8655 Oct 27 22:28	22° \mathbb{M} 57'32					
max. Earth dist.	8655 Nov 07 10:49	23° \mathbb{M} 16'58	37.01450 AU	conjunction	8661 Nov 20 17:01	3° \mathbb{A} 59'27	10°58'54
				minimum elong	8661 Nov 20 16:41	3° \mathbb{A} 59'25	10°59'05
conjunction	8655 Nov 10 04:47	23° \mathbb{M} 22'05	8°37'21	morning rise	8661 Dec 01 17:35	4° \mathbb{A} 21'07	
minimum elong	8655 Nov 10 04:30	23° \mathbb{M} 22'03	8°37'31	retrograde	8662 Mar 04 12:31	6° \mathbb{A} 11'08	
morning rise	8655 Nov 23 10:15	23° \mathbb{M} 46'34		opposition	8662 May 21 23:03	4° \mathbb{A} 55'42	11°50'05
retrograde	8656 Feb 21 21:06	25° \mathbb{M} 26'11		min. Earth dist.	8662 May 24 11:05	4° \mathbb{A} 51'54	33.40688 AU
opposition	8656 May 10 21:57	24° \mathbb{M} 13'15	9°19'32	direct	8662 Aug 09 21:44	3° \mathbb{A} 38'39	
min. Earth dist.	8656 May 13 08:38	24° \mathbb{M} 09'42	34.91083 AU	evening set	8662 Nov 12 06:31	5° \mathbb{A} 30'47	
direct	8656 Jul 30 02:05	22° \mathbb{M} 59'07		max. Earth dist.	8662 Nov 20 00:42	5° \mathbb{A} 46'09	35.24386 AU
evening set	8656 Oct 29 06:06	24° \mathbb{M} 39'45					
max. Earth dist.	8656 Nov 08 11:33	24° \mathbb{M} 58'49	36.75980 AU	conjunction	8662 Nov 22 21:28	5° \mathbb{A} 51'50	11°21'35
				minimum elong	8662 Nov 22 21:07	5° \mathbb{A} 51'49	11°21'47
conjunction	8656 Nov 11 05:09	25° \mathbb{M} 03'57	9°01'22	morning rise	8662 Dec 03 11:19	6° \mathbb{A} 12'50	
minimum elong	8656 Nov 11 04:52	25° \mathbb{M} 03'56	9°01'33	retrograde	8663 Mar 06 19:24	8° \mathbb{A} 04'51	
morning rise	8656 Nov 24 03:00	25° \mathbb{M} 28'06		opposition	8663 May 24 01:44	6° \mathbb{A} 48'58	12°14'12
retrograde	8657 Feb 22 21:44	27° \mathbb{M} 09'17		min. Earth dist.	8663 May 26 14:31	6° \mathbb{A} 45'07	33.16263 AU
opposition	8657 May 12 20:20	25° \mathbb{M} 55'58	9°45'04	direct	8663 Aug 11 23:20	5° \mathbb{A} 31'26	
min. Earth dist.	8657 May 15 07:07	25° \mathbb{M} 52'23	34.65849 AU	evening set	8663 Nov 14 23:20	7° \mathbb{A} 25'47	
direct	8657 Aug 01 01:51	24° \mathbb{M} 41'23		max. Earth dist.	8663 Nov 22 07:26	7° \mathbb{A} 40'27	34.99847 AU
evening set	8657 Oct 31 15:05	26° \mathbb{M} 23'46					
max. Earth dist.	8657 Nov 10 10:59	26° \mathbb{M} 42'16	36.50521 AU	conjunction	8663 Nov 25 02:49	7° \mathbb{A} 46'06	11°43'52
				minimum elong	8663 Nov 25 02:29	7° \mathbb{A} 46'04	11°44'03
conjunction	8657 Nov 13 06:04	26° \mathbb{M} 47'35	9°25'16	morning rise	8663 Dec 05 04:58	8° \mathbb{A} 06'19	
minimum elong	8657 Nov 13 05:46	26° \mathbb{M} 47'34	9°25'25	retrograde	8664 Mar 08 01:46	10° \mathbb{A} 00'27	
morning rise	8657 Nov 25 20:06	27° \mathbb{M} 11'20		opposition	8664 May 25 05:18	8° \mathbb{A} 44'08	12°37'51
retrograde	8658 Feb 25 00:42	28° \mathbb{M} 54'09		min. Earth dist.	8664 May 27 17:16	8° \mathbb{A} 40'18	32.92196 AU
opposition	8658 May 14 19:28	27° \mathbb{M} 40'26	10°10'29	direct	8664 Aug 13 03:50	7° \mathbb{A} 26'07	

evening set	8664 Nov 16 17:45	9°♂22'48		opposition	8671 Jun 09 05:16	23°♂09'09	15°05'40
max. Earth dist.	8664 Nov 23 12:48	9°♂36'31	34.75708 AU	min. Earth dist.	8671 Jun 11 14:49	23°♂05'18	31.35905 AU
				direct	8671 Aug 27 16:49	21°♂48'03	
conjunction	8664 Nov 26 08:49	9°♂42'16	12°05'40	evening set	8671 Dec 07 08:08	24°♂04'37	
minimum elong	8664 Nov 26 08:27	9°♂42'15	12°05'52	max. Earth dist.	8671 Dec 09 09:38	24°♂09'05	33.18938 AU
morning rise	8664 Dec 05 22:47	10°♂01'40					
retrograde	8665 Mar 10 09:24	11°♂58'00		conjunction	8671 Dec 12 02:51	24°♂14'58	14°20'19
opposition	8665 May 27 09:32	10°♂41'17	13°01'00	minimum elong	8671 Dec 12 02:32	24°♂14'57	14°20'32
min. Earth dist.	8665 May 29 21:17	10°♂37'26	32.68569 AU	morning rise	8671 Dec 16 20:50	24°♂25'16	
direct	8665 Aug 15 06:28	9°♂22'48		retrograde	8672 Mar 25 09:39	26°♂40'26	
evening set	8665 Nov 19 13:40	11°♂21'55		opposition	8672 Jun 10 15:34	25°♂21'06	15°23'29
max. Earth dist.	8665 Nov 25 20:49	11°♂34'46	34.52015 AU	min. Earth dist.	8672 Jun 13 01:11	25°♂17'15	31.15253 AU
				direct	8672 Aug 29 02:24	23°♂59'34	
conjunction	8665 Nov 28 15:45	11°♂40'29	12°26'57	evening set	8672 Dec 09 22:40	26°♂19'51	
minimum elong	8665 Nov 28 15:25	11°♂40'27	12°27'09	max. Earth dist.	8672 Dec 11 00:11	26°♂22'10	32.98267 AU
morning rise	8665 Dec 07 16:35	11°♂58'58					
retrograde	8666 Mar 12 15:26	13°♂57'36		conjunction	8672 Dec 13 15:42	26°♂27'57	14°36'16
opposition	8666 May 29 14:47	12°♂40'30	13°23'34	minimum elong	8672 Dec 13 15:22	26°♂27'56	14°36'29
min. Earth dist.	8666 Jun 01 02:17	12°♂36'39	32.45398 AU	morning rise	8672 Dec 17 07:57	26°♂36'00	
direct	8666 Aug 17 10:06	11°♂21'35		retrograde	8673 Mar 27 22:52	28°♂54'43	
evening set	8666 Nov 22 11:15	13°♂23'16		opposition	8673 Jun 13 02:40	27°♂34'59	15°40'15
max. Earth dist.	8666 Nov 28 04:39	13°♂35'04	34.28803 AU	min. Earth dist.	8673 Jun 15 11:33	27°♂31'09	30.95097 AU
				direct	8673 Aug 31 14:36	26°♂13'00	
conjunction	8666 Nov 30 23:16	13°♂40'49	12°47'38	evening set	8673 Dec 13 22:56	28°♂37'50	
minimum elong	8666 Nov 30 22:55	13°♂40'47	12°47'51	max. Earth dist.	8673 Dec 13 13:39	28°♂36'59	32.78160 AU
morning rise	8666 Dec 09 10:14	13°♂58'17					
retrograde	8667 Mar 15 01:12	15°♂59'20		conjunction	8673 Dec 16 05:05	28°♂42'49	14°51'10
opposition	8667 May 31 20:41	14°♂41'53	13°45'30	minimum elong	8673 Dec 16 04:48	28°♂42'47	14°51'23
min. Earth dist.	8667 Jun 03 07:13	14°♂38'04	32.22695 AU	morning rise	8673 Dec 18 10:39	28°♂47'44	
direct	8667 Aug 19 13:36	13°♂22'32			8674 Jan 21 20:48	0°♂	
evening set	8667 Nov 25 10:44	15°♂26'54		retrograde	8674 Mar 30 13:32	1°♂10'50	
max. Earth dist.	8667 Nov 30 13:33	15°♂37'33	34.06019 AU		8674 Jun 09 21:48	30°♂♂	
				opposition	8674 Jun 15 14:30	29°♂50'43	15°55'53
conjunction	8667 Dec 03 07:56	15°♂43'20	13°07'41	min. Earth dist.	8674 Jun 17 22:19	29°♂46'56	30.75539 AU
minimum elong	8667 Dec 03 07:36	15°♂43'18	13°07'53	direct	8674 Sep 03 01:49	28°♂28'16	
morning rise	8667 Dec 11 04:03	15°♂59'41			8674 Nov 21 07:46	0°♂	
retrograde	8668 Mar 16 09:22	18°♂03'17		max. Earth dist.	8674 Dec 16 05:30	0°♂53'45	32.58684 AU
opposition	8668 Jun 02 03:30	16°♂45'29	14°06'44				
min. Earth dist.	8668 Jun 04 14:45	16°♂41'35	32.00408 AU	conjunction	8674 Dec 18 19:15	0°♂59'29	15°04'58
direct	8668 Aug 20 16:43	15°♂25'42		minimum elong	8674 Dec 18 18:58	0°♂59'27	15°05'11
evening set	8668 Nov 27 12:25	17°♂32'52		retrograde	8675 Apr 02 03:07	3°♂28'44	
max. Earth dist.	8668 Dec 01 23:59	17°♂42'18	33.83653 AU	opposition	8675 Jun 18 03:15	2°♂08'14	16°10'16
				min. Earth dist.	8675 Jun 20 10:35	2°♂04'27	30.56633 AU
conjunction	8668 Dec 04 17:28	17°♂48'03	13°27'01	direct	8675 Sep 05 13:43	0°♂45'21	
minimum elong	8668 Dec 04 17:07	17°♂48'02	13°27'14	max. Earth dist.	8675 Dec 18 21:29	3°♂12'15	32.39937 AU
morning rise	8668 Dec 11 21:29	18°♂03'10					
retrograde	8669 Mar 18 19:52	20°♂09'25		conjunction	8675 Dec 21 10:06	3°♂17'55	15°17'33
opposition	8669 Jun 04 11:12	18°♂51'15	14°27'13	minimum elong	8675 Dec 21 09:51	3°♂17'54	15°17'45
min. Earth dist.	8669 Jun 06 21:16	18°♂47'25	31.78516 AU	retrograde	8676 Apr 03 19:46	5°♂48'22	
direct	8669 Aug 23 00:43	17°♂31'03		opposition	8676 Jun 19 16:32	4°♂27'30	16°23'20
evening set	8669 Nov 30 16:01	19°♂41'10		min. Earth dist.	8676 Jun 21 21:48	4°♂23'50	30.38485 AU
max. Earth dist.	8669 Dec 04 09:37	19°♂49'05	33.61667 AU	direct	8676 Sep 07 02:27	3°♂04'12	
				max. Earth dist.	8676 Dec 20 14:40	5°♂32'31	32.21991 AU
conjunction	8669 Dec 07 03:40	19°♂54'57	13°45'37				
minimum elong	8669 Dec 07 03:20	19°♂54'55	13°45'50	conjunction	8676 Dec 23 01:45	5°♂38'05	15°28'50
morning rise	8669 Dec 13 14:25	20°♂08'41		minimum elong	8676 Dec 23 01:30	5°♂38'04	15°29'03
retrograde	8670 Mar 21 07:21	22°♂17'43		retrograde	8677 Apr 06 09:52	8°♂09'42	
opposition	8670 Jun 06 19:54	20°♂59'10	14°46'53	opposition	8677 Jun 22 06:55	6°♂48'31	16°34'57
min. Earth dist.	8670 Jun 09 06:36	20°♂55'16	31.57010 AU	min. Earth dist.	8677 Jun 24 11:43	6°♂44'52	30.21166 AU
direct	8670 Aug 25 07:18	19°♂38'31		direct	8677 Sep 09 14:16	5°♂24'50	
evening set	8670 Dec 03 22:29	21°♂51'45		max. Earth dist.	8677 Dec 23 09:04	7°♂54'36	32.04945 AU
max. Earth dist.	8670 Dec 06 22:17	21°♂58'10	33.40086 AU				
				conjunction	8677 Dec 25 17:50	8°♂00'00	15°38'43
conjunction	8670 Dec 09 14:54	22°♂03'57	14°03'24	minimum elong	8677 Dec 25 17:38	7°♂59'59	15°38'56
minimum elong	8670 Dec 09 14:34	22°♂03'55	14°03'38	retrograde	8678 Apr 09 02:15	10°♂32'44	
morning rise	8670 Dec 15 06:23	22°♂16'05		opposition	8678 Jun 24 21:53	9°♂11'16	16°45'04
retrograde	8671 Mar 23 19:15	24°♂28'04		min. Earth dist.	8678 Jun 27 00:03	9°♂07'47	30.04739 AU

direct	8678 Sep 12 05:37	7°347'15			8687 Jan 06 08:40	0°	
max. Earth dist.	8678 Dec 26 03:06	10°318'20	31.88819 AU	max. Earth dist.	8687 Jan 16 06:26	0°23'34	30.92261 AU
conjunction	8678 Dec 28 10:46	10°323'40	15°47'10	conjunction	8687 Jan 17 21:57	0°27'30	15°56'26
minimum elong	8678 Dec 28 10:35	10°323'39	15°47'24	minimum elong	8687 Jan 17 22:02	0°27'30	15°56'38
retrograde	8679 Apr 11 19:13	12°357'31		retrograde	8687 May 02 09:21	3°07'25	
opposition	8679 Jun 27 13:34	11°335'46	16°53'35	opposition	8687 Jul 17 18:05	1°44'18	16°58'22
min. Earth dist.	8679 Jun 29 15:10	11°332'19	29.89224 AU	min. Earth dist.	8687 Jul 19 05:00	1°41'49	28.96432 AU
direct	8679 Sep 14 18:43	10°311'28		direct	8687 Oct 05 00:42	0°18'27	
max. Earth dist.	8679 Dec 28 23:30	12°344'00	31.73629 AU	max. Earth dist.	8688 Jan 19 06:08	2°58'46	30.84488 AU
conjunction	8679 Dec 31 04:26	12°349'06	15°54'05	conjunction	8688 Jan 20 18:55	3°02'27	15°49'44
minimum elong	8679 Dec 31 04:17	12°349'05	15°54'18	minimum elong	8688 Jan 20 19:02	3°02'27	15°49'55
retrograde	8680 Apr 13 13:03	15°323'59		retrograde	8688 May 04 04:51	5°42'41	
opposition	8680 Jun 29 06:00	14°302'02	17°00'27	opposition	8688 Jul 19 14:43	4°19'27	16°50'24
min. Earth dist.	8680 Jul 01 05:14	13°358'44	29.74590 AU	min. Earth dist.	8688 Jul 21 00:18	4°17'04	28.89095 AU
direct	8680 Sep 16 11:11	12°337'29		direct	8688 Oct 06 19:54	2°53'29	
max. Earth dist.	8680 Dec 30 18:24	15°311'11	31.59330 AU	max. Earth dist.	8689 Jan 21 05:58	5°34'24	30.77861 AU
conjunction	8681 Jan 01 22:33	15°316'14	15°59'27	conjunction	8689 Jan 22 15:45	5°37'47	15°41'10
minimum elong	8681 Jan 01 22:25	15°316'13	15°59'40	minimum elong	8689 Jan 22 15:55	5°37'48	15°41'22
retrograde	8681 Apr 16 08:08	17°352'08		retrograde	8689 May 07 00:40	8°18'15	
opposition	8681 Jul 01 23:14	16°329'58	17°05'36	opposition	8689 Jul 22 11:26	6°54'56	16°40'26
min. Earth dist.	8681 Jul 03 21:31	16°326'44	29.60824 AU	min. Earth dist.	8689 Jul 23 17:25	6°52'48	28.82900 AU
direct	8681 Sep 19 03:21	15°305'11		direct	8689 Oct 09 18:31	5°28'54	
max. Earth dist.	8682 Jan 02 16:18	17°340'13	31.45912 AU	max. Earth dist.	8690 Jan 24 05:29	8°10'16	30.72432 AU
conjunction	8682 Jan 04 17:26	17°345'00	16°03'12	conjunction	8690 Jan 25 12:44	8°13'24	15°30'45
minimum elong	8682 Jan 04 17:21	17°345'00	16°03'24	minimum elong	8690 Jan 25 12:55	8°13'25	15°30'55
retrograde	8682 Apr 19 02:47	20°321'48		retrograde	8690 May 09 20:40	10°54'00	
opposition	8682 Jul 04 17:06	18°359'28	17°09'01	opposition	8690 Jul 25 08:23	9°30'39	16°28'27
min. Earth dist.	8682 Jul 06 13:34	18°356'20	29.47894 AU	min. Earth dist.	8690 Jul 26 12:26	9°28'39	28.77916 AU
direct	8682 Sep 21 22:05	17°334'28		direct	8690 Oct 12 14:00	8°04'36	
max. Earth dist.	8683 Jan 05 12:16	20°310'30	31.33364 AU	max. Earth dist.	8691 Jan 27 06:08	10°46'25	30.68266 AU
conjunction	8683 Jan 07 12:40	20°315'15	16°05'18	conjunction	8691 Jan 28 09:44	10°49'11	15°18'27
minimum elong	8683 Jan 07 12:36	20°315'14	16°05'31	minimum elong	8691 Jan 28 09:59	10°49'13	15°18'38
retrograde	8683 Apr 21 23:25	22°352'53		retrograde	8691 May 12 16:41	13°29'50	
opposition	8683 Jul 07 11:33	21°330'21	17°10'39	opposition	8691 Jul 28 05:25	12°06'30	16°14'27
min. Earth dist.	8683 Jul 09 06:26	21°327'20	29.35812 AU	min. Earth dist.	8691 Jul 29 06:05	12°04'45	28.74143 AU
direct	8683 Sep 24 15:45	20°305'09		direct	8691 Oct 15 11:37	10°40'29	
max. Earth dist.	8684 Jan 08 11:08	22°342'19	31.21685 AU	max. Earth dist.	8692 Jan 30 05:14	13°22'31	30.65332 AU
conjunction	8684 Jan 10 08:38	22°346'48	16°05'43	conjunction	8692 Jan 31 06:40	13°25'04	15°04'20
minimum elong	8684 Jan 10 08:37	22°346'48	16°05'54	minimum elong	8692 Jan 31 06:55	13°25'06	15°04'30
retrograde	8684 Apr 23 19:12	25°325'09		retrograde	8692 Mar 13 07:50	15°	
opposition	8684 Jul 09 06:35	24°302'28	17°10'26	retrograde	8692 May 14 12:11	16°05'42	
min. Earth dist.	8684 Jul 11 00:07	23°359'32	29.24574 AU		8692 Jul 19 16:10	15°R	
direct	8684 Sep 26 11:38	22°337'05		opposition	8692 Jul 30 02:32	14°42'24	15°58'30
max. Earth dist.	8685 Jan 10 08:25	25°315'06	31.10916 AU	min. Earth dist.	8692 Jul 31 00:57	14°40'49	28.71581 AU
conjunction	8685 Jan 12 04:48	25°319'29	16°04'24	direct	8692 Oct 17 08:23	13°16'28	
minimum elong	8685 Jan 12 04:49	25°319'30	16°04'36		8693 Jan 07 05:02	15°	
retrograde	8685 Apr 26 16:26	27°358'28		evening set	8693 Jan 30 15:04	15°54'52	
opposition	8685 Jul 12 02:04	26°335'37	17°08'21	max. Earth dist.	8693 Feb 01 06:11	15°58'48	30.63613 AU
min. Earth dist.	8685 Jul 13 17:07	26°332'52	29.14238 AU	conjunction	8693 Feb 02 03:37	16°00'57	14°48'26
direct	8685 Sep 29 07:49	25°310'04		minimum elong	8693 Feb 02 03:56	16°00'59	14°48'36
max. Earth dist.	8686 Jan 13 07:46	27°349'00	31.01085 AU	morning rise	8693 Feb 04 16:44	16°07'05	
conjunction	8686 Jan 15 01:15	27°353'07	16°01'19	retrograde	8693 May 17 07:26	18°41'26	
minimum elong	8686 Jan 15 01:18	27°353'07	16°01'30	opposition	8693 Aug 01 23:46	17°18'14	15°40'38
retrograde	8686 Mar 17 07:18	0°		min. Earth dist.	8693 Aug 02 19:28	17°16'50	28.70169 AU
	8686 Apr 29 11:35	0°32'38		direct	8693 Oct 20 06:57	15°52'24	
	8686 Jun 13 01:55	30°R3		evening set	8694 Jan 31 23:55	18°27'01	
opposition	8686 Jul 14 22:04	29°309'38	17°04'20	max. Earth dist.	8694 Feb 04 04:34	18°34'42	30.63047 AU
min. Earth dist.	8686 Jul 16 11:58	29°306'57	29.04834 AU	conjunction	8694 Feb 05 00:11	18°36'40	14°30'48
direct	8686 Oct 02 03:31	27°343'55		minimum elong	8694 Feb 05 00:29	18°36'42	14°30'57

morning rise	8694 Feb 09 00:54	18° \approx 46'22		direct	8700 Nov 08 17:20	3° \approx 47'46	
retrograde	8694 May 20 04:15	21° \approx 16'56		evening set	8701 Feb 13 20:57	6° \approx 04'32	
opposition	8694 Aug 04 20:54	19° \approx 53'49	15°20'55				
min. Earth dist.	8694 Aug 05 13:51	19° \approx 52'37	28.69876 AU	conjunction	8701 Feb 23 16:09	6° \approx 27'34	11°44'46
direct	8694 Oct 23 03:35	18° \approx 28'07		minimum elong	8701 Feb 23 16:33	6° \approx 27'37	11°44'51
evening set	8695 Feb 02 17:29	20° \approx 59'43		max. Earth dist.	8701 Feb 23 16:04	6° \approx 27'34	30.88684 AU
				morning rise	8701 Mar 05 11:10	6° \approx 50'36	
conjunction	8695 Feb 07 20:51	21° \approx 12'03	14°11'30	retrograde	8701 Jun 07 12:03	9° \approx 03'39	
minimum elong	8695 Feb 07 21:13	21° \approx 12'05	14°11'38	opposition	8701 Aug 23 18:31	7° \approx 41'30	12°18'02
max. Earth dist.	8695 Feb 07 05:03	21° \approx 10'28	30.63585 AU	min. Earth dist.	8701 Aug 23 18:00	7° \approx 41'32	28.96771 AU
morning rise	8695 Feb 13 00:36	21° \approx 24'27		direct	8701 Nov 11 12:47	6° \approx 17'07	
retrograde	8695 May 22 22:50	23° \approx 51'59		evening set	8702 Feb 16 00:01	8° \approx 31'39	
opposition	8695 Aug 07 17:54	22° \approx 28'59	14°59'27				
min. Earth dist.	8695 Aug 08 08:53	22° \approx 27'56	28.70635 AU	conjunction	8702 Feb 26 09:20	8° \approx 55'57	11°15'52
direct	8695 Oct 26 02:27	21° \approx 03'26		minimum elong	8702 Feb 26 09:43	8° \approx 55'59	11°15'57
evening set	8696 Feb 04 14:36	23° \approx 32'19		max. Earth dist.	8702 Feb 26 12:29	8° \approx 56'15	30.96603 AU
				morning rise	8702 Mar 08 18:19	9° \approx 20'12	
conjunction	8696 Feb 10 17:08	23° \approx 46'56	13°50'36	retrograde	8702 Jun 10 04:03	11° \approx 31'09	
minimum elong	8696 Feb 10 17:29	23° \approx 46'58	13°50'44	opposition	8702 Aug 26 13:02	10° \approx 09'12	11°46'28
max. Earth dist.	8696 Feb 10 02:52	23° \approx 45'31	30.65189 AU	min. Earth dist.	8702 Aug 26 09:04	10° \approx 09'28	29.04885 AU
morning rise	8696 Feb 16 20:03	24° \approx 01'37		direct	8702 Nov 14 09:20	8° \approx 45'05	
retrograde	8696 May 24 19:29	26° \approx 26'27		evening set	8703 Feb 18 03:30	10° \approx 57'27	
opposition	8696 Aug 09 14:49	25° \approx 03'33	14°36'18				
min. Earth dist.	8696 Aug 10 02:36	25° \approx 02'44	28.72435 AU	conjunction	8703 Mar 01 01:59	11° \approx 22'54	10°45'54
direct	8696 Oct 28 01:11	23° \approx 38'10		minimum elong	8703 Mar 01 02:23	11° \approx 22'56	10°45'59
evening set	8697 Feb 05 13:45	26° \approx 04'29		max. Earth dist.	8703 Mar 01 07:39	11° \approx 23'27	31.05656 AU
				morning rise	8703 Mar 12 00:10	11° \approx 48'18	
conjunction	8697 Feb 12 13:06	26° \approx 21'08	13°28'10	retrograde	8703 Jun 12 18:31	13° \approx 57'11	
minimum elong	8697 Feb 12 13:29	26° \approx 21'10	13°28'18	opposition	8703 Aug 29 06:59	12° \approx 35'29	11°13'50
max. Earth dist.	8697 Feb 12 02:30	26° \approx 20'04	30.67825 AU	min. Earth dist.	8703 Aug 29 00:21	12° \approx 35'56	29.14157 AU
morning rise	8697 Feb 19 12:38	26° \approx 37'49		direct	8703 Nov 17 03:21	11° \approx 11'41	
retrograde	8697 May 27 13:13	29° \approx 00'07		evening set	8704 Feb 20 07:16	13° \approx 21'57	
opposition	8697 Aug 12 11:37	27° \approx 37'21	14°11'32				
min. Earth dist.	8697 Aug 12 21:50	27° \approx 36'38	28.75243 AU	conjunction	8704 Mar 02 18:07	13° \approx 48'26	10°14'59
direct	8697 Oct 30 22:52	26° \approx 12'09		minimum elong	8704 Mar 02 18:30	13° \approx 48'28	10°15'04
evening set	8698 Feb 07 14:24	28° \approx 35'58		max. Earth dist.	8704 Mar 03 03:30	13° \approx 49'20	31.15857 AU
				morning rise	8704 Mar 14 04:21	14° \approx 14'51	
conjunction	8698 Feb 15 08:36	28° \approx 54'27	13°04'18	retrograde	8704 Jun 14 07:37	16° \approx 21'46	
minimum elong	8698 Feb 15 08:58	28° \approx 54'29	13°04'26	opposition	8704 Aug 31 00:30	15° \approx 00'21	10°40'13
max. Earth dist.	8698 Feb 14 23:49	28° \approx 53'34	30.71493 AU	min. Earth dist.	8704 Aug 30 15:03	15° \approx 00'59	29.24544 AU
morning rise	8698 Feb 23 02:58	29° \approx 12'57		direct	8704 Nov 18 22:39	13° \approx 36'54	
	8698 Mar 15 15:31	0° \approx		evening set	8705 Feb 21 11:09	15° \approx 45'08	
retrograde	8698 May 30 09:11	1° \approx 32'49					
opposition	8698 Aug 15 07:49	0° \approx 10'12	13°45'14	conjunction	8705 Mar 05 09:18	16° \approx 12'33	9°43'13
min. Earth dist.	8698 Aug 15 14:33	0° \approx 09'44	28.79066 AU	minimum elong	8705 Mar 05 09:41	16° \approx 12'35	9°43'17
	8698 Aug 21 10:11	30° \approx		max. Earth dist.	8705 Mar 05 20:39	16° \approx 13'38	31.27142 AU
direct	8698 Nov 02 21:39	28° \approx 45'10		morning rise	8705 Mar 17 07:02	16° \approx 39'54	
	8699 Jan 10 14:57	0° \approx		retrograde	8705 Jun 16 22:36	18° \approx 44'55	
evening set	8699 Feb 09 15:57	1° \approx 06'35		opposition	8705 Sep 02 17:24	17° \approx 23'47	10°05'44
				min. Earth dist.	8705 Sep 02 04:46	17° \approx 24'38	29.36008 AU
conjunction	8699 Feb 18 03:46	1° \approx 26'44	12°39'04	direct	8705 Nov 21 14:49	16° \approx 00'42	
minimum elong	8699 Feb 18 04:10	1° \approx 26'46	12°39'10	evening set	8706 Feb 23 15:14	18° \approx 06'59	
max. Earth dist.	8699 Feb 17 22:18	1° \approx 26'11	30.76173 AU				
morning rise	8699 Feb 26 15:34	1° \approx 46'52		conjunction	8706 Mar 08 00:07	18° \approx 35'13	9°10'42
retrograde	8699 Jun 02 02:36	4° \approx 04'25		minimum elong	8706 Mar 08 00:29	18° \approx 35'15	9°10'46
opposition	8699 Aug 18 03:53	2° \approx 41'55	13°17'30	max. Earth dist.	8706 Mar 08 15:10	18° \approx 36'39	31.39448 AU
min. Earth dist.	8699 Aug 18 09:05	2° \approx 41'33	28.83904 AU	morning rise	8706 Mar 20 08:12	19° \approx 03'24	
direct	8699 Nov 05 19:00	1° \approx 17'05		retrograde	8706 Jun 19 10:47	21° \approx 06'35	
evening set	8700 Feb 11 18:16	3° \approx 36'09		opposition	8706 Sep 05 09:38	19° \approx 45'46	9°30'31
				min. Earth dist.	8706 Sep 04 19:15	19° \approx 46'44	29.48452 AU
conjunction	8700 Feb 20 22:14	3° \approx 57'48	12°12'31	direct	8706 Nov 24 08:19	18° \approx 23'04	
minimum elong	8700 Feb 20 22:37	3° \approx 57'51	12°12'37	evening set	8707 Feb 25 19:41	20° \approx 27'25	
max. Earth dist.	8700 Feb 20 19:09	3° \approx 57'30	30.81897 AU				
morning rise	8700 Mar 02 02:07	4° \approx 19'27		conjunction	8707 Mar 10 14:09	20° \approx 56'24	8°37'33
retrograde	8700 Jun 04 20:02	6° \approx 34'43		minimum elong	8707 Mar 10 14:30	20° \approx 56'26	8°37'35
opposition	8700 Aug 20 23:21	5° \approx 12'23	12°48'24	max. Earth dist.	8707 Mar 11 06:33	20° \approx 57'58	31.52688 AU
min. Earth dist.	8700 Aug 21 00:52	5° \approx 12'17	28.89784 AU	morning rise	8707 Mar 23 08:03	21° \approx 25'19	

retrograde	8707 Jun 22 01:10	23° ✕ 26'43		opposition	8713 Sep 21 09:44	5° ♀ 32'39	5°12'23
min. Earth dist.	8707 Sep 07 07:39	22° ✕ 07'24	29.61811 AU	direct	8713 Dec 10 23:05	4° ♀ 12'29	
opposition	8707 Sep 08 01:18	22° ✕ 06'13	8°54'41	evening set	8714 Mar 11 03:11	6° ♀ 04'59	
direct	8707 Nov 27 01:47	20° ✕ 43'53					
evening set	8708 Feb 28 00:03	22° ✕ 46'24		conjunction	8714 Mar 25 20:38	6° ♀ 36'43	4°35'32
				minimum elong	8714 Mar 25 20:50	6° ♀ 36'44	4°35'31
conjunction	8708 Mar 12 03:36	23° ✕ 16'01	8°03'52	max. Earth dist.	8714 Mar 27 04:08	6° ♀ 39'34	32.66656 AU
minimum elong	8708 Mar 12 03:55	23° ✕ 16'03	8°03'54	morning rise	8714 Apr 09 13:16	7° ♀ 08'23	
max. Earth dist.	8708 Mar 12 23:23	23° ✕ 17'54	31.66781 AU	retrograde	8714 Jul 06 21:59	8° ♀ 58'55	
morning rise	8708 Mar 25 06:14	23° ✕ 45'35		min. Earth dist.	8714 Sep 22 11:50	7° ♀ 42'33	30.76604 AU
retrograde	8708 Jun 23 12:32	25° ✕ 45'16		opposition	8714 Sep 23 20:26	7° ♀ 40'27	4°34'55
opposition	8708 Sep 09 16:31	24° ✕ 25'04	8°18'20	direct	8714 Dec 13 10:00	6° ♀ 20'38	
min. Earth dist.	8708 Sep 08 21:37	24° ✕ 26'20	29.76007 AU	evening set	8715 Mar 13 07:20	8° ♀ 11'41	
direct	8708 Nov 28 17:53	23° ✕ 03'08					
evening set	8709 Mar 01 04:44	25° ✕ 03'50		conjunction	8715 Mar 28 04:54	8° ♀ 43'32	4°00'29
				minimum elong	8715 Mar 28 05:04	8° ♀ 43'32	4°00'27
conjunction	8709 Mar 14 16:18	25° ✕ 34'01	7°29'44	max. Earth dist.	8715 Mar 29 15:33	8° ♀ 46'38	32.85795 AU
minimum elong	8709 Mar 14 16:37	25° ✕ 34'02	7°29'45	morning rise	8715 Apr 12 01:18	9° ♀ 15'18	
max. Earth dist.	8709 Mar 15 13:28	25° ✕ 36'00	31.81673 AU	retrograde	8715 Jul 09 02:48	11° ♀ 04'33	
morning rise	8709 Mar 28 03:06	26° ✕ 04'07		min. Earth dist.	8715 Sep 24 20:32	9° ♀ 48'34	30.95957 AU
retrograde	8709 Jun 26 01:28	28° ✕ 02'09		opposition	8715 Sep 26 06:40	9° ♀ 46'23	3°57'33
min. Earth dist.	8709 Sep 11 08:44	26° ✕ 43'43	29.90986 AU	direct	8715 Dec 15 22:11	8° ♀ 26'58	
opposition	8709 Sep 12 06:54	26° ✕ 42'15	7°41'35	evening set	8716 Mar 14 11:28	10° ♀ 16'38	
direct	8709 Dec 01 10:35	25° ✕ 20'41					
evening set	8710 Mar 03 09:14	27° ✕ 19'38		conjunction	8716 Mar 29 12:11	10° ♀ 48'31	3°25'33
				minimum elong	8716 Mar 29 12:19	10° ♀ 48'32	3°25'31
conjunction	8710 Mar 17 04:18	27° ✕ 50'17	6°55'15	max. Earth dist.	8716 Mar 30 23:56	10° ♀ 51'43	33.05684 AU
minimum elong	8710 Mar 17 04:35	27° ✕ 50'19	6°55'17	morning rise	8716 Apr 13 12:03	11° ♀ 20'20	
max. Earth dist.	8710 Mar 18 04:07	27° ✕ 52'30	31.97293 AU	retrograde	8716 Jul 10 10:04	13° ♀ 08'23	
morning rise	8710 Mar 30 22:27	28° ✕ 20'51		min. Earth dist.	8716 Sep 26 02:44	11° ♀ 52'56	31.16078 AU
	8710 May 27 02:59	0° ♀		opposition	8716 Sep 27 16:06	11° ♀ 50'33	3°20'20
retrograde	8710 Jun 28 12:47	0° ♀ 17'16		direct	8716 Dec 17 07:38	10° ♀ 31'32	
	8710 Jul 31 18:16	30° ♂ ✕		evening set	8717 Mar 16 15:24	12° ♀ 19'55	
opposition	8710 Sep 14 20:45	28° ✕ 57'40	7°04'32				
min. Earth dist.	8710 Sep 13 21:24	28° ✕ 59'12	30.06696 AU	conjunction	8717 Mar 31 18:58	12° ♀ 51'48	2°50'45
direct	8710 Dec 04 02:36	27° ✕ 36'28		minimum elong	8717 Mar 31 19:05	12° ♀ 51'49	2°50'43
evening set	8711 Mar 05 13:56	29° ✕ 33'44		max. Earth dist.	8717 Apr 02 09:51	12° ♀ 55'15	33.26291 AU
	8711 Mar 17 12:15	0° ♀		morning rise	8717 Apr 15 21:27	13° ♀ 23'37	
				retrograde	8717 Jul 12 15:21	15° ♀ 10'32	
conjunction	8711 Mar 19 15:39	0° ♀ 04'45	6°20'31	min. Earth dist.	8717 Sep 28 10:30	13° ♀ 55'29	31.36910 AU
minimum elong	8711 Mar 19 15:55	0° ♀ 04'47	6°20'31	opposition	8717 Sep 30 00:53	13° ♀ 53'03	2°43'21
max. Earth dist.	8711 Mar 20 17:07	0° ♀ 07'07	32.13611 AU	direct	8717 Dec 19 16:21	12° ♀ 34'27	
morning rise	8711 Apr 02 16:23	0° ♀ 35'42		evening set	8718 Mar 18 19:16	14° ♀ 21'38	
retrograde	8711 Jun 30 23:15	2° ♀ 30'34					
min. Earth dist.	8711 Sep 16 07:41	1° ♀ 12'57	30.23093 AU	conjunction	8718 Apr 03 00:56	14° ♀ 53'27	2°16'11
opposition	8711 Sep 17 09:40	1° ♀ 11'15	6°27'15	minimum elong	8718 Apr 03 01:02	14° ♀ 53'28	2°16'08
	8711 Nov 11 16:10	30° ♂ ✕		max. Earth dist.	8718 Apr 04 16:57	14° ♀ 56'58	33.47555 AU
direct	8711 Dec 06 19:14	29° ✕ 50'24		morning rise	8718 Apr 18 05:42	15° ♀ 25'13	
	8711 Dec 31 08:28	0° ♀		retrograde	8718 Jul 14 21:46	17° ♀ 11'04	
evening set	8712 Mar 06 18:32	1° ♀ 46'01		min. Earth dist.	8718 Sep 30 15:36	15° ♀ 56'33	31.58370 AU
				opposition	8718 Oct 02 08:53	15° ♀ 53'56	2°06'39
conjunction	8712 Mar 21 02:09	2° ♀ 17'21	5°45'37	direct	8718 Dec 22 02:10	14° ♀ 35'47	
minimum elong	8712 Mar 21 02:24	2° ♀ 17'22	5°45'37	evening set	8719 Mar 20 23:04	16° ♀ 21'49	
max. Earth dist.	8712 Mar 22 05:32	2° ♀ 19'52	32.30593 AU				
morning rise	8712 Apr 04 08:54	2° ♀ 48'36		conjunction	8719 Apr 05 06:19	16° ♀ 53'32	1°41'53
retrograde	8712 Jul 02 07:25	4° ♀ 41'58		minimum elong	8719 Apr 05 06:23	16° ♀ 53'33	1°41'49
opposition	8712 Sep 18 22:07	3° ♀ 22'55	5°49'51	max. Earth dist.	8719 Apr 07 00:34	16° ♀ 57'13	33.69374 AU
min. Earth dist.	8712 Sep 17 18:21	3° ♀ 24'44	30.40200 AU	morning rise	8719 Apr 20 12:39	17° ♀ 25'11	
direct	8712 Dec 08 08:18	2° ♀ 02'25		retrograde	8719 Jul 17 03:15	19° ♀ 10'03	
evening set	8713 Mar 08 22:47	3° ♀ 56'26		min. Earth dist.	8719 Oct 02 22:05	17° ♀ 55'56	31.80384 AU
				opposition	8719 Oct 04 16:21	17° ♀ 53'17	1°30'18
conjunction	8713 Mar 23 11:48	4° ♀ 28'00	5°10'35	direct	8719 Dec 24 11:00	16° ♀ 35'35	
minimum elong	8713 Mar 23 12:01	4° ♀ 28'02	5°10'34	evening set	8720 Mar 22 02:47	18° ♀ 20'32	
max. Earth dist.	8713 Mar 24 17:51	4° ♀ 30'45	32.48271 AU				
morning rise	8713 Apr 06 23:41	4° ♀ 59'30		conjunction	8720 Apr 06 11:07	18° ♀ 52'06	1°07'55
retrograde	8713 Jul 04 14:01	6° ♀ 51'25		minimum elong	8720 Apr 06 11:10	18° ♀ 52'06	1°07'52
min. Earth dist.	8713 Sep 20 03:50	5° ♀ 34'36	30.58017 AU	max. Earth dist.	8720 Apr 08 06:48	18° ♀ 55'52	33.91692 AU

morning rise	8720 Apr 21 18:28	19° Υ 23'36	retrograde	8726 Jul 29 17:12	2° \mathcal{B} 20'06	
retrograde	8720 Jul 18 07:25	21° Υ 07'31	min. Earth dist.	8726 Oct 15 23:12	1° \mathcal{B} 08'44	33.44459 AU
min. Earth dist.	8720 Oct 04 03:02	19° Υ 53'52	32.02863 AU	opposition	8726 Oct 18 02:30	1° \mathcal{B} 05'39 -2°30'44
opposition	8720 Oct 05 23:11	19° Υ 51'07	0°54'21		8726 Dec 12 08:04	30° $\mathcal{R}\Upsilon$
direct	8720 Dec 25 20:42	18° Υ 33'51		direct	8727 Jan 07 03:18	29° Υ 50'39
evening set	8721 Mar 24 06:22	20° Υ 17'46			8727 Feb 01 16:23	0° \mathcal{B}
				evening set	8727 Apr 05 00:23	1° \mathcal{B} 29'17
conjunction	8721 Apr 08 15:07	20° Υ 49'08	0°34'20			
minimum elong	8721 Apr 08 15:08	20° Υ 49'08	0°34'15	conjunction	8727 Apr 20 02:45	1° \mathcal{B} 58'45 -2°37'32
max. Earth dist.	8721 Apr 10 11:55	20° Υ 52'59	34.14408 AU	minimum elong	8727 Apr 20 02:39	1° \mathcal{B} 58'44 2°37'39
morning rise	8721 Apr 23 23:08	21° Υ 20'27		max. Earth dist.	8727 Apr 22 06:54	2° \mathcal{B} 03'01 35.56687 AU
retrograde	8721 Jul 20 10:25	23° Υ 03'29		morning rise	8727 May 05 04:29	2° \mathcal{B} 28'10
min. Earth dist.	8721 Oct 06 07:46	21° Υ 50'16	32.25745 AU	retrograde	8727 Jul 31 16:07	4° \mathcal{B} 06'42
opposition	8721 Oct 08 05:25	21° Υ 47'27	0°18'51	min. Earth dist.	8727 Oct 17 23:29	2° \mathcal{B} 55'43 33.69110 AU
direct	8721 Dec 28 03:03	20° Υ 30'35		opposition	8727 Oct 20 04:44	2° \mathcal{B} 52'32 -3°02'52
evening set	8722 Mar 26 09:50	22° Υ 13'31		direct	8728 Jan 09 08:01	1° \mathcal{B} 37'54
				evening set	8728 Apr 06 02:41	3° \mathcal{B} 15'50
conjunction	8722 Apr 10 18:46	22° Υ 44'40	0°01'10			
minimum elong	8722 Apr 10 18:46	22° Υ 44'40	0°01'06	conjunction	8728 Apr 21 02:26	3° \mathcal{B} 44'52 -3°07'38
behind sun begin	8722 Apr 10 12:24	22° Υ 44'09		minimum elong	8728 Apr 21 02:20	3° \mathcal{B} 44'52 3°07'44
behind sun end	8722 Apr 11 01:09	22° Υ 45'11		max. Earth dist.	8728 Apr 23 07:44	3° \mathcal{B} 49'12 35.81426 AU
max. Earth dist.	8722 Apr 12 17:29	22° Υ 48'39	34.37468 AU	morning rise	8728 May 06 01:48	4° \mathcal{B} 13'53
desc. node	8722 Apr 23 09:44	23° Υ 10'20		retrograde	8728 Aug 01 15:36	5° \mathcal{B} 51'49
morning rise	8722 Apr 26 02:43	23° Υ 15'45		min. Earth dist.	8728 Oct 18 23:58	4° \mathcal{B} 41'13 33.94131 AU
retrograde	8722 Jul 22 10:35	24° Υ 57'55		opposition	8728 Oct 21 06:34	4° \mathcal{B} 37'58 -3°34'21
min. Earth dist.	8722 Oct 08 12:26	23° Υ 45'06	32.48938 AU	direct	8729 Jan 10 11:13	3° \mathcal{B} 23'42
opposition	8722 Oct 10 10:49	23° Υ 42'15	-0°16'09	evening set	8729 Apr 08 04:32	5° \mathcal{B} 00'58
direct	8722 Dec 30 11:07	22° Υ 25'48				
evening set	8723 Mar 28 13:21	24° Υ 07'47		conjunction	8729 Apr 23 01:35	5° \mathcal{B} 29'35 -3°37'08
				minimum elong	8729 Apr 23 01:28	5° \mathcal{B} 29'34 3°37'15
conjunction	8723 Apr 12 21:40	24° Υ 38'40	-0°31'37	max. Earth dist.	8729 Apr 25 08:44	5° \mathcal{B} 34'02 36.06507 AU
minimum elong	8723 Apr 12 21:39	24° Υ 38'40	0°31'42	morning rise	8729 May 07 22:00	5° \mathcal{B} 58'09
max. Earth dist.	8723 Apr 14 20:31	24° Υ 42'37	34.60798 AU	retrograde	8729 Aug 03 12:17	7° \mathcal{B} 35'33
morning rise	8723 Apr 28 05:23	25° Υ 09'29		min. Earth dist.	8729 Oct 21 00:16	6° \mathcal{B} 25'18 34.19459 AU
retrograde	8723 Jul 24 13:19	26° Υ 50'51		opposition	8729 Oct 23 07:42	6° \mathcal{B} 22'01 -4°05'10
min. Earth dist.	8723 Oct 10 15:17	25° Υ 38'28	32.72414 AU	direct	8730 Jan 12 15:31	5° \mathcal{B} 08'08
opposition	8723 Oct 12 15:43	25° Υ 35'30	-0°50'39	evening set	8730 Apr 10 06:28	6° \mathcal{B} 44'48
direct	8724 Jan 01 15:36	24° Υ 19'26				
evening set	8724 Mar 29 16:22	26° Υ 00'31		conjunction	8730 Apr 25 00:09	7° \mathcal{B} 12'56 -4°06'01
				minimum elong	8730 Apr 25 00:01	7° \mathcal{B} 12'56 4°06'08
conjunction	8724 Apr 13 23:57	26° Υ 31'05	-1°03'53	max. Earth dist.	8730 Apr 27 07:33	7° \mathcal{B} 17'23 36.31858 AU
minimum elong	8724 Apr 13 23:55	26° Υ 31'05	1°03'57	morning rise	8730 May 09 17:35	7° \mathcal{B} 41'04
max. Earth dist.	8724 Apr 16 00:55	26° Υ 35'12	34.84372 AU	retrograde	8730 Aug 05 10:41	9° \mathcal{B} 17'57
morning rise	8724 Apr 29 06:40	27° Υ 01'36		min. Earth dist.	8730 Oct 22 22:47	8° \mathcal{B} 08'09 34.45057 AU
retrograde	8724 Jul 25 13:23	28° Υ 42'12		opposition	8730 Oct 25 08:09	8° \mathcal{B} 04'46 -4°35'19
min. Earth dist.	8724 Oct 11 19:31	27° Υ 30'07	32.96140 AU	direct	8731 Jan 14 15:57	6° \mathcal{B} 51'16
opposition	8724 Oct 13 20:05	27° Υ 27'10	-1°24'36	evening set	8731 Apr 12 08:06	8° \mathcal{B} 27'21
direct	8725 Jan 02 21:09	26° Υ 11'28				
evening set	8725 Mar 31 19:21	27° Υ 51'41		conjunction	8731 Apr 26 22:22	8° \mathcal{B} 55'01 -4°34'17
				minimum elong	8731 Apr 26 22:13	8° \mathcal{B} 55'01 4°34'25
conjunction	8725 Apr 16 01:31	28° Υ 21'54	-1°35'38	max. Earth dist.	8731 Apr 29 07:49	8° \mathcal{B} 59'36 36.57428 AU
minimum elong	8725 Apr 16 01:28	28° Υ 21'54	1°35'44	morning rise	8731 May 11 12:10	9° \mathcal{B} 22'41
max. Earth dist.	8725 Apr 18 02:39	28° Υ 26'00	35.08192 AU	retrograde	8731 Aug 07 06:34	10° \mathcal{B} 59'07
morning rise	8725 May 01 07:06	28° Υ 52'05		min. Earth dist.	8731 Oct 24 23:03	9° \mathcal{B} 49'37 34.70844 AU
	8725 Jun 10 15:50	0° \mathcal{B}		opposition	8731 Oct 27 08:20	9° \mathcal{B} 46'16 -5°04'47
retrograde	8725 Jul 27 15:39	0° \mathcal{B} 31'57		direct	8732 Jan 16 17:12	8° \mathcal{B} 33'09
	8725 Sep 14 15:13	30° $\mathcal{R}\Upsilon$		evening set	8732 Apr 13 09:33	10° \mathcal{B} 08'42
min. Earth dist.	8725 Oct 13 20:43	29° Υ 20'17	33.20143 AU			
opposition	8725 Oct 15 23:30	29° Υ 17'12	-1°57'58	conjunction	8732 Apr 27 19:52	10° \mathcal{B} 35'53 -5°01'56
direct	8726 Jan 05 00:55	28° Υ 01'51		minimum elong	8732 Apr 27 19:43	10° \mathcal{B} 35'52 5°02'04
evening set	8726 Apr 02 21:59	29° Υ 41'16		max. Earth dist.	8732 Apr 30 05:10	10° \mathcal{B} 40'25 36.83144 AU
	8726 Apr 12 11:43	0° \mathcal{B}		morning rise	8732 May 12 05:56	11° \mathcal{B} 03'02
				retrograde	8732 Aug 08 05:08	12° \mathcal{B} 39'05
conjunction	8726 Apr 18 02:29	0° \mathcal{B} 11'07	-2°06'51	min. Earth dist.	8732 Oct 25 20:50	11° \mathcal{B} 29'59 34.96751 AU
minimum elong	8726 Apr 18 02:24	0° \mathcal{B} 11'07	2°06'58	opposition	8732 Oct 28 07:54	11° \mathcal{B} 26'33 -5°33'33
max. Earth dist.	8726 Apr 20 05:38	0° \mathcal{B} 15'20	35.32279 AU	direct	8733 Jan 17 15:48	10° \mathcal{B} 13'48
morning rise	8726 May 03 06:21	0° \mathcal{B} 40'56		evening set	8733 Apr 15 10:55	11° \mathcal{B} 48'52

conjunction	8733 Apr 29 17:06	12°8'15"32 -5°28'56	retrograde	8739 Aug 19 20:38	23°8'45"35
minimum elong	8733 Apr 29 16:56	12°8'15"31 5°29'05	min. Earth dist.	8739 Nov 07 00:45	22°8'38"31 36.77108 AU
max. Earth dist.	8733 May 02 03:45	12°8'20"09 37.08924 AU	opposition	8739 Nov 09 15:04	22°8'35"01 -8°35'39
morning rise	8733 May 13 23:03	12°8'42"12	direct	8740 Jan 30 03:57	21°8'24"31
retrograde	8733 Aug 10 02:49	14°8'17"51	evening set	8740 Apr 27 14:43	22°8'56"56
min. Earth dist.	8733 Oct 27 20:11	13°8'09"02 35.22710 AU			
opposition	8733 Oct 30 06:59	13°8'05"39 -6°01'37	conjunction	8740 May 10 08:28	23°8'19"42 -8°20'17
direct	8734 Jan 19 13:57	11°8'53"16	minimum elong	8740 May 10 08:15	23°8'19"41 8°20'28
evening set	8734 Apr 17 12:08	13°8'27"53	max. Earth dist.	8740 May 12 22:04	23°8'24"19 38.87848 AU
			morning rise	8740 May 23 02:17	23°8'42"28
conjunction	8734 May 01 13:56	13°8'54"01 -5°55'19	retrograde	8740 Aug 20 15:06	25°8'16"08
minimum elong	8734 May 01 13:45	13°8'54"00 5°55'28	min. Earth dist.	8740 Nov 07 20:32	24°8'09"18 37.02786 AU
max. Earth dist.	8734 May 04 00:48	13°8'58"37 37.34714 AU	opposition	8740 Nov 10 10:51	24°8'05"49 -8°58'54
morning rise	8734 May 15 15:25	14°8'20"10	direct	8741 Jan 30 23:19	22°8'55"38
	8734 Jun 07 19:37	15°8'	evening set	8741 Apr 29 14:21	24°8'27"48
retrograde	8734 Aug 11 23:20	15°8'55"27			
	8734 Oct 20 05:28	15°8'8"	conjunction	8741 May 12 02:03	24°8'49"58 -8°42'13
min. Earth dist.	8734 Oct 29 17:49	14°8'46"59 35.48630 AU	minimum elong	8741 May 12 01:50	24°8'49"57 8°42'22
opposition	8734 Nov 01 05:32	14°8'43"33 -6°29'01	max. Earth dist.	8741 May 14 16:20	24°8'54"36 39.13349 AU
direct	8735 Jan 21 14:32	13°8'31"31	morning rise	8741 May 24 13:39	25°8'12"09
	8735 Apr 16 09:18	15°8'	retrograde	8741 Aug 22 08:05	26°8'45"38
evening set	8735 Apr 19 13:13	15°8'05"43	min. Earth dist.	8741 Nov 09 14:46	25°8'39"07 37.28494 AU
			opposition	8741 Nov 12 05:50	25°8'35"36 -9°21'27
conjunction	8735 May 03 10:10	15°8'31"19 -6°21'04	direct	8742 Feb 01 19:40	24°8'25"44
minimum elong	8735 May 03 09:58	15°8'31"18 6°21'13	evening set	8742 May 01 13:50	25°8'57"41
max. Earth dist.	8735 May 05 21:06	15°8'35"53 37.60423 AU			
morning rise	8735 May 17 07:05	15°8'56"55	conjunction	8742 May 13 19:06	26°8'19"16 -9°03'29
retrograde	8735 Aug 13 20:04	17°8'31"53	minimum elong	8742 May 13 18:53	26°8'19"15 9°03'41
min. Earth dist.	8735 Oct 31 15:32	16°8'23"43 35.74479 AU	max. Earth dist.	8742 May 16 09:19	26°8'23"52 39.38866 AU
opposition	8735 Nov 03 03:44	16°8'20"16 -6°55'43	morning rise	8742 May 26 00:33	26°8'40"51
direct	8736 Jan 23 13:17	15°8'08"34	retrograde	8742 Aug 24 01:50	28°8'14"11
evening set	8736 Apr 20 14:00	16°8'42"21	min. Earth dist.	8742 Nov 11 08:39	27°8'08"00 37.54221 AU
			opposition	8742 Nov 14 00:37	27°8'04"27 -9°43'20
conjunction	8736 May 04 06:09	17°8'07"25 -6°46'11	direct	8743 Feb 03 14:27	25°8'54"55
minimum elong	8736 May 04 05:58	17°8'07"24 6°46'21	evening set	8743 May 03 12:57	27°8'26"41
max. Earth dist.	8736 May 06 18:02	17°8'12"02 37.86042 AU			
morning rise	8736 May 17 21:59	17°8'32"29	conjunction	8743 May 15 11:50	27°8'47"39 -9°24'08
retrograde	8736 Aug 14 13:36	19°8'07"07	minimum elong	8743 May 15 11:37	27°8'47"38 9°24'19
min. Earth dist.	8736 Nov 01 13:26	17°8'59"12 36.00217 AU	max. Earth dist.	8743 May 18 03:23	27°8'52"20 39.64371 AU
opposition	8736 Nov 04 01:23	17°8'55"47 -7°21'44	morning rise	8743 May 27 10:38	28°8'08"38
direct	8737 Jan 24 13:32	16°8'44"24	retrograde	8743 Aug 25 15:41	29°8'41"52
evening set	8737 Apr 22 14:36	18°8'17"48	min. Earth dist.	8743 Nov 13 03:30	28°8'35"56 37.79898 AU
			opposition	8743 Nov 15 19:01	28°8'32"25 -10°04'31
conjunction	8737 May 06 01:23	18°8'42"17 -7°10'40	direct	8744 Feb 05 11:10	27°8'23"12
minimum elong	8737 May 06 01:10	18°8'42"16 7°10'49	evening set	8744 May 04 12:06	28°8'54"48
max. Earth dist.	8737 May 08 12:39	18°8'46"49 38.11551 AU			
morning rise	8737 May 19 12:13	19°8'06"48	conjunction	8744 May 16 04:08	29°8'15"10 -9°44'09
retrograde	8737 Aug 16 07:56	20°8'41"08	minimum elong	8744 May 16 03:55	29°8'15"09 9°44'21
min. Earth dist.	8737 Nov 03 09:13	19°8'33"32 36.25873 AU	max. Earth dist.	8744 May 18 18:57	29°8'19"46 39.89808 AU
opposition	8737 Nov 05 22:28	19°8'30"04 -7°47'04	morning rise	8744 May 27 20:20	29°8'35"33
direct	8738 Jan 26 11:20	18°8'18"58		8744 Jun 11 10:26	0°II
evening set	8738 Apr 24 14:51	19°8'52"00	retrograde	8744 Aug 26 07:39	1°II08'42
			min. Earth dist.	8744 Nov 13 20:14	0°II03'05 38.05489 AU
conjunction	8738 May 07 20:19	20°8'15"56 -7°34'31	opposition	8744 Nov 16 12:57	29°8'59"32 -10°25'03
minimum elong	8738 May 07 20:07	20°8'15"55 7°34'41		8744 Nov 16 04:24	30°8'8"
max. Earth dist.	8738 May 10 09:06	20°8'20"33 38.36984 AU	direct	8745 Feb 06 05:47	28°8'50"38
morning rise	8738 May 21 01:36	20°8'39"52		8745 Apr 23 05:47	0°II
retrograde	8738 Aug 18 01:26	22°8'13"57	evening set	8745 May 06 10:55	0°II22'05
min. Earth dist.	8738 Nov 05 06:18	21°8'06"33 36.51484 AU			
opposition	8738 Nov 07 19:00	21°8'03"07 -8°11'42	conjunction	8745 May 17 20:10	0°II41'50 -10°03'34
direct	8739 Jan 28 08:50	19°8'52"20	minimum elong	8745 May 17 19:57	0°II41'49 10°03'45
evening set	8739 Apr 26 15:00	21°8'25"02	max. Earth dist.	8745 May 20 12:05	0°II46'29 40.15114 AU
			morning rise	8745 May 29 05:30	1°II01'36
conjunction	8739 May 09 14:40	21°8'48"23 -7°57'43	retrograde	8745 Aug 28 00:35	2°II34'42
minimum elong	8739 May 09 14:27	21°8'48"22 7°57'53	min. Earth dist.	8745 Nov 15 14:52	1°II29'17 38.30917 AU
max. Earth dist.	8739 May 12 03:09	21°8'52"57 38.62405 AU	opposition	8745 Nov 18 06:40	1°II25'48 -10°44'56
morning rise	8739 May 22 14:18	22°8'11"44	direct	8746 Feb 07 22:59	0°II17'13

evening set	8746 May 08 09:49	1°II48'32		min. Earth dist.	8752 Nov 25 08:04	11°II07'40	40.01823 AU
				opposition	8752 Nov 27 23:35	11°II04'17	-12°47'05
conjunction	8746 May 19 11:57	2°II07'40	-10°22'22	direct	8753 Feb 17 18:44	9°II57'24	
minimum elong	8746 May 19 11:44	2°II07'39	10°22'34	evening set	8753 May 19 21:10	11°II28'15	
max. Earth dist.	8746 May 22 03:18	2°II12'15	40.40229 AU				
morning rise	8746 May 30 14:07	2°II26'49		conjunction	8753 May 28 16:33	11°II42'52	-12°18'07
retrograde	8746 Aug 29 16:53	3°II59'51		minimum elong	8753 May 28 16:22	11°II42'51	12°18'20
min. Earth dist.	8746 Nov 17 07:21	2°II54'43	38.56111 AU	max. Earth dist.	8753 May 31 08:05	11°II47'16	42.08950 AU
opposition	8746 Nov 19 23:44	2°II51'14	-11°04'12	morning rise	8753 Jun 06 11:56	11°II57'30	
direct	8747 Feb 09 15:34	1°II42'55		retrograde	8753 Sep 07 18:58	13°II30'28	
evening set	8747 May 10 08:34	3°II14'08		min. Earth dist.	8753 Nov 26 22:14	12°II26'42	40.25515 AU
				opposition	8753 Nov 29 14:11	12°II23'19	-13°02'08
conjunction	8747 May 21 03:22	3°II32'39	-10°40'36	direct	8754 Feb 19 09:56	11°II16'40	
minimum elong	8747 May 21 03:10	3°II32'38	10°40'47	evening set	8754 May 21 18:47	12°II47'33	
max. Earth dist.	8747 May 23 18:27	3°II37'10	40.65081 AU				
morning rise	8747 May 31 22:24	3°II51'10		conjunction	8754 May 30 05:30	13°II01'30	-12°32'24
retrograde	8747 Aug 31 09:53	5°II24'09		minimum elong	8754 May 30 05:18	13°II01'30	12°32'36
min. Earth dist.	8747 Nov 19 00:50	4°II19'13	38.81040 AU	max. Earth dist.	8754 Jun 01 20:25	13°II05'51	42.32395 AU
opposition	8747 Nov 21 16:48	4°II15'46	-11°22'50	morning rise	8754 Jun 07 16:24	13°II15'28	
direct	8748 Feb 11 07:33	3°II07'44		retrograde	8754 Sep 09 08:26	14°II48'31	
evening set	8748 May 11 07:01	4°II38'51		min. Earth dist.	8754 Nov 28 12:08	13°II45'00	40.49095 AU
				opposition	8754 Dec 01 04:29	13°II41'36	-13°16'36
conjunction	8748 May 21 18:30	4°II56'44	-10°58'15	direct	8755 Feb 20 23:24	12°II35'13	
minimum elong	8748 May 21 18:17	4°II56'43	10°58'28	evening set	8755 May 23 16:18	14°II06'10	
max. Earth dist.	8748 May 24 09:58	5°II01'15	40.89652 AU				
morning rise	8748 Jun 01 05:57	5°II14'37		conjunction	8755 May 31 18:21	14°II19'28	-12°46'08
retrograde	8748 Aug 31 23:23	6°II47'33		minimum elong	8755 May 31 18:11	14°II19'27	12°46'21
min. Earth dist.	8748 Nov 19 17:55	5°II42'49	39.05655 AU	max. Earth dist.	8755 Jun 03 10:22	14°II23'51	42.55717 AU
opposition	8748 Nov 22 09:21	5°II39'23	-11°40'53	morning rise	8755 Jun 08 20:23	14°II32'45	
direct	8749 Feb 12 01:52	4°II31'36		retrograde	8755 Sep 10 19:19	16°II05'55	
evening set	8749 May 13 05:30	6°II02'38		min. Earth dist.	8755 Nov 30 03:04	15°II02'35	40.72515 AU
				opposition	8755 Dec 02 18:37	14°II59'15	-13°30'30
conjunction	8749 May 23 09:13	6°II19'52	-11°15'21	direct	8756 Feb 22 15:24	13°II53'08	
minimum elong	8749 May 23 09:01	6°II19'51	11°15'33	evening set	8756 May 24 13:47	15°II24'11	
max. Earth dist.	8749 May 25 23:35	6°II24'17	41.13917 AU				
morning rise	8749 Jun 02 13:10	6°II37'06		conjunction	8756 Jun 01 06:43	15°II36'47	-12°59'20
retrograde	8749 Sep 02 13:56	8°II10'00		minimum elong	8756 Jun 01 06:32	15°II36'46	12°59'33
min. Earth dist.	8749 Nov 21 09:20	7°II05'29	39.29991 AU	max. Earth dist.	8756 Jun 03 21:45	15°II41'06	42.78869 AU
opposition	8749 Nov 24 01:21	7°II02'03	-11°58'20	morning rise	8756 Jun 08 23:43	15°II49'24	
direct	8750 Feb 13 18:13	5°II54'29		retrograde	8756 Sep 11 07:44	17°II22'43	
evening set	8750 May 15 03:38	7°II25'26		min. Earth dist.	8756 Nov 30 15:52	16°II19'40	40.95740 AU
				opposition	8756 Dec 03 08:22	16°II16'18	-13°43'51
conjunction	8750 May 24 23:40	7°II42'01	-11°31'53	direct	8757 Feb 23 05:23	15°II10'26	
minimum elong	8750 May 24 23:27	7°II42'00	11°32'06	evening set	8757 May 26 11:18	16°II41'37	
max. Earth dist.	8750 May 27 14:57	7°II46'29	41.37920 AU				
morning rise	8750 Jun 03 19:44	7°II58'37		conjunction	8757 Jun 02 19:03	16°II53'32	-13°12'01
retrograde	8750 Sep 04 01:01	9°II31'30		minimum elong	8757 Jun 02 18:53	16°II53'31	13°12'15
min. Earth dist.	8750 Nov 23 02:13	8°II27'06	39.54086 AU	max. Earth dist.	8757 Jun 05 10:39	16°II57'51	43.01787 AU
opposition	8750 Nov 25 17:09	8°II23'44	-12°15'11	morning rise	8757 Jun 10 02:51	17°II05'28	
direct	8751 Feb 15 13:16	7°II16'23		retrograde	8757 Sep 12 20:57	18°II38'58	
evening set	8751 May 17 01:38	8°II47'16		min. Earth dist.	8757 Dec 02 06:41	17°II36'04	41.18703 AU
				opposition	8757 Dec 04 21:48	17°II32'47	-13°56'39
conjunction	8751 May 26 13:32	9°II03'12	-11°47'52	direct	8758 Feb 24 19:11	16°II27'11	
minimum elong	8751 May 26 13:20	9°II03'11	11°48'04	evening set	8758 May 28 09:04	17°II58'31	
max. Earth dist.	8751 May 29 04:04	9°II07'36	41.61725 AU				
morning rise	8751 Jun 05 01:32	9°II19'09		conjunction	8758 Jun 04 07:13	18°II09'44	-13°24'12
retrograde	8751 Sep 05 15:02	10°II52'01		minimum elong	8758 Jun 04 07:02	18°II09'43	13°24'25
min. Earth dist.	8751 Nov 24 16:28	9°II47'52	39.78010 AU	max. Earth dist.	8758 Jun 06 22:07	18°II14'00	43.24424 AU
opposition	8751 Nov 27 08:30	9°II44'27	-12°31'26	morning rise	8758 Jun 11 05:19	18°II20'58	
direct	8752 Feb 17 05:05	8°II37'20		retrograde	8758 Sep 14 11:03	19°II54'40	
evening set	8752 May 17 23:25	10°II08'11		min. Earth dist.	8758 Dec 03 19:42	18°II52'00	41.41336 AU
				opposition	8758 Dec 06 10:58	18°II48'43	-14°08'57
conjunction	8752 May 27 03:11	10°II23'27	-12°03'16	direct	8759 Feb 26 06:35	17°II43'23	
minimum elong	8752 May 27 02:58	10°II23'26	12°03'29	evening set	8759 May 30 06:42	19°II14'54	
max. Earth dist.	8752 May 29 18:21	10°II27'52	41.85384 AU				
morning rise	8752 Jun 05 07:04	10°II38'45		conjunction	8759 Jun 05 18:56	19°II25'24	-13°35'55
retrograde	8752 Sep 06 06:21	12°II11'40		minimum elong	8759 Jun 05 18:47	19°II25'23	13°36'09

max. Earth dist.	8759 Jun 08 09:05	19°II29'34	43.46699 AU	conjunction	8766 Jun 13 23:06	27°II57'10	-14°45'03
morning rise	8759 Jun 12 07:14	19°II35'54		minimum elong	8766 Jun 13 22:59	27°II57'09	14°45'17
retrograde	8759 Sep 16 00:35	21°II09'49		morning rise	8766 Jun 16 18:02	28°II01'31	
min. Earth dist.	8759 Dec 05 09:29	20°II07'20	41.63598 AU	max. Earth dist.	8766 Jun 16 10:24	28°II01'01	44.92720 AU
opposition	8759 Dec 08 00:05	20°II04'06	-14°20'45	retrograde	8766 Sep 24 02:39	29°II38'09	
direct	8760 Feb 27 17:47	18°II59'00		min. Earth dist.	8766 Dec 13 22:51	28°II36'43	43.09601 AU
evening set	8760 May 31 04:45	20°II30'42		opposition	8766 Dec 16 11:07	28°II33'41	-15°30'00
				direct	8767 Mar 08 07:02	27°II29'56	
conjunction	8760 Jun 06 06:45	20°II40'29	-13°47'09	evening set	8767 Jun 13 11:41	29°II04'52	
minimum elong	8760 Jun 06 06:36	20°II40'28	13°47'22				
max. Earth dist.	8760 Jun 08 21:06	20°II44'39	43.68587 AU	conjunction	8767 Jun 15 08:57	29°II07'48	-14°53'07
morning rise	8760 Jun 12 08:41	20°II50'14		minimum elong	8767 Jun 15 08:50	29°II07'48	14°53'21
retrograde	8760 Sep 16 09:47	22°II24'24		morning rise	8767 Jun 17 06:02	29°II10'44	
min. Earth dist.	8760 Dec 05 23:11	21°II22'03	41.85434 AU	max. Earth dist.	8767 Jun 17 21:05	29°II11'42	45.12560 AU
opposition	8760 Dec 08 12:46	21°II18'53	-14°32'04		8767 Jul 20 15:33	0°☾	
direct	8761 Feb 28 08:28	20°II14'00		retrograde	8767 Sep 25 09:15	0°☾48'22	
evening set	8761 Jun 02 02:58	21°II45'55			8767 Dec 04 14:24	30°☿II	
				min. Earth dist.	8767 Dec 15 11:03	29°II47'03	43.29442 AU
conjunction	8761 Jun 07 18:07	21°II54'56	-13°57'56	opposition	8767 Dec 17 22:06	29°II44'04	-15°38'00
minimum elong	8761 Jun 07 17:58	21°II54'56	13°58'11	direct	8768 Mar 08 20:59	28°II40'31	
max. Earth dist.	8761 Jun 10 06:45	21°II58'59	43.90058 AU		8768 Jun 04 03:13	0°☾	
morning rise	8761 Jun 13 09:15	22°II03'56					
retrograde	8761 Sep 17 19:44	23°II38'20		conjunction	8768 Jun 15 18:42	0°☾17'57	-15°00'44
min. Earth dist.	8761 Dec 07 11:23	22°II36'11	42.06863 AU	minimum elong	8768 Jun 15 18:37	0°☾17'56	15°00'59
opposition	8761 Dec 10 01:10	22°II33'00	-14°42'55	max. Earth dist.	8768 Jun 18 05:46	0°☾21'46	45.32154 AU
direct	8762 Mar 01 22:10	21°II28'19		retrograde	8768 Sep 25 18:49	1°☾58'05	
evening set	8762 Jun 04 01:24	23°II00'30		min. Earth dist.	8768 Dec 15 21:06	0°☾56'59	43.49008 AU
				opposition	8768 Dec 18 08:39	0°☾53'59	-15°45'34
conjunction	8762 Jun 09 05:16	23°II08'43	-14°08'17		8769 Feb 09 18:42	30°☿II	
minimum elong	8762 Jun 09 05:07	23°II08'42	14°08'30	direct	8769 Mar 10 08:29	29°II50'38	
max. Earth dist.	8762 Jun 11 18:21	23°II12'46	44.11134 AU		8769 Apr 07 07:28	0°☾	
morning rise	8762 Jun 14 09:03	23°II16'55					
retrograde	8762 Sep 19 05:28	24°II51'37		conjunction	8769 Jun 17 04:16	1°☾27'38	-15°07'57
min. Earth dist.	8762 Dec 09 01:04	23°II49'32	42.27922 AU	minimum elong	8769 Jun 17 04:09	1°☾27'37	15°08'11
opposition	8762 Dec 11 13:20	23°II46'27	-14°53'18	max. Earth dist.	8769 Jun 19 15:03	1°☾31'24	45.51442 AU
direct	8763 Mar 03 12:22	22°II41'57		retrograde	8769 Sep 27 06:23	3°☾07'22	
evening set	8763 Jun 06 00:26	24°II14'26		min. Earth dist.	8769 Dec 17 09:01	2°☾06'22	43.68246 AU
				opposition	8769 Dec 19 19:11	2°☾03'27	-15°52'42
conjunction	8763 Jun 10 16:06	24°II21'48	-14°18'10	direct	8770 Mar 11 18:30	1°☾00'19	
minimum elong	8763 Jun 10 15:58	24°II21'47	14°18'24				
max. Earth dist.	8763 Jun 13 04:25	24°II25'47	44.31894 AU	conjunction	8770 Jun 18 13:45	2°☾36'52	-15°14'45
morning rise	8763 Jun 15 07:39	24°II29'10		minimum elong	8770 Jun 18 13:41	2°☾36'52	15°14'59
retrograde	8763 Sep 20 16:38	26°II04'12		max. Earth dist.	8770 Jun 21 00:22	2°☾40'37	45.70377 AU
min. Earth dist.	8763 Dec 10 12:15	25°II02'19	42.48687 AU	retrograde	8770 Sep 28 16:16	4°☾16'12	
opposition	8763 Dec 13 01:09	24°II59'12	-15°03'11	min. Earth dist.	8770 Dec 18 19:40	3°☾15'22	43.87078 AU
direct	8764 Mar 04 00:51	23°II54'53		opposition	8770 Dec 21 05:22	3°☾12'29	-15°59'25
evening set	8764 Jun 06 23:58	25°II27'44		direct	8771 Mar 13 04:12	2°☾09'32	
conjunction	8764 Jun 11 02:33	25°II34'12	-14°27'35	conjunction	8771 Jun 19 23:00	3°☾45'41	-15°21'11
minimum elong	8764 Jun 11 02:26	25°II34'12	14°27'48	minimum elong	8771 Jun 19 22:55	3°☾45'40	15°21'24
max. Earth dist.	8764 Jun 13 14:36	25°II38'09	44.52383 AU	max. Earth dist.	8771 Jun 22 07:54	3°☾49'18	45.88889 AU
morning rise	8764 Jun 15 05:03	25°II40'41		retrograde	8771 Sep 30 03:00	5°☾24'37	
retrograde	8764 Sep 21 06:13	27°II16'08		min. Earth dist.	8771 Dec 20 06:20	4°☾23'55	44.05475 AU
min. Earth dist.	8764 Dec 11 00:39	26°II14'21	42.69214 AU	opposition	8771 Dec 22 15:32	4°☾21'04	-16°05'45
opposition	8764 Dec 13 12:51	26°II11'18	-15°12'36	direct	8772 Mar 13 11:57	3°☾18'18	
direct	8765 Mar 05 10:14	25°II07'09					
evening set	8765 Jun 09 01:01	26°II40'29		conjunction	8772 Jun 20 08:14	4°☾54'02	-15°27'14
				minimum elong	8772 Jun 20 08:10	4°☾54'02	15°27'28
conjunction	8765 Jun 12 13:01	26°II45'59	-14°36'33	max. Earth dist.	8772 Jun 22 17:18	4°☾57'40	46.06936 AU
minimum elong	8765 Jun 12 12:53	26°II45'58	14°36'46	retrograde	8772 Sep 30 10:31	6°☾32'35	
max. Earth dist.	8765 Jun 15 01:27	26°II49'56	44.72660 AU	min. Earth dist.	8772 Dec 20 18:06	5°☾31'56	44.23369 AU
morning rise	8765 Jun 16 00:51	26°II51'28		opposition	8772 Dec 23 01:31	5°☾29'11	-16°11'43
retrograde	8765 Sep 22 16:35	28°II27'25		direct	8773 Mar 14 23:15	4°☾26'35	
min. Earth dist.	8765 Dec 12 12:10	27°II25'48	42.89512 AU				
opposition	8765 Dec 14 24:00	27°II22'46	-15°21'32	conjunction	8773 Jun 21 17:16	6°☾01'54	-15°32'56
direct	8766 Mar 06 20:26	26°II18'49		minimum elong	8773 Jun 21 17:12	6°☾01'54	15°33'09
evening set	8766 Jun 11 04:02	27°II52'48		max. Earth dist.	8773 Jun 24 00:33	6°☾05'24	46.24493 AU

retrograde	8773 Oct 01 17:55	7°☾40'03		direct	8782 Mar 25 06:33	14°☾19'50	
min. Earth dist.	8773 Dec 22 03:26	6°☾39'33	44.40774 AU				
opposition	8773 Dec 24 10:59	6°☾36'48	-16°17'19	conjunction	8782 Jul 01 17:32	15°☾51'56	-16°07'56
direct	8774 Mar 16 10:24	5°☾34'20		minimum elong	8782 Jul 01 17:31	15°☾51'56	16°08'10
				max. Earth dist.	8782 Jul 03 20:47	15°☾55'05	47.66847 AU
conjunction	8774 Jun 23 02:01	7°☾09'14	-15°38'17	retrograde	8782 Oct 11 22:27	17°☾27'02	
minimum elong	8774 Jun 23 01:58	7°☾09'14	15°38'31	min. Earth dist.	8783 Jan 01 15:42	16°☾27'29	45.82238 AU
max. Earth dist.	8774 Jun 25 08:53	7°☾12'42	46.41575 AU	opposition	8783 Jan 03 16:58	16°☾25'06	-16°50'49
retrograde	8774 Oct 03 03:31	8°☾47'00		direct	8783 Mar 26 13:45	15°☾24'01	
min. Earth dist.	8774 Dec 23 14:40	7°☾46'32	44.57737 AU				
opposition	8774 Dec 25 20:32	7°☾43'52	-16°22'33	conjunction	8783 Jul 03 00:47	16°☾55'49	-16°10'06
direct	8775 Mar 17 21:03	6°☾41'33		minimum elong	8783 Jul 03 00:48	16°☾55'49	16°10'19
				max. Earth dist.	8783 Jul 05 02:17	16°☾58'51	47.81021 AU
conjunction	8775 Jun 24 10:31	8°☾16'03	-15°43'16	retrograde	8783 Oct 13 04:08	18°☾30'38	
minimum elong	8775 Jun 24 10:28	8°☾16'02	15°43'29	min. Earth dist.	8784 Jan 02 23:42	17°☾31'12	45.96217 AU
max. Earth dist.	8775 Jun 26 17:01	8°☾19'28	46.58262 AU	opposition	8784 Jan 05 00:53	17°☾28'50	-16°52'46
retrograde	8775 Oct 04 13:08	9°☾53'25		direct	8784 Mar 26 21:41	16°☾27'53	
min. Earth dist.	8775 Dec 24 23:56	8°☾53'04	44.74320 AU				
opposition	8775 Dec 27 05:43	8°☾50'26	-16°27'24	conjunction	8784 Jul 03 08:10	17°☾59'23	-16°11'57
direct	8776 Mar 18 05:26	7°☾48'14		minimum elong	8784 Jul 03 08:10	17°☾59'23	16°12'10
				max. Earth dist.	8784 Jul 05 09:11	18°☾02'22	47.94711 AU
conjunction	8776 Jun 24 18:47	9°☾22'20	-15°47'53	retrograde	8784 Oct 13 09:19	19°☾33'54	
minimum elong	8776 Jun 24 18:44	9°☾22'20	15°48'08	min. Earth dist.	8785 Jan 03 09:30	18°☾34'30	46.09691 AU
max. Earth dist.	8776 Jun 27 00:06	9°☾25'40	46.74605 AU	opposition	8785 Jan 05 08:39	18°☾32'13	-16°54'26
retrograde	8776 Oct 04 22:55	10°☾59'20		direct	8785 Mar 28 08:41	17°☾31'24	
min. Earth dist.	8776 Dec 25 09:23	9°☾59'06	44.90604 AU				
opposition	8776 Dec 27 14:41	9°☾56'29	-16°31'52	conjunction	8785 Jul 04 15:28	19°☾02'35	-16°13'31
direct	8777 Mar 19 12:34	8°☾54'26		minimum elong	8785 Jul 04 15:30	19°☾02'36	16°13'45
				max. Earth dist.	8785 Jul 06 15:22	19°☾05'30	48.07906 AU
conjunction	8777 Jun 26 03:02	10°☾28'10	-15°52'08	retrograde	8785 Oct 14 16:55	20°☾36'48	
minimum elong	8777 Jun 26 03:00	10°☾28'10	15°52'21	min. Earth dist.	8786 Jan 04 17:17	19°☾37'29	46.22650 AU
max. Earth dist.	8777 Jun 28 08:56	10°☾31'31	46.90670 AU	opposition	8786 Jan 06 16:10	19°☾35'14	-16°55'48
retrograde	8777 Oct 06 04:15	12°☾04'48		direct	8786 Mar 29 17:45	18°☾34'30	
min. Earth dist.	8777 Dec 26 19:09	11°☾04'39	45.06598 AU				
opposition	8777 Dec 28 23:29	11°☾02'05	-16°35'57	conjunction	8786 Jul 05 22:21	20°☾05'22	-16°14'48
direct	8778 Mar 20 22:26	10°☾00'12		minimum elong	8786 Jul 05 22:22	20°☾05'22	16°15'01
				max. Earth dist.	8786 Jul 07 20:44	20°☾08'11	48.20600 AU
conjunction	8778 Jun 27 10:55	11°☾33'35	-15°56'00	retrograde	8786 Oct 16 01:58	21°☾39'17	
minimum elong	8778 Jun 27 10:52	11°☾33'35	15°56'14	min. Earth dist.	8787 Jan 06 02:01	20°☾39'59	46.35149 AU
max. Earth dist.	8778 Jun 29 15:25	11°☾36'50	47.06472 AU	opposition	8787 Jan 07 23:39	20°☾37'48	-16°56'52
retrograde	8778 Oct 07 10:41	13°☾09'53		direct	8787 Mar 30 23:56	19°☾37'10	
min. Earth dist.	8778 Dec 28 03:12	12°☾09'54	45.22336 AU				
opposition	8778 Dec 30 08:02	12°☾07'19	-16°39'39	conjunction	8787 Jul 07 05:17	21°☾07'43	-16°15'48
direct	8779 Mar 22 07:43	11°☾05'34		minimum elong	8787 Jul 07 05:19	21°☾07'43	16°16'02
				max. Earth dist.	8787 Jul 09 03:54	21°☾10'31	48.32872 AU
conjunction	8779 Jun 28 18:44	12°☾38'37	-15°59'31	retrograde	8787 Oct 17 08:19	22°☾41'18	
minimum elong	8779 Jun 28 18:44	12°☾38'37	15°59'44	min. Earth dist.	8788 Jan 07 10:12	21°☾42'03	46.47243 AU
max. Earth dist.	8779 Jun 30 23:24	12°☾41'53	47.22014 AU	opposition	8788 Jan 09 06:54	21°☾39'54	-16°57'38
retrograde	8779 Oct 08 18:56	14°☾14'37		direct	8788 Mar 31 06:47	20°☾39'21	
min. Earth dist.	8779 Dec 29 13:14	13°☾14'43	45.37807 AU				
opposition	8779 Dec 31 16:37	13°☾12'12	-16°42'58	conjunction	8788 Jul 07 11:52	22°☾09'36	-16°16'29
direct	8780 Mar 22 17:36	12°☾10'38		minimum elong	8788 Jul 07 11:54	22°☾09'36	16°16'41
				max. Earth dist.	8788 Jul 09 08:49	22°☾12'18	48.44785 AU
conjunction	8780 Jun 29 02:25	13°☾43'20	-16°02'40	retrograde	8788 Oct 17 14:14	23°☾42'54	
minimum elong	8780 Jun 29 02:24	13°☾43'20	16°02'53	min. Earth dist.	8789 Jan 07 17:07	22°☾43'43	46.59007 AU
max. Earth dist.	8780 Jul 01 06:44	13°☾46'34	47.37294 AU	opposition	8789 Jan 09 13:56	22°☾41'35	-16°58'05
retrograde	8780 Oct 09 03:33	15°☾19'02		direct	8789 Apr 01 12:33	21°☾41'07	
min. Earth dist.	8780 Dec 29 21:20	14°☾19'18	45.52976 AU				
opposition	8781 Jan 01 00:51	14°☾16'47	-16°45'56	conjunction	8789 Jul 08 18:28	23°☾11'05	-16°16'52
direct	8781 Mar 24 02:11	13°☾15'22		minimum elong	8789 Jul 08 18:31	23°☾11'05	16°17'05
				max. Earth dist.	8789 Jul 10 15:32	23°☾13'47	48.56379 AU
conjunction	8781 Jun 30 09:57	14°☾47'46	-16°05'28	retrograde	8789 Oct 18 18:58	24°☾44'06	
minimum elong	8781 Jun 30 09:57	14°☾47'47	16°05'41	min. Earth dist.	8790 Jan 09 01:40	23°☾44'57	46.70467 AU
max. Earth dist.	8781 Jul 02 12:57	14°☾50'54	47.52249 AU	opposition	8790 Jan 10 20:48	23°☾42'53	-16°58'12
retrograde	8781 Oct 10 14:49	16°☾23'10		direct	8790 Apr 02 20:45	22°☾42'31	
min. Earth dist.	8781 Dec 31 06:19	15°☾23'32	45.67810 AU				
opposition	8782 Jan 02 08:55	15°☾21'05	-16°48'32	conjunction	8790 Jul 10 00:57	24°☾12'13	-16°16'55

minimum elong	8790 Jul 10 01:01	24°☿12'13	16°17'08	conjunction	8798 Jul 18 01:45	2°♂14'07	-16°07'09
max. Earth dist.	8790 Jul 11 21:25	24°☿14'53	48.67706 AU	minimum elong	8798 Jul 18 01:51	2°♂14'08	16°07'21
retrograde	8790 Oct 20 00:36	25°♂44'59		max. Earth dist.	8798 Jul 19 14:21	2°♂16'16	49.45537 AU
min. Earth dist.	8791 Jan 10 07:54	24°♂45'57	46.81651 AU	retrograde	8798 Oct 28 06:50	3°♂45'15	
opposition	8791 Jan 12 03:32	24°♂43'52	-16°58'01	min. Earth dist.	8799 Jan 18 18:19	2°♂46'43	47.57602 AU
direct	8791 Apr 04 05:24	23°♂43'36		opposition	8799 Jan 20 06:20	2°♂45'02	-16°46'03
				direct	8799 Apr 12 02:59	1°♂45'40	
conjunction	8791 Jul 11 07:04	25°♂13'03	-16°16'41				
minimum elong	8791 Jul 11 07:07	25°♂13'03	16°16'54	conjunction	8799 Jul 19 07:25	3°♂13'29	-16°04'47
max. Earth dist.	8791 Jul 13 02:27	25°♂15'38	48.78754 AU	minimum elong	8799 Jul 19 07:31	3°♂13'30	16°04'59
retrograde	8791 Oct 21 09:56	26°♂45'35		max. Earth dist.	8799 Jul 20 19:52	3°♂15'37	49.53147 AU
min. Earth dist.	8792 Jan 11 15:47	25°♂46'36	46.92562 AU	retrograde	8799 Oct 29 10:25	4°♂44'24	
opposition	8792 Jan 13 10:20	25°♂44'35	-16°57'30	min. Earth dist.	8800 Jan 20 02:09	3°♂45'51	47.64958 AU
direct	8792 Apr 04 10:51	24°♂44'27		opposition	8800 Jan 21 12:19	3°♂44'14	-16°43'24
				direct	8800 Apr 12 09:32	2°♂44'56	
conjunction	8792 Jul 11 13:27	26°♂13'40	-16°16'08				
minimum elong	8792 Jul 11 13:32	26°♂13'40	16°16'20	conjunction	8800 Jul 19 13:07	4°♂12'33	-16°02'11
max. Earth dist.	8792 Jul 13 09:13	26°♂16'16	48.89526 AU	minimum elong	8800 Jul 19 13:13	4°♂12'34	16°02'23
retrograde	8792 Oct 21 17:02	27°♂45'58		max. Earth dist.	8800 Jul 21 00:35	4°♂14'38	49.60356 AU
min. Earth dist.	8793 Jan 11 23:03	26°♂47'05	47.03160 AU	retrograde	8800 Oct 29 13:51	5°♂43'17	
opposition	8793 Jan 13 16:47	26°♂45'06	-16°56'41	min. Earth dist.	8801 Jan 20 07:33	4°♂44'47	47.71934 AU
direct	8793 Apr 05 15:54	25°♂45'06		opposition	8801 Jan 21 17:53	4°♂43'11	-16°40'30
				direct	8801 Apr 13 17:54	3°♂43'55	
conjunction	8793 Jul 12 19:35	27°♂14'06	-16°15'17				
minimum elong	8793 Jul 12 19:38	27°♂14'06	16°15'30	conjunction	8801 Jul 20 18:36	5°♂11'21	-15°59'18
max. Earth dist.	8793 Jul 14 13:38	27°♂16'36	48.99977 AU	minimum elong	8801 Jul 20 18:44	5°♂11'21	15°59'30
retrograde	8793 Oct 22 23:47	28°♂46'12		max. Earth dist.	8801 Jul 22 04:47	5°♂13'20	49.67202 AU
min. Earth dist.	8794 Jan 13 05:41	27°♂47'25	47.13418 AU	retrograde	8801 Oct 30 21:20	6°♂41'54	
opposition	8794 Jan 14 23:14	27°♂45'27	-16°55'33	opposition	8802 Jan 22 23:37	5°♂41'51	-16°37'19
direct	8794 Apr 06 20:29	26°♂45'35		min. Earth dist.	8802 Jan 21 14:39	5°♂43'24	47.78577 AU
				direct	8802 Apr 15 00:38	4°♂42'40	
conjunction	8794 Jul 14 01:38	28°♂14'24	-16°14'10				
minimum elong	8794 Jul 14 01:44	28°♂14'24	16°14'23	conjunction	8802 Jul 22 00:02	6°♂09'54	-15°56'10
max. Earth dist.	8794 Jul 15 19:35	28°♂16'53	49.10049 AU	minimum elong	8802 Jul 22 00:08	6°♂09'55	15°56'22
retrograde	8794 Oct 24 03:25	29°♂46'19		max. Earth dist.	8802 Jul 23 10:32	6°♂11'55	49.73736 AU
min. Earth dist.	8795 Jan 14 14:02	28°♂47'34	47.23262 AU	retrograde	8802 Nov 01 04:35	7°♂40'17	
opposition	8795 Jan 16 05:43	28°♂45'42	-16°54'10	min. Earth dist.	8803 Jan 22 20:44	6°♂41'49	47.84900 AU
direct	8795 Apr 08 05:05	27°♂45'57		opposition	8803 Jan 24 05:11	6°♂40'18	-16°33'51
				direct	8803 Apr 16 05:01	5°♂41'11	
conjunction	8795 Jul 15 07:47	29°♂14'34	-16°12'46				
minimum elong	8795 Jul 15 07:51	29°♂14'35	16°12'59	conjunction	8803 Jul 23 05:20	7°♂08'15	-15°52'46
max. Earth dist.	8795 Jul 17 00:33	29°♂16'59	49.19698 AU	minimum elong	8803 Jul 23 05:28	7°♂08'16	15°52'57
	8795 Aug 17 21:05	0°♂		max. Earth dist.	8803 Jul 24 14:10	7°♂10'09	49.79973 AU
retrograde	8795 Oct 25 09:20	0°♂46'18		retrograde	8803 Nov 02 12:10	8°♂38'27	
	8796 Jan 04 20:49	30°♂		min. Earth dist.	8804 Jan 24 02:23	7°♂40'03	47.90932 AU
min. Earth dist.	8796 Jan 15 20:28	29°♂47'41	47.32640 AU	opposition	8804 Jan 25 10:39	7°♂38'33	-16°30'07
opposition	8796 Jan 17 11:58	29°♂45'49	-16°52'30	direct	8804 Apr 16 07:41	6°♂39'30	
direct	8796 Apr 08 12:48	28°♂46'11					
	8796 Jul 05 04:28	0°♂		conjunction	8804 Jul 23 10:40	8°♂06'25	-15°49'05
				minimum elong	8804 Jul 23 10:47	8°♂06'26	15°49'17
conjunction	8796 Jul 15 13:48	0°♂14'37	-16°11'08	max. Earth dist.	8804 Jul 24 19:28	8°♂08'19	49.85902 AU
minimum elong	8796 Jul 15 13:54	0°♂14'37	16°11'21	retrograde	8804 Nov 02 14:32	9°♂36'28	
max. Earth dist.	8796 Jul 17 04:57	0°♂16'55	49.28840 AU	min. Earth dist.	8805 Jan 24 09:30	8°♂38'04	47.96634 AU
retrograde	8796 Oct 25 18:12	1°♂46'10		opposition	8805 Jan 25 16:08	8°♂36'38	-16°26'07
min. Earth dist.	8797 Jan 16 04:39	0°♂47'33	47.41495 AU	direct	8805 Apr 17 13:52	7°♂37'40	
opposition	8797 Jan 17 18:18	0°♂45'47	-16°50'36				
	8797 Mar 04 17:01	30°♂		conjunction	8805 Jul 24 15:59	9°♂04'27	-15°45'10
direct	8797 Apr 09 18:17	29°♂46'16		minimum elong	8805 Jul 24 16:08	9°♂04'28	15°45'21
	8797 May 15 01:12	0°♂		max. Earth dist.	8805 Jul 25 23:51	9°♂06'18	49.91504 AU
				retrograde	8805 Nov 03 17:24	10°♂34'21	
conjunction	8797 Jul 16 19:56	1°♂14'29	-16°09'16	opposition	8806 Jan 26 21:17	9°♂34'36	-16°21'52
minimum elong	8797 Jul 16 20:01	1°♂14'29	16°09'27	min. Earth dist.	8806 Jan 25 14:36	9°♂36'02	48.01979 AU
max. Earth dist.	8797 Jul 18 10:41	1°♂16'46	49.37450 AU	direct	8806 Apr 18 20:38	8°♂35'42	
retrograde	8797 Oct 27 00:36	2°♂45'50					
min. Earth dist.	8798 Jan 17 11:43	1°♂47'16	47.49795 AU	conjunction	8806 Jul 25 21:10	10°♂02'22	-15°41'00
opposition	8798 Jan 19 00:18	1°♂45'32	-16°48'27	minimum elong	8806 Jul 25 21:17	10°♂02'23	15°41'11
direct	8798 Apr 10 23:50	0°♂46'06		max. Earth dist.	8806 Jul 27 03:39	10°♂04'08	49.96719 AU

retrograde	8806 Nov 05 00:29	11°Ω32'09		minimum elong	8814 Aug 02 14:10	17°Ω40'39	14°59'50
min. Earth dist.	8807 Jan 26 21:47	10°Ω33'50	48.06921 AU	max. Earth dist.	8814 Aug 03 12:40	17°Ω41'56	50.21257 AU
opposition	8807 Jan 28 02:41	10°Ω32'29	-16°17'21	retrograde	8814 Nov 12 18:38	19°Ω09'29	
direct	8807 Apr 20 02:28	9°Ω33'40		opposition	8815 Feb 04 18:42	18°Ω10'08	-15°33'15
				min. Earth dist.	8815 Feb 03 22:01	18°Ω11'05	48.29025 AU
conjunction	8807 Jul 27 02:27	11°Ω00'12	-15°36'35	direct	8815 Apr 27 15:44	17°Ω11'35	
minimum elong	8807 Jul 27 02:37	11°Ω00'12	15°36'46	evening set	8815 Aug 01 21:56	18°Ω34'42	
max. Earth dist.	8807 Jul 28 08:47	11°Ω01'56	50.01503 AU				
retrograde	8807 Nov 06 06:16	12°Ω29'52		conjunction	8815 Aug 03 18:45	18°Ω37'16	-14°53'28
min. Earth dist.	8808 Jan 28 03:53	11°Ω31'34	48.11379 AU	minimum elong	8815 Aug 03 18:54	18°Ω37'16	14°53'38
opposition	8808 Jan 29 07:56	11°Ω30'15	-16°12'37	morning rise	8815 Aug 05 15:56	18°Ω39'50	
direct	8808 Apr 20 08:07	10°Ω31'30		max. Earth dist.	8815 Aug 04 16:38	18°Ω38'31	50.22595 AU
				retrograde	8815 Nov 13 20:40	20°Ω06'02	
conjunction	8808 Jul 27 07:45	11°Ω57'55	-15°31'58	opposition	8816 Feb 05 23:23	19°Ω06'43	-15°26'40
minimum elong	8808 Jul 27 07:52	11°Ω57'55	15°32'08	min. Earth dist.	8816 Feb 05 02:28	19°Ω07'41	48.30114 AU
max. Earth dist.	8808 Jul 28 11:44	11°Ω59'31	50.05781 AU	direct	8816 Apr 27 22:03	18°Ω08'13	
retrograde	8808 Nov 06 13:42	13°Ω27'27		evening set	8816 Aug 01 08:00	19°Ω30'14	
min. Earth dist.	8809 Jan 28 09:59	12°Ω29'10	48.15315 AU				
opposition	8809 Jan 29 13:01	12°Ω27'55	-16°07'40	conjunction	8816 Aug 03 23:33	19°Ω33'51	-14°47'01
direct	8809 Apr 21 10:10	11°Ω29'12		minimum elong	8816 Aug 03 23:44	19°Ω33'51	14°47'10
				max. Earth dist.	8816 Aug 04 20:12	19°Ω35'01	50.23634 AU
conjunction	8809 Jul 28 13:06	12°Ω55'30	-15°27'08	morning rise	8816 Aug 06 15:35	19°Ω37'30	
minimum elong	8809 Jul 28 13:16	12°Ω55'31	15°27'19	retrograde	8816 Nov 14 02:52	21°Ω02'35	
max. Earth dist.	8809 Jul 29 16:32	12°Ω57'04	50.09510 AU	min. Earth dist.	8817 Feb 05 08:42	20°Ω04'12	48.30908 AU
retrograde	8809 Nov 07 17:54	14°Ω24'54		opposition	8817 Feb 06 04:01	20°Ω03'18	-15°19'49
opposition	8810 Jan 30 18:16	13°Ω25'24	-16°02'31	direct	8817 Apr 29 03:41	19°Ω04'51	
min. Earth dist.	8810 Jan 29 17:18	13°Ω26'34	48.18689 AU	evening set	8817 Aug 01 22:08	20°Ω25'59	
direct	8810 Apr 22 15:17	12°Ω26'44					
				conjunction	8817 Aug 05 04:27	20°Ω30'26	-14°40'19
conjunction	8810 Jul 29 18:10	13°Ω52'54	-15°22'05	minimum elong	8817 Aug 05 04:37	20°Ω30'27	14°40'29
minimum elong	8810 Jul 29 18:19	13°Ω52'54	15°22'16	max. Earth dist.	8817 Aug 06 01:10	20°Ω31'37	50.24374 AU
max. Earth dist.	8810 Jul 30 20:11	13°Ω54'24	50.12711 AU	morning rise	8817 Aug 08 11:13	20°Ω34'55	
	8810 Sep 22 23:09	15°Ω		retrograde	8817 Nov 15 08:19	21°Ω59'08	
retrograde	8810 Nov 08 20:40	15°Ω22'10		opposition	8818 Feb 07 08:39	20°Ω59'55	-15°12'44
	8810 Dec 26 18:48	15°Ω		min. Earth dist.	8818 Feb 06 13:44	21°Ω00'48	48.31366 AU
opposition	8811 Jan 31 23:17	14°Ω22'42	-15°57'08	direct	8818 Apr 30 08:43	20°Ω01'31	
min. Earth dist.	8811 Jan 30 22:22	14°Ω23'51	48.21549 AU	evening set	8818 Aug 02 14:06	21°Ω21'54	
direct	8811 Apr 23 21:41	13°Ω24'03					
				conjunction	8818 Aug 06 09:03	21°Ω27'04	-14°33'24
conjunction	8811 Jul 30 23:12	14°Ω50'06	-15°16'50	minimum elong	8818 Aug 06 09:14	21°Ω27'04	14°33'33
minimum elong	8811 Jul 30 23:21	14°Ω50'06	15°17'01	max. Earth dist.	8818 Aug 07 03:58	21°Ω28'08	50.24764 AU
max. Earth dist.	8811 Jul 31 23:40	14°Ω51'30	50.15418 AU	morning rise	8818 Aug 10 04:34	21°Ω32'16	
	8811 Aug 07 04:31	15°Ω		retrograde	8818 Nov 16 16:28	22°Ω55'43	
retrograde	8811 Nov 10 02:17	16°Ω19'15		opposition	8819 Feb 08 13:21	21°Ω56'34	-15°05'25
min. Earth dist.	8812 Feb 01 05:15	15°Ω20'52	48.23960 AU	min. Earth dist.	8819 Feb 07 19:14	21°Ω57'24	48.31455 AU
opposition	8812 Feb 02 04:18	15°Ω19'48	-15°51'32	direct	8819 May 01 09:33	20°Ω58'13	
	8812 Feb 20 05:45	15°Ω		evening set	8819 Aug 03 07:33	22°Ω17'56	
direct	8812 Apr 24 04:18	14°Ω21'10					
	8812 Jun 24 21:20	15°Ω		conjunction	8819 Aug 07 13:59	22°Ω23'45	-14°26'15
				minimum elong	8819 Aug 07 14:09	22°Ω23'45	14°26'25
conjunction	8812 Jul 31 04:16	15°Ω47'06	-15°11'21	max. Earth dist.	8819 Aug 08 08:31	22°Ω24'48	50.24738 AU
minimum elong	8812 Jul 31 04:26	15°Ω47'06	15°11'31	morning rise	8819 Aug 11 20:58	22°Ω29'35	
max. Earth dist.	8812 Aug 01 04:49	15°Ω48'30	50.17714 AU	retrograde	8819 Nov 17 21:15	23°Ω52'22	
retrograde	8812 Nov 10 08:28	17°Ω16'08		opposition	8820 Feb 09 18:00	22°Ω53'15	-14°57'52
min. Earth dist.	8813 Feb 01 10:36	16°Ω17'45	48.25970 AU	min. Earth dist.	8820 Feb 09 01:48	22°Ω54'00	48.31089 AU
opposition	8813 Feb 02 09:08	16°Ω16'43	-15°45'41	direct	8820 May 01 12:44	21°Ω54'56	
direct	8813 Apr 25 09:04	15°Ω18'06		evening set	8820 Aug 03 02:07	23°Ω14'02	
conjunction	8813 Aug 01 09:06	16°Ω43'56	-15°05'38	conjunction	8820 Aug 07 18:56	23°Ω20'27	-14°18'54
minimum elong	8813 Aug 01 09:15	16°Ω43'56	15°05'48	minimum elong	8820 Aug 07 19:07	23°Ω20'28	14°19'03
max. Earth dist.	8813 Aug 02 07:47	16°Ω45'14	50.19643 AU	max. Earth dist.	8820 Aug 08 12:02	23°Ω21'25	50.24243 AU
retrograde	8813 Nov 11 16:03	18°Ω12'52		morning rise	8820 Aug 12 12:22	23°Ω26'53	
opposition	8814 Feb 03 13:51	17°Ω13'28	-15°39'36	retrograde	8820 Nov 17 23:56	24°Ω49'02	
min. Earth dist.	8814 Feb 02 15:49	17°Ω14'30	48.27651 AU	opposition	8821 Feb 09 22:34	23°Ω49'57	-14°50'08
direct	8814 Apr 26 10:43	16°Ω14'53		min. Earth dist.	8821 Feb 09 06:35	23°Ω50'42	48.30214 AU
				direct	8821 May 02 17:25	22°Ω51'39	
conjunction	8814 Aug 02 14:00	17°Ω40'38	-14°59'40	evening set	8821 Aug 03 21:13	24°Ω10'11	

conjunction	8821 Aug 08 23:48	24°Ω17'08	-14°11'21	retrograde	8827 Nov 25 08:15	1°η23'24
minimum elong	8821 Aug 08 23:59	24°Ω17'08	14°11'29	opposition	8828 Feb 17 06:01	0°η24'14 -13°49'53
max. Earth dist.	8821 Aug 09 14:59	24°Ω18'00	50.23204 AU	min. Earth dist.	8828 Feb 16 21:05	0°η24'38 48.11336 AU
morning rise	8821 Aug 14 03:05	24°Ω24'07			8828 Mar 10 14:57	30°RΩ
retrograde	8821 Nov 19 04:05	25°Ω45'41		direct	8828 May 09 05:09	29°Ω25'47
opposition	8822 Feb 11 03:13	24°Ω46'36	-14°42'11		8828 Jul 06 01:56	0°η
min. Earth dist.	8822 Feb 10 13:24	24°Ω47'15	48.28796 AU	evening set	8828 Aug 07 21:53	0°η41'00
direct	8822 May 04 00:47	23°Ω48'18				
evening set	8822 Aug 04 17:02	25°Ω06'17		conjunction	8828 Aug 15 09:22	0°η51'08 -13°12'33
				minimum elong	8828 Aug 15 09:33	0°η51'09 13°12'41
conjunction	8822 Aug 10 04:48	25°Ω13'44	-14°03'36	max. Earth dist.	8828 Aug 15 17:52	0°η51'37 50.03849 AU
minimum elong	8822 Aug 10 04:59	25°Ω13'45	14°03'45	morning rise	8828 Aug 22 21:54	1°η01'21
max. Earth dist.	8822 Aug 10 19:42	25°Ω14'35	50.21644 AU	retrograde	8828 Nov 25 16:03	2°η19'32
morning rise	8822 Aug 15 17:14	25°Ω21'15		opposition	8829 Feb 17 10:29	1°η20'22 -13°40'21
retrograde	8822 Nov 20 09:25	26°Ω42'15		min. Earth dist.	8829 Feb 17 02:19	1°η20'45 48.07293 AU
opposition	8823 Feb 12 07:46	25°Ω43'09	-14°34'02	direct	8829 May 10 06:58	0°η21'56
min. Earth dist.	8823 Feb 11 18:40	25°Ω43'46	48.26861 AU	evening set	8829 Aug 08 19:28	1°η36'47
direct	8823 May 05 06:56	24°Ω44'50				
evening set	8823 Aug 05 13:03	26°Ω02'17		conjunction	8829 Aug 16 14:11	1°η47'20 -13°03'15
				minimum elong	8829 Aug 16 14:24	1°η47'20 13°03'22
conjunction	8823 Aug 11 09:28	26°Ω10'13	-13°55'39	max. Earth dist.	8829 Aug 16 22:30	1°η47'48 49.99765 AU
minimum elong	8823 Aug 11 09:39	26°Ω10'14	13°55'47	morning rise	8829 Aug 24 09:57	1°η57'56
max. Earth dist.	8823 Aug 11 22:11	26°Ω10'57	50.19598 AU	retrograde	8829 Nov 26 21:08	3°η15'45
morning rise	8823 Aug 17 06:43	26°Ω18'14		opposition	8830 Feb 18 14:58	2°η16'36 -13°30'34
retrograde	8823 Nov 21 17:40	27°Ω38'41		min. Earth dist.	8830 Feb 18 08:16	2°η16'55 48.02909 AU
opposition	8824 Feb 13 12:18	26°Ω39'34	-14°25'40	direct	8830 May 11 10:02	1°η18'11
min. Earth dist.	8824 Feb 13 00:04	26°Ω40'08	48.24474 AU	evening set	8830 Aug 09 17:26	2°η32'42
direct	8824 May 05 08:29	25°Ω41'13				
evening set	8824 Aug 05 09:31	26°Ω58'10		conjunction	8830 Aug 17 19:03	2°η43'39 -12°53'42
				minimum elong	8830 Aug 17 19:14	2°η43'39 12°53'49
conjunction	8824 Aug 11 14:24	27°Ω06'35	-13°47'29	max. Earth dist.	8830 Aug 18 02:19	2°η44'03 49.95346 AU
minimum elong	8824 Aug 11 14:35	27°Ω06'35	13°47'38	morning rise	8830 Aug 25 21:43	2°η54'38
max. Earth dist.	8824 Aug 12 02:46	27°Ω07'17	50.17114 AU	retrograde	8830 Nov 28 00:50	4°η12'07
morning rise	8824 Aug 17 20:04	27°Ω15'02		opposition	8831 Feb 19 19:24	3°η12'59 -13°20'33
retrograde	8824 Nov 21 21:46	28°Ω34'59		min. Earth dist.	8831 Feb 19 12:44	3°η13'18 47.98157 AU
opposition	8825 Feb 13 16:42	27°Ω35'51	-14°17'04	direct	8831 May 12 13:41	2°η14'35
min. Earth dist.	8825 Feb 13 06:08	27°Ω36'21	48.21677 AU	evening set	8831 Aug 10 15:29	3°η28'48
direct	8825 May 06 12:38	26°Ω37'28				
evening set	8825 Aug 06 06:22	27°Ω53'56		conjunction	8831 Aug 18 23:54	3°η40'07 -12°43'57
				minimum elong	8831 Aug 19 00:07	3°η40'08 12°44'04
conjunction	8825 Aug 12 19:12	28°Ω02'48	-13°39'06	max. Earth dist.	8831 Aug 19 05:32	3°η40'26 49.90506 AU
minimum elong	8825 Aug 12 19:24	28°Ω02'49	13°39'14	morning rise	8831 Aug 27 09:34	3°η51'31
max. Earth dist.	8825 Aug 13 06:39	28°Ω03'27	50.14268 AU	retrograde	8831 Nov 29 05:44	5°η08'40
morning rise	8825 Aug 19 08:52	28°Ω11'43		opposition	8832 Feb 21 00:03	4°η09'33 -13°10'20
retrograde	8825 Nov 22 23:36	29°Ω31'10		min. Earth dist.	8832 Feb 20 19:34	4°η09'46 47.92954 AU
opposition	8826 Feb 14 21:05	28°Ω32'01	-14°08'15	direct	8832 May 12 19:45	3°η11'09
min. Earth dist.	8826 Feb 14 10:23	28°Ω32'31	48.18537 AU	evening set	8832 Aug 10 14:01	4°η25'04
direct	8826 May 07 17:48	27°Ω33'37				
evening set	8826 Aug 07 03:08	28°Ω49'38		conjunction	8832 Aug 19 05:08	4°η36'46 -12°34'00
				minimum elong	8832 Aug 19 05:19	4°η36'46 12°34'06
conjunction	8826 Aug 13 23:46	28°Ω58'56	-13°30'29	max. Earth dist.	8832 Aug 19 10:20	4°η37'03 49.85182 AU
minimum elong	8826 Aug 13 23:57	28°Ω58'57	13°30'37	morning rise	8832 Aug 27 21:19	4°η48'32
max. Earth dist.	8826 Aug 14 09:52	28°Ω59'31	50.11086 AU	retrograde	8832 Nov 29 10:57	6°η05'24
morning rise	8826 Aug 20 21:21	29°Ω08'18		opposition	8833 Feb 21 04:29	5°η06'17 -12°59'54
	8826 Oct 02 14:24	0°η		min. Earth dist.	8833 Feb 21 00:47	5°η06'27 47.87223 AU
retrograde	8826 Nov 24 03:45	0°η27'18		direct	8833 May 14 01:42	4°η07'51
	8827 Jan 16 19:26	30°RΩ		evening set	8833 Aug 11 12:46	5°η21'29
opposition	8827 Feb 16 01:40	29°Ω28'08	-13°59'11			
min. Earth dist.	8827 Feb 15 16:33	29°Ω28'33	48.15087 AU	conjunction	8833 Aug 20 10:13	5°η33'33 -12°23'51
direct	8827 May 08 23:33	28°Ω29'42		minimum elong	8833 Aug 20 10:25	5°η33'34 12°23'58
evening set	8827 Aug 08 00:25	29°Ω45'19		max. Earth dist.	8833 Aug 20 12:55	5°η33'42 49.79318 AU
				morning rise	8833 Aug 29 09:00	5°η45'42
conjunction	8827 Aug 15 04:38	29°Ω55'02	-13°21'38	retrograde	8833 Nov 30 20:02	7°η02'14
minimum elong	8827 Aug 15 04:50	29°Ω55'03	13°21'46	opposition	8834 Feb 22 09:09	6°η03'07 -12°49'17
max. Earth dist.	8827 Aug 15 14:56	29°Ω55'37	50.07613 AU	min. Earth dist.	8834 Feb 22 06:41	6°η03'13 47.80950 AU
	8827 Aug 18 20:20	0°η		direct	8834 May 15 02:40	5°η04'40
morning rise	8827 Aug 22 09:44	0°η04'49		evening set	8834 Aug 12 11:22	6°η17'59

conjunction	8834 Aug 21 15:16	6° \mathring{M} 30'26 -12°13'30	direct	8841 May 21 09:04	11° \mathring{M} 43'16
minimum elong	8834 Aug 21 15:28	6° \mathring{M} 30'26 12°13'36	evening set	8841 Aug 17 06:58	12° \mathring{M} 54'55
max. Earth dist.	8834 Aug 21 17:18	6° \mathring{M} 30'32 49.72902 AU			
morning rise	8834 Aug 30 20:24	6° \mathring{M} 42'56	conjunction	8841 Aug 28 03:30	13° \mathring{M} 09'43 -10°55'04
retrograde	8834 Dec 02 01:54	7° \mathring{M} 59'10	minimum elong	8841 Aug 28 03:41	13° \mathring{M} 09'44 10°55'09
opposition	8835 Feb 23 13:53	7° \mathring{M} 00'00 -12°38'27	max. Earth dist.	8841 Aug 27 22:08	13° \mathring{M} 09'25 49.16584 AU
min. Earth dist.	8835 Feb 23 13:12	7° \mathring{M} 00'02 47.74133 AU	morning rise	8841 Sep 08 01:39	13° \mathring{M} 24'36
direct	8835 May 16 06:11	6° \mathring{M} 01'31	retrograde	8841 Dec 08 11:19	14° \mathring{M} 39'04
evening set	8835 Aug 13 10:25	7° \mathring{M} 14'33	opposition	8842 Mar 01 22:17	13° \mathring{M} 39'31 -11°16'18
			min. Earth dist.	8842 Mar 02 03:50	13° \mathring{M} 39'16 47.15624 AU
conjunction	8835 Aug 22 20:25	7° \mathring{M} 27'21 -12°02'57	direct	8842 May 22 14:56	12° \mathring{M} 40'36
minimum elong	8835 Aug 22 20:37	7° \mathring{M} 27'21 12°03'04	evening set	8842 Aug 18 06:50	13° \mathring{M} 52'04
max. Earth dist.	8835 Aug 22 21:12	7° \mathring{M} 27'23 49.65985 AU			
morning rise	8835 Sep 01 07:42	7° \mathring{M} 40'12	conjunction	8842 Aug 29 08:50	14° \mathring{M} 07'11 -10°42'56
retrograde	8835 Dec 03 04:04	8° \mathring{M} 56'08	minimum elong	8842 Aug 29 09:03	14° \mathring{M} 07'11 10°43'01
opposition	8836 Feb 24 18:19	7° \mathring{M} 56'55 -12°27'24	max. Earth dist.	8842 Aug 29 03:34	14° \mathring{M} 06'53 49.07256 AU
min. Earth dist.	8836 Feb 24 17:56	7° \mathring{M} 56'57 47.66840 AU	morning rise	8842 Sep 09 12:17	14° \mathring{M} 22'24
direct	8836 May 16 11:40	6° \mathring{M} 58'22	retrograde	8842 Dec 09 14:51	15° \mathring{M} 36'40
evening set	8836 Aug 13 09:29	8° \mathring{M} 11'09	opposition	8843 Mar 03 03:07	14° \mathring{M} 37'05 -11°03'37
			min. Earth dist.	8843 Mar 03 08:57	14° \mathring{M} 36'49 47.05965 AU
conjunction	8836 Aug 23 01:31	8° \mathring{M} 24'17 -11°52'12	direct	8843 May 23 22:23	13° \mathring{M} 38'06
minimum elong	8836 Aug 23 01:43	8° \mathring{M} 24'17 11°52'18	evening set	8843 Aug 19 07:13	14° \mathring{M} 49'25
max. Earth dist.	8836 Aug 23 00:30	8° \mathring{M} 24'13 49.58605 AU			
morning rise	8836 Sep 01 19:01	8° \mathring{M} 37'29	conjunction	8843 Aug 30 14:20	15° \mathring{M} 04'51 -10°30'36
retrograde	8836 Dec 03 07:26	9° \mathring{M} 53'08	minimum elong	8843 Aug 30 14:31	15° \mathring{M} 04'52 10°30'40
opposition	8837 Feb 24 23:00	8° \mathring{M} 53'52 -12°16'09	max. Earth dist.	8843 Aug 30 06:54	15° \mathring{M} 04'26 48.97543 AU
min. Earth dist.	8837 Feb 25 00:30	8° \mathring{M} 53'48 47.59123 AU	morning rise	8843 Sep 10 23:12	15° \mathring{M} 20'23
direct	8837 May 17 18:19	7° \mathring{M} 55'14	retrograde	8843 Dec 10 23:42	16° \mathring{M} 34'30
evening set	8837 Aug 14 08:37	9° \mathring{M} 07'46	opposition	8844 Mar 03 07:56	15° \mathring{M} 34'52 -10°50'42
			min. Earth dist.	8844 Mar 03 15:05	15° \mathring{M} 34'32 46.95896 AU
conjunction	8837 Aug 24 06:39	9° \mathring{M} 21'14 -11°41'14	direct	8844 May 24 01:03	14° \mathring{M} 35'50
minimum elong	8837 Aug 24 06:51	9° \mathring{M} 21'15 11°41'20	evening set	8844 Aug 19 07:43	15° \mathring{M} 47'00
max. Earth dist.	8837 Aug 24 05:42	9° \mathring{M} 21'11 49.50832 AU			
morning rise	8837 Sep 03 05:58	9° \mathring{M} 34'47	conjunction	8844 Aug 30 20:08	16° \mathring{M} 02'45 -10°18'02
retrograde	8837 Dec 04 11:44	10° \mathring{M} 50'10	minimum elong	8844 Aug 30 20:20	16° \mathring{M} 02'46 10°18'07
opposition	8838 Feb 26 03:30	9° \mathring{M} 50'50 -12°04'39	max. Earth dist.	8844 Aug 30 12:01	16° \mathring{M} 02'17 48.87365 AU
min. Earth dist.	8838 Feb 26 05:16	9° \mathring{M} 50'45 47.51030 AU	morning rise	8844 Sep 11 10:09	16° \mathring{M} 18'36
direct	8838 May 19 00:53	8° \mathring{M} 52'09	retrograde	8844 Dec 11 07:15	17° \mathring{M} 32'33
evening set	8838 Aug 15 08:00	10° \mathring{M} 04'25	opposition	8845 Mar 04 13:00	16° \mathring{M} 32'51 -10°37'34
			min. Earth dist.	8845 Mar 04 21:56	16° \mathring{M} 32'26 46.85326 AU
conjunction	8838 Aug 25 11:42	10° \mathring{M} 18'13 -11°30'02	direct	8845 May 25 04:38	15° \mathring{M} 33'44
minimum elong	8838 Aug 25 11:54	10° \mathring{M} 18'14 11°30'07	evening set	8845 Aug 20 08:28	16° \mathring{M} 44'46
max. Earth dist.	8838 Aug 25 08:55	10° \mathring{M} 18'04 49.42721 AU			
morning rise	8838 Sep 04 16:56	10° \mathring{M} 32'07	conjunction	8845 Sep 01 01:52	17° \mathring{M} 00'50 -10°05'16
retrograde	8838 Dec 05 19:43	11° \mathring{M} 47'15	minimum elong	8845 Sep 01 02:03	17° \mathring{M} 00'50 10°05'20
opposition	8839 Feb 27 08:08	10° \mathring{M} 47'51 -11°52'56	max. Earth dist.	8845 Aug 31 16:17	17° \mathring{M} 00'17 48.76683 AU
min. Earth dist.	8839 Feb 27 10:44	10° \mathring{M} 47'44 47.42630 AU	morning rise	8845 Sep 12 20:53	17° \mathring{M} 16'59
direct	8839 May 20 03:24	9° \mathring{M} 49'06	retrograde	8845 Dec 12 12:12	18° \mathring{M} 30'46
evening set	8839 Aug 16 07:22	11° \mathring{M} 01'08	opposition	8846 Mar 05 18:01	17° \mathring{M} 31'01 -10°24'13
			min. Earth dist.	8846 Mar 06 03:19	17° \mathring{M} 30'34 46.74237 AU
conjunction	8839 Aug 26 16:54	11° \mathring{M} 15'17 -11°18'37	direct	8846 May 26 09:02	16° \mathring{M} 31'48
minimum elong	8839 Aug 26 17:06	11° \mathring{M} 15'17 11°18'42	evening set	8846 Aug 21 09:21	17° \mathring{M} 42'42
max. Earth dist.	8839 Aug 26 13:52	11° \mathring{M} 15'06 49.34299 AU			
morning rise	8839 Sep 06 03:52	11° \mathring{M} 29'31	conjunction	8846 Sep 02 07:40	17° \mathring{M} 59'03 -9°52'18
retrograde	8839 Dec 07 02:08	12° \mathring{M} 44'24	minimum elong	8846 Sep 02 07:52	17° \mathring{M} 59'04 9°52'23
opposition	8840 Feb 28 12:52	11° \mathring{M} 44'57 -11°40'58	max. Earth dist.	8846 Sep 01 20:03	17° \mathring{M} 58'23 48.65471 AU
min. Earth dist.	8840 Feb 28 16:43	11° \mathring{M} 44'46 47.33921 AU	morning rise	8846 Sep 14 07:48	18° \mathring{M} 15'32
direct	8840 May 20 06:06	10° \mathring{M} 46'08	retrograde	8846 Dec 13 16:31	19° \mathring{M} 29'09
evening set	8840 Aug 16 07:09	11° \mathring{M} 57'57	opposition	8847 Mar 06 23:14	18° \mathring{M} 29'18 -10°10'39
			min. Earth dist.	8847 Mar 07 10:40	18° \mathring{M} 28'45 46.62641 AU
conjunction	8840 Aug 26 22:12	12° \mathring{M} 12'26 -11°06'57	direct	8847 May 27 15:28	17° \mathring{M} 29'59
minimum elong	8840 Aug 26 22:25	12° \mathring{M} 12'27 11°07'02	evening set	8847 Aug 22 10:19	18° \mathring{M} 40'45
max. Earth dist.	8840 Aug 26 18:18	12° \mathring{M} 12'13 49.25594 AU			
morning rise	8840 Sep 06 14:44	12° \mathring{M} 27'00	conjunction	8847 Sep 03 13:37	18° \mathring{M} 57'25 -9°39'07
retrograde	8840 Dec 07 07:09	13° \mathring{M} 41'38	minimum elong	8847 Sep 03 13:48	18° \mathring{M} 57'25 9°39'10
opposition	8841 Feb 28 17:23	12° \mathring{M} 42'09 -11°28'45	max. Earth dist.	8847 Sep 03 01:48	18° \mathring{M} 56'44 48.53779 AU
min. Earth dist.	8841 Feb 28 21:06	12° \mathring{M} 41'58 47.24926 AU	morning rise	8847 Sep 15 18:28	19° \mathring{M} 14'11

retrograde	8847 Dec 14 20:39	20° \mathring{M} 27'40	minimum elong	8854 Sep 10 08:58	25° \mathring{M} 51'18	8°00'25
opposition	8848 Mar 07 04:22	19° \mathring{M} 27'42 -9°56'52	max. Earth dist.	8854 Sep 09 14:19	25° \mathring{M} 50'12	47.62295 AU
min. Earth dist.	8848 Mar 07 16:12	19° \mathring{M} 27'09 46.50575 AU	morning rise	8854 Sep 23 20:47	26° \mathring{M} 10'06	
direct	8848 May 27 22:53	18° \mathring{M} 28'16	retrograde	8854 Dec 21 21:44	27° \mathring{M} 23'07	
evening set	8848 Aug 22 11:39	19° \mathring{M} 38'56	opposition	8855 Mar 14 18:31	26° \mathring{M} 22'30	-8°13'28
			min. Earth dist.	8855 Mar 15 12:39	26° \mathring{M} 21'38	45.57099 AU
conjunction	8848 Sep 03 19:31	19° \mathring{M} 55'53 -9°25'43	direct	8855 Jun 04 07:05	25° \mathring{M} 22'21	
minimum elong	8848 Sep 03 19:42	19° \mathring{M} 55'54 9°25'47	evening set	8855 Aug 29 01:16	26° \mathring{M} 32'45	
max. Earth dist.	8848 Sep 03 05:33	19° \mathring{M} 55'05 48.41646 AU				
morning rise	8848 Sep 16 05:16	20° \mathring{M} 12'57	conjunction	8855 Sep 11 15:29	26° \mathring{M} 51'44	-7°45'19
retrograde	8848 Dec 15 04:30	21° \mathring{M} 26'19	minimum elong	8855 Sep 11 15:40	26° \mathring{M} 51'44	7°45'20
opposition	8849 Mar 08 09:29	20° \mathring{M} 26'15 -9°42'50	max. Earth dist.	8855 Sep 10 19:49	26° \mathring{M} 50'35	47.48046 AU
min. Earth dist.	8849 Mar 08 22:36	20° \mathring{M} 25'38 46.38114 AU	morning rise	8855 Sep 25 07:32	27° \mathring{M} 10'50	
direct	8849 May 29 02:33	19° \mathring{M} 26'42	retrograde	8855 Dec 23 05:51	28° \mathring{M} 23'50	
evening set	8849 Aug 23 12:57	20° \mathring{M} 37'15	opposition	8856 Mar 15 00:21	27° \mathring{M} 23'09	-7°57'41
max. Earth dist.	8849 Sep 04 11:13	20° \mathring{M} 53'41 48.29134 AU	min. Earth dist.	8856 Mar 15 18:51	27° \mathring{M} 22'16	45.42517 AU
			direct	8856 Jun 04 10:44	26° \mathring{M} 22'53	
conjunction	8849 Sep 05 01:34	20° \mathring{M} 54'30 -9°12'06	evening set	8856 Aug 29 04:24	27° \mathring{M} 33'20	
minimum elong	8849 Sep 05 01:46	20° \mathring{M} 54'31 9°12'08				
morning rise	8849 Sep 17 15:53	21° \mathring{M} 11'53	conjunction	8856 Sep 11 22:28	27° \mathring{M} 52'35	-7°30'01
retrograde	8849 Dec 16 11:34	22° \mathring{M} 25'07	minimum elong	8856 Sep 11 22:37	27° \mathring{M} 52'36	7°30'02
opposition	8850 Mar 09 14:49	21° \mathring{M} 24'57 -9°28'34	max. Earth dist.	8856 Sep 11 00:51	27° \mathring{M} 51'19	47.33359 AU
min. Earth dist.	8850 Mar 10 05:04	21° \mathring{M} 24'16 46.25301 AU	morning rise	8856 Sep 25 18:28	28° \mathring{M} 11'58	
direct	8850 May 30 06:30	20° \mathring{M} 25'17	retrograde	8856 Dec 23 11:40	29° \mathring{M} 24'59	
evening set	8850 Aug 24 14:23	21° \mathring{M} 35'46	opposition	8857 Mar 16 06:24	28° \mathring{M} 24'12	-7°41'41
			min. Earth dist.	8857 Mar 17 03:07	28° \mathring{M} 23'12	45.27473 AU
conjunction	8850 Sep 06 07:28	21° \mathring{M} 53'19 -8°58'14	direct	8857 Jun 05 17:53	27° \mathring{M} 23'49	
minimum elong	8850 Sep 06 07:39	21° \mathring{M} 53'19 8°58'17	evening set	8857 Aug 30 07:43	28° \mathring{M} 34'19	
max. Earth dist.	8850 Sep 05 16:18	21° \mathring{M} 52'26 48.16313 AU	max. Earth dist.	8857 Sep 12 07:40	28° \mathring{M} 52'33	47.18197 AU
morning rise	8850 Sep 19 02:19	22° \mathring{M} 10'58				
retrograde	8850 Dec 17 18:13	23° \mathring{M} 24'07	conjunction	8857 Sep 13 05:41	28° \mathring{M} 53'51	-7°14'30
opposition	8851 Mar 10 20:08	22° \mathring{M} 23'51 -9°14'04	minimum elong	8857 Sep 13 05:51	28° \mathring{M} 53'51	7°14'32
min. Earth dist.	8851 Mar 11 10:19	22° \mathring{M} 23'10 46.12199 AU	morning rise	8857 Sep 27 05:18	29° \mathring{M} 13'29	
direct	8851 May 31 10:15	21° \mathring{M} 24'04		8857 Nov 04 05:15	0° \mathring{A}	
evening set	8851 Aug 25 16:09	22° \mathring{M} 34'30	retrograde	8857 Dec 24 15:52	0° \mathring{A} 26'32	
				8858 Feb 14 01:33	30° \mathring{R} \mathring{M}	
conjunction	8851 Sep 07 13:38	22° \mathring{M} 52'20 -8°44'08	opposition	8858 Mar 17 12:37	29° \mathring{M} 25'37	-7°25'26
minimum elong	8851 Sep 07 13:49	22° \mathring{M} 52'21 8°44'11	min. Earth dist.	8858 Mar 18 09:43	29° \mathring{M} 24'36	45.11931 AU
max. Earth dist.	8851 Sep 06 21:04	22° \mathring{M} 51'23 48.03200 AU	direct	8858 Jun 07 02:49	28° \mathring{M} 25'06	
morning rise	8851 Sep 20 13:02	23° \mathring{M} 10'17	evening set	8858 Aug 31 11:16	29° \mathring{M} 35'38	
retrograde	8851 Dec 18 23:31	24° \mathring{M} 23'22				
opposition	8852 Mar 11 01:34	23° \mathring{M} 23'00 -8°59'18	conjunction	8858 Sep 14 12:45	29° \mathring{M} 55'25	-6°58'46
min. Earth dist.	8852 Mar 11 17:30	23° \mathring{M} 22'14 45.98829 AU	minimum elong	8858 Sep 14 12:54	29° \mathring{M} 55'26	6°58'46
direct	8852 May 31 16:00	22° \mathring{M} 23'07	max. Earth dist.	8858 Sep 13 12:18	29° \mathring{M} 53'59	47.02533 AU
evening set	8852 Aug 25 18:03	23° \mathring{M} 33'31		8858 Sep 17 18:08	0° \mathring{A}	
			morning rise	8858 Sep 28 16:14	0° \mathring{A} 15'20	
conjunction	8852 Sep 07 20:00	23° \mathring{M} 51'38 -8°29'47	retrograde	8858 Dec 26 00:15	1° \mathring{A} 28'25	
minimum elong	8852 Sep 07 20:10	23° \mathring{M} 51'39 8°29'50	opposition	8859 Mar 18 19:01	0° \mathring{A} 27'21	-7°08'57
max. Earth dist.	8852 Sep 07 03:31	23° \mathring{M} 50'41 47.89836 AU	min. Earth dist.	8859 Mar 19 17:47	0° \mathring{A} 26'15	44.95901 AU
morning rise	8852 Sep 20 23:35	24° \mathring{M} 09'53		8859 Apr 12 02:11	30° \mathring{R} \mathring{M}	
retrograde	8852 Dec 19 03:28	25° \mathring{M} 22'55	direct	8859 Jun 08 08:25	29° \mathring{M} 26'40	
opposition	8853 Mar 12 07:03	24° \mathring{M} 22'28 -8°44'16		8859 Aug 03 07:10	0° \mathring{A}	
min. Earth dist.	8853 Mar 12 22:54	24° \mathring{M} 21'42 45.85199 AU	evening set	8859 Sep 01 15:02	0° \mathring{A} 37'14	
direct	8853 Jun 01 23:59	23° \mathring{M} 22'29				
evening set	8853 Aug 26 20:12	24° \mathring{M} 32'52	conjunction	8859 Sep 15 20:15	0° \mathring{A} 57'18	-6°42'48
max. Earth dist.	8853 Sep 08 07:55	24° \mathring{M} 50'12 47.76210 AU	minimum elong	8859 Sep 15 20:24	0° \mathring{A} 57'18	6°42'49
			max. Earth dist.	8859 Sep 14 19:09	0° \mathring{A} 55'49	46.86380 AU
conjunction	8853 Sep 09 02:12	24° \mathring{M} 51'16 -8°15'12	morning rise	8859 Sep 30 03:10	1° \mathring{A} 17'29	
minimum elong	8853 Sep 09 02:22	24° \mathring{M} 51'17 8°15'14	retrograde	8859 Dec 27 08:23	2° \mathring{A} 30'35	
morning rise	8853 Sep 22 10:09	25° \mathring{M} 09'48	opposition	8860 Mar 19 01:23	1° \mathring{A} 29'22	-6°52'13
retrograde	8853 Dec 20 12:33	26° \mathring{M} 22'49	min. Earth dist.	8860 Mar 20 01:28	1° \mathring{A} 28'11	44.79404 AU
opposition	8854 Mar 13 12:44	25° \mathring{M} 22'17 -8°29'00	direct	8860 Jun 08 14:26	0° \mathring{A} 28'30	
min. Earth dist.	8854 Mar 14 05:35	25° \mathring{M} 21'28 45.71307 AU	evening set	8860 Sep 01 19:11	1° \mathring{A} 39'08	
direct	8854 Jun 03 03:49	24° \mathring{M} 22'13	max. Earth dist.	8860 Sep 15 01:21	1° \mathring{A} 57'52	46.69803 AU
evening set	8854 Aug 27 22:33	25° \mathring{M} 32'36				
			conjunction	8860 Sep 16 03:46	1° \mathring{A} 59'26	-6°26'36
conjunction	8854 Sep 10 08:48	25° \mathring{M} 51'17 -8°00'23	minimum elong	8860 Sep 16 03:55	1° \mathring{A} 59'27	6°26'36



























































































































morning rise	8860 Sep 30 14:11	2° <u>♁</u> 19'53	conjunction	8867 Sep 24 12:37	9° <u>♁</u> 24'10	-4°26'22
retrograde	8860 Dec 27 18:32	3° <u>♁</u> 33'00	minimum elong	8867 Sep 24 12:43	9° <u>♁</u> 24'11	4°26'20
opposition	8861 Mar 20 07:52	2° <u>♁</u> 31'38 -6°35'15	morning rise	8867 Oct 09 19:27	9° <u>♁</u> 46'22	
min. Earth dist.	8861 Mar 21 08:18	2° <u>♁</u> 30'26 44.62515 AU	retrograde	8868 Jan 05 03:22	11° <u>♁</u> 00'21	
direct	8861 Jun 09 18:14	1° <u>♁</u> 30'35	opposition	8868 Mar 27 10:00	9° <u>♁</u> 57'52	-4°29'04
evening set	8861 Sep 02 23:23	2° <u>♁</u> 41'17	min. Earth dist.	8868 Mar 28 16:22	9° <u>♁</u> 56'21	43.36225 AU
max. Earth dist.	8861 Sep 16 07:20	3° <u>♁</u> 00'11 46.52837 AU	direct	8868 Jun 16 19:29	8° <u>♁</u> 55'35	
			evening set	8868 Sep 09 14:05	10° <u>♁</u> 07'28	
conjunction	8861 Sep 17 11:15	3° <u>♁</u> 01'51 -6°10'10	max. Earth dist.	8868 Sep 23 10:44	10° <u>♁</u> 27'38	45.26218 AU
minimum elong	8861 Sep 17 11:24	3° <u>♁</u> 01'52 6°10'10				
morning rise	8861 Oct 02 01:00	3° <u>♁</u> 22'33	conjunction	8868 Sep 24 21:39	10° <u>♁</u> 29'47	-4°08'12
retrograde	8861 Dec 29 02:51	4° <u>♁</u> 35'43	minimum elong	8868 Sep 24 21:45	10° <u>♁</u> 29'47	4°08'10
opposition	8862 Mar 21 14:38	3° <u>♁</u> 34'10 -6°18'01	morning rise	8868 Oct 10 07:00	10° <u>♁</u> 52'13	
min. Earth dist.	8862 Mar 22 16:57	3° <u>♁</u> 32'53 44.45276 AU	retrograde	8869 Jan 05 13:12	12° <u>♁</u> 06'25	
direct	8862 Jun 10 23:51	2° <u>♁</u> 32'56	opposition	8869 Mar 28 18:03	11° <u>♁</u> 03'47	-4°10'00
evening set	8862 Sep 04 03:53	3° <u>♁</u> 43'43	min. Earth dist.	8869 Mar 30 02:21	11° <u>♁</u> 02'09	43.16921 AU
			direct	8869 Jun 18 02:47	10° <u>♁</u> 01'19	
conjunction	8862 Sep 18 19:04	4° <u>♁</u> 04'33 -5°53'29	evening set	8869 Sep 10 20:58	11° <u>♁</u> 13'27	
minimum elong	8862 Sep 18 19:12	4° <u>♁</u> 04'33 5°53'29	max. Earth dist.	8869 Sep 24 19:29	11° <u>♁</u> 33'49	45.06757 AU
max. Earth dist.	8862 Sep 17 15:07	4° <u>♁</u> 02'52 46.35559 AU				
morning rise	8862 Oct 03 11:53	4° <u>♁</u> 25'30	conjunction	8869 Sep 26 06:56	11° <u>♁</u> 36'00	-3°49'47
retrograde	8862 Dec 30 07:27	5° <u>♁</u> 38'44	minimum elong	8869 Sep 26 07:02	11° <u>♁</u> 36'00	3°49'45
opposition	8863 Mar 22 21:20	4° <u>♁</u> 37'00 -6°00'31	morning rise	8869 Oct 11 18:20	11° <u>♁</u> 58'40	
min. Earth dist.	8863 Mar 23 23:30	4° <u>♁</u> 35'43 44.27746 AU	retrograde	8870 Jan 06 21:48	13° <u>♁</u> 13'07	
direct	8863 Jun 12 09:18	3° <u>♁</u> 35'35	opposition	8870 Mar 30 02:17	12° <u>♁</u> 10'18	-3°50'40
evening set	8863 Sep 05 08:47	4° <u>♁</u> 46'29	min. Earth dist.	8870 Mar 31 11:33	12° <u>♁</u> 08'37	42.97143 AU
max. Earth dist.	8863 Sep 18 21:02	5° <u>♁</u> 05'46 46.18004 AU	direct	8870 Jun 19 11:17	11° <u>♁</u> 07'38	
			evening set	8870 Sep 12 04:27	12° <u>♁</u> 20'02	
conjunction	8863 Sep 20 02:54	5° <u>♁</u> 07'33 -5°36'34	max. Earth dist.	8870 Sep 26 03:12	12° <u>♁</u> 40'31	44.86836 AU
minimum elong	8863 Sep 20 03:02	5° <u>♁</u> 07'34 5°36'33				
morning rise	8863 Oct 04 22:58	5° <u>♁</u> 28'46	conjunction	8870 Sep 27 16:26	12° <u>♁</u> 42'49	-3°31'09
retrograde	8863 Dec 31 15:09	6° <u>♁</u> 42'06	minimum elong	8870 Sep 27 16:32	12° <u>♁</u> 42'49	3°31'07
opposition	8864 Mar 23 04:22	5° <u>♁</u> 40'12 -5°42'46	morning rise	8870 Oct 13 06:03	13° <u>♁</u> 05'42	
min. Earth dist.	8864 Mar 24 07:48	5° <u>♁</u> 38'51 44.09963 AU	retrograde	8871 Jan 08 10:31	14° <u>♁</u> 20'24	
direct	8864 Jun 12 16:27	4° <u>♁</u> 38'35	opposition	8871 Mar 31 10:35	13° <u>♁</u> 17'23	-3°31'05
evening set	8864 Sep 05 13:53	5° <u>♁</u> 49'38	min. Earth dist.	8871 Apr 01 20:42	13° <u>♁</u> 15'40	42.76917 AU
max. Earth dist.	8864 Sep 19 05:11	6° <u>♁</u> 09'09 46.00190 AU	direct	8871 Jun 20 16:20	12° <u>♁</u> 14'30	
			evening set	8871 Sep 13 12:15	13° <u>♁</u> 27'11	
conjunction	8864 Sep 20 11:06	6° <u>♁</u> 10'57 -5°19'23	max. Earth dist.	8871 Sep 27 11:25	13° <u>♁</u> 47'46	44.66453 AU
minimum elong	8864 Sep 20 11:14	6° <u>♁</u> 10'58 5°19'22				
morning rise	8864 Oct 05 09:55	6° <u>♁</u> 32'25	conjunction	8871 Sep 29 02:16	13° <u>♁</u> 50'11	-3°12'16
retrograde	8864 Dec 31 23:39	7° <u>♁</u> 45'52	minimum elong	8871 Sep 29 02:21	13° <u>♁</u> 50'11	3°12'13
opposition	8865 Mar 24 11:29	6° <u>♁</u> 43'49 -5°24'44	morning rise	8871 Oct 14 17:48	14° <u>♁</u> 13'18	
min. Earth dist.	8865 Mar 25 15:41	6° <u>♁</u> 42'25 43.91929 AU	retrograde	8872 Jan 09 22:51	15° <u>♁</u> 28'15	
direct	8865 Jun 13 22:55	5° <u>♁</u> 42'02	opposition	8872 Mar 31 19:16	14° <u>♁</u> 25'01	-3°11'14
evening set	8865 Sep 06 19:23	6° <u>♁</u> 53'14	min. Earth dist.	8872 Apr 02 07:23	14° <u>♁</u> 23'11	42.56255 AU
			direct	8872 Jun 20 22:35	13° <u>♁</u> 21'53	
conjunction	8865 Sep 21 19:20	7° <u>♁</u> 14'49 -5°01'58	evening set	8872 Sep 13 20:23	14° <u>♁</u> 34'52	
minimum elong	8865 Sep 21 19:28	7° <u>♁</u> 14'49 5°01'57	max. Earth dist.	8872 Sep 27 20:57	14° <u>♁</u> 55'38	44.45669 AU
max. Earth dist.	8865 Sep 20 12:16	7° <u>♁</u> 12'56 45.82149 AU				
morning rise	8865 Oct 06 21:03	7° <u>♁</u> 36'31	conjunction	8872 Sep 29 12:17	14° <u>♁</u> 58'05	-2°53'09
retrograde	8866 Jan 02 10:33	8° <u>♁</u> 50'07	minimum elong	8872 Sep 29 12:22	14° <u>♁</u> 58'06	2°53'06
opposition	8866 Mar 25 18:48	7° <u>♁</u> 47'55 -5°06'27	morning rise	8872 Oct 15 05:31	15° <u>♁</u> 21'25	
min. Earth dist.	8866 Mar 26 23:10	7° <u>♁</u> 46'31 43.73666 AU	retrograde	8873 Jan 10 07:12	16° <u>♁</u> 36'37	
direct	8866 Jun 15 03:16	6° <u>♁</u> 45'58	opposition	8873 Apr 02 03:53	15° <u>♁</u> 33'10	-2°51'07
evening set	8866 Sep 08 01:05	7° <u>♁</u> 57'22	min. Earth dist.	8873 Apr 03 16:02	15° <u>♁</u> 31'20	42.35225 AU
max. Earth dist.	8866 Sep 21 19:25	8° <u>♁</u> 17'14 45.63841 AU	direct	8873 Jun 22 09:08	14° <u>♁</u> 29'47	
			evening set	8873 Sep 15 04:59	15° <u>♁</u> 43'06	
conjunction	8866 Sep 23 03:44	8° <u>♁</u> 19'12 -4°44'17	max. Earth dist.	8873 Sep 29 04:58	16° <u>♁</u> 03'55	44.24538 AU
minimum elong	8866 Sep 23 03:51	8° <u>♁</u> 19'12 4°44'16				
morning rise	8866 Oct 08 08:08	8° <u>♁</u> 41'09	conjunction	8873 Sep 30 22:23	16° <u>♁</u> 06'31	-2°33'47
retrograde	8867 Jan 03 19:56	9° <u>♁</u> 54'56	minimum elong	8873 Sep 30 22:27	16° <u>♁</u> 06'31	2°33'42
opposition	8867 Mar 27 02:27	8° <u>♁</u> 52'35 -4°47'53	morning rise	8873 Oct 16 17:22	16° <u>♁</u> 30'04	
min. Earth dist.	8867 Mar 28 08:36	8° <u>♁</u> 51'05 43.55117 AU	retrograde	8874 Jan 11 16:03	17° <u>♁</u> 45'33	
direct	8867 Jun 16 10:17	7° <u>♁</u> 50'28	opposition	8874 Apr 03 12:57	16° <u>♁</u> 41'52	-2°30'45
evening set	8867 Sep 09 07:18	9° <u>♁</u> 02'06	min. Earth dist.	8874 Apr 05 02:44	16° <u>♁</u> 39'56	42.13895 AU
max. Earth dist.	8867 Sep 23 04:07	9° <u>♁</u> 22'11 45.45225 AU	direct	8874 Jun 23 19:19	15° <u>♁</u> 38'13	

evening set	8874 Sep 16 13:41	16° <u>♁</u> 51'51		morning rise	8880 Oct 25 06:23	24° <u>♁</u> 48'12	
max. Earth dist.	8874 Sep 30 15:30	17° <u>♁</u> 12'54	44.03124 AU	retrograde	8881 Jan 20 01:56	26° <u>♁</u> 06'30	
				opposition	8881 Apr 11 11:08	25° <u>♁</u> 01'10	-0°00'39
conjunction	8874 Oct 02 08:46	17° <u>♁</u> 15'30	-2°14'10	min. Earth dist.	8881 Apr 13 06:00	24° <u>♁</u> 58'54	40.58851 AU
minimum elong	8874 Oct 02 08:50	17° <u>♁</u> 15'30	2°14'06	asc. node	8881 Apr 22 01:44	24° <u>♁</u> 47'48	
morning rise	8874 Oct 18 05:02	17° <u>♁</u> 39'15		direct	8881 Jul 01 13:15	23° <u>♁</u> 55'41	
retrograde	8875 Jan 13 00:26	18° <u>♁</u> 55'03		evening set	8881 Sep 24 17:34	25° <u>♁</u> 12'32	
opposition	8875 Apr 04 22:11	17° <u>♁</u> 51'07	-2°10'06	max. Earth dist.	8881 Oct 08 17:41	25° <u>♁</u> 34'18	42.47463 AU
min. Earth dist.	8875 Apr 06 12:22	17° <u>♁</u> 49'09	41.92308 AU				
direct	8875 Jun 25 05:49	16° <u>♁</u> 47'13		conjunction	8881 Oct 10 17:56	25° <u>♁</u> 37'28	0°10'03
evening set	8875 Sep 17 23:07	18° <u>♁</u> 01'12		minimum elong	8881 Oct 10 17:56	25° <u>♁</u> 37'28	0°10'09
max. Earth dist.	8875 Oct 02 00:37	18° <u>♁</u> 22'20	43.81485 AU	behind sun begin	8881 Oct 10 12:46	25° <u>♁</u> 37'09	
				behind sun end	8881 Oct 10 23:06	25° <u>♁</u> 37'47	
conjunction	8875 Oct 03 19:24	18° <u>♁</u> 25'02	-1°54'18	morning rise	8881 Oct 26 19:06	26° <u>♁</u> 02'29	
minimum elong	8875 Oct 03 19:28	18° <u>♁</u> 25'03	1°54'14	retrograde	8882 Jan 21 15:10	27° <u>♁</u> 21'18	
morning rise	8875 Oct 19 17:06	18° <u>♁</u> 49'00		opposition	8882 Apr 12 22:33	26° <u>♁</u> 15'42	0°21'50
retrograde	8876 Jan 14 12:47	20° <u>♁</u> 05'08		min. Earth dist.	8882 Apr 14 18:55	26° <u>♁</u> 13'20	40.35670 AU
opposition	8876 Apr 05 07:30	19° <u>♁</u> 00'58	-1°49'11	direct	8882 Jul 02 22:28	25° <u>♁</u> 09'55	
min. Earth dist.	8876 Apr 06 22:16	18° <u>♁</u> 58'58	41.70531 AU	evening set	8882 Sep 26 06:32	26° <u>♁</u> 27'21	
direct	8876 Jun 25 12:50	17° <u>♁</u> 56'47		max. Earth dist.	8882 Oct 10 05:35	26° <u>♁</u> 49'10	42.24106 AU
evening set	8876 Sep 18 08:55	19° <u>♁</u> 11'11					
max. Earth dist.	8876 Oct 02 10:48	19° <u>♁</u> 32'27	43.59647 AU	conjunction	8882 Oct 12 06:53	26° <u>♁</u> 52'25	0°31'33
				minimum elong	8882 Oct 12 06:52	26° <u>♁</u> 52'25	0°31'39
conjunction	8876 Oct 04 06:24	19° <u>♁</u> 35'13	-1°34'11	morning rise	8882 Oct 28 08:01	27° <u>♁</u> 17'35	
minimum elong	8876 Oct 04 06:26	19° <u>♁</u> 35'13	1°34'08	retrograde	8883 Jan 23 06:15	28° <u>♁</u> 36'56	
morning rise	8876 Oct 20 05:04	19° <u>♁</u> 59'22		opposition	8883 Apr 14 10:09	27° <u>♁</u> 31'03	0°44'34
retrograde	8877 Jan 15 01:32	21° <u>♁</u> 15'52		min. Earth dist.	8883 Apr 16 06:48	27° <u>♁</u> 28'40	40.12133 AU
opposition	8877 Apr 06 17:21	20° <u>♁</u> 11'28	-1°28'01	direct	8883 Jul 04 08:40	26° <u>♁</u> 24'57	
min. Earth dist.	8877 Apr 08 09:18	20° <u>♁</u> 09'23	41.48578 AU	evening set	8883 Sep 27 20:17	27° <u>♁</u> 42'59	
direct	8877 Jun 26 20:30	19° <u>♁</u> 07'02		max. Earth dist.	8883 Oct 11 16:55	28° <u>♁</u> 04'47	42.00378 AU
evening set	8877 Sep 19 19:00	20° <u>♁</u> 21'51					
max. Earth dist.	8877 Oct 03 21:49	20° <u>♁</u> 43'17	43.37656 AU	conjunction	8883 Oct 13 20:19	28° <u>♁</u> 08'11	0°53'19
				minimum elong	8883 Oct 13 20:17	28° <u>♁</u> 08'11	0°53'25
conjunction	8877 Oct 05 17:29	20° <u>♁</u> 46'04	-1°13'50	morning rise	8883 Oct 29 21:08	28° <u>♁</u> 33'30	
minimum elong	8877 Oct 05 17:31	20° <u>♁</u> 46'04	1°13'45	retrograde	8884 Jan 24 21:10	29° <u>♁</u> 53'23	
morning rise	8877 Oct 21 17:03	21° <u>♁</u> 10'24		opposition	8884 Apr 14 22:06	28° <u>♁</u> 47'13	1°07'33
retrograde	8878 Jan 16 15:12	22° <u>♁</u> 27'18		min. Earth dist.	8884 Apr 16 20:46	28° <u>♁</u> 44'43	39.88260 AU
opposition	8878 Apr 08 03:19	21° <u>♁</u> 22'40	-1°06'34	direct	8884 Jul 04 20:23	27° <u>♁</u> 40'47	
min. Earth dist.	8878 Apr 09 18:57	21° <u>♁</u> 20'36	41.26474 AU	evening set	8884 Sep 28 10:27	28° <u>♁</u> 59'26	
direct	8878 Jun 28 05:37	20° <u>♁</u> 17'58		max. Earth dist.	8884 Oct 12 06:43	29° <u>♁</u> 21'21	41.76337 AU
evening set	8878 Sep 21 05:49	21° <u>♁</u> 33'15					
max. Earth dist.	8878 Oct 05 07:30	21° <u>♁</u> 54'45	43.15492 AU	conjunction	8884 Oct 14 10:07	29° <u>♁</u> 24'47	1°15'18
				minimum elong	8884 Oct 14 10:05	29° <u>♁</u> 24'47	1°15'25
conjunction	8878 Oct 07 04:58	21° <u>♁</u> 57'40	-0°53'14	morning rise	8884 Oct 30 10:15	29° <u>♁</u> 50'13	
minimum elong	8878 Oct 07 04:59	21° <u>♁</u> 57'40	0°53'10		8884 Nov 05 19:00	0° <u>♁</u>	
morning rise	8878 Oct 23 05:21	22° <u>♁</u> 22'11		retrograde	8885 Jan 25 09:58	1° <u>♁</u> 10'41	
retrograde	8879 Jan 18 03:49	23° <u>♁</u> 39'31		opposition	8885 Apr 16 10:21	0° <u>♁</u> 04'12	1°30'47
opposition	8879 Apr 09 13:38	22° <u>♁</u> 34'39	-0°44'51	min. Earth dist.	8885 Apr 18 09:03	0° <u>♁</u> 01'41	39.64106 AU
min. Earth dist.	8879 Apr 11 07:02	22° <u>♁</u> 32'29	41.04195 AU		8885 Apr 19 16:20	30° <u>♁</u>	
direct	8879 Jun 29 15:18	21° <u>♁</u> 29'42		direct	8885 Jul 06 10:38	28° <u>♁</u> 57'26	
evening set	8879 Sep 22 17:04	22° <u>♁</u> 45'29			8885 Sep 19 01:26	0° <u>♁</u>	
max. Earth dist.	8879 Oct 06 19:35	23° <u>♁</u> 07'09	42.93119 AU	evening set	8885 Sep 30 01:10	0° <u>♁</u> 16'44	
				max. Earth dist.	8885 Oct 13 18:35	0° <u>♁</u> 38'38	41.52039 AU
conjunction	8879 Oct 08 16:59	23° <u>♁</u> 10'05	-0°32'24				
minimum elong	8879 Oct 08 17:00	23° <u>♁</u> 10'05	0°32'18	conjunction	8885 Oct 15 23:55	0° <u>♁</u> 42'13	1°37'31
morning rise	8879 Oct 24 17:45	23° <u>♁</u> 34'47		minimum elong	8885 Oct 15 23:53	0° <u>♁</u> 42'12	1°37'37
retrograde	8880 Jan 19 13:14	24° <u>♁</u> 52'34		morning rise	8885 Oct 31 23:24	1° <u>♁</u> 07'46	
opposition	8880 Apr 10 00:14	23° <u>♁</u> 47'29	-0°22'53	retrograde	8886 Jan 27 00:30	2° <u>♁</u> 28'51	
min. Earth dist.	8880 Apr 11 17:54	23° <u>♁</u> 45'17	40.81672 AU	opposition	8886 Apr 17 23:00	1° <u>♁</u> 22'03	1°54'15
direct	8880 Jun 30 03:40	22° <u>♁</u> 42'16		min. Earth dist.	8886 Apr 19 23:00	1° <u>♁</u> 19'27	39.39743 AU
evening set	8880 Sep 23 05:05	23° <u>♁</u> 58'35		direct	8886 Jul 07 22:10	0° <u>♁</u> 14'56	
max. Earth dist.	8880 Oct 07 05:52	24° <u>♁</u> 20'16	42.70466 AU	evening set	8886 Oct 01 16:30	1° <u>♁</u> 34'56	
				max. Earth dist.	8886 Oct 15 08:53	1° <u>♁</u> 56'53	41.27537 AU
conjunction	8880 Oct 09 05:12	24° <u>♁</u> 23'21	-0°11'21				
minimum elong	8880 Oct 09 05:12	24° <u>♁</u> 23'21	0°11'15	conjunction	8886 Oct 17 14:26	2° <u>♁</u> 00'31	1°59'56
behind sun begin	8880 Oct 09 00:28	24° <u>♁</u> 23'03		minimum elong	8886 Oct 17 14:23	2° <u>♁</u> 00'30	2°00'03
behind sun end	8880 Oct 09 09:55	24° <u>♁</u> 23'38		morning rise	8886 Nov 02 12:42	2° <u>♁</u> 26'10	

retrograde	8887 Jan 28 13:19	3°M.47'55		conjunction	8893 Oct 27 07:49	11°M.39'05	4°42'03
opposition	8887 Apr 19 11:55	2°M.40'49	2°17'58	minimum elong	8893 Oct 27 07:40	11°M.39'05	4°42'12
min. Earth dist.	8887 Apr 21 12:36	2°M.38'09	39.15214 AU	morning rise	8893 Nov 11 14:51	12°M.05'04	
direct	8887 Jul 09 10:47	1°M.33'20		retrograde	8894 Feb 07 13:38	13°M.32'43	
evening set	8887 Oct 03 08:36	2°M.54'04		opposition	8894 Apr 28 18:53	12°M.23'29	5°09'38
max. Earth dist.	8887 Oct 16 22:51	3°M.16'03	41.02907 AU	min. Earth dist.	8894 May 01 00:25	12°M.20'27	37.41304 AU
				direct	8894 Jul 18 08:37	11°M.13'36	
conjunction	8887 Oct 19 05:14	3°M.19'45	2°22'33	evening set	8894 Oct 13 22:13	12°M.40'53	
minimum elong	8887 Oct 19 05:10	3°M.19'45	2°22'40	max. Earth dist.	8894 Oct 26 14:22	13°M.02'31	39.27942 AU
morning rise	8887 Nov 04 02:18	3°M.45'29					
retrograde	8888 Jan 30 06:30	5°M.07'56		conjunction	8894 Oct 29 02:10	13°M.06'49	5°05'50
opposition	8888 Apr 20 01:13	4°M.00'31	2°41'53	minimum elong	8894 Oct 29 02:00	13°M.06'48	5°06'00
min. Earth dist.	8888 Apr 22 01:55	3°M.57'51	38.90591 AU	morning rise	8894 Nov 13 05:50	13°M.32'46	
direct	8888 Jul 09 21:14	2°M.52'42			8895 Jan 30 03:39	15°M.	
evening set	8888 Oct 04 01:20	4°M.14'14		retrograde	8895 Feb 09 10:34	15°M.01'25	
max. Earth dist.	8888 Oct 17 12:57	4°M.36'11	40.78172 AU		8895 Feb 19 18:22	15°R.M.	
				opposition	8895 Apr 30 11:24	13°M.51'51	5°34'52
conjunction	8888 Oct 19 20:26	4°M.39'59	2°45'23	min. Earth dist.	8895 May 02 16:59	13°M.48'47	37.15857 AU
minimum elong	8888 Oct 19 20:22	4°M.39'59	2°45'31	direct	8895 Jul 19 23:03	12°M.41'33	
morning rise	8888 Nov 04 15:51	5°M.05'48		evening set	8895 Oct 15 20:51	14°M.09'57	
retrograde	8889 Jan 30 23:39	6°M.29'00		max. Earth dist.	8895 Oct 28 07:17	14°M.31'22	39.02249 AU
opposition	8889 Apr 21 15:04	5°M.21'17	3°06'02				
min. Earth dist.	8889 Apr 23 17:09	5°M.18'31	38.65900 AU	conjunction	8895 Oct 30 21:05	14°M.35'50	5°29'45
direct	8889 Jul 11 08:09	4°M.13'07		minimum elong	8895 Oct 30 20:54	14°M.35'49	5°29'54
evening set	8889 Oct 05 18:43	5°M.35'29			8895 Nov 13 20:33	15°M.	
max. Earth dist.	8889 Oct 19 04:55	5°M.57'30	40.53398 AU	morning rise	8895 Nov 14 21:02	15°M.01'44	
				retrograde	8896 Feb 11 07:00	16°M.31'25	
conjunction	8889 Oct 21 12:08	6°M.01'19	3°08'23	opposition	8896 May 01 04:41	15°M.21'28	6°00'14
minimum elong	8889 Oct 21 12:02	6°M.01'18	3°08'30	min. Earth dist.	8896 May 03 12:09	15°M.18'17	36.90208 AU
morning rise	8889 Nov 06 05:37	6°M.27'12			8896 May 16 23:45	15°R.M.	
retrograde	8890 Feb 01 16:09	7°M.51'11		direct	8896 Jul 20 14:57	14°M.10'45	
opposition	8890 Apr 23 05:13	6°M.43'10	3°30'23		8896 Sep 21 13:21	15°M.	
min. Earth dist.	8890 Apr 25 06:45	6°M.40'25	38.41182 AU	evening set	8896 Oct 16 20:10	15°M.40'18	
direct	8890 Jul 12 23:34	5°M.34'40		max. Earth dist.	8896 Oct 29 02:48	16°M.01'36	38.76370 AU
evening set	8890 Oct 07 12:55	6°M.57'56					
max. Earth dist.	8890 Oct 20 19:13	7°M.19'51	40.28579 AU	conjunction	8896 Oct 31 16:28	16°M.06'07	5°53'46
				minimum elong	8896 Oct 31 16:17	16°M.06'06	5°53'57
conjunction	8890 Oct 23 04:09	7°M.23'49	3°31'34	morning rise	8896 Nov 15 12:10	16°M.31'56	
minimum elong	8890 Oct 23 04:02	7°M.23'49	3°31'43	retrograde	8897 Feb 12 02:54	18°M.02'41	
morning rise	8890 Nov 07 19:38	7°M.49'45		opposition	8897 May 02 22:19	16°M.52'21	6°25'44
retrograde	8891 Feb 03 09:45	9°M.14'35		min. Earth dist.	8897 May 05 05:43	16°M.49'09	36.64404 AU
opposition	8891 Apr 24 19:56	8°M.06'16	3°54'56	direct	8897 Jul 22 10:55	15°M.41'12	
min. Earth dist.	8891 Apr 26 22:51	8°M.03'26	38.16418 AU	evening set	8897 Oct 18 20:33	17°M.11'56	
direct	8891 Jul 14 14:07	6°M.57'27		max. Earth dist.	8897 Oct 30 20:46	17°M.32'58	38.50365 AU
evening set	8891 Oct 09 07:55	8°M.21'39					
max. Earth dist.	8891 Oct 22 12:18	8°M.43'37	40.03676 AU	conjunction	8897 Nov 02 12:17	17°M.37'39	6°17'52
				minimum elong	8897 Nov 02 12:05	17°M.37'38	6°18'03
conjunction	8891 Oct 24 20:57	8°M.47'35	3°54'54	morning rise	8897 Nov 17 03:39	18°M.03'22	
minimum elong	8891 Oct 24 20:50	8°M.47'35	3°55'02	retrograde	8898 Feb 14 00:10	19°M.35'14	
morning rise	8891 Nov 09 09:49	9°M.13'34		opposition	8898 May 04 16:29	18°M.24'30	6°51'20
retrograde	8892 Feb 05 01:34	10°M.39'17		min. Earth dist.	8898 May 07 00:57	18°M.21'13	36.38528 AU
opposition	8892 Apr 25 10:58	9°M.30'41	4°19'39	direct	8898 Jul 24 04:48	17°M.12'53	
min. Earth dist.	8892 Apr 27 14:15	9°M.27'48	37.91551 AU	evening set	8898 Oct 20 21:39	18°M.44'52	
direct	8892 Jul 15 05:43	8°M.21'31		max. Earth dist.	8898 Nov 01 17:21	19°M.05'45	38.24290 AU
evening set	8892 Oct 10 03:56	9°M.46'43					
max. Earth dist.	8892 Oct 23 03:56	10°M.08'33	39.78643 AU	conjunction	8898 Nov 04 08:47	19°M.10'28	6°42'03
				minimum elong	8898 Nov 04 08:34	19°M.10'27	6°42'14
conjunction	8892 Oct 25 14:07	10°M.12'40	4°18'24	morning rise	8898 Nov 18 19:08	19°M.36'03	
minimum elong	8892 Oct 25 13:59	10°M.12'40	4°18'34	retrograde	8899 Feb 15 19:02	21°M.09'05	
morning rise	8892 Nov 10 00:22	10°M.38'40		opposition	8899 May 06 11:17	19°M.57'57	7°17'00
retrograde	8893 Feb 05 19:33	12°M.05'19		min. Earth dist.	8899 May 08 20:14	19°M.54'36	36.12618 AU
opposition	8893 Apr 27 02:36	10°M.56'25	4°44'34	direct	8899 Jul 25 23:30	18°M.45'53	
min. Earth dist.	8893 Apr 29 06:42	10°M.53'29	37.66537 AU	evening set	8899 Oct 22 23:58	20°M.19'10	
direct	8893 Jul 16 19:00	9°M.46'55		max. Earth dist.	8899 Nov 03 13:37	20°M.39'47	37.98221 AU
evening set	8893 Oct 12 00:32	11°M.13'08					
max. Earth dist.	8893 Oct 24 20:38	11°M.34'52	39.53401 AU	conjunction	8899 Nov 06 05:46	20°M.44'36	7°06'15
				minimum elong	8899 Nov 06 05:32	20°M.44'35	7°06'26

morning rise	8899 Nov 20 10:57	21° ℳ 10'01	direct	8906 Aug 06 19:04	0° ♂ 19'52	
retrograde	8900 Feb 17 16:06	22° ℳ 44'17	evening set	8906 Nov 06 22:36	2° ♂ 04'27	
opposition	8900 May 08 06:26	21° ℳ 32'44 7°42'43	max. Earth dist.	8906 Nov 16 08:23	2° ♂ 22'22	36.18788 AU
min. Earth dist.	8900 May 10 15:21	21° ℳ 29'22				
direct	8900 Jul 27 16:50	20° ℳ 20'12	conjunction	8906 Nov 19 03:10	2° ♂ 27'43	9°54'16
evening set	8900 Oct 25 03:09	21° ℳ 54'52	minimum elong	8906 Nov 19 02:51	2° ♂ 27'42	9°54'29
max. Earth dist.	8900 Nov 05 10:29	22° ℳ 15'12 37.72207 AU	morning rise	8906 Dec 01 06:43	2° ♂ 50'57	
			retrograde	8907 Mar 02 21:21	4° ♂ 35'55	
conjunction	8900 Nov 08 03:23	22° ℳ 20'06 7°30'28	opposition	8907 May 20 15:47	3° ♂ 21'41	10°41'19
minimum elong	8900 Nov 08 03:08	22° ℳ 20'05 7°30'39	min. Earth dist.	8907 May 23 02:55	3° ♂ 18'02	34.09273 AU
morning rise	8900 Nov 22 02:48	22° ℳ 45'19	direct	8907 Aug 08 16:51	2° ♂ 06'05	
retrograde	8901 Feb 19 14:11	24° ℳ 20'55	evening set	8907 Nov 09 10:17	3° ♂ 52'34	
opposition	8901 May 10 02:29	23° ℳ 08'57 8°08'27	max. Earth dist.	8907 Nov 18 10:07	4° ♂ 09'53	35.93455 AU
min. Earth dist.	8901 May 12 12:24	23° ℳ 05'31				
direct	8901 Jul 29 09:53	21° ℳ 55'58	conjunction	8907 Nov 21 05:51	4° ♂ 15'21	10°17'43
evening set	8901 Oct 27 07:16	23° ℳ 32'05	minimum elong	8907 Nov 21 05:33	4° ♂ 15'20	10°17'56
max. Earth dist.	8901 Nov 07 09:07	23° ℳ 52'11 37.46331 AU	morning rise	8907 Dec 03 00:15	4° ♂ 38'04	
			retrograde	8908 Mar 04 00:05	6° ♂ 24'51	
conjunction	8901 Nov 10 01:26	23° ℳ 57'05 7°54'39	opposition	8908 May 21 16:34	5° ♂ 10'12	11°06'16
minimum elong	8901 Nov 10 01:11	23° ℳ 57'04 7°54'50	min. Earth dist.	8908 May 24 05:03	5° ♂ 06'26	33.84239 AU
morning rise	8901 Nov 23 18:42	24° ℳ 22'04	direct	8908 Aug 09 14:03	3° ♂ 54'07	
retrograde	8902 Feb 21 14:05	25° ℳ 59'03	evening set	8908 Nov 10 23:22	5° ♂ 42'35	
opposition	8902 May 11 22:59	24° ℳ 46'42 8°34'09	max. Earth dist.	8908 Nov 19 13:48	5° ♂ 59'19	35.68215 AU
min. Earth dist.	8902 May 14 07:59	24° ℳ 43'17				
direct	8902 Jul 31 05:34	23° ℳ 33'16	conjunction	8908 Nov 22 09:12	6° ♂ 04'48	10°40'55
evening set	8902 Oct 29 12:42	25° ℳ 10'55	minimum elong	8908 Nov 22 08:52	6° ♂ 04'47	10°41'08
max. Earth dist.	8902 Nov 09 06:41	25° ℳ 30'37 37.20604 AU	morning rise	8908 Dec 03 17:48	6° ♂ 26'58	
			retrograde	8909 Mar 06 04:57	8° ♂ 15'36	
conjunction	8902 Nov 12 00:17	25° ℳ 35'40 8°18'48	opposition	8909 May 23 17:59	7° ♂ 00'32	11°30'57
minimum elong	8902 Nov 12 00:01	25° ℳ 35'38 8°18'59	min. Earth dist.	8909 May 26 05:43	6° ♂ 56'47	33.59328 AU
morning rise	8902 Nov 25 11:05	26° ℳ 00'23	direct	8909 Aug 11 15:49	5° ♂ 43'57	
retrograde	8903 Feb 23 15:17	27° ℳ 38'49	evening set	8909 Nov 13 13:34	7° ♂ 34'28	
opposition	8903 May 13 20:07	26° ℳ 26'05 8°59'48	max. Earth dist.	8909 Nov 21 16:25	7° ♂ 50'26	35.43112 AU
min. Earth dist.	8903 May 16 06:19	26° ℳ 22'34				
direct	8903 Aug 02 01:18	25° ℳ 12'13	conjunction	8909 Nov 24 13:03	7° ♂ 56'05	11°03'50
evening set	8903 Oct 31 19:17	26° ℳ 51'29	minimum elong	8909 Nov 24 12:44	7° ♂ 56'03	11°04'03
max. Earth dist.	8903 Nov 11 07:14	27° ℳ 10'54 36.95026 AU	morning rise	8909 Dec 05 11:28	8° ♂ 17'37	
			retrograde	8910 Mar 08 11:40	10° ♂ 08'12	
conjunction	8903 Nov 14 00:01	27° ℳ 15'57 8°42'51	opposition	8910 May 25 20:14	8° ♂ 52'41	11°55'19
minimum elong	8903 Nov 13 23:45	27° ℳ 15'55 8°43'03	min. Earth dist.	8910 May 28 09:00	8° ♂ 48'51	33.34599 AU
morning rise	8903 Nov 27 03:37	27° ℳ 40'21	direct	8910 Aug 13 17:11	7° ♂ 35'36	
retrograde	8904 Feb 25 16:06	29° ℳ 20'18	evening set	8910 Nov 16 05:21	9° ♂ 28'16	
opposition	8904 May 14 17:58	28° ℳ 07'13 9°25'22	max. Earth dist.	8910 Nov 23 22:23	9° ♂ 43'34	35.18220 AU
min. Earth dist.	8904 May 17 03:52	28° ℳ 03'42				
direct	8904 Aug 03 00:15	26° ℳ 52'56	conjunction	8910 Nov 26 17:56	9° ♂ 49'11	11°26'24
evening set	8904 Nov 02 03:07	28° ℳ 33'54	minimum elong	8910 Nov 26 17:35	9° ♂ 49'09	11°26'37
max. Earth dist.	8904 Nov 12 06:01	28° ℳ 52'50 36.69559 AU	morning rise	8910 Dec 07 05:11	10° ♂ 10'01	
			retrograde	8911 Mar 10 17:09	12° ♂ 02'37	
conjunction	8904 Nov 15 00:10	28° ℳ 58'01 9°06'48	opposition	8911 May 27 23:02	10° ♂ 46'39	12°19'18
minimum elong	8904 Nov 14 23:53	28° ℳ 58'00 9°07'01	min. Earth dist.	8911 May 30 11:09	10° ♂ 42'50	33.10117 AU
morning rise	8904 Nov 27 20:23	29° ℳ 22'05	direct	8911 Aug 15 21:18	9° ♂ 29'04	
	8904 Dec 19 07:30	0° ♂	evening set	8911 Nov 18 22:37	11° ♂ 23'58	
retrograde	8905 Feb 26 18:36	1° ♂ 03'39	max. Earth dist.	8911 Nov 26 02:59	11° ♂ 38'22	34.93617 AU
	8905 May 09 23:13	30° ♂ ℳ				
opposition	8905 May 16 16:30	29° ℳ 50'11 9°50'50	conjunction	8911 Nov 28 23:23	11° ♂ 44'07	11°48'33
min. Earth dist.	8905 May 19 03:06	29° ℳ 46'36	minimum elong	8911 Nov 28 23:03	11° ♂ 44'05	11°48'47
direct	8905 Aug 04 21:02	28° ℳ 35'29	morning rise	8911 Dec 08 23:06	12° ♂ 04'11	
	8905 Oct 25 13:46	0° ♂	retrograde	8912 Mar 12 00:13	13° ♂ 58'53	
evening set	8905 Nov 04 12:08	0° ♂ 18'13	opposition	8912 May 29 02:43	12° ♂ 42'29	12°42'51
max. Earth dist.	8905 Nov 14 07:15	0° ♂ 36'42 36.44148 AU	min. Earth dist.	8912 May 31 15:01	12° ♂ 38'37	32.85979 AU
			direct	8912 Aug 16 23:36	11° ♂ 24'22	
conjunction	8905 Nov 17 01:22	0° ♂ 41'57 9°30'37	evening set	8912 Nov 20 17:09	13° ♂ 21'36	
minimum elong	8905 Nov 17 01:04	0° ♂ 41'55 9°30'50	max. Earth dist.	8912 Nov 27 10:17	13° ♂ 35'12	34.69376 AU
morning rise	8905 Nov 29 13:23	1° ♂ 05'37				
retrograde	8906 Feb 28 18:23	2° ♂ 48'51	conjunction	8912 Nov 30 05:35	13° ♂ 40'54	12°10'14
opposition	8906 May 18 15:49	1° ♂ 35'01 10°16'10	minimum elong	8912 Nov 30 05:14	13° ♂ 40'52	12°10'28
min. Earth dist.	8906 May 21 03:03	1° ♂ 31'22 34.34364 AU	morning rise	8912 Dec 09 16:45	14° ♂ 00'07	

retrograde	8913 Mar 14 05:59	15° \mathring{A} 57'01		conjunction	8919 Dec 16 00:28	28° \mathring{A} 15'22	14°23'21
opposition	8913 May 31 07:17	14° \mathring{A} 40'11	13°05'52	minimum elong	8919 Dec 16 00:09	28° \mathring{A} 15'21	14°23'36
min. Earth dist.	8913 Jun 02 19:15	14° \mathring{A} 36'18	32.62244 AU	morning rise	8919 Dec 20 13:59	28° \mathring{A} 25'18	
direct	8913 Aug 19 03:57	13° \mathring{A} 21'35			8920 Feb 07 09:59	0° \mathring{B}	
evening set	8913 Nov 23 13:29	15° \mathring{A} 21'14		retrograde	8920 Mar 29 07:08	0° \mathring{B} 41'08	
max. Earth dist.	8913 Nov 29 17:22	15° \mathring{A} 33'51	34.45598 AU		8920 May 20 19:19	30° \mathring{R} \mathring{A}	
				opposition	8920 Jun 14 14:11	29° \mathring{A} 21'39	15°26'38
conjunction	8913 Dec 02 12:32	15° \mathring{A} 39'36	12°31'23	min. Earth dist.	8920 Jun 16 22:41	29° \mathring{A} 17'51	31.09972 AU
minimum elong	8913 Dec 02 12:11	15° \mathring{A} 39'34	12°31'37	direct	8920 Sep 02 01:49	27° \mathring{A} 59'58	
morning rise	8913 Dec 11 10:32	15° \mathring{A} 57'52			8920 Dec 04 09:56	0° \mathring{B}	
retrograde	8914 Mar 16 15:13	17° \mathring{A} 57'04		evening set	8920 Dec 14 01:26	0° \mathring{B} 20'59	
opposition	8914 Jun 02 12:27	16° \mathring{A} 39'49	13°28'17	max. Earth dist.	8920 Dec 14 21:51	0° \mathring{B} 22'51	32.93107 AU
min. Earth dist.	8914 Jun 04 23:21	16° \mathring{A} 36'00	32.39006 AU				
direct	8914 Aug 21 07:14	15° \mathring{A} 20'45		conjunction	8920 Dec 17 13:11	0° \mathring{B} 28'38	14°38'58
evening set	8914 Nov 26 11:22	17° \mathring{A} 22'57		minimum elong	8920 Dec 17 12:52	0° \mathring{B} 28'36	14°39'13
max. Earth dist.	8914 Dec 02 01:48	17° \mathring{A} 34'31	34.22319 AU	morning rise	8920 Dec 21 00:14	0° \mathring{B} 36'13	
				retrograde	8921 Mar 31 21:56	2° \mathring{B} 55'42	
conjunction	8914 Dec 04 20:26	17° \mathring{A} 40'17	12°51'55	opposition	8921 Jun 17 01:29	1° \mathring{B} 35'51	15°43'03
minimum elong	8914 Dec 04 20:04	17° \mathring{A} 40'15	12°52'09	min. Earth dist.	8921 Jun 19 09:17	1° \mathring{B} 32'04	30.90135 AU
morning rise	8914 Dec 13 04:20	17° \mathring{A} 57'31		direct	8921 Sep 04 12:09	0° \mathring{B} 13'44	
retrograde	8915 Mar 18 21:33	19° \mathring{A} 59'08		evening set	8921 Dec 18 04:57	2° \mathring{B} 39'36	
opposition	8915 Jun 04 18:40	18° \mathring{A} 41'30	13°50'03	max. Earth dist.	8921 Dec 17 13:07	2° \mathring{B} 38'08	32.73291 AU
min. Earth dist.	8915 Jun 07 05:49	18° \mathring{A} 37'38	32.16277 AU				
direct	8915 Aug 23 10:43	17° \mathring{A} 21'58		conjunction	8921 Dec 20 02:59	2° \mathring{B} 43'50	14°53'33
evening set	8915 Nov 29 11:16	19° \mathring{A} 26'51		minimum elong	8921 Dec 20 02:42	2° \mathring{B} 43'49	14°53'48
max. Earth dist.	8915 Dec 04 11:38	19° \mathring{A} 37'19	33.99576 AU	morning rise	8921 Dec 22 00:25	2° \mathring{B} 48'02	
				retrograde	8922 Apr 03 11:29	5° \mathring{B} 12'11	
conjunction	8915 Dec 07 05:06	19° \mathring{A} 43'02	13°11'46	opposition	8922 Jun 19 13:32	3° \mathring{B} 51'58	15°58'19
minimum elong	8915 Dec 07 04:46	19° \mathring{A} 43'00	13°12'01	min. Earth dist.	8922 Jun 21 21:04	3° \mathring{B} 48'11	30.70843 AU
morning rise	8915 Dec 14 21:53	19° \mathring{A} 59'08		direct	8922 Sep 06 23:36	2° \mathring{B} 29'26	
retrograde	8916 Mar 20 06:59	22° \mathring{A} 03'17		max. Earth dist.	8922 Dec 20 04:07	4° \mathring{B} 55'14	32.54087 AU
opposition	8916 Jun 06 01:31	20° \mathring{A} 45'16	14°11'04				
min. Earth dist.	8916 Jun 08 11:15	20° \mathring{A} 41'28	31.94074 AU	conjunction	8922 Dec 22 17:23	5° \mathring{B} 00'56	15°07'00
direct	8916 Aug 24 16:47	19° \mathring{A} 25'18		minimum elong	8922 Dec 22 17:06	5° \mathring{B} 00'54	15°07'15
evening set	8916 Dec 01 12:58	21° \mathring{A} 33'00		retrograde	8923 Apr 06 03:47	7° \mathring{B} 30'30	
max. Earth dist.	8916 Dec 05 20:55	21° \mathring{A} 42'08	33.77339 AU	opposition	8923 Jun 22 02:21	6° \mathring{B} 09'56	16°12'20
				min. Earth dist.	8923 Jun 24 08:13	6° \mathring{B} 06'15	30.52179 AU
conjunction	8916 Dec 08 14:36	21° \mathring{A} 47'55	13°30'54	direct	8923 Sep 09 11:41	4° \mathring{B} 46'59	
minimum elong	8916 Dec 08 14:14	21° \mathring{A} 47'53	13°31'09	max. Earth dist.	8923 Dec 22 20:35	7° \mathring{B} 14'14	32.35542 AU
morning rise	8916 Dec 15 15:15	22° \mathring{A} 02'46					
retrograde	8917 Mar 22 17:24	24° \mathring{A} 09'35		conjunction	8923 Dec 25 08:33	7° \mathring{B} 19'51	15°19'14
opposition	8917 Jun 08 09:25	22° \mathring{A} 51'12	14°31'18	minimum elong	8923 Dec 25 08:18	7° \mathring{B} 19'49	15°19'29
min. Earth dist.	8917 Jun 10 19:42	22° \mathring{A} 47'20	31.72369 AU	retrograde	8924 Apr 07 17:16	9° \mathring{B} 50'37	
direct	8917 Aug 26 21:23	21° \mathring{A} 30'48		opposition	8924 Jun 23 16:04	8° \mathring{B} 29'42	16°25'02
evening set	8917 Dec 04 17:00	23° \mathring{A} 41'28		min. Earth dist.	8924 Jun 25 21:45	8° \mathring{B} 26'01	30.34207 AU
max. Earth dist.	8917 Dec 08 08:49	23° \mathring{A} 49'15	33.55591 AU	direct	8924 Sep 10 23:27	7° \mathring{B} 06'21	
				max. Earth dist.	8924 Dec 24 14:13	9° \mathring{B} 35'03	32.17772 AU
conjunction	8917 Dec 11 00:55	23° \mathring{A} 54'57	13°49'14				
minimum elong	8917 Dec 11 00:36	23° \mathring{A} 54'56	13°49'29	conjunction	8924 Dec 27 00:17	9° \mathring{B} 40'32	15°30'10
morning rise	8917 Dec 17 07:53	24° \mathring{A} 08'23		minimum elong	8924 Dec 27 00:02	9° \mathring{B} 40'31	15°30'25
retrograde	8918 Mar 25 04:58	26° \mathring{A} 18'00		retrograde	8925 Apr 10 09:30	12° \mathring{B} 12'28	
opposition	8918 Jun 10 18:07	24° \mathring{A} 59'16	14°50'41	opposition	8925 Jun 26 06:24	10° \mathring{B} 51'14	16°36'17
min. Earth dist.	8918 Jun 13 03:08	24° \mathring{A} 55'28	31.51119 AU	min. Earth dist.	8925 Jun 28 09:42	10° \mathring{B} 47'41	30.17029 AU
direct	8918 Aug 29 06:06	23° \mathring{A} 38'27		direct	8925 Sep 13 13:48	9° \mathring{B} 27'30	
evening set	8918 Dec 07 23:45	25° \mathring{A} 52'15		max. Earth dist.	8925 Dec 27 07:42	11° \mathring{B} 57'32	32.00843 AU
max. Earth dist.	8918 Dec 10 19:25	25° \mathring{A} 58'19	33.34294 AU				
				conjunction	8925 Dec 29 16:38	12° \mathring{B} 02'57	15°39'43
conjunction	8918 Dec 13 12:12	26° \mathring{A} 04'08	14°06'45	minimum elong	8925 Dec 29 16:27	12° \mathring{B} 02'56	15°39'58
minimum elong	8918 Dec 13 11:52	26° \mathring{A} 04'06	14°06'59	retrograde	8926 Apr 13 01:43	14° \mathring{B} 36'01	
morning rise	8918 Dec 18 23:48	26° \mathring{A} 15'56		opposition	8926 Jun 28 21:39	13° \mathring{B} 14'29	16°46'01
retrograde	8919 Mar 27 18:41	28° \mathring{A} 28'33		min. Earth dist.	8926 Jul 01 00:24	13° \mathring{B} 10'57	30.00716 AU
opposition	8919 Jun 13 03:39	27° \mathring{A} 09'26	15°09'09	direct	8926 Sep 16 02:08	11° \mathring{B} 50'25	
min. Earth dist.	8919 Jun 15 12:54	27° \mathring{A} 05'36	31.30321 AU	max. Earth dist.	8926 Dec 30 03:32	14° \mathring{B} 21'54	31.84842 AU
direct	8919 Aug 31 14:46	25° \mathring{A} 48'11					
evening set	8919 Dec 11 10:10	28° \mathring{A} 05'24		conjunction	8927 Jan 01 09:48	14° \mathring{B} 27'06	15°47'48
max. Earth dist.	8919 Dec 13 09:21	28° \mathring{A} 09'40	33.13454 AU	minimum elong	8927 Jan 01 09:37	14° \mathring{B} 27'05	15°48'02
				retrograde	8927 Apr 15 18:41	17° \mathring{B} 01'14	

opposition	8927 Jul 01 13:26	15°  39'27	16°54'08	opposition	8935 Jul 21 19:07	5°  51'17	16°54'58
min. Earth dist.	8927 Jul 03 13:38	15°  36'05	29.85320 AU	min. Earth dist.	8935 Jul 23 06:20	5°  48'47	28.94915 AU
direct	8927 Sep 18 18:18	14°  15'06		direct	8935 Oct 08 23:17	4°  25'29	
max. Earth dist.	8928 Jan 01 22:12	16°  47'49	31.69804 AU	max. Earth dist.	8936 Jan 23 07:05	7°  05'58	30.83138 AU
conjunction	8928 Jan 04 03:30	16°  52'58	15°54'20	conjunction	8936 Jan 24 19:04	7°  09'34	15°46'17
minimum elong	8928 Jan 04 03:23	16°  52'57	15°54'35	minimum elong	8936 Jan 24 19:13	7°  09'34	15°46'29
retrograde	8928 Apr 17 13:12	19°  28'09		retrograde	8936 May 08 05:56	9°  49'55	
opposition	8928 Jul 03 06:07	18°  06'07	17°00'35	opposition	8936 Jul 23 15:44	8°  26'43	16°46'32
min. Earth dist.	8928 Jul 05 05:11	18°  02'50	29.70881 AU	min. Earth dist.	8936 Jul 24 23:43	8°  24'26	28.87764 AU
direct	8928 Sep 20 09:47	16°  41'31		direct	8936 Oct 10 21:41	7°  00'48	
max. Earth dist.	8929 Jan 03 19:39	19°  15'39	31.55742 AU	max. Earth dist.	8937 Jan 25 06:19	9°  41'46	30.76657 AU
conjunction	8929 Jan 05 21:46	19°  20'31	15°59'17	conjunction	8937 Jan 26 16:01	9°  45'08	15°37'18
minimum elong	8929 Jan 05 21:39	19°  20'30	15°59'31	minimum elong	8937 Jan 26 16:11	9°  45'09	15°37'30
retrograde	8929 Apr 20 07:27	21°  56'40		retrograde	8937 May 11 02:05	12°  25'41	
opposition	8929 Jul 05 23:27	20°  34'28	17°05'17	opposition	8937 Jul 26 12:40	11°  02'23	16°36'07
min. Earth dist.	8929 Jul 07 20:30	20°  31'19	29.57365 AU	min. Earth dist.	8937 Jul 27 19:09	11°  00'13	28.81683 AU
direct	8929 Sep 23 03:24	19°  09'39		direct	8937 Oct 13 17:17	9°  36'23	
max. Earth dist.	8930 Jan 06 15:26	21°  44'54	31.42623 AU	max. Earth dist.	8938 Jan 28 06:51	12°  17'50	30.71317 AU
conjunction	8930 Jan 08 16:37	21°  49'41	16°02'35	conjunction	8938 Jan 29 13:09	12°  20'52	15°26'28
minimum elong	8930 Jan 08 16:34	21°  49'41	16°02'50	minimum elong	8938 Jan 29 13:22	12°  20'53	15°26'40
retrograde	8930 Apr 23 04:01	24°  26'45		retrograde	8938 May 04 17:36	15° 	
opposition	8930 Jul 08 17:15	23°  04'22	17°08'12	retrograde	8938 May 13 21:25	15°  01'30	
min. Earth dist.	8930 Jul 10 12:48	23°  01'19	29.44761 AU	retrograde	8938 May 23 01:36	15°  R 	
direct	8930 Sep 25 20:10	21°  39'22		opposition	8938 Jul 29 09:30	13°  38'08	16°23'43
max. Earth dist.	8931 Jan 09 13:58	24°  15'50	31.30415 AU	min. Earth dist.	8938 Jul 30 12:40	13°  36'12	28.76731 AU
conjunction	8931 Jan 11 12:15	24°  20'22	16°04'13	direct	8938 Oct 16 15:35	12°  12'05	
minimum elong	8931 Jan 11 12:12	24°  20'22	16°04'28	max. Earth dist.	8939 Jan 31 06:03	14°  53'48	30.67167 AU
retrograde	8931 Apr 25 23:45	26°  58'14		conjunction	8939 Feb 01 10:13	14°  56'37	15°13'49
opposition	8931 Jul 11 11:56	25°  35'42	17°09'19	minimum elong	8939 Feb 01 10:27	14°  56'39	15°14'01
min. Earth dist.	8931 Jul 13 06:09	25°  32'43	29.33019 AU	retrograde	8939 Feb 02 19:52	15° 	
direct	8931 Sep 28 15:54	24°  10'31		retrograde	8939 May 16 16:58	17°  37'16	
max. Earth dist.	8932 Jan 12 10:51	26°  47'54	31.19106 AU	opposition	8939 Aug 01 06:40	16°  13'53	16°09'20
conjunction	8932 Jan 14 08:04	26°  52'22	16°04'09	min. Earth dist.	8939 Aug 02 07:36	16°  12'06	28.72989 AU
minimum elong	8932 Jan 14 08:04	26°  52'22	16°04'23	direct	8939 Sep 22 10:22	15°  R 	
retrograde	8932 Apr 27 20:33	29°  30'57		direct	8939 Oct 19 12:20	14°  47'50	
opposition	8932 Jul 13 07:02	28°  08'15	17°08'35	retrograde	8939 Nov 15 06:00	15° 	
min. Earth dist.	8932 Jul 14 22:56	28°  05'26	29.22150 AU	evening set	8940 Feb 03 18:41	17°  31'04	
direct	8932 Sep 30 11:27	26°  42'54		max. Earth dist.	8940 Feb 03 07:06	17°  29'55	30.64271 AU
max. Earth dist.	8933 Jan 14 09:54	29°  21'16	31.08693 AU	conjunction	8940 Feb 04 07:10	17°  32'20	14°59'20
conjunction	8933 Jan 16 04:29	29°  25'29	16°02'21	minimum elong	8940 Feb 04 07:27	17°  32'21	14°59'30
minimum elong	8933 Jan 16 04:30	29°  25'29	16°02'35	evening rise	8940 Feb 04 20:14	17°  33'38	
retrograde	8933 Jan 30 19:28	0° 		retrograde	8940 May 18 12:15	20°  12'53	
retrograde	8933 Apr 30 16:20	2°  44'41		opposition	8940 Aug 03 03:52	18°  49'32	15°52'58
opposition	8933 Jul 16 02:45	0°  41'51	17°05'58	min. Earth dist.	8940 Aug 04 01:44	18°  47'59	28.70463 AU
min. Earth dist.	8933 Jul 17 17:40	0°  39'06	29.12156 AU	direct	8940 Oct 21 10:40	17°  23'33	
direct	8933 Aug 10 20:49	30°  R 		evening set	8941 Feb 03 02:32	20°  00'33	
direct	8933 Oct 03 06:42	29°  16'20		max. Earth dist.	8941 Feb 05 05:55	20°  05'42	30.62627 AU
max. Earth dist.	8933 Nov 23 17:37	0° 		conjunction	8941 Feb 06 03:57	20°  07'55	14°43'03
conjunction	8934 Jan 17 08:08	1°  55'28	30.99213 AU	minimum elong	8941 Feb 06 04:15	20°  07'57	14°43'14
conjunction	8934 Jan 19 01:03	1°  59'32	15°58'48	morning rise	8941 Feb 09 05:53	20°  15'20	
minimum elong	8934 Jan 19 01:07	1°  59'32	15°59'00	retrograde	8941 May 21 08:49	22°  48'20	
retrograde	8934 May 03 14:26	4°  39'13		opposition	8941 Aug 06 00:52	21°  25'03	15°34'42
opposition	8934 Jul 18 22:42	3°  16'15	17°01'26	min. Earth dist.	8941 Aug 06 19:56	21°  23'42	28.69167 AU
min. Earth dist.	8934 Jul 20 10:50	3°  13'41	29.03067 AU	direct	8941 Oct 24 07:00	19°  59'10	
direct	8934 Oct 06 03:46	1°  50'35		evening set	8942 Feb 04 15:30	22°  32'47	
max. Earth dist.	8935 Jan 20 07:29	4°  30'27	30.90669 AU	max. Earth dist.	8942 Feb 08 06:45	22°  41'31	30.62204 AU
conjunction	8935 Jan 21 22:01	4°  34'18	15°53'27	conjunction	8942 Feb 09 00:43	22°  43'19	14°25'02
minimum elong	8935 Jan 21 22:07	4°  34'18	15°53'40	minimum elong	8942 Feb 09 01:02	22°  43'21	14°25'11
retrograde	8935 May 06 09:21	7°  14'22		morning rise	8942 Feb 13 10:21	22°  53'54	
				retrograde	8942 May 24 03:51	25°  23'29	

opposition	8942 Aug 08 21:58	24° \approx 00'19	15°14'36	conjunction	8949 Feb 26 16:01	10° \mathbb{H} 33'21	11°36'40
min. Earth dist.	8942 Aug 09 14:45	23° \approx 59'08	28.69027 AU	minimum elong	8949 Feb 26 16:26	10° \mathbb{H} 33'23	11°36'47
direct	8942 Oct 27 05:56	22° \approx 34'36		max. Earth dist.	8949 Feb 26 16:36	10° \mathbb{H} 33'24	30.89575 AU
evening set	8943 Feb 06 10:23	25° \approx 05'20		morning rise	8949 Mar 08 15:11	10° \mathbb{H} 56'45	
				retrograde	8949 Jun 10 13:19	13° \mathbb{H} 09'21	
conjunction	8943 Feb 11 21:06	25° \approx 18'24	14°05'21	opposition	8949 Aug 26 18:40	11° \mathbb{H} 47'16	12°09'15
minimum elong	8943 Feb 11 21:27	25° \approx 18'26	14°05'31	min. Earth dist.	8949 Aug 26 17:14	11° \mathbb{H} 47'22	28.97619 AU
max. Earth dist.	8943 Feb 11 04:53	25° \approx 16'47	30.62940 AU	direct	8949 Nov 14 13:38	10° \mathbb{H} 22'58	
morning rise	8943 Feb 17 08:15	25° \approx 31'31		evening set	8950 Feb 18 19:56	12° \mathbb{H} 37'01	
retrograde	8943 May 27 00:33	27° \approx 58'15					
opposition	8943 Aug 11 18:51	26° \approx 35'12	14°52'43	conjunction	8950 Mar 01 09:12	13° \mathbb{H} 01'40	11°07'33
min. Earth dist.	8943 Aug 12 08:25	26° \approx 34'15	28.70012 AU	minimum elong	8950 Mar 01 09:35	13° \mathbb{H} 01'42	11°07'38
direct	8943 Oct 30 04:03	25° \approx 09'39		max. Earth dist.	8950 Mar 01 12:08	13° \mathbb{H} 01'57	30.97609 AU
evening set	8944 Feb 08 08:19	27° \approx 37'46		morning rise	8950 Mar 11 22:13	13° \mathbb{H} 26'17	
				retrograde	8950 Jun 13 03:46	15° \mathbb{H} 36'45	
conjunction	8944 Feb 14 17:24	27° \approx 53'02	13°44'05	opposition	8950 Aug 29 13:08	14° \mathbb{H} 14'51	11°37'29
minimum elong	8944 Feb 14 17:46	27° \approx 53'04	13°44'13	min. Earth dist.	8950 Aug 29 09:17	14° \mathbb{H} 15'07	29.05838 AU
max. Earth dist.	8944 Feb 14 04:57	27° \approx 51'47	30.64784 AU	direct	8950 Nov 17 08:40	12° \mathbb{H} 50'48	
morning rise	8944 Feb 21 02:43	28° \approx 08'20		evening set	8951 Feb 20 23:32	15° \mathbb{H} 02'40	
	8944 Apr 15 18:39	0° \mathbb{H}					
retrograde	8944 May 28 19:03	0° \mathbb{H} 32'28		conjunction	8951 Mar 04 01:44	15° \mathbb{H} 28'26	10°37'24
	8944 Jul 12 12:30	30° \mathbb{R} \approx		minimum elong	8951 Mar 04 02:08	15° \mathbb{H} 28'28	10°37'29
opposition	8944 Aug 13 15:46	29° \approx 09'34	14°29'10	max. Earth dist.	8951 Mar 04 08:24	15° \mathbb{H} 29'04	31.06739 AU
min. Earth dist.	8944 Aug 14 03:38	29° \approx 08'44	28.72066 AU	morning rise	8951 Mar 15 03:25	15° \mathbb{H} 54'09	
direct	8944 Nov 01 01:28	27° \approx 44'13		retrograde	8951 Jun 15 17:16	18° \mathbb{H} 02'33	
	8945 Feb 05 04:33	0° \mathbb{H}		opposition	8951 Sep 01 07:01	16° \mathbb{H} 40'52	11°04'39
evening set	8945 Feb 09 08:01	0° \mathbb{H} 09'49		min. Earth dist.	8951 Sep 01 00:13	16° \mathbb{H} 41'20	29.15161 AU
				direct	8951 Nov 20 04:27	15° \mathbb{H} 17'05	
conjunction	8945 Feb 16 13:06	0° \mathbb{H} 27'03	13°21'18	evening set	8952 Feb 23 03:25	17° \mathbb{H} 26'51	
minimum elong	8945 Feb 16 13:29	0° \mathbb{H} 27'05	13°21'27				
max. Earth dist.	8945 Feb 16 02:32	0° \mathbb{H} 25'59	30.67705 AU	conjunction	8952 Mar 05 17:32	17° \mathbb{H} 53'37	10°06'20
morning rise	8945 Feb 23 18:29	0° \mathbb{H} 44'18		minimum elong	8952 Mar 05 17:54	17° \mathbb{H} 53'39	10°06'23
retrograde	8945 May 31 15:50	3° \mathbb{H} 05'58		max. Earth dist.	8952 Mar 06 02:18	17° \mathbb{H} 54'28	31.16991 AU
opposition	8945 Aug 16 12:16	1° \mathbb{H} 43'13	14°04'00	morning rise	8952 Mar 17 07:17	18° \mathbb{H} 20'19	
min. Earth dist.	8945 Aug 16 20:43	1° \mathbb{H} 42'38	28.75161 AU	retrograde	8952 Jun 17 08:20	20° \mathbb{H} 26'45	
direct	8945 Nov 04 00:27	0° \mathbb{H} 18'04		opposition	8952 Sep 03 00:18	19° \mathbb{H} 05'18	10°30'52
evening set	8946 Feb 11 09:03	2° \mathbb{H} 41'16		min. Earth dist.	8952 Sep 02 14:08	19° \mathbb{H} 06'00	29.25636 AU
				direct	8952 Nov 21 21:15	17° \mathbb{H} 41'50	
conjunction	8946 Feb 19 08:43	3° \mathbb{H} 00'16	12°57'05	evening set	8953 Feb 24 07:17	19° \mathbb{H} 49'34	
minimum elong	8946 Feb 19 09:06	3° \mathbb{H} 00'18	12°57'12				
max. Earth dist.	8946 Feb 19 01:24	2° \mathbb{H} 59'32	30.71649 AU	conjunction	8953 Mar 08 08:44	20° \mathbb{H} 17'13	9°34'25
morning rise	8946 Feb 27 08:25	3° \mathbb{H} 19'16		minimum elong	8953 Mar 08 09:07	20° \mathbb{H} 17'15	9°34'28
retrograde	8946 Jun 03 09:22	5° \mathbb{H} 38'35		max. Earth dist.	8953 Mar 08 21:28	20° \mathbb{H} 18'27	31.28375 AU
opposition	8946 Aug 19 08:30	4° \mathbb{H} 15'59	13°37'21	morning rise	8953 Mar 20 09:26	20° \mathbb{H} 44'50	
min. Earth dist.	8946 Aug 19 15:32	4° \mathbb{H} 15'30	28.79264 AU	retrograde	8953 Jun 19 20:16	22° \mathbb{H} 49'21	
direct	8946 Nov 06 21:51	2° \mathbb{H} 51'02		opposition	8953 Sep 05 17:01	21° \mathbb{H} 28'11	9°56'15
evening set	8947 Feb 13 11:08	5° \mathbb{H} 11'53		min. Earth dist.	8953 Sep 05 04:40	21° \mathbb{H} 29'01	29.37213 AU
				direct	8953 Nov 24 16:02	20° \mathbb{H} 05'04	
conjunction	8947 Feb 22 03:45	5° \mathbb{H} 32'30	12°31'31	evening set	8954 Feb 26 11:35	22° \mathbb{H} 10'49	
minimum elong	8947 Feb 22 04:09	5° \mathbb{H} 32'32	12°31'39				
max. Earth dist.	8947 Feb 21 22:39	5° \mathbb{H} 32'00	30.76616 AU	conjunction	8954 Mar 10 23:12	22° \mathbb{H} 39'17	9°01'46
morning rise	8947 Mar 02 20:24	5° \mathbb{H} 53'07		minimum elong	8954 Mar 10 23:33	22° \mathbb{H} 39'19	9°01'48
retrograde	8947 Jun 06 03:48	8° \mathbb{H} 10'07		max. Earth dist.	8954 Mar 11 13:35	22° \mathbb{H} 40'39	31.40831 AU
opposition	8947 Aug 22 04:22	6° \mathbb{H} 47'42	13°09'17	morning rise	8954 Mar 23 10:18	23° \mathbb{H} 07'41	
min. Earth dist.	8947 Aug 22 07:53	6° \mathbb{H} 47'27	28.84366 AU	retrograde	8954 Jun 22 10:29	25° \mathbb{H} 10'22	
direct	8947 Nov 09 20:13	5° \mathbb{H} 22'58		opposition	8954 Sep 08 08:56	23° \mathbb{H} 49'30	9°20'54
evening set	8948 Feb 15 13:32	7° \mathbb{H} 41'30		min. Earth dist.	8954 Sep 07 17:05	23° \mathbb{H} 50'34	29.49850 AU
				direct	8954 Nov 27 08:57	22° \mathbb{H} 26'45	
conjunction	8948 Feb 24 22:09	8° \mathbb{H} 03'35	12°04'41	evening set	8955 Feb 28 15:53	24° \mathbb{H} 30'36	
minimum elong	8948 Feb 24 22:32	8° \mathbb{H} 03'37	12°04'48				
max. Earth dist.	8948 Feb 24 19:51	8° \mathbb{H} 03'21	30.82579 AU	conjunction	8955 Mar 13 13:11	24° \mathbb{H} 59'47	8°28'29
morning rise	8948 Mar 05 06:39	8° \mathbb{H} 25'39		minimum elong	8955 Mar 13 13:32	24° \mathbb{H} 59'49	8°28'31
retrograde	8948 Jun 07 21:00	10° \mathbb{H} 40'26		max. Earth dist.	8955 Mar 14 07:16	25° \mathbb{H} 01'30	31.54289 AU
opposition	8948 Aug 23 23:55	9° \mathbb{H} 18'10	12°39'53	morning rise	8955 Mar 26 09:36	25° \mathbb{H} 28'53	
min. Earth dist.	8948 Aug 24 01:40	9° \mathbb{H} 18'03	28.90480 AU	retrograde	8955 Jun 24 22:08	27° \mathbb{H} 29'49	
direct	8948 Nov 11 16:19	7° \mathbb{H} 53'39		min. Earth dist.	8955 Sep 10 07:13	26° \mathbb{H} 10'24	29.63463 AU
evening set	8949 Feb 16 16:38	10° \mathbb{H} 09'55		opposition	8955 Sep 11 00:34	26° \mathbb{H} 09'15	8°44'56

direct	8955 Nov 30 00:56	24° ✕ 46'53		minimum elong	8962 Mar 28 18:58	10° ✓ 36'36	4°26'03
evening set	8956 Mar 01 20:19	26° ✕ 48'54		max. Earth dist.	8962 Mar 30 03:33	10° ✓ 39'33	32.70522 AU
				morning rise	8962 Apr 12 12:32	11° ✓ 08'19	
conjunction	8956 Mar 15 02:12	27° ✕ 18'41	7°54'41	retrograde	8962 Jul 09 18:00	12° ✓ 58'36	
minimum elong	8956 Mar 15 02:31	27° ✕ 18'43	7°54'42	min. Earth dist.	8962 Sep 25 10:18	11° ✓ 42'19	30.80490 AU
max. Earth dist.	8956 Mar 15 21:56	27° ✕ 20'33	31.68674 AU	opposition	8962 Sep 26 18:27	11° ✓ 40'14	4°24'52
morning rise	8956 Mar 28 07:22	27° ✕ 48'25		direct	8962 Dec 16 08:29	10° ✓ 20'34	
retrograde	8956 Jun 26 11:45	29° ✕ 47'38		evening set	8963 Mar 16 04:16	12° ✓ 11'21	
opposition	8956 Sep 12 15:23	28° ✕ 27'23	8°08'29				
min. Earth dist.	8956 Sep 11 18:35	28° ✕ 28'47	29.77977 AU	conjunction	8963 Mar 31 02:49	12° ✓ 43'15	3°51'06
direct	8956 Dec 01 18:23	27° ✕ 05'26		minimum elong	8963 Mar 31 02:59	12° ✓ 43'16	3°51'03
evening set	8957 Mar 04 00:51	29° ✕ 05'39		max. Earth dist.	8963 Apr 01 12:35	12° ✓ 46'17	32.89788 AU
				morning rise	8963 Apr 15 00:30	13° ✓ 15'04	
conjunction	8957 Mar 17 14:47	29° ✕ 35'59	7°20'28	retrograde	8963 Jul 12 01:38	15° ✓ 04'05	
minimum elong	8957 Mar 17 15:06	29° ✕ 36'01	7°20'29	min. Earth dist.	8963 Sep 27 17:16	13° ✓ 48'17	30.99955 AU
max. Earth dist.	8957 Mar 18 13:30	29° ✕ 38'07	31.83893 AU	opposition	8963 Sep 29 04:29	13° ✓ 46'01	3°47'34
	8957 Mar 28 08:06	0° ✓		direct	8963 Dec 18 18:17	12° ✓ 26'43	
morning rise	8957 Mar 31 03:48	0° ✓ 06'14		evening set	8964 Mar 17 08:15	14° ✓ 16'10	
retrograde	8957 Jun 28 23:30	2° ✓ 03'49					
min. Earth dist.	8957 Sep 14 07:31	0° ✓ 45'21	29.93316 AU	conjunction	8964 Apr 01 10:06	14° ✓ 48'05	3°16'13
opposition	8957 Sep 15 05:34	0° ✓ 43'54	7°31'38	minimum elong	8964 Apr 01 10:14	14° ✓ 48'06	3°16'09
	8957 Oct 14 07:44	30° ✕		max. Earth dist.	8964 Apr 02 23:03	14° ✓ 51'23	33.09747 AU
direct	8957 Dec 04 10:13	29° ✕ 22'20		morning rise	8964 Apr 16 10:47	15° ✓ 19'56	
	8958 Jan 22 13:22	0° ✓		retrograde	8964 Jul 13 06:48	17° ✓ 07'47	
evening set	8958 Mar 06 05:34	1° ✓ 20'51		min. Earth dist.	8964 Sep 29 01:32	15° ✓ 52'21	31.20137 AU
				opposition	8964 Sep 30 13:53	15° ✓ 50'02	3°10'26
conjunction	8958 Mar 20 02:40	1° ✓ 51'37	6°45'54	direct	8964 Dec 20 03:41	14° ✓ 31'08	
minimum elong	8958 Mar 20 02:57	1° ✓ 51'39	6°45'55	evening set	8965 Mar 19 12:23	16° ✓ 19'18	
max. Earth dist.	8958 Mar 21 03:03	1° ✓ 53'53	31.99890 AU				
morning rise	8958 Apr 02 22:50	2° ✓ 22'19		conjunction	8965 Apr 03 16:41	16° ✓ 51'12	2°41'30
retrograde	8958 Jul 01 10:33	4° ✓ 18'19		minimum elong	8965 Apr 03 16:48	16° ✓ 51'13	2°41'27
opposition	8958 Sep 17 19:06	2° ✓ 58'43	6°54'30	max. Earth dist.	8965 Apr 05 06:48	16° ✓ 54'34	33.30409 AU
min. Earth dist.	8958 Sep 16 18:13	3° ✓ 00'22	30.09401 AU	morning rise	8965 Apr 18 20:05	17° ✓ 23'02	
direct	8958 Dec 07 02:47	1° ✓ 37'32		retrograde	8965 Jul 15 13:58	19° ✓ 09'45	
evening set	8959 Mar 08 10:14	3° ✓ 34'24		min. Earth dist.	8965 Oct 01 06:49	17° ✓ 54'51	31.41026 AU
				opposition	8965 Oct 02 22:16	17° ✓ 52'21	2°33'32
conjunction	8959 Mar 22 13:45	4° ✓ 05'33	6°11'07	direct	8965 Dec 22 14:21	16° ✓ 33'52	
minimum elong	8959 Mar 22 14:01	4° ✓ 05'34	6°11'07	evening set	8966 Mar 21 16:20	18° ✓ 20'50	
max. Earth dist.	8959 Mar 23 16:08	4° ✓ 07'59	32.16576 AU				
morning rise	8959 Apr 05 16:23	4° ✓ 36'36		conjunction	8966 Apr 05 22:40	18° ✓ 52'40	2°07'01
retrograde	8959 Jul 03 20:07	6° ✓ 31'06		minimum elong	8966 Apr 05 22:45	18° ✓ 52'41	2°06'57
min. Earth dist.	8959 Sep 19 05:40	5° ✓ 13'33	30.26192 AU	max. Earth dist.	8966 Apr 07 15:22	18° ✓ 56'14	33.51728 AU
opposition	8959 Sep 20 08:08	5° ✓ 11'49	6°17'11	morning rise	8966 Apr 21 04:01	19° ✓ 24'26	
direct	8959 Dec 09 16:31	3° ✓ 51'01		retrograde	8966 Jul 17 20:27	21° ✓ 10'05	
evening set	8960 Mar 09 14:52	5° ✓ 46'17		min. Earth dist.	8966 Oct 03 13:39	19° ✓ 55'37	31.62576 AU
				opposition	8966 Oct 05 06:18	19° ✓ 53'03	1°56'57
conjunction	8960 Mar 24 00:15	6° ✓ 17'43	5°36'10	direct	8966 Dec 24 23:20	18° ✓ 35'00	
minimum elong	8960 Mar 24 00:29	6° ✓ 17'44	5°36'09	evening set	8967 Mar 23 20:02	20° ✓ 20'51	
max. Earth dist.	8960 Mar 25 04:54	6° ✓ 20'20	32.33933 AU				
morning rise	8960 Apr 07 08:31	6° ✓ 49'04		conjunction	8967 Apr 08 03:50	20° ✓ 52'33	1°32'49
retrograde	8960 Jul 05 04:14	8° ✓ 42'05		minimum elong	8967 Apr 08 03:54	20° ✓ 52'34	1°32'45
opposition	8960 Sep 21 20:17	7° ✓ 23'07	5°39'45	max. Earth dist.	8967 Apr 09 22:05	20° ✓ 56'14	33.73655 AU
min. Earth dist.	8960 Sep 20 15:47	7° ✓ 24'59	30.43637 AU	morning rise	8967 Apr 23 10:37	21° ✓ 24'12	
direct	8960 Dec 11 07:40	6° ✓ 02'43		retrograde	8967 Jul 20 00:58	23° ✓ 08'52	
evening set	8961 Mar 11 19:28	7° ✓ 56'25		min. Earth dist.	8967 Oct 05 18:38	21° ✓ 54'54	31.84702 AU
				opposition	8967 Oct 07 13:35	21° ✓ 52'12	1°20'43
conjunction	8961 Mar 26 09:50	8° ✓ 28'04	5°01'08	direct	8967 Dec 27 09:02	20° ✓ 34'35	
minimum elong	8961 Mar 26 10:03	8° ✓ 28'05	5°01'07	evening set	8968 Mar 24 23:49	22° ✓ 19'22	
max. Earth dist.	8961 Mar 27 15:44	8° ✓ 30'48	32.51911 AU				
morning rise	8961 Apr 09 23:20	8° ✓ 59'39		conjunction	8968 Apr 09 08:25	22° ✓ 50'54	0°58'58
retrograde	8961 Jul 07 12:50	10° ✓ 51'16		minimum elong	8968 Apr 09 08:28	22° ✓ 50'55	0°58'53
min. Earth dist.	8961 Sep 23 00:57	9° ✓ 34'36	30.61738 AU	max. Earth dist.	8968 Apr 11 04:09	22° ✓ 54'41	33.96094 AU
opposition	8961 Sep 24 07:45	9° ✓ 32'36	5°02'17	morning rise	8968 Apr 24 16:14	23° ✓ 22'24	
direct	8961 Dec 13 19:28	8° ✓ 12'34		retrograde	8968 Jul 21 04:37	25° ✓ 06'08	
evening set	8962 Mar 13 23:51	10° ✓ 04'47		min. Earth dist.	8968 Oct 06 23:48	23° ✓ 52'35	32.07345 AU
				opposition	8968 Oct 08 20:13	23° ✓ 49'50	0°44'54
conjunction	8962 Mar 28 18:47	10° ✓ 36'35	4°26'05	direct	8968 Dec 28 16:24	22° ✓ 32'39	

evening set	8969 Mar 27 03:19	24° Υ 16'24	conjunction	8975 Apr 22 23:40	5° \mathcal{B} 56'11 -2°45'28
			minimum elong	8975 Apr 22 23:34	5° \mathcal{B} 56'10 2°45'36
conjunction	8969 Apr 11 12:29	24° Υ 47'45 0°25'30	max. Earth dist.	8975 Apr 25 03:22	6° \mathcal{B} 00'25 35.61800 AU
minimum elong	8969 Apr 11 12:30	24° Υ 47'45 0°25'24	morning rise	8975 May 08 01:00	6° \mathcal{B} 25'31
max. Earth dist.	8969 Apr 13 10:13	24° Υ 51'40 34.18982 AU	retrograde	8975 Aug 03 13:16	8° \mathcal{B} 03'55
morning rise	8969 Apr 26 20:36	25° Υ 19'02	min. Earth dist.	8975 Oct 20 20:45	6° \mathcal{B} 52'58 33.74179 AU
retrograde	8969 Jul 23 05:57	27° Υ 01'52	opposition	8975 Oct 23 01:20	6° \mathcal{B} 49'50 -3°11'11
min. Earth dist.	8969 Oct 09 04:44	25° Υ 48'45 32.30390 AU	direct	8976 Jan 12 05:19	5° \mathcal{B} 35'15
opposition	8969 Oct 11 02:14	25° Υ 45'56 0°09'32	evening set	8976 Apr 09 00:05	7° \mathcal{B} 13'03
direct	8969 Dec 31 01:35	24° Υ 29'11			
desc. node	8970 Jan 18 23:27	24° Υ 34'34	conjunction	8976 Apr 23 23:25	7° \mathcal{B} 42'00 -3°15'24
evening set	8970 Mar 29 06:56	26° Υ 11'57	minimum elong	8976 Apr 23 23:18	7° \mathcal{B} 42'00 3°15'34
			max. Earth dist.	8976 Apr 26 04:41	7° \mathcal{B} 46'20 35.86373 AU
conjunction	8970 Apr 13 15:48	26° Υ 43'04 -0°07'38	morning rise	8976 May 08 22:03	8° \mathcal{B} 10'55
minimum elong	8970 Apr 13 15:48	26° Υ 43'04 0°07'45	retrograde	8976 Aug 04 10:43	9° \mathcal{B} 48'43
behind sun begin	8970 Apr 13 10:01	26° Υ 42'36	min. Earth dist.	8976 Oct 21 21:17	8° \mathcal{B} 38'06 33.98990 AU
behind sun end	8970 Apr 13 21:35	26° Υ 43'32	opposition	8976 Oct 24 02:51	8° \mathcal{B} 34'55 -3°42'29
max. Earth dist.	8970 Apr 15 13:58	26° Υ 46'59 34.42211 AU	direct	8977 Jan 13 09:54	7° \mathcal{B} 20'40
morning rise	8970 Apr 28 24:00	27° Υ 14'06	evening set	8977 Apr 11 02:13	8° \mathcal{B} 57'49
retrograde	8970 Jul 25 09:20	28° Υ 56'07			
min. Earth dist.	8970 Oct 11 08:05	27° Υ 43'27 32.53781 AU	conjunction	8977 Apr 25 22:26	9° \mathcal{B} 26'19 -3°44'45
opposition	8970 Oct 13 07:37	27° Υ 40'32 -0°25'20	minimum elong	8977 Apr 25 22:18	9° \mathcal{B} 26'19 3°44'53
direct	8971 Jan 02 07:06	26° Υ 24'11	max. Earth dist.	8977 Apr 28 04:07	9° \mathcal{B} 30'39 36.11228 AU
evening set	8971 Mar 31 10:17	28° Υ 06'02	morning rise	8977 May 10 18:20	9° \mathcal{B} 54'48
			retrograde	8977 Aug 06 08:51	11° \mathcal{B} 32'03
conjunction	8971 Apr 15 18:44	28° Υ 36'51 -0°40'11	min. Earth dist.	8977 Oct 23 20:21	10° \mathcal{B} 21'50 34.24114 AU
minimum elong	8971 Apr 15 18:43	28° Υ 36'51 0°40'18	opposition	8977 Oct 26 03:53	10° \mathcal{B} 18'33 -4°13'08
max. Earth dist.	8971 Apr 17 19:01	28° Υ 40'56 34.65729 AU	direct	8978 Jan 15 11:18	9° \mathcal{B} 04'40
morning rise	8971 May 01 02:14	29° Υ 07'37	evening set	8978 Apr 13 03:58	10° \mathcal{B} 41'12
	8971 May 30 03:22	0° \mathcal{B}			
retrograde	8971 Jul 27 09:05	0° \mathcal{B} 48'50	conjunction	8978 Apr 27 21:01	11° \mathcal{B} 09'15 -4°13'28
	8971 Sep 27 03:04	30° $\mathcal{K}\Upsilon$	minimum elong	8978 Apr 27 20:53	11° \mathcal{B} 09'14 4°13'39
min. Earth dist.	8971 Oct 13 12:48	29° Υ 36'31 32.77438 AU	max. Earth dist.	8978 Apr 30 04:55	11° \mathcal{B} 13'44 36.36369 AU
opposition	8971 Oct 15 12:32	29° Υ 33'36 -0°59'40	morning rise	8978 May 12 13:29	11° \mathcal{B} 37'16
direct	8972 Jan 04 13:22	28° Υ 17'38	retrograde	8978 Aug 08 04:43	13° \mathcal{B} 14'02
evening set	8972 Apr 01 13:30	29° Υ 58'35	min. Earth dist.	8978 Oct 25 20:34	12° \mathcal{B} 04'08 34.49510 AU
	8972 Apr 02 06:50	0° \mathcal{B}	opposition	8978 Oct 28 04:23	12° \mathcal{B} 00'51 -4°43'06
			direct	8979 Jan 17 13:31	10° \mathcal{B} 47'20
conjunction	8972 Apr 16 20:50	0° \mathcal{B} 29'05 -1°12'18	evening set	8979 Apr 15 05:41	12° \mathcal{B} 23'19
minimum elong	8972 Apr 16 20:47	0° \mathcal{B} 29'05 1°12'25			
max. Earth dist.	8972 Apr 18 21:03	0° \mathcal{B} 33'08 34.89472 AU	conjunction	8979 Apr 29 18:58	12° \mathcal{B} 50'53 -4°41'34
morning rise	8972 May 02 03:31	0° \mathcal{B} 59'33	minimum elong	8979 Apr 29 18:49	12° \mathcal{B} 50'52 4°41'44
retrograde	8972 Jul 28 11:26	2° \mathcal{B} 40'01	max. Earth dist.	8979 May 02 02:53	12° \mathcal{B} 55'20 36.61764 AU
min. Earth dist.	8972 Oct 14 14:52	1° \mathcal{B} 28'06 33.01314 AU	morning rise	8979 May 14 07:58	13° \mathcal{B} 18'25
opposition	8972 Oct 16 16:39	1° \mathcal{B} 25'05 -1°33'26	retrograde	8979 Aug 10 03:15	14° \mathcal{B} 54'45
direct	8973 Jan 05 17:12	0° \mathcal{B} 09'29	min. Earth dist.	8979 Oct 27 18:20	13° \mathcal{B} 45'17 34.75149 AU
evening set	8973 Apr 03 16:33	1° \mathcal{B} 49'35	opposition	8979 Oct 30 04:17	13° \mathcal{B} 41'54 -5°12'22
			direct	8980 Jan 19 12:31	12° \mathcal{B} 28'46
conjunction	8973 Apr 18 22:32	2° \mathcal{B} 19'45 -1°43'54	evening set	8980 Apr 16 07:00	14° \mathcal{B} 04'14
minimum elong	8973 Apr 18 22:28	2° \mathcal{B} 19'44 1°44'01			
max. Earth dist.	8973 Apr 21 00:30	2° \mathcal{B} 23'54 35.13391 AU	conjunction	8980 Apr 30 16:27	14° \mathcal{B} 31'18 -5°09'03
morning rise	8973 May 04 03:45	2° \mathcal{B} 49'51	minimum elong	8980 Apr 30 16:17	14° \mathcal{B} 31'17 5°09'14
retrograde	8973 Jul 30 12:14	4° \mathcal{B} 29'36	max. Earth dist.	8980 May 03 02:09	14° \mathcal{B} 35'52 36.87350 AU
min. Earth dist.	8973 Oct 16 18:19	3° \mathcal{B} 17'58 33.25382 AU	morning rise	8980 May 15 01:32	14° \mathcal{B} 58'21
opposition	8973 Oct 18 20:07	3° \mathcal{B} 14'57 -2°06'38		8980 May 15 22:52	15° \mathcal{B}
direct	8974 Jan 07 20:14	1° \mathcal{B} 59'42	retrograde	8980 Aug 11 00:55	16° \mathcal{B} 34'18
evening set	8974 Apr 05 19:23	3° \mathcal{B} 39'00	min. Earth dist.	8980 Oct 28 17:57	15° \mathcal{B} 25'08 35.00961 AU
			opposition	8980 Oct 31 03:47	15° \mathcal{B} 21'46 -5°40'57
conjunction	8974 Apr 20 23:31	4° \mathcal{B} 08'47 -2°14'58		8980 Nov 15 23:28	15° $\mathcal{R}\mathcal{B}$
minimum elong	8974 Apr 20 23:26	4° \mathcal{B} 08'46 2°15'06	direct	8981 Jan 20 11:35	14° \mathcal{B} 09'02
max. Earth dist.	8974 Apr 23 02:00	4° \mathcal{B} 12'57 35.37497 AU		8981 Mar 23 12:53	15° \mathcal{B}
morning rise	8974 May 06 02:58	4° \mathcal{B} 38'31	evening set	8981 Apr 18 08:19	15° \mathcal{B} 44'02
retrograde	8974 Aug 01 12:41	6° \mathcal{B} 17'34			
min. Earth dist.	8974 Oct 18 19:22	5° \mathcal{B} 06'18 33.49650 AU	conjunction	8981 May 02 13:32	16° \mathcal{B} 10'35 -5°35'53
opposition	8974 Oct 20 22:57	5° \mathcal{B} 03'12 -2°39'13	minimum elong	8981 May 02 13:21	16° \mathcal{B} 10'34 5°36'03
direct	8975 Jan 10 01:50	3° \mathcal{B} 48'17	max. Earth dist.	8981 May 04 23:29	16° \mathcal{B} 15'08 37.13067 AU
evening set	8975 Apr 07 21:51	5° \mathcal{B} 26'49	morning rise	8981 May 16 18:23	16° \mathcal{B} 37'08

retrograde	8981 Aug 12 22:44	18° 8 12'42		minimum elong	8988 May 13 04:05	27° 8 14'03	8°26'09
min. Earth dist.	8981 Oct 30 15:20	17° 8 03'56	35.26864 AU	max. Earth dist.	8988 May 15 17:19	27° 8 18'38	38.91958 AU
opposition	8981 Nov 02 02:29	17° 8 00'31	-6°08'50	morning rise	8988 May 25 20:31	27° 8 36'43	
direct	8982 Jan 22 11:12	15° 8 48'09		retrograde	8988 Aug 23 10:49	29° 8 10'21	
evening set	8982 Apr 20 09:30	17° 8 22'44		min. Earth dist.	8988 Nov 10 15:35	28° 8 03'34	37.06859 AU
				opposition	8988 Nov 13 05:37	28° 8 00'07	-9°04'44
conjunction	8982 May 04 10:06	17° 8 48'46	-6°02'04	direct	8989 Feb 02 18:53	26° 8 49'57	
minimum elong	8982 May 04 09:55	17° 8 48'45	6°02'16	evening set	8989 May 02 11:36	28° 8 22'08	
max. Earth dist.	8982 May 06 20:43	17° 8 53'20	37.38827 AU				
morning rise	8982 May 18 10:36	18° 8 14'47		conjunction	8989 May 14 21:40	28° 8 44'11	-8°47'41
retrograde	8982 Aug 14 20:49	19° 8 50'01		minimum elong	8989 May 14 21:27	28° 8 44'10	8°47'53
min. Earth dist.	8982 Nov 01 13:27	18° 8 41'35	35.52808 AU	max. Earth dist.	8989 May 17 10:57	28° 8 48'44	39.17294 AU
opposition	8982 Nov 04 01:03	18° 8 38'10	-6°36'01	morning rise	8989 May 27 07:52	29° 8 06'14	
direct	8983 Jan 24 09:21	17° 8 26'10			8989 Jun 30 05:55	0° II	
evening set	8983 Apr 22 10:19	19° 8 00'21		retrograde	8989 Aug 25 04:41	0° II 39'41	
					8989 Oct 22 13:44	30° R 8	
conjunction	8983 May 06 06:16	19° 8 25'51	-6°27'38	min. Earth dist.	8989 Nov 12 09:50	29° 8 33'11	37.32428 AU
minimum elong	8983 May 06 06:04	19° 8 25'50	6°27'48	opposition	8989 Nov 15 00:38	29° 8 29'42	-9°27'06
max. Earth dist.	8983 May 08 17:50	19° 8 30'27	37.64585 AU	direct	8990 Feb 04 13:28	28° 8 19'49	
morning rise	8983 May 20 01:51	19° 8 51'20		evening set	8990 May 04 10:57	29° 8 51'47	
retrograde	8983 Aug 16 14:39	21° 8 26'16			8990 May 09 03:34	0° II	
min. Earth dist.	8983 Nov 03 11:22	20° 8 18'08	35.78705 AU				
opposition	8983 Nov 05 23:04	20° 8 14'43	-7°02'31	conjunction	8990 May 16 14:47	0° II 13'13	-9°08'48
direct	8984 Jan 26 09:47	19° 8 03'04		minimum elong	8990 May 16 14:33	0° II 13'12	9°09'01
evening set	8984 Apr 23 11:13	20° 8 36'53		max. Earth dist.	8990 May 19 05:25	0° II 17'51	39.42680 AU
				morning rise	8990 May 28 18:27	0° II 34'40	
conjunction	8984 May 07 01:58	21° 8 01'49	-6°52'33	retrograde	8990 Aug 26 18:26	2° II 07'58	
minimum elong	8984 May 07 01:46	21° 8 01'48	6°52'45	min. Earth dist.	8990 Nov 14 04:31	1° II 01'43	37.58026 AU
max. Earth dist.	8984 May 09 12:57	21° 8 06'21	37.90262 AU	opposition	8990 Nov 16 19:21	0° II 58'14	-9°48'48
morning rise	8984 May 20 16:44	21° 8 26'46			8991 Jan 07 13:38	30° R 8	
retrograde	8984 Aug 17 09:01	23° 8 01'24		direct	8991 Feb 06 11:23	29° 8 48'40	
min. Earth dist.	8984 Nov 04 07:45	21° 8 53'37	36.04523 AU		8991 Mar 07 18:00	0° II	
opposition	8984 Nov 06 20:28	21° 8 50'09	-7°28'19	evening set	8991 May 06 10:07	1° II 20'25	
direct	8985 Jan 27 08:35	20° 8 38'50					
evening set	8985 Apr 25 11:46	22° 8 12'17		conjunction	8991 May 18 07:13	1° II 41'15	-9°29'16
				minimum elong	8991 May 18 07:00	1° II 41'14	9°29'29
conjunction	8985 May 08 21:24	22° 8 36'40	-7°16'51	max. Earth dist.	8991 May 20 21:22	1° II 45'49	39.68088 AU
minimum elong	8985 May 08 21:12	22° 8 36'39	7°17'02	morning rise	8991 May 30 04:28	2° II 02'06	
max. Earth dist.	8985 May 11 09:39	22° 8 41'16	38.15830 AU	retrograde	8991 Aug 28 10:04	3° II 35'16	
morning rise	8985 May 22 06:47	23° 8 01'03		min. Earth dist.	8991 Nov 15 21:21	2° II 29'21	37.83643 AU
retrograde	8985 Aug 19 02:08	24° 8 35'25		opposition	8991 Nov 18 13:36	2° II 25'48	-10°09'48
min. Earth dist.	8985 Nov 06 05:32	23° 8 27'51	36.30212 AU	direct	8992 Feb 08 06:49	1° II 16'32	
opposition	8985 Nov 08 17:32	23° 8 24'26	-7°53'27	evening set	8992 May 07 09:04	2° II 48'08	
direct	8986 Jan 29 07:32	22° 8 13'26					
evening set	8986 Apr 27 12:08	23° 8 46'32		conjunction	8992 May 18 23:33	3° II 08'21	-9°49'07
				minimum elong	8992 May 18 23:20	3° II 08'20	9°49'20
conjunction	8986 May 10 16:08	24° 8 10'20	-7°40'31	max. Earth dist.	8992 May 21 15:08	3° II 13'00	39.93484 AU
minimum elong	8986 May 10 15:55	24° 8 10'19	7°40'43	morning rise	8992 May 30 14:02	3° II 28'35	
max. Earth dist.	8986 May 13 03:43	24° 8 14'52	38.41274 AU	retrograde	8992 Aug 29 01:24	5° II 01'40	
morning rise	8986 May 23 20:05	24° 8 34'09		min. Earth dist.	8992 Nov 16 15:55	3° II 55'58	38.09219 AU
retrograde	8986 Aug 20 21:02	26° 8 08'15		opposition	8992 Nov 19 07:24	3° II 52'29	-10°30'09
min. Earth dist.	8986 Nov 08 00:34	25° 8 01'00	36.55795 AU	direct	8993 Feb 09 01:40	2° II 43'31	
opposition	8986 Nov 10 14:01	24° 8 57'32	-8°17'54	evening set	8993 May 09 08:01	4° II 14'58	
direct	8987 Jan 31 04:04	23° 8 46'49					
evening set	8987 Apr 29 12:11	25° 8 19'34		conjunction	8993 May 20 15:30	4° II 34'34	-10°08'20
				minimum elong	8993 May 20 15:18	4° II 34'33	10°08'34
conjunction	8987 May 12 10:28	25° 8 42'48	-8°03'32	max. Earth dist.	8993 May 23 06:39	4° II 39'09	40.18816 AU
minimum elong	8987 May 12 10:16	25° 8 42'47	8°03'45	morning rise	8993 May 31 23:01	4° II 54'11	
max. Earth dist.	8987 May 14 23:09	25° 8 47'22	38.66625 AU	retrograde	8993 Aug 30 18:03	6° II 27'12	
morning rise	8987 May 25 08:43	26° 8 06'02		min. Earth dist.	8993 Nov 18 08:14	5° II 21'49	38.34693 AU
retrograde	8987 Aug 22 16:05	27° 8 39'54		opposition	8993 Nov 21 00:49	5° II 18'17	-10°49'50
min. Earth dist.	8987 Nov 09 21:04	26° 8 32'50	36.81332 AU	direct	8994 Feb 10 18:37	4° II 09'38	
opposition	8987 Nov 12 10:08	26° 8 29'25	-8°41'39	evening set	8994 May 11 06:39	5° II 40'58	
direct	8988 Feb 01 23:32	25° 8 18'58					
evening set	8988 Apr 30 11:56	26° 8 51'26		conjunction	8994 May 22 06:59	5° II 59'56	-10°26'57
				minimum elong	8994 May 22 06:46	5° II 59'55	10°27'11
conjunction	8988 May 13 04:18	27° 8 14'04	-8°25'56	max. Earth dist.	8994 May 24 22:31	6° II 04'31	40.44005 AU

morning rise	8994 Jun 02 07:30	6°II18'56		conjunction	9001 Jun 01 11:35	15°II34'25	-12°21'24
retrograde	8994 Sep 01 11:52	7°II51'55		minimum elong	9001 Jun 01 11:24	15°II34'25	12°21'39
min. Earth dist.	8994 Nov 20 01:57	6°II46'45	38.60011 AU	max. Earth dist.	9001 Jun 04 01:53	15°II38'44	42.13112 AU
opposition	8994 Nov 22 18:05	6°II43'16	-11°08'53	morning rise	9001 Jun 10 05:09	15°II48'55	
direct	8995 Feb 12 10:03	5°II34'56		retrograde	9001 Sep 11 15:36	17°II21'57	
evening set	8995 May 13 05:18	7°II06'09		min. Earth dist.	9001 Nov 30 16:44	16°II18'16	40.29641 AU
				opposition	9001 Dec 03 08:08	16°II14'55	-13°05'28
conjunction	8995 May 23 22:26	7°II24'31	-10°44'59	direct	9002 Feb 23 01:55	15°II08'20	
minimum elong	8995 May 23 22:13	7°II24'30	10°45'13	evening set	9002 May 25 15:45	16°II39'22	
max. Earth dist.	8995 May 26 14:12	7°II29'05	40.69013 AU				
morning rise	8995 Jun 03 15:30	7°II42'53		conjunction	9002 Jun 03 00:37	16°II53'11	-12°35'33
retrograde	8995 Sep 03 02:56	9°II15'49		minimum elong	9002 Jun 03 00:25	16°II53'10	12°35'47
min. Earth dist.	8995 Nov 21 18:55	8°II10'54	38.85095 AU	max. Earth dist.	9002 Jun 05 15:51	16°II57'32	42.36383 AU
opposition	8995 Nov 24 10:50	8°II07'27	-11°27'18	morning rise	9002 Jun 11 09:26	17°II07'00	
direct	8996 Feb 14 03:12	6°II59'24		retrograde	9002 Sep 13 02:58	18°II40'08	
evening set	8996 May 14 03:49	8°II30'33		min. Earth dist.	9002 Dec 02 07:35	17°II36'38	40.53025 AU
				opposition	9002 Dec 04 22:32	17°II33'19	-13°19'48
conjunction	8996 May 24 13:22	8°II48'17	-11°02'26	direct	9003 Feb 24 17:51	16°II27'00	
minimum elong	8996 May 24 13:08	8°II48'16	11°02'40	evening set	9003 May 27 13:24	17°II58'05	
max. Earth dist.	8996 May 27 04:10	8°II52'45	40.93754 AU				
morning rise	8996 Jun 03 23:06	9°II06'01		conjunction	9003 Jun 04 13:19	18°II11'14	-12°49'08
retrograde	8996 Sep 03 18:08	10°II38'56		minimum elong	9003 Jun 04 13:07	18°II11'13	12°49'24
min. Earth dist.	8996 Nov 22 11:03	9°II34'17	39.09900 AU	max. Earth dist.	9003 Jun 07 03:38	18°II15'30	42.59518 AU
opposition	8996 Nov 25 03:18	9°II30'49	-11°45'08	morning rise	9003 Jun 12 13:20	18°II24'22	
direct	8997 Feb 14 19:43	8°II23'02		retrograde	9003 Sep 14 14:09	19°II57'38	
evening set	8997 May 16 02:12	9°II54'08		min. Earth dist.	9003 Dec 03 20:36	18°II54'24	40.76273 AU
				opposition	9003 Dec 06 12:30	18°II51'03	-13°33'33
conjunction	8997 May 26 04:13	10°II11'13	-11°19'20	direct	9004 Feb 26 09:01	17°II44'58	
minimum elong	8997 May 26 04:01	10°II11'12	11°19'34	evening set	9004 May 28 10:50	19°II16'10	
max. Earth dist.	8997 May 28 19:45	10°II15'44	41.18188 AU				
morning rise	8997 Jun 05 06:13	10°II28'19		conjunction	9004 Jun 05 01:48	19°II28'37	-13°02'12
retrograde	8997 Sep 05 05:47	12°II01'14		minimum elong	9004 Jun 05 01:38	19°II28'37	13°02'27
min. Earth dist.	8997 Nov 24 04:20	10°II56'44	39.34370 AU	max. Earth dist.	9004 Jun 07 17:05	19°II32'57	42.82496 AU
opposition	8997 Nov 26 19:23	10°II53'21	-12°02'22	morning rise	9004 Jun 12 16:49	19°II41'06	
direct	8998 Feb 16 15:01	9°II45'50		retrograde	9004 Sep 15 01:59	21°II14'30	
evening set	8998 May 18 00:33	11°II16'53		min. Earth dist.	9004 Dec 04 11:28	20°II11'26	40.99335 AU
				opposition	9004 Dec 07 02:18	20°II08'09	-13°46'45
conjunction	8998 May 27 18:37	11°II33'19	-11°35'40	direct	9005 Feb 27 00:44	19°II02'20	
minimum elong	8998 May 27 18:24	11°II33'18	11°35'54	evening set	9005 May 30 08:26	20°II33'39	
max. Earth dist.	8998 May 30 08:48	11°II37'43	41.42303 AU				
morning rise	8998 Jun 06 12:47	11°II49'46		conjunction	9005 Jun 06 14:02	20°II45'25	-13°14'44
retrograde	8998 Sep 06 20:07	13°II22'42		minimum elong	9005 Jun 06 13:51	20°II45'24	13°15'00
min. Earth dist.	8998 Nov 25 19:16	12°II18'27	39.58530 AU	max. Earth dist.	9005 Jun 09 04:36	20°II49'40	43.05278 AU
opposition	8998 Nov 28 11:07	12°II15'02	-12°19'01	morning rise	9005 Jun 13 19:37	20°II57'11	
direct	8999 Feb 18 07:14	11°II07'45		retrograde	9005 Sep 16 15:38	22°II30'46	
evening set	8999 May 19 22:26	12°II38'45		min. Earth dist.	9005 Dec 06 00:12	21°II27'57	41.22166 AU
				opposition	9005 Dec 08 15:37	21°II24'39	-13°59'24
conjunction	8999 May 29 08:33	12°II54'32	-11°51'28	direct	9006 Feb 28 13:32	20°II19'06	
minimum elong	8999 May 29 08:21	12°II54'32	11°51'43	evening set	9006 Jun 01 05:59	21°II50'33	
max. Earth dist.	8999 May 31 23:20	12°II58'57	41.66119 AU				
morning rise	8999 Jun 07 18:46	13°II10'21		conjunction	9006 Jun 08 02:00	22°II01'37	-13°26'47
retrograde	8999 Sep 08 10:47	14°II43'18		minimum elong	9006 Jun 08 01:50	22°II01'36	13°27'02
min. Earth dist.	8999 Nov 27 11:52	13°II39'11	39.82426 AU	max. Earth dist.	9006 Jun 10 16:19	22°II05'49	43.27805 AU
opposition	8999 Nov 30 02:37	13°II35'50	-12°35'05	morning rise	9006 Jun 14 22:05	22°II12'41	
direct	9000 Feb 19 22:36	12°II28'47		retrograde	9006 Sep 18 05:34	23°II46'28	
evening set	9000 May 21 20:25	13°II59'45		min. Earth dist.	9006 Dec 07 14:17	22°II43'49	41.44730 AU
				opposition	9006 Dec 10 04:57	22°II40'35	-14°11'32
conjunction	9000 May 30 22:18	14°II14'54	-12°06'42	direct	9007 Mar 02 00:53	21°II35'16	
minimum elong	9000 May 30 22:05	14°II14'53	12°06'57	evening set	9007 Jun 03 03:40	23°II06'53	
max. Earth dist.	9000 Jun 02 12:57	14°II19'16	41.89710 AU				
morning rise	9000 Jun 09 00:08	14°II30'03		conjunction	9007 Jun 09 13:49	23°II17'15	-13°38'19
retrograde	9000 Sep 10 00:43	16°II03'01		minimum elong	9007 Jun 09 13:39	23°II17'14	13°38'35
min. Earth dist.	9000 Nov 29 02:08	14°II59'08	40.06108 AU	max. Earth dist.	9007 Jun 12 04:25	23°II21'27	43.50037 AU
opposition	9000 Dec 01 17:24	14°II55'47	-12°50'34	morning rise	9007 Jun 15 23:51	23°II27'36	
direct	9001 Feb 21 13:11	13°II48'58		retrograde	9007 Sep 19 17:10	25°II01'35	
evening set	9001 May 23 18:12	15°II19'56		min. Earth dist.	9007 Dec 09 03:53	23°II59'07	41.66942 AU
				opposition	9007 Dec 11 17:54	23°II55'55	-14°23'10

direct	9008 Mar 02 13:33	22°II50'51	minimum elong	9014 Jun 17 17:52	1°☿48'17 14°46'49
evening set	9008 Jun 04 01:42	24°II22'40	morning rise	9014 Jun 20 09:21	1°☿52'25
			max. Earth dist.	9014 Jun 20 05:24	1°☿52'10 44.94897 AU
conjunction	9008 Jun 10 01:25	24°II32'18 -13°49'24	retrograde	9014 Sep 27 17:28	3°☿29'09
minimum elong	9008 Jun 10 01:17	24°II32'17 13°49'39	min. Earth dist.	9014 Dec 17 18:31	2°☿27'36 43.11643 AU
max. Earth dist.	9008 Jun 12 14:27	24°II36'22 43.71894 AU	opposition	9014 Dec 20 04:54	2°☿24'39 -15°31'30
morning rise	9008 Jun 16 01:10	24°II41'54	direct	9015 Mar 12 04:33	1°☿20'51
retrograde	9008 Sep 20 05:10	26°II16'07	evening set	9015 Jun 17 11:35	2°☿56'02
min. Earth dist.	9008 Dec 09 16:26	25°II13'51 41.88764 AU			
opposition	9008 Dec 12 06:27	25°II10'40 -14°34'18	conjunction	9015 Jun 19 03:44	2°☿58'39 -14°54'31
direct	9009 Mar 04 01:31	24°II05'48	minimum elong	9015 Jun 19 03:37	2°☿58'38 14°54'46
evening set	9009 Jun 05 23:58	25°II37'51	morning rise	9015 Jun 20 19:43	3°☿01'14
			max. Earth dist.	9015 Jun 21 14:02	3°☿02'26 45.14434 AU
conjunction	9009 Jun 11 12:58	25°II46'43 -14°00'02	retrograde	9015 Sep 29 02:39	4°☿39'04
minimum elong	9009 Jun 11 12:48	25°II46'42 14°00'17	min. Earth dist.	9015 Dec 19 04:27	3°☿37'44 43.31193 AU
max. Earth dist.	9009 Jun 14 02:15	25°II50'48 43.93333 AU	opposition	9015 Dec 21 15:40	3°☿34'45 -15°39'24
morning rise	9009 Jun 17 01:51	25°II55'33	direct	9016 Mar 12 15:41	2°☿31'08
retrograde	9009 Sep 21 13:58	27°II30'02			
min. Earth dist.	9009 Dec 11 06:41	26°II27'52 42.10141 AU	conjunction	9016 Jun 19 13:27	4°☿08'29 -15°02'02
opposition	9009 Dec 13 18:58	26°II24'46 -14°45'00	minimum elong	9016 Jun 19 13:21	4°☿08'29 15°02'18
direct	9010 Mar 05 16:20	25°II20'06	max. Earth dist.	9016 Jun 21 23:58	4°☿12'16 45.33746 AU
evening set	9010 Jun 07 22:36	26°II52'24	retrograde	9016 Sep 29 13:05	5°☿48'30
			min. Earth dist.	9016 Dec 19 16:21	4°☿47'17 43.50512 AU
conjunction	9010 Jun 13 00:02	27°II00'27 -14°10'13	opposition	9016 Dec 22 02:12	4°☿44'22 -15°46'51
minimum elong	9010 Jun 12 23:55	27°II00'27 14°10'29	direct	9017 Mar 14 03:10	3°☿40'57
max. Earth dist.	9010 Jun 15 11:58	27°II04'26 44.14342 AU			
morning rise	9010 Jun 18 01:25	27°II08'31	conjunction	9017 Jun 20 23:01	5°☿17'52 -15°09'08
retrograde	9010 Sep 23 00:00	28°II43'17	minimum elong	9017 Jun 20 22:55	5°☿17'52 15°09'23
min. Earth dist.	9010 Dec 12 18:25	27°II41'16 42.31085 AU	max. Earth dist.	9017 Jun 23 09:20	5°☿21'37 45.52828 AU
opposition	9010 Dec 15 07:07	27°II38'10 -14°55'13	retrograde	9017 Sep 30 23:53	6°☿57'30
direct	9011 Mar 07 06:31	26°II33'40	min. Earth dist.	9017 Dec 21 02:31	5°☿56'28 43.69559 AU
evening set	9011 Jun 09 21:38	28°II06'17	opposition	9017 Dec 23 12:32	5°☿53'34 -15°53'52
			direct	9018 Mar 15 12:38	4°☿50'22
conjunction	9011 Jun 14 10:54	28°II13'29 -14°19'58			
minimum elong	9011 Jun 14 10:46	28°II13'29 14°20'14	conjunction	9018 Jun 22 08:08	6°☿26'52 -15°15'49
max. Earth dist.	9011 Jun 16 22:35	28°II17'26 44.34935 AU	minimum elong	9018 Jun 22 08:03	6°☿26'52 15°16'06
morning rise	9011 Jun 19 00:05	28°II20'41	max. Earth dist.	9018 Jun 24 17:28	6°☿30'32 45.71618 AU
retrograde	9011 Sep 24 12:50	29°II55'48	retrograde	9018 Oct 02 12:05	8°☿06'07
min. Earth dist.	9011 Dec 14 07:34	28°II53'52 42.51652 AU	min. Earth dist.	9018 Dec 22 13:18	7°☿05'15 43.88305 AU
opposition	9011 Dec 16 19:00	28°II50'50 -15°04'59	opposition	9018 Dec 24 22:51	7°☿02'23 -16°00'27
direct	9012 Mar 07 18:00	27°II46'30	direct	9019 Mar 16 19:17	5°☿59'23
evening set	9012 Jun 10 21:40	29°II19'29			
			conjunction	9019 Jun 23 17:27	7°☿35'31 -15°22'07
conjunction	9012 Jun 14 21:35	29°II25'47 -14°29'16	minimum elong	9019 Jun 23 17:23	7°☿35'30 15°22'22
minimum elong	9012 Jun 14 21:28	29°II25'46 14°29'33	max. Earth dist.	9019 Jun 26 03:09	7°☿39'11 45.90081 AU
max. Earth dist.	9012 Jun 17 09:10	29°II29'42 44.55192 AU	retrograde	9019 Oct 03 20:02	9°☿14'22
morning rise	9012 Jun 18 21:23	29°II32'04	min. Earth dist.	9019 Dec 24 00:35	8°☿13'38 44.06675 AU
	9012 Jul 07 00:45	0°☿	opposition	9019 Dec 26 08:47	8°☿10'50 -16°06'38
retrograde	9012 Sep 24 23:08	1°☿07'35	direct	9020 Mar 17 06:13	7°☿08'03
min. Earth dist.	9012 Dec 14 19:14	0°☿05'47 42.71891 AU			
opposition	9012 Dec 17 06:29	0°☿02'46 -15°14'18	conjunction	9020 Jun 24 02:31	8°☿43'47 -15°28'01
	9012 Dec 19 12:59	30°☿II	minimum elong	9020 Jun 24 02:26	8°☿43'47 15°28'17
direct	9013 Mar 09 05:26	28°II58'36	max. Earth dist.	9020 Jun 26 10:27	8°☿47'20 46.08149 AU
	9013 May 22 21:52	0°☿	retrograde	9020 Oct 04 03:09	10°☿22'17
evening set	9013 Jun 12 22:44	0°☿32'04	min. Earth dist.	9020 Dec 24 10:19	9°☿21'43 44.24619 AU
			opposition	9020 Dec 26 18:34	9°☿18'56 -16°12'26
conjunction	9013 Jun 16 07:47	0°☿37'22 -14°38'08	direct	9021 Mar 18 17:15	8°☿16'19
minimum elong	9013 Jun 16 07:39	0°☿37'21 14°38'23			
morning rise	9013 Jun 19 16:42	0°☿42'39	conjunction	9021 Jun 25 11:26	9°☿51'40 -15°33'34
max. Earth dist.	9013 Jun 18 18:17	0°☿41'11 44.75156 AU	minimum elong	9021 Jun 25 11:23	9°☿51'40 15°33'49
retrograde	9013 Sep 26 09:59	2°☿18'41	max. Earth dist.	9021 Jun 27 19:13	9°☿55'12 46.25756 AU
min. Earth dist.	9013 Dec 16 06:26	1°☿17'02 42.91880 AU	retrograde	9021 Oct 05 11:44	11°☿29'49
opposition	9013 Dec 18 17:46	1°☿14'01 -15°23'08	min. Earth dist.	9021 Dec 25 21:52	10°☿29'19 44.42083 AU
direct	9014 Mar 10 15:34	0°☿10'02	opposition	9021 Dec 28 04:18	10°☿26'37 -16°17'53
evening set	9014 Jun 15 02:26	1°☿44'10	direct	9022 Mar 20 05:06	9°☿24'11
conjunction	9014 Jun 17 17:58	1°☿48'18 -14°46'33	conjunction	9022 Jun 26 20:17	10°☿59'08 -15°38'45

minimum elong	9022 Jun 26 20:13	10°☾59'08	15°39'01	min. Earth dist.	9031 Jan 05 08:01	20°☾17'05	45.82889 AU
max. Earth dist.	9022 Jun 29 03:00	11°☾02'35	46.42900 AU	opposition	9031 Jan 07 09:59	20°☾14'40	-16°50'15
retrograde	9022 Oct 06 21:14	12°☾36'54		direct	9031 Mar 30 08:14	19°☾13'31	
min. Earth dist.	9022 Dec 27 07:22	11°☾36'32	44.59069 AU				
opposition	9022 Dec 29 13:43	11°☾33'51	-16°22'57	conjunction	9031 Jul 06 18:48	20°☾45'16	-16°09'29
direct	9023 Mar 21 15:04	10°☾31'34		minimum elong	9031 Jul 06 18:49	20°☾45'16	16°09'45
				max. Earth dist.	9031 Jul 08 20:58	20°☾48'20	47.81700 AU
conjunction	9023 Jun 28 04:42	12°☾06'06	-15°43'36	retrograde	9031 Oct 16 19:36	22°☾19'58	
minimum elong	9023 Jun 28 04:40	12°☾06'06	15°43'52	min. Earth dist.	9032 Jan 06 17:49	21°☾20'28	45.96923 AU
max. Earth dist.	9023 Jun 30 10:12	12°☾09'28	46.59580 AU	opposition	9032 Jan 08 17:55	21°☾18'09	-16°52'04
retrograde	9023 Oct 08 07:59	13°☾43'29		direct	9032 Mar 30 17:43	20°☾17'10	
min. Earth dist.	9023 Dec 28 17:45	12°☾43'11	44.75625 AU				
opposition	9023 Dec 30 23:01	12°☾40'34	-16°27'40	conjunction	9032 Jul 07 02:09	21°☾48'37	-16°11'12
direct	9024 Mar 21 22:27	11°☾38'25		minimum elong	9032 Jul 07 02:10	21°☾48'37	16°11'26
				max. Earth dist.	9032 Jul 09 02:54	21°☾51'35	47.95483 AU
conjunction	9024 Jun 28 13:10	13°☾12'34	-15°48'06	retrograde	9032 Oct 17 02:09	23°☾23'02	
minimum elong	9024 Jun 28 13:07	13°☾12'34	15°48'21	min. Earth dist.	9033 Jan 07 01:25	22°☾23'41	46.10489 AU
max. Earth dist.	9024 Jun 30 18:57	13°☾15'55	46.75861 AU	opposition	9033 Jan 09 01:27	22°☾21'22	-16°53'34
retrograde	9024 Oct 08 15:23	14°☾49'33		direct	9033 Apr 01 02:23	21°☾20'30	
min. Earth dist.	9024 Dec 29 03:33	13°☾49'19	44.91797 AU				
opposition	9024 Dec 31 07:51	13°☾46'45	-16°32'01	conjunction	9033 Jul 08 09:20	22°☾51'41	-16°12'38
direct	9025 Mar 23 06:34	12°☾44'44		minimum elong	9033 Jul 08 09:21	22°☾51'41	16°12'53
				max. Earth dist.	9033 Jul 10 08:44	22°☾54'33	48.08766 AU
conjunction	9025 Jun 29 21:15	14°☾18'30	-15°52'14	retrograde	9033 Oct 18 11:18	24°☾25'50	
minimum elong	9025 Jun 29 21:14	14°☾18'30	15°52'29	min. Earth dist.	9034 Jan 08 10:57	23°☾26'30	46.23547 AU
max. Earth dist.	9025 Jul 02 01:31	14°☾21'45	46.91807 AU	opposition	9034 Jan 10 09:12	23°☾24'17	-16°54'47
retrograde	9025 Oct 09 23:13	15°☾55'06		direct	9034 Apr 02 09:59	22°☾23'34	
min. Earth dist.	9025 Dec 30 11:58	14°☾55'01	45.07668 AU				
opposition	9026 Jan 01 16:38	14°☾52'26	-16°35'59	conjunction	9034 Jul 09 16:25	23°☾54'26	-16°13'46
direct	9026 Mar 24 14:11	13°☾50'33		minimum elong	9034 Jul 09 16:28	23°☾54'26	16°14'01
				max. Earth dist.	9034 Jul 11 15:36	23°☾57'17	48.21538 AU
conjunction	9026 Jul 01 05:06	15°☾23'56	-15°56'00	retrograde	9034 Oct 19 19:05	25°☾28'18	
minimum elong	9026 Jul 01 05:04	15°☾23'56	15°56'15	min. Earth dist.	9035 Jan 09 19:22	24°☾29'02	46.36065 AU
max. Earth dist.	9026 Jul 03 09:45	15°☾27'12	47.07468 AU	opposition	9035 Jan 11 16:43	24°☾26'52	-16°55'43
retrograde	9026 Oct 11 04:34	17°☾00'12		direct	9035 Apr 03 16:46	23°☾26'15	
min. Earth dist.	9026 Dec 31 22:08	16°☾00'09	45.23266 AU				
opposition	9027 Jan 03 01:21	15°☾57'39	-16°39'34	conjunction	9035 Jul 10 23:19	24°☾56'50	-16°14'38
direct	9027 Mar 26 01:34	14°☾55'54		minimum elong	9035 Jul 10 23:21	24°☾56'50	16°14'53
				max. Earth dist.	9035 Jul 12 20:24	24°☾59'33	48.33795 AU
conjunction	9027 Jul 02 12:59	16°☾28'55	-15°59'24	retrograde	9035 Oct 21 03:15	26°☾30'24	
minimum elong	9027 Jul 02 12:59	16°☾28'55	15°59'40	min. Earth dist.	9036 Jan 11 03:05	25°☾31'13	46.48102 AU
max. Earth dist.	9027 Jul 04 17:03	16°☾32'09	47.22885 AU	opposition	9036 Jan 12 23:55	25°☾29'04	-16°56'22
retrograde	9027 Oct 12 11:50	18°☾04'51		direct	9036 Apr 03 21:31	24°☾28'33	
min. Earth dist.	9028 Jan 02 05:58	17°☾04'57	45.38605 AU				
opposition	9028 Jan 04 09:35	17°☾02'26	-16°42'47	conjunction	9036 Jul 11 06:09	25°☾58'51	-16°15'13
direct	9028 Mar 26 11:55	16°☾00'49		minimum elong	9036 Jul 11 06:13	25°☾58'52	16°15'28
				max. Earth dist.	9036 Jul 13 03:15	26°☾01'34	48.45589 AU
conjunction	9028 Jul 02 20:35	17°☾33'30	-16°02'26	retrograde	9036 Oct 21 07:31	27°☾32'09	
minimum elong	9028 Jul 02 20:34	17°☾33'30	16°02'41	min. Earth dist.	9037 Jan 11 12:03	26°☾32'58	46.59698 AU
max. Earth dist.	9028 Jul 04 23:47	17°☾36'40	47.38038 AU	opposition	9037 Jan 13 07:05	26°☾30'54	-16°56'43
retrograde	9028 Oct 12 23:04	19°☾09'07		direct	9037 Apr 05 06:11	25°☾30'29	
min. Earth dist.	9029 Jan 02 15:10	18°☾09'19	45.53681 AU				
opposition	9029 Jan 04 17:54	18°☾06'51	-16°45'38	conjunction	9037 Jul 12 12:40	27°☾00'30	-16°15'30
direct	9029 Mar 27 18:26	17°☾05'23		minimum elong	9037 Jul 12 12:42	27°☾00'30	16°15'45
				max. Earth dist.	9037 Jul 14 08:40	27°☾03'09	48.56994 AU
conjunction	9029 Jul 04 04:07	18°☾37'44	-16°05'07	retrograde	9037 Oct 22 12:06	28°☾33'32	
minimum elong	9029 Jul 04 04:08	18°☾37'44	16°05'23	min. Earth dist.	9038 Jan 12 18:38	27°☾34'28	46.70929 AU
max. Earth dist.	9029 Jul 06 07:41	18°☾40'54	47.52921 AU	opposition	9038 Jan 14 14:00	27°☾32'23	-16°56'45
retrograde	9029 Oct 14 06:40	20°☾13'02		direct	9038 Apr 06 15:36	26°☾32'04	
min. Earth dist.	9030 Jan 03 23:59	19°☾13'20	45.68447 AU				
opposition	9030 Jan 06 01:59	19°☾10'55	-16°48'07	conjunction	9038 Jul 13 19:05	28°☾01'49	-16°15'30
direct	9030 Mar 29 02:15	18°☾09'36		minimum elong	9038 Jul 13 19:09	28°☾01'50	16°15'44
				max. Earth dist.	9038 Jul 15 14:19	28°☾04'25	48.68057 AU
conjunction	9030 Jul 05 11:28	19°☾41'39	-16°07'28	retrograde	9038 Oct 23 21:06	29°☾34'37	
minimum elong	9030 Jul 05 11:29	19°☾41'39	16°07'43	min. Earth dist.	9039 Jan 14 02:53	28°☾35'34	46.81848 AU
max. Earth dist.	9030 Jul 07 13:27	19°☾44'42	47.67494 AU	opposition	9039 Jan 15 20:55	28°☾33'34	-16°56'29
retrograde	9030 Oct 15 14:12	21°☾16'38		direct	9039 Apr 07 22:44	27°☾33'21	

conjunction	9039 Jul 15 01:29	29° Ω 02'51 -16°15'11	direct	9047 Apr 15 20:57	5° Ω 35'52
minimum elong	9039 Jul 15 01:32	29° Ω 02'51 16°15'25			
max. Earth dist.	9039 Jul 16 20:49	29° Ω 05'26 48.78831 AU	conjunction	9047 Jul 23 01:35	7° Ω 03'42 -16°02'36
	9039 Aug 27 03:40	0° Ω	minimum elong	9047 Jul 23 01:42	7° Ω 03'42 16°02'49
retrograde	9039 Oct 25 04:19	0° Ω 35'24	max. Earth dist.	9047 Jul 24 13:06	7° Ω 05'46 49.51962 AU
	9039 Dec 25 01:05	30° \mathbb{R} Ω	retrograde	9047 Nov 02 03:23	8° Ω 34'35
min. Earth dist.	9040 Jan 15 09:52	29° Ω 36'27 46.92459 AU	min. Earth dist.	9048 Jan 23 18:49	7° Ω 36'03 47.63651 AU
opposition	9040 Jan 17 03:34	29° Ω 34'27 -16°55'54	opposition	9048 Jan 25 05:25	7° Ω 34'25 -16°41'06
direct	9040 Apr 08 04:50	28° Ω 34'21	direct	9048 Apr 16 04:29	6° Ω 35'05
	9040 Jul 12 18:42	0° Ω			
conjunction	9040 Jul 15 07:40	0° Ω 03'37 -16°14'34	conjunction	9048 Jul 23 07:13	8° Ω 02'42 -15°59'54
minimum elong	9040 Jul 15 07:45	0° Ω 03'38 16°14'48	minimum elong	9048 Jul 23 07:18	8° Ω 02'43 16°00'07
max. Earth dist.	9040 Jul 17 01:26	0° Ω 06'06 48.89307 AU	max. Earth dist.	9048 Jul 24 17:31	8° Ω 04'42 49.58983 AU
retrograde	9040 Oct 25 12:02	1° Ω 35'56	retrograde	9048 Nov 02 08:26	9° Ω 33'24
min. Earth dist.	9041 Jan 15 16:41	0° Ω 37'05 47.02780 AU	min. Earth dist.	9049 Jan 24 02:24	8° Ω 34'48 47.70420 AU
opposition	9041 Jan 17 10:03	0° Ω 35'07 -16°55'01	opposition	9049 Jan 25 11:10	8° Ω 33'16 -16°38'06
	9041 Feb 19 05:45	30° \mathbb{R} Ω	direct	9049 Apr 17 12:23	7° Ω 33'58
direct	9041 Apr 09 08:26	29° Ω 35'08	conjunction	9049 Jul 24 12:49	9° Ω 01'23 -15°56'58
	9041 May 27 06:58	0° Ω	minimum elong	9049 Jul 24 12:57	9° Ω 01'23 15°57'11
			max. Earth dist.	9049 Jul 25 23:04	9° Ω 03'23 49.65610 AU
conjunction	9041 Jul 16 13:52	1° Ω 04'11 -16°13'39	retrograde	9049 Nov 03 14:12	10° Ω 31'52
minimum elong	9041 Jul 16 13:56	1° Ω 04'11 16°13'53	min. Earth dist.	9050 Jan 25 08:16	9° Ω 33'19 47.76810 AU
max. Earth dist.	9041 Jul 18 07:56	1° Ω 06'41 48.99484 AU	opposition	9050 Jan 26 16:48	9° Ω 31'47 -16°34'51
retrograde	9041 Oct 26 15:46	2° Ω 36'17	direct	9050 Apr 18 19:09	8° Ω 32'32
min. Earth dist.	9042 Jan 17 00:39	1° Ω 37'28 47.12780 AU			
opposition	9042 Jan 18 16:37	1° Ω 35'35 -16°53'50	conjunction	9050 Jul 25 18:04	9° Ω 59'45 -15°53'46
direct	9042 Apr 10 15:18	0° Ω 35'43	minimum elong	9050 Jul 25 18:10	9° Ω 59'45 15°53'58
			max. Earth dist.	9050 Jul 27 02:41	10° Ω 01'39 49.71891 AU
conjunction	9042 Jul 17 19:50	2° Ω 04'34 -16°12'27	retrograde	9050 Nov 04 21:51	11° Ω 30'03
minimum elong	9042 Jul 17 19:55	2° Ω 04'34 16°12'42	opposition	9051 Jan 27 22:25	10° Ω 30'01 -16°31'20
max. Earth dist.	9042 Jul 19 12:44	2° Ω 06'59 49.09346 AU	min. Earth dist.	9051 Jan 26 14:30	10° Ω 31'31 47.82889 AU
retrograde	9042 Oct 27 20:04	3° Ω 36'28	direct	9051 Apr 19 22:36	9° Ω 30'49
min. Earth dist.	9043 Jan 18 06:48	2° Ω 37'47 47.22434 AU			
opposition	9043 Jan 19 22:57	2° Ω 35'52 -16°52'21	conjunction	9051 Jul 26 23:31	10° Ω 57'52 -15°50'18
direct	9043 Apr 11 22:03	1° Ω 36'08	minimum elong	9051 Jul 26 23:40	10° Ω 57'52 15°50'31
			max. Earth dist.	9051 Jul 28 08:26	10° Ω 59'46 49.77868 AU
conjunction	9043 Jul 19 01:51	3° Ω 04'47 -16°10'59	retrograde	9051 Nov 06 02:00	12° Ω 27'59
minimum elong	9043 Jul 19 01:56	3° Ω 04'47 16°11'12	min. Earth dist.	9052 Jan 27 21:09	11° Ω 29'27 47.88663 AU
max. Earth dist.	9043 Jul 20 17:46	3° Ω 07'08 49.18824 AU	opposition	9052 Jan 29 03:47	11° Ω 28'01 -16°27'33
retrograde	9043 Oct 29 03:16	4° Ω 36'30	direct	9052 Apr 20 03:26	10° Ω 28'53
min. Earth dist.	9044 Jan 19 14:56	3° Ω 37'50 47.31686 AU			
opposition	9044 Jan 21 05:11	3° Ω 36'01 -16°50'36	conjunction	9052 Jul 27 04:49	11° Ω 55'47 -15°46'34
direct	9044 Apr 12 05:58	2° Ω 36'23	minimum elong	9052 Jul 27 04:56	11° Ω 55'47 15°46'46
			max. Earth dist.	9052 Jul 28 12:29	11° Ω 57'37 49.83571 AU
conjunction	9044 Jul 19 08:00	4° Ω 04'50 -16°09'15	retrograde	9052 Nov 06 05:39	13° Ω 25'45
minimum elong	9044 Jul 19 08:05	4° Ω 04'50 16°09'29	min. Earth dist.	9053 Jan 28 02:07	12° Ω 27'18 47.94156 AU
max. Earth dist.	9044 Jul 20 23:36	4° Ω 07'10 49.27878 AU	opposition	9053 Jan 29 09:06	12° Ω 25'51 -16°23'28
retrograde	9044 Oct 29 10:43	5° Ω 36'22	direct	9053 Apr 21 08:20	11° Ω 26'47
min. Earth dist.	9045 Jan 19 21:49	4° Ω 37'46 47.40459 AU			
opposition	9045 Jan 21 11:20	4° Ω 35'59 -16°48'35	conjunction	9053 Jul 28 09:53	12° Ω 53'33 -15°42'34
direct	9045 Apr 13 12:31	3° Ω 36'28	minimum elong	9053 Jul 28 10:02	12° Ω 53'33 15°42'47
			max. Earth dist.	9053 Jul 29 16:53	12° Ω 55'20 49.88977 AU
conjunction	9045 Jul 20 13:48	5° Ω 04'43 -16°07'16	retrograde	9053 Nov 07 11:05	14° Ω 23'24
minimum elong	9045 Jul 20 13:54	5° Ω 04'43 16°07'29	min. Earth dist.	9054 Jan 29 09:13	13° Ω 24'57 47.99352 AU
max. Earth dist.	9045 Jul 22 03:11	5° Ω 06'54 49.36429 AU	opposition	9054 Jan 30 14:33	13° Ω 23'34 -16°19'08
retrograde	9045 Oct 30 19:58	6° Ω 36'02	direct	9054 Apr 22 15:03	12° Ω 24'36
min. Earth dist.	9046 Jan 21 04:52	5° Ω 37'29 47.48720 AU			
opposition	9046 Jan 22 17:30	5° Ω 35'45 -16°46'19	conjunction	9054 Jul 29 15:09	13° Ω 51'14 -15°38'18
direct	9046 Apr 14 14:47	4° Ω 36'18	minimum elong	9054 Jul 29 15:17	13° Ω 51'14 15°38'31
			max. Earth dist.	9054 Jul 30 22:08	13° Ω 53'01 49.94090 AU
conjunction	9046 Jul 21 19:48	6° Ω 04'21 -16°05'03		9054 Sep 24 06:33	15° Ω
minimum elong	9046 Jul 21 19:54	6° Ω 04'21 16°05'17	retrograde	9054 Nov 08 16:52	15° Ω 20'58
max. Earth dist.	9046 Jul 23 08:54	6° Ω 06'31 49.44452 AU		9054 Dec 25 02:13	15° \mathbb{R} Ω
retrograde	9046 Nov 01 01:06	7° Ω 35'28	opposition	9055 Jan 31 19:44	14° Ω 21'14 -16°14'32
opposition	9047 Jan 23 23:35	6° Ω 35'15 -16°43'50	min. Earth dist.	9055 Jan 30 14:35	14° Ω 22'36 48.04217 AU
min. Earth dist.	9047 Jan 22 12:54	6° Ω 36'53 47.56437 AU	direct	9055 Apr 23 21:13	13° Ω 22'21

conjunction	9055 Jul 30 20:14	14° Ω 48'53	-15°33'48	direct	9063 May 01 08:29	21° Ω 01'34	
minimum elong	9055 Jul 30 20:23	14° Ω 48'53	15°34'01	evening set	9063 Aug 05 04:32	22° Ω 24'07	
max. Earth dist.	9055 Aug 01 01:17	14° Ω 50'33	49.98849 AU				
	9055 Aug 07 21:39	15° Ω		conjunction	9063 Aug 07 12:41	22° Ω 27'19	-14°49'50
retrograde	9055 Nov 10 01:52	16° Ω 18'31		minimum elong	9063 Aug 07 12:50	22° Ω 27'19	14°50'00
min. Earth dist.	9056 Jan 31 20:48	15° Ω 20'12	48.08705 AU	max. Earth dist.	9063 Aug 08 09:40	22° Ω 28'31	50.20074 AU
opposition	9056 Feb 02 00:57	15° Ω 18'53	-16°09'41	morning rise	9063 Aug 09 21:14	22° Ω 30'32	
	9056 Feb 19 04:41	15° κ Ω		retrograde	9063 Nov 17 15:08	23° Ω 56'08	
direct	9056 Apr 23 22:38	14° Ω 20'05		opposition	9064 Feb 09 16:36	22° Ω 56'49	-15°22'52
	9056 Jun 25 12:26	15° Ω		min. Earth dist.	9064 Feb 08 21:14	22° Ω 57'43	48.27465 AU
				direct	9064 May 01 14:31	21° Ω 58'18	
conjunction	9056 Jul 31 01:30	15° Ω 46'32	-15°29'04	evening set	9064 Aug 04 17:32	23° Ω 19'52	
minimum elong	9056 Jul 31 01:39	15° Ω 46'32	15°29'15				
max. Earth dist.	9056 Aug 01 06:28	15° Ω 48'11	50.03185 AU	conjunction	9064 Aug 07 17:34	23° Ω 23'58	-14°43'18
retrograde	9056 Nov 10 07:43	17° Ω 16'04		minimum elong	9064 Aug 07 17:45	23° Ω 23'59	14°43'29
min. Earth dist.	9057 Feb 01 03:40	16° Ω 17'45	48.12727 AU	max. Earth dist.	9064 Aug 08 14:31	23° Ω 25'10	50.20960 AU
opposition	9057 Feb 02 06:05	16° Ω 16'31	-16°04'37	morning rise	9064 Aug 10 18:05	23° Ω 28'07	
direct	9057 Apr 25 02:37	15° Ω 17'48		retrograde	9064 Nov 17 18:51	24° Ω 52'44	
				opposition	9065 Feb 09 21:10	23° Ω 53'26	-15°15'57
conjunction	9057 Aug 01 06:42	16° Ω 44'09	-15°24'06	min. Earth dist.	9065 Feb 09 01:47	23° Ω 54'21	48.28091 AU
minimum elong	9057 Aug 01 06:51	16° Ω 44'10	15°24'18	direct	9065 May 02 21:53	22° Ω 54'57	
max. Earth dist.	9057 Aug 02 09:57	16° Ω 45'43	50.07049 AU	evening set	9065 Aug 05 08:52	24° Ω 15'42	
retrograde	9057 Nov 11 10:23	18° Ω 13'36					
min. Earth dist.	9058 Feb 02 09:03	17° Ω 15'20	48.16248 AU	conjunction	9065 Aug 08 22:16	24° Ω 20'33	-14°36'32
opposition	9058 Feb 03 11:12	17° Ω 14'07	-15°59'19	minimum elong	9065 Aug 08 22:27	24° Ω 20'34	14°36'42
direct	9058 Apr 26 08:02	16° Ω 15'28		max. Earth dist.	9065 Aug 09 17:25	24° Ω 21'39	50.21546 AU
				morning rise	9065 Aug 12 12:13	24° Ω 25'27	
conjunction	9058 Aug 02 11:47	17° Ω 41'43	-15°18'56	retrograde	9065 Nov 19 03:23	25° Ω 49'15	
minimum elong	9058 Aug 02 11:57	17° Ω 41'44	15°19'07	min. Earth dist.	9066 Feb 10 07:22	24° Ω 50'52	48.28422 AU
max. Earth dist.	9058 Aug 03 13:36	17° Ω 43'12	50.10378 AU	opposition	9066 Feb 11 01:55	24° Ω 50'00	-15°08'47
retrograde	9058 Nov 12 14:24	19° Ω 11'04		direct	9066 May 04 00:31	23° Ω 51'33	
opposition	9059 Feb 04 16:26	18° Ω 11'38	-15°53'48	evening set	9066 Aug 06 01:45	25° Ω 11'35	
min. Earth dist.	9059 Feb 03 16:23	18° Ω 12'45	48.19227 AU				
direct	9059 Apr 27 15:45	17° Ω 13'02		conjunction	9066 Aug 10 03:04	25° Ω 17'06	-14°29'32
				minimum elong	9066 Aug 10 03:15	25° Ω 17'07	14°29'42
conjunction	9059 Aug 03 17:04	18° Ω 39'10	-15°13'33	max. Earth dist.	9066 Aug 10 22:26	25° Ω 18'12	50.21815 AU
minimum elong	9059 Aug 03 17:13	18° Ω 39'11	15°13'45	morning rise	9066 Aug 14 04:55	25° Ω 22'40	
max. Earth dist.	9059 Aug 04 18:19	18° Ω 40'37	50.13183 AU	retrograde	9066 Nov 20 10:01	26° Ω 45'45	
retrograde	9059 Nov 13 20:05	20° Ω 08'25		opposition	9067 Feb 12 06:39	25° Ω 46'32	-15°01'22
opposition	9060 Feb 05 21:14	19° Ω 09'01	-15°48'05	min. Earth dist.	9067 Feb 11 13:29	25° Ω 47'20	48.28404 AU
min. Earth dist.	9060 Feb 04 21:49	19° Ω 10'06	48.21681 AU	direct	9067 May 05 03:33	24° Ω 48'07	
direct	9060 Apr 27 22:22	18° Ω 10'26		evening set	9067 Aug 06 19:53	26° Ω 07'30	
conjunction	9060 Aug 03 22:03	19° Ω 36'28	-15°07'58	conjunction	9067 Aug 11 07:56	26° Ω 13'39	-14°22'18
minimum elong	9060 Aug 03 22:13	19° Ω 36'29	15°08'09	minimum elong	9067 Aug 11 08:07	26° Ω 13'39	14°22'27
max. Earth dist.	9060 Aug 04 21:14	19° Ω 37'47	50.15492 AU	max. Earth dist.	9067 Aug 12 01:50	26° Ω 14'40	50.21730 AU
retrograde	9060 Nov 14 03:48	21° Ω 05'36		morning rise	9067 Aug 15 20:36	26° Ω 19'49	
min. Earth dist.	9061 Feb 05 03:52	20° Ω 07'16	48.23682 AU	retrograde	9067 Nov 21 14:00	27° Ω 42'14	
opposition	9061 Feb 06 02:11	20° Ω 06'13	-15°42'08	opposition	9068 Feb 13 11:07	26° Ω 43'04	-14°53'44
direct	9061 Apr 29 01:17	19° Ω 07'40		min. Earth dist.	9068 Feb 12 18:06	26° Ω 43'52	48.28002 AU
				direct	9068 May 05 06:39	25° Ω 44'41	
conjunction	9061 Aug 05 02:57	20° Ω 33'35	-15°02'09	evening set	9068 Aug 06 14:42	27° Ω 03'29	
minimum elong	9061 Aug 05 03:06	20° Ω 33'36	15°02'20				
max. Earth dist.	9061 Aug 06 02:07	20° Ω 34'54	50.17370 AU	conjunction	9068 Aug 11 12:49	27° Ω 10'12	-14°14'51
retrograde	9061 Nov 15 08:23	22° Ω 02'36		minimum elong	9068 Aug 11 12:59	27° Ω 10'12	14°15'01
min. Earth dist.	9062 Feb 06 10:06	21° Ω 04'13	48.25273 AU	max. Earth dist.	9068 Aug 12 05:22	27° Ω 11'08	50.21211 AU
opposition	9062 Feb 07 07:06	21° Ω 03'15	-15°35'57	morning rise	9068 Aug 16 11:37	27° Ω 16'56	
direct	9062 Apr 30 04:51	20° Ω 04'42		retrograde	9068 Nov 21 17:04	28° Ω 38'46	
evening set	9062 Aug 04 21:43	21° Ω 28'35		opposition	9069 Feb 13 15:52	27° Ω 39'38	-14°45'53
				min. Earth dist.	9069 Feb 13 01:01	27° Ω 40'19	48.27137 AU
conjunction	9062 Aug 06 07:50	21° Ω 30'32	-14°56'07	direct	9069 May 06 13:05	26° Ω 41'17	
minimum elong	9062 Aug 06 08:01	21° Ω 30'32	14°56'18	evening set	9069 Aug 07 10:12	27° Ω 59'32	
morning rise	9062 Aug 07 18:22	21° Ω 32'30					
max. Earth dist.	9062 Aug 07 05:44	21° Ω 31'47	50.18889 AU	conjunction	9069 Aug 12 17:42	28° Ω 06'46	-14°07'11
retrograde	9062 Nov 16 11:36	22° Ω 59'26		minimum elong	9069 Aug 12 17:54	28° Ω 06'47	14°07'20
opposition	9063 Feb 08 11:46	22° Ω 00'06	-15°29'32	max. Earth dist.	9069 Aug 13 09:48	28° Ω 07'41	50.20209 AU
min. Earth dist.	9063 Feb 07 14:40	22° Ω 01'05	48.26529 AU	morning rise	9069 Aug 18 01:52	28° Ω 14'03	

retrograde	9069 Nov 22 21:13	29°Ω35'19	min. Earth dist.	9076 Feb 20 15:49	4°♊14'55	48.07127 AU
opposition	9070 Feb 14 20:32	28°Ω36'13 -14°37'49	direct	9076 May 12 21:33	3°♊16'07	
min. Earth dist.	9070 Feb 14 06:12	28°Ω36'53 48.25744 AU	evening set	9076 Aug 11 12:40	4°♊31'13	
direct	9070 May 07 19:45	27°Ω37'52				
evening set	9070 Aug 08 06:15	28°Ω55'37	conjunction	9076 Aug 19 03:46	4°♊41'33 -13°07'54	
			minimum elong	9076 Aug 19 03:57	4°♊41'34 13°08'02	
conjunction	9070 Aug 13 22:37	29°Ω03'20 -13°59'20	max. Earth dist.	9076 Aug 19 12:11	4°♊42'02 49.99529 AU	
minimum elong	9070 Aug 13 22:48	29°Ω03'21 13°59'30	morning rise	9076 Aug 26 19:49	4°♊51'58	
max. Earth dist.	9070 Aug 14 12:17	29°Ω04'07 50.18660 AU	retrograde	9076 Nov 29 11:21	6°♊10'01	
morning rise	9070 Aug 19 15:47	29°Ω11'07	opposition	9077 Feb 21 04:12	5°♊10'51 -13°35'31	
	9070 Sep 28 02:12	0°♊	min. Earth dist.	9077 Feb 20 21:24	5°♊11'10 48.02744 AU	
retrograde	9070 Nov 24 04:49	0°♊31'52	direct	9077 May 13 23:46	4°♊12'25	
	9071 Jan 21 13:39	30°♋Ω	evening set	9077 Aug 12 10:25	5°♊27'09	
opposition	9071 Feb 16 01:12	29°Ω32'46 -14°29'34				
min. Earth dist.	9071 Feb 15 12:25	29°Ω33'22 48.23806 AU	conjunction	9077 Aug 20 08:23	5°♊37'54 -12°58'33	
direct	9071 May 08 22:47	28°Ω34'26	minimum elong	9077 Aug 20 08:36	5°♊37'54 12°58'41	
evening set	9071 Aug 09 02:43	29°Ω51'40	max. Earth dist.	9077 Aug 20 15:38	5°♊38'18 49.95140 AU	
			morning rise	9077 Aug 28 07:28	5°♊48'42	
conjunction	9071 Aug 15 03:40	29°Ω59'52 -13°51'18	retrograde	9077 Nov 30 16:31	7°♊06'23	
minimum elong	9071 Aug 15 03:52	29°Ω59'53 13°51'27	opposition	9078 Feb 22 08:40	6°♊07'14 -13°25'41	
	9071 Aug 15 06:02	0°♊	min. Earth dist.	9078 Feb 22 01:44	6°♊07'33 47.98075 AU	
max. Earth dist.	9071 Aug 15 16:50	0°♊00'37 50.16559 AU	direct	9078 May 15 01:44	5°♊08'47	
morning rise	9071 Aug 21 05:24	0°♊08'07	evening set	9078 Aug 13 08:21	6°♊23'11	
retrograde	9071 Nov 25 10:03	1°♊28'21				
opposition	9072 Feb 17 05:50	0°♊29'15 -14°21'07	conjunction	9078 Aug 21 13:14	6°♊34'19 -12°48'58	
min. Earth dist.	9072 Feb 16 18:36	0°♊29'46 48.21315 AU	minimum elong	9078 Aug 21 13:26	6°♊34'20 12°49'05	
	9072 Mar 15 17:23	30°♋Ω	max. Earth dist.	9078 Aug 21 19:25	6°♊34'40 49.90443 AU	
direct	9072 May 09 02:51	29°Ω30'54	morning rise	9078 Aug 29 19:18	6°♊45'31	
	9072 Jul 01 05:29	0°♊	retrograde	9078 Dec 01 18:46	8°♊02'52	
evening set	9072 Aug 08 23:28	0°♊47'39	opposition	9079 Feb 23 13:12	7°♊03'43 -13°15'37	
			min. Earth dist.	9079 Feb 23 08:04	7°♊03'57 47.93089 AU	
conjunction	9072 Aug 15 08:30	0°♊56'19 -13°43'03	direct	9079 May 16 08:23	6°♊05'16	
minimum elong	9072 Aug 15 08:40	0°♊56'20 13°43'12	evening set	9079 Aug 14 06:37	7°♊19'22	
max. Earth dist.	9072 Aug 15 20:01	0°♊56'58 50.13948 AU				
morning rise	9072 Aug 21 18:19	1°♊05'01	conjunction	9079 Aug 22 18:14	7°♊30'52 -12°39'08	
retrograde	9072 Nov 25 13:52	2°♊24'46	minimum elong	9079 Aug 22 18:26	7°♊30'53 12°39'16	
opposition	9073 Feb 17 10:17	1°♊25'39 -14°12'27	max. Earth dist.	9079 Aug 23 00:18	7°♊31'13 49.85420 AU	
min. Earth dist.	9073 Feb 16 23:22	1°♊26'09 48.18344 AU	morning rise	9079 Aug 31 06:55	7°♊42'27	
direct	9073 May 10 06:14	0°♊27'16	retrograde	9079 Dec 02 22:02	8°♊59'30	
evening set	9073 Aug 09 20:24	1°♊43'35	opposition	9080 Feb 24 17:39	8°♊00'20 -13°05'19	
			min. Earth dist.	9080 Feb 24 12:47	8°♊00'34 47.87735 AU	
conjunction	9073 Aug 16 13:17	1°♊52'41 -13°34'36	direct	9080 May 16 15:30	7°♊01'53	
minimum elong	9073 Aug 16 13:30	1°♊52'42 13°34'44	evening set	9080 Aug 14 05:04	8°♊15'42	
max. Earth dist.	9073 Aug 16 23:38	1°♊53'16 50.10877 AU				
morning rise	9073 Aug 23 07:08	2°♊01'50	conjunction	9080 Aug 22 23:05	8°♊27'34 -12°29'06	
retrograde	9073 Nov 26 17:15	3°♊21'07	minimum elong	9080 Aug 22 23:18	8°♊27'35 12°29'12	
opposition	9074 Feb 18 14:54	2°♊21'59 -14°03'34	max. Earth dist.	9080 Aug 23 03:00	8°♊27'48 49.79995 AU	
min. Earth dist.	9074 Feb 18 05:55	2°♊22'24 48.14955 AU	morning rise	9080 Aug 31 18:27	8°♊39'32	
direct	9074 May 11 11:40	1°♊23'35	retrograde	9080 Dec 03 06:05	9°♊56'16	
evening set	9074 Aug 10 17:36	2°♊39'28	opposition	9081 Feb 24 22:12	8°♊57'07 -12°54'48	
			min. Earth dist.	9081 Feb 24 18:46	8°♊57'16 47.81959 AU	
conjunction	9074 Aug 17 18:06	2°♊48'59 -13°25'56	direct	9081 May 17 18:34	7°♊58'39	
minimum elong	9074 Aug 17 18:17	2°♊49'00 13°26'03	evening set	9081 Aug 15 03:42	9°♊12'10	
max. Earth dist.	9074 Aug 18 04:16	2°♊49'34 50.07428 AU				
morning rise	9074 Aug 24 19:28	2°♊58'35	conjunction	9081 Aug 24 04:15	9°♊24'25 -12°18'52	
retrograde	9074 Nov 27 20:40	4°♊17'26	minimum elong	9081 Aug 24 04:27	9°♊24'25 12°18'59	
opposition	9075 Feb 19 19:19	3°♊18'16 -13°54'27	max. Earth dist.	9081 Aug 24 07:44	9°♊24'37 49.74108 AU	
min. Earth dist.	9075 Feb 19 10:21	3°♊18'41 48.11199 AU	morning rise	9081 Sep 02 05:59	9°♊36'45	
direct	9075 May 12 18:37	2°♊19'51	retrograde	9081 Dec 04 12:31	10°♊53'11	
evening set	9075 Aug 11 15:04	3°♊35'20	opposition	9082 Feb 26 02:51	9°♊54'00 -12°44'05	
			min. Earth dist.	9082 Feb 26 00:54	9°♊54'06 47.75682 AU	
conjunction	9075 Aug 18 22:52	3°♊45'16 -13°17'02	direct	9082 May 18 22:26	8°♊55'31	
minimum elong	9075 Aug 18 23:04	3°♊45'17 13°17'10	evening set	9082 Aug 16 02:40	10°♊08'45	
max. Earth dist.	9075 Aug 19 07:09	3°♊45'44 50.03633 AU				
morning rise	9075 Aug 26 07:44	3°♊55'16	conjunction	9082 Aug 25 09:21	10°♊21'21 -12°08'26	
retrograde	9075 Nov 29 04:35	5°♊13'43	minimum elong	9082 Aug 25 09:34	10°♊21'22 12°08'31	
opposition	9076 Feb 20 23:41	4°♊14'33 -13°45'06	max. Earth dist.	9082 Aug 25 11:07	10°♊21'27 49.67715 AU	

morning rise	9082 Sep 03 17:21	10° \mathring{M} 34'02	conjunction	9089 Aug 31 21:44	17° \mathring{M} 00'16 -10°49'27
retrograde	9082 Dec 05 18:15	11° \mathring{M} 50'10	minimum elong	9089 Aug 31 21:56	17° \mathring{M} 00'16 10°49'31
opposition	9083 Feb 27 07:28	10° \mathring{M} 50'57 -12°33'09	max. Earth dist.	9089 Aug 31 17:03	17° \mathring{M} 00'00 49.10654 AU
min. Earth dist.	9083 Feb 27 06:03	10° \mathring{M} 51'01 47.68881 AU	morning rise	9089 Sep 11 22:07	17° \mathring{M} 15'18
direct	9083 May 20 00:36	9° \mathring{M} 52'25	retrograde	9089 Dec 12 02:40	18° \mathring{M} 29'38
evening set	9083 Aug 17 01:44	11° \mathring{M} 05'22	opposition	9090 Mar 05 16:10	17° \mathring{M} 29'59 -11°10'26
			min. Earth dist.	9090 Mar 05 21:09	17° \mathring{M} 29'45 47.09575 AU
conjunction	9083 Aug 26 14:35	11° \mathring{M} 18'20 -11°57'47	direct	9090 May 26 12:02	16° \mathring{M} 30'58
minimum elong	9083 Aug 26 14:46	11° \mathring{M} 18'21 11°57'54	evening set	9090 Aug 21 22:48	17° \mathring{M} 42'19
max. Earth dist.	9083 Aug 26 14:38	11° \mathring{M} 18'20 49.60778 AU			
morning rise	9083 Sep 05 04:48	11° \mathring{M} 31'22	conjunction	9090 Sep 02 02:59	17° \mathring{M} 57'35 -10°37'15
retrograde	9083 Dec 06 21:55	12° \mathring{M} 47'11	minimum elong	9090 Sep 02 03:11	17° \mathring{M} 57'35 10°37'19
opposition	9084 Feb 28 12:06	11° \mathring{M} 47'56 -12°22'01	max. Earth dist.	9090 Sep 01 20:23	17° \mathring{M} 57'12 49.01236 AU
min. Earth dist.	9084 Feb 28 12:56	11° \mathring{M} 47'53 47.61554 AU	morning rise	9090 Sep 13 08:55	18° \mathring{M} 12'56
direct	9084 May 20 05:22	10° \mathring{M} 49'19	retrograde	9090 Dec 13 10:28	19° \mathring{M} 27'06
evening set	9084 Aug 17 00:59	12° \mathring{M} 02'00	opposition	9091 Mar 06 21:04	18° \mathring{M} 27'25 -10°57'40
			min. Earth dist.	9091 Mar 07 03:18	18° \mathring{M} 27'08 46.99868 AU
conjunction	9084 Aug 26 19:49	12° \mathring{M} 15'18 -11°46'57	direct	9091 May 27 15:41	17° \mathring{M} 28'21
minimum elong	9084 Aug 26 20:02	12° \mathring{M} 15'19 11°47'03	evening set	9091 Aug 22 23:05	18° \mathring{M} 39'34
max. Earth dist.	9084 Aug 26 19:27	12° \mathring{M} 15'17 49.53353 AU			
morning rise	9084 Sep 05 15:55	12° \mathring{M} 28'40	conjunction	9091 Sep 03 08:38	18° \mathring{M} 55'09 -10°24'49
retrograde	9084 Dec 07 00:25	13° \mathring{M} 44'13	minimum elong	9091 Sep 03 08:50	18° \mathring{M} 55'10 10°24'52
opposition	9085 Feb 28 16:41	12° \mathring{M} 44'53 -12°10'40	max. Earth dist.	9091 Sep 03 01:57	18° \mathring{M} 54'46 48.91500 AU
min. Earth dist.	9085 Feb 28 17:42	12° \mathring{M} 44'50 47.53756 AU	morning rise	9091 Sep 14 19:41	19° \mathring{M} 10'50
direct	9085 May 21 12:49	11° \mathring{M} 46'12	retrograde	9091 Dec 14 17:09	20° \mathring{M} 24'51
evening set	9085 Aug 18 00:10	12° \mathring{M} 58'37	opposition	9092 Mar 07 01:53	19° \mathring{M} 25'08 -10°44'39
			min. Earth dist.	9092 Mar 07 09:14	19° \mathring{M} 24'48 46.89810 AU
conjunction	9085 Aug 28 00:45	13° \mathring{M} 12'14 -11°35'54	direct	9092 May 27 19:56	18° \mathring{M} 26'02
minimum elong	9085 Aug 28 00:56	13° \mathring{M} 12'15 11°36'00	evening set	9092 Aug 22 23:41	19° \mathring{M} 37'08
max. Earth dist.	9085 Aug 27 22:22	13° \mathring{M} 12'06 49.45486 AU			
morning rise	9085 Sep 07 02:51	13° \mathring{M} 25'57	conjunction	9092 Sep 03 14:14	19° \mathring{M} 53'01 -10°12'09
retrograde	9085 Dec 08 06:51	14° \mathring{M} 41'13	minimum elong	9092 Sep 03 14:25	19° \mathring{M} 53'02 10°12'14
opposition	9086 Mar 01 21:25	13° \mathring{M} 41'49 -11°59'06	max. Earth dist.	9092 Sep 03 06:06	19° \mathring{M} 52'33 48.81400 AU
min. Earth dist.	9086 Mar 01 23:48	13° \mathring{M} 41'42 47.45559 AU	morning rise	9092 Sep 15 06:26	20° \mathring{M} 09'01
direct	9086 May 22 17:43	12° \mathring{M} 43'03	retrograde	9092 Dec 15 00:24	21° \mathring{M} 22'54
evening set	9086 Aug 18 23:34	13° \mathring{M} 55'12	opposition	9093 Mar 08 06:51	20° \mathring{M} 23'10 -10°31'25
			min. Earth dist.	9093 Mar 08 14:42	20° \mathring{M} 22'47 46.79357 AU
conjunction	9086 Aug 29 06:01	14° \mathring{M} 09'10 -11°24'38	direct	9093 May 28 21:58	19° \mathring{M} 24'00
minimum elong	9086 Aug 29 06:14	14° \mathring{M} 09'11 11°24'44	evening set	9093 Aug 24 00:20	20° \mathring{M} 35'00
max. Earth dist.	9086 Aug 29 03:38	14° \mathring{M} 09'02 49.37237 AU			
morning rise	9086 Sep 08 13:51	14° \mathring{M} 23'14	conjunction	9093 Sep 04 19:53	20° \mathring{M} 51'12 -9°59'17
retrograde	9086 Dec 09 13:29	15° \mathring{M} 38'13	minimum elong	9093 Sep 04 20:05	20° \mathring{M} 51'13 9°59'20
opposition	9087 Mar 03 02:01	14° \mathring{M} 38'45 -11°47'18	max. Earth dist.	9093 Sep 04 10:12	20° \mathring{M} 50'39 48.70845 AU
min. Earth dist.	9087 Mar 03 05:29	14° \mathring{M} 38'35 47.37002 AU	morning rise	9093 Sep 16 17:11	21° \mathring{M} 07'30
direct	9087 May 23 21:30	13° \mathring{M} 39'55	retrograde	9093 Dec 16 05:42	22° \mathring{M} 21'16
evening set	9087 Aug 19 23:15	14° \mathring{M} 51'49	opposition	9094 Mar 09 12:07	21° \mathring{M} 21'29 -10°17'57
			min. Earth dist.	9094 Mar 09 22:08	21° \mathring{M} 21'00 46.68419 AU
conjunction	9087 Aug 30 11:14	15° \mathring{M} 06'07 -11°13'08	direct	9094 May 30 02:56	20° \mathring{M} 22'16
minimum elong	9087 Aug 30 11:25	15° \mathring{M} 06'08 11°13'13	evening set	9094 Aug 25 01:23	21° \mathring{M} 33'10
max. Earth dist.	9087 Aug 30 07:30	15° \mathring{M} 05'54 49.28669 AU			
morning rise	9087 Sep 10 00:41	15° \mathring{M} 20'30	conjunction	9094 Sep 06 01:55	21° \mathring{M} 49'40 -9°46'12
retrograde	9087 Dec 10 20:27	16° \mathring{M} 35'15	minimum elong	9094 Sep 06 02:06	21° \mathring{M} 49'41 9°46'16
opposition	9088 Mar 03 06:38	15° \mathring{M} 35'43 -11°35'15	max. Earth dist.	9094 Sep 05 15:36	21° \mathring{M} 49'05 48.59790 AU
min. Earth dist.	9088 Mar 03 10:06	15° \mathring{M} 35'33 47.28143 AU	morning rise	9094 Sep 18 04:00	22° \mathring{M} 06'17
direct	9088 May 23 23:24	14° \mathring{M} 36'48	retrograde	9094 Dec 17 09:19	23° \mathring{M} 19'55
evening set	9088 Aug 19 22:53	15° \mathring{M} 48'31	opposition	9095 Mar 10 17:11	22° \mathring{M} 20'04 -10°04'16
			min. Earth dist.	9095 Mar 11 03:36	22° \mathring{M} 19'35 46.56953 AU
conjunction	9088 Aug 30 16:23	16° \mathring{M} 03'08 -11°01'24	direct	9095 May 31 10:17	21° \mathring{M} 20'47
minimum elong	9088 Aug 30 16:35	16° \mathring{M} 03'08 11°01'30	evening set	9095 Aug 26 02:43	22° \mathring{M} 31'35
max. Earth dist.	9088 Aug 30 11:37	16° \mathring{M} 02'52 49.19792 AU			
morning rise	9088 Sep 10 11:29	16° \mathring{M} 17'50	conjunction	9095 Sep 07 07:54	22° \mathring{M} 48'22 -9°32'55
retrograde	9088 Dec 10 23:51	17° \mathring{M} 32'22	minimum elong	9095 Sep 07 08:06	22° \mathring{M} 48'23 9°32'58
opposition	9089 Mar 04 11:27	16° \mathring{M} 32'46 -11°22'58	max. Earth dist.	9095 Sep 06 19:07	22° \mathring{M} 47'38 48.48201 AU
min. Earth dist.	9089 Mar 04 16:35	16° \mathring{M} 32'32 47.18994 AU	morning rise	9095 Sep 19 14:58	23° \mathring{M} 05'18
direct	9089 May 25 05:02	15° \mathring{M} 33'48	retrograde	9095 Dec 18 16:23	24° \mathring{M} 18'49
evening set	9089 Aug 20 22:45	16° \mathring{M} 45'20	opposition	9096 Mar 10 22:31	23° \mathring{M} 18'53 -9°50'22
			min. Earth dist.	9096 Mar 11 10:44	23° \mathring{M} 18'18 46.44969 AU

direct	9096 May 31 15:36	22° <u>11</u> 19'30
evening set	9096 Aug 26 03:56	23° <u>11</u> 30'11
conjunction	9096 Sep 07 13:56	23° <u>11</u> 47'17 -9°19'25
minimum elong	9096 Sep 07 14:07	23° <u>11</u> 47'17 9°19'28
max. Earth dist.	9096 Sep 07 00:44	23° <u>11</u> 46'31 48.36100 AU
morning rise	9096 Sep 20 01:34	24° <u>11</u> 04'30
retrograde	9096 Dec 18 23:56	25° <u>11</u> 17'55
opposition	9097 Mar 12 03:51	24° <u>11</u> 17'53 -9°36'15
min. Earth dist.	9097 Mar 12 17:16	24° <u>11</u> 17'14 46.32493 AU
direct	9097 Jun 01 20:09	23° <u>11</u> 18'22
evening set	9097 Aug 27 05:31	24° <u>11</u> 28'58
conjunction	9097 Sep 08 19:59	24° <u>11</u> 46'22 -9°05'42
minimum elong	9097 Sep 08 20:11	24° <u>11</u> 46'22 9°05'45
max. Earth dist.	9097 Sep 08 05:14	24° <u>11</u> 45'30 48.23556 AU
morning rise	9097 Sep 21 12:16	25° <u>11</u> 03'52
retrograde	9097 Dec 20 09:24	26° <u>11</u> 17'10
opposition	9098 Mar 13 09:08	25° <u>11</u> 17'02 -9°21'54
min. Earth dist.	9098 Mar 13 22:55	25° <u>11</u> 16'22 46.19609 AU
direct	9098 Jun 02 21:44	24° <u>11</u> 17'24
evening set	9098 Aug 28 07:09	25° <u>11</u> 27'55
max. Earth dist.	9098 Sep 09 10:07	25° <u>11</u> 44'40 48.10607 AU
conjunction	9098 Sep 10 02:09	25° <u>11</u> 45'36 -8°51'46
minimum elong	9098 Sep 10 02:19	25° <u>11</u> 45'37 8°51'48
morning rise	9098 Sep 22 22:59	26° <u>11</u> 03'24
retrograde	9098 Dec 21 14:25	27° <u>11</u> 16'36
opposition	9099 Mar 14 14:40	26° <u>11</u> 16'20 -9°07'18
min. Earth dist.	9099 Mar 15 06:21	26° <u>11</u> 15'36 46.06351 AU
direct	9099 Jun 04 03:16	25° <u>11</u> 16'35
evening set	9099 Aug 29 09:04	26° <u>11</u> 27'03
conjunction	9099 Sep 11 08:29	26° <u>11</u> 45'00 -8°37'36
minimum elong	9099 Sep 11 08:41	26° <u>11</u> 45'01 8°37'38
max. Earth dist.	9099 Sep 10 16:18	26° <u>11</u> 44'04 47.97319 AU
morning rise	9099 Sep 24 09:34	27° <u>11</u> 03'06
retrograde	9099 Dec 22 16:52	28° <u>11</u> 16'12
opposition	9100 Mar 15 20:01	27° <u>11</u> 15'50 -8°52'28
min. Earth dist.	9100 Mar 16 11:38	27° <u>11</u> 15'05 45.92771 AU
direct	9100 Jun 05 11:52	26° <u>11</u> 15'57
evening set	9100 Aug 30 11:14	27° <u>11</u> 26'22
conjunction	9100 Sep 12 14:45	27° <u>11</u> 44'37 -8°23'11
minimum elong	9100 Sep 12 14:56	27° <u>11</u> 44'37 8°23'12
max. Earth dist.	9100 Sep 11 20:35	27° <u>11</u> 43'33 47.83726 AU
morning rise	9100 Sep 25 20:16	28° <u>11</u> 02'59
retrograde	9100 Dec 23 23:29	29° <u>11</u> 16'02
opposition	9101 Mar 17 01:43	28° <u>11</u> 15'33 -8°37'23
min. Earth dist.	9101 Mar 17 18:35	28° <u>11</u> 14'44 45.78912 AU
direct	9101 Jun 06 17:58	27° <u>11</u> 15'33
evening set	9101 Aug 31 13:18	28° <u>11</u> 25'55
conjunction	9101 Sep 13 21:09	28° <u>11</u> 44'27 -8°08'32
minimum elong	9101 Sep 13 21:20	28° <u>11</u> 44'28 8°08'34
max. Earth dist.	9101 Sep 13 03:09	28° <u>11</u> 43'24 47.69855 AU
morning rise	9101 Sep 27 06:43	29° <u>11</u> 03'06
	9101 Nov 16 03:10	0° <u>11</u>
retrograde	9101 Dec 25 06:11	0° <u>11</u> 16'07