

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 1

Attention, astronomical year style is used: The year -9900 in astronomical counting style is the year 9901 BCE in historical counting style.

evening set	-9900 Mar 25 j 16:15	6°36'33		evening set	-9894 Apr 03 j 02:28	14°19'32	
max. Earth dist.	-9900 Apr 07 j 13:47	6°56'38	42.34116 AU	max. Earth dist.	-9894 Apr 15 j 20:46	14°40'12	40.90775 AU
conjunction	-9900 Apr 10 j 16:24	7°01'31	-1°56'23	conjunction	-9894 Apr 19 j 05:06	14°45'41	0°21'19
minimum elong	-9900 Apr 10 j 16:28	7°01'32	1°56'54	minimum elong	-9894 Apr 19 j 05:05	14°45'41	0°20'51
morning rise	-9900 Apr 26 j 14:01	7°26'21			-9894 Apr 27 j 22:47	15°	
retrograde	-9900 Jul 20 j 09:12	8°43'42		morning rise	-9894 May 05 j 04:17	15°11'40	
opposition	-9900 Oct 07 j 19:17	7°38'57	-1°50'46	retrograde	-9894 Jul 28 j 21:20	16°32'06	
min. Earth dist.	-9900 Oct 10 j 13:57	7°35'23	40.22612 AU	opposition	-9894 Oct 15 j 23:01	15°25'48	0°34'41
direct	-9900 Dec 29 j 10:10	6°31'42		min. Earth dist.	-9894 Oct 19 j 00:26	15°21'46	38.78320 AU
evening set	-9899 Mar 27 j 04:15	7°51'20			-9894 Nov 05 j 00:21	15°	
max. Earth dist.	-9899 Apr 09 j 02:39	8°11'35	42.10895 AU	direct	-9893 Jan 06 j 12:59	14°16'43	
					-9893 Mar 08 j 16:01	15°	
conjunction	-9899 Apr 12 j 05:34	8°16'32	-1°34'10	evening set	-9893 Apr 04 j 18:27	15°40'04	
minimum elong	-9899 Apr 12 j 05:37	8°16'32	1°34'39	max. Earth dist.	-9893 Apr 17 j 10:45	16°00'46	40.65810 AU
morning rise	-9899 Apr 28 j 03:57	8°41'35					
retrograde	-9899 Jul 21 j 22:02	9°59'21		conjunction	-9893 Apr 20 j 20:24	16°06'23	0°45'16
opposition	-9899 Oct 09 j 06:59	8°54'22	-1°27'19	minimum elong	-9893 Apr 20 j 20:22	16°06'23	0°44'49
min. Earth dist.	-9899 Oct 12 j 03:11	8°50'43	39.99257 AU	morning rise	-9893 May 06 j 19:07	16°32'30	
direct	-9899 Dec 30 j 22:16	7°46'52		retrograde	-9893 Jul 30 j 13:52	17°53'32	
evening set	-9898 Mar 28 j 17:04	9°07'02		opposition	-9893 Oct 17 j 12:56	16°46'56	1°00'02
max. Earth dist.	-9898 Apr 10 j 15:19	9°27'25	41.87477 AU	min. Earth dist.	-9893 Oct 20 j 14:29	16°42'53	38.53246 AU
				direct	-9892 Jan 08 j 03:58	15°37'30	
conjunction	-9898 Apr 13 j 19:04	9°32'27	-1°11'40	evening set	-9892 Apr 05 j 11:01	17°01'34	
minimum elong	-9898 Apr 13 j 19:06	9°32'27	1°12'09	max. Earth dist.	-9892 Apr 18 j 01:29	17°22'17	40.40599 AU
morning rise	-9898 Apr 29 j 18:12	9°57'42					
retrograde	-9898 Jul 23 j 09:49	11°15'57		conjunction	-9892 Apr 21 j 12:13	17°28'01	1°09'29
opposition	-9898 Oct 10 j 18:51	10°10'44	-1°03'34	minimum elong	-9892 Apr 21 j 12:11	17°28'01	1°09'01
min. Earth dist.	-9898 Oct 13 j 15:09	10°07'04	39.75683 AU	morning rise	-9892 May 07 j 09:58	17°54'17	
direct	-9897 Jan 01 j 11:51	9°02'57		retrograde	-9892 Jul 31 j 03:48	19°15'58	
evening set	-9897 Mar 30 j 06:31	10°23'42		opposition	-9892 Oct 18 j 03:20	18°09'03	1°25'40
max. Earth dist.	-9897 Apr 12 j 03:26	10°44'07	41.63786 AU	min. Earth dist.	-9892 Oct 21 j 06:40	18°04'52	38.27982 AU
				direct	-9891 Jan 08 j 18:33	16°59'14	
conjunction	-9897 Apr 15 j 09:00	10°49'19	-0°48'51	evening set	-9891 Apr 07 j 04:10	18°24'04	
minimum elong	-9897 Apr 15 j 09:02	10°49'19	0°49'19	max. Earth dist.	-9891 Apr 19 j 17:42	18°44'52	40.15232 AU
morning rise	-9897 May 01 j 08:31	11°14'46					
retrograde	-9897 Jul 24 j 23:20	12°33'31		conjunction	-9891 Apr 23 j 04:19	18°50'38	1°33'57
opposition	-9897 Oct 12 j 07:24	11°28'04	-0°39'28	minimum elong	-9891 Apr 23 j 04:16	18°50'38	1°33'32
min. Earth dist.	-9897 Oct 15 j 05:39	11°24'16	39.51830 AU	morning rise	-9891 May 09 j 00:57	19°17'01	
direct	-9896 Jan 02 j 23:05	10°19'59		retrograde	-9891 Aug 01 j 18:07	20°39'24	
evening set	-9896 Mar 30 j 20:22	11°41'20		opposition	-9891 Oct 19 j 18:06	19°32'09	1°51'35
max. Earth dist.	-9896 Apr 12 j 17:35	12°01'55	41.39790 AU	min. Earth dist.	-9891 Oct 22 j 21:08	19°27'57	38.02591 AU
				direct	-9890 Jan 10 j 09:55	18°21'57	
conjunction	-9896 Apr 15 j 23:12	12°07'09	-0°25'46	evening set	-9890 Apr 08 j 22:11	19°47'36	
minimum elong	-9896 Apr 15 j 23:13	12°07'09	0°26'15	max. Earth dist.	-9890 Apr 21 j 08:32	20°08'21	39.89754 AU
morning rise	-9896 May 01 j 22:50	12°32'47					
retrograde	-9896 Jul 25 j 13:14	13°52'05		conjunction	-9890 Apr 24 j 20:49	20°14'17	1°58'42
opposition	-9896 Oct 12 j 20:14	12°46'22	-0°15'04	minimum elong	-9890 Apr 24 j 20:45	20°14'17	1°58'17
min. Earth dist.	-9896 Oct 15 j 18:53	12°42'31	39.27649 AU	morning rise	-9890 May 10 j 16:01	20°40'46	
direct	-9895 Jan 03 j 11:00	11°37'58		retrograde	-9890 Aug 03 j 12:10	22°03'53	
evening set	-9895 Apr 01 j 11:09	12°59'57		opposition	-9890 Oct 21 j 09:21	20°56'18	2°17'48
max. Earth dist.	-9895 Apr 14 j 05:57	13°20'31	41.15452 AU	min. Earth dist.	-9890 Oct 24 j 13:30	20°52'02	37.77150 AU
				direct	-9889 Jan 11 j 21:32	19°45'43	
conjunction	-9895 Apr 17 j 13:51	13°25'56	-0°02'26	evening set	-9889 Apr 10 j 16:48	21°12'14	
minimum elong	-9895 Apr 17 j 13:51	13°25'56	0°02'54	max. Earth dist.	-9889 Apr 23 j 02:16	21°33'05	39.64239 AU
behind sun begin	-9895 Apr 17 j 07:22	13°25'32					
behind sun end	-9895 Apr 17 j 20:20	13°26'21		conjunction	-9889 Apr 26 j 13:51	21°39'01	2°23'40
morning rise	-9895 May 03 j 13:32	13°51'46		minimum elong	-9889 Apr 26 j 13:46	21°39'00	2°23'16
asc. node	-9895 May 24 j 13:28	14°23'11		morning rise	-9889 May 12 j 07:07	22°05'35	
	-9895 Jun 27 j 03:47	15°		retrograde	-9889 Aug 05 j 05:02	23°29'30	
retrograde	-9895 Jul 27 j 05:58	15°11'36		opposition	-9889 Oct 23 j 01:13	22°21'35	2°44'16
	-9895 Aug 26 j 13:38	15°		min. Earth dist.	-9889 Oct 26 j 05:27	22°17'17	37.51698 AU
opposition	-9895 Oct 14 j 09:18	14°05'37	0°09'39	direct	-9888 Jan 13 j 12:16	21°10'38	
min. Earth dist.	-9895 Oct 17 j 09:25	14°01'41	39.03145 AU	evening set	-9888 Apr 11 j 12:11	22°38'04	
direct	-9894 Jan 04 j 22:08	12°56'53		max. Earth dist.	-9888 Apr 23 j 18:25	22°58'52	39.38735 AU

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 2

Attention, astronomical year style is used: The year -9888 in astronomical counting style is the year 9889 BCE in historical counting style.

conjunction	-9888 Apr 27 j 07:01	23°04'55	2°48'53	opposition	-9882 Nov 02 j 06:45	2°55'56	5°56'05
minimum elong	-9888 Apr 27 j 06:55	23°04'54	2°48'29	min. Earth dist.	-9882 Nov 05 j 15:02	2°51'13	35.72602 AU
morning rise	-9888 May 12 j 22:22	23°31'33		direct	-9881 Jan 23 j 12:28	1°42'17	
retrograde	-9888 Aug 06 j 01:16	24°56'19		evening set	-9881 Apr 24 j 05:35	3°17'36	
opposition	-9888 Oct 23 j 17:24	23°48'05	3°11'00	max. Earth dist.	-9881 May 05 j 07:38	3°37'37	37.58536 AU
min. Earth dist.	-9888 Oct 26 j 21:41	23°43'45	37.26277 AU				
direct	-9887 Jan 14 j 03:46	22°36'46		conjunction	-9881 May 08 j 23:42	3°44'18	5°50'49
evening set	-9887 Apr 13 j 08:24	24°05'11		minimum elong	-9881 May 08 j 23:28	3°44'17	5°50'30
max. Earth dist.	-9887 Apr 25 j 12:17	24°25'59	39.13229 AU	morning rise	-9881 May 23 j 14:13	4°10'46	
				retrograde	-9881 Aug 17 j 22:41	5°42'52	
conjunction	-9887 Apr 29 j 00:59	24°32'05	3°14'18	opposition	-9881 Nov 04 j 03:02	4°32'08	6°24'14
minimum elong	-9887 Apr 29 j 00:52	24°32'05	3°13'55	min. Earth dist.	-9881 Nov 07 j 11:06	4°27'24	35.46674 AU
morning rise	-9887 May 14 j 13:46	24°58'46		direct	-9880 Jan 25 j 09:04	3°18'02	
retrograde	-9887 Aug 07 j 20:08	26°24'27		evening set	-9880 Apr 25 j 08:14	4°54'40	
opposition	-9887 Oct 25 j 10:07	25°15'53	3°37'58	max. Earth dist.	-9880 May 06 j 04:58	5°14'28	37.32419 AU
min. Earth dist.	-9887 Oct 28 j 15:38	25°11'28	37.00857 AU				
direct	-9886 Jan 15 j 21:22	24°04'13		conjunction	-9880 May 09 j 21:20	5°21'14	6°17'24
evening set	-9886 Apr 15 j 05:40	25°33'40		minimum elong	-9880 May 09 j 21:06	5°21'13	6°17'06
max. Earth dist.	-9886 Apr 27 j 06:31	25°54'26	38.87713 AU	morning rise	-9880 May 24 j 06:36	5°47'33	
				retrograde	-9880 Aug 18 j 21:31	7°20'54	
conjunction	-9886 Apr 30 j 19:25	26°00'37	3°39'57	opposition	-9880 Nov 05 j 00:03	6°09'44	6°52'31
minimum elong	-9886 Apr 30 j 19:17	26°00'36	3°39'34	min. Earth dist.	-9880 Nov 08 j 09:23	6°04'54	35.20747 AU
morning rise	-9886 May 16 j 05:30	26°27'19		direct	-9879 Jan 26 j 05:56	4°55'10	
retrograde	-9886 Aug 09 j 15:04	27°53'56		evening set	-9879 Apr 27 j 12:11	6°33'12	
opposition	-9886 Oct 27 j 03:24	26°45'04	4°05'10	max. Earth dist.	-9879 May 08 j 03:38	6°52'46	37.06342 AU
min. Earth dist.	-9886 Oct 30 j 08:27	26°40'39	36.75411 AU				
direct	-9885 Jan 17 j 15:33	25°33'03		conjunction	-9879 May 11 j 19:34	6°59'35	6°44'03
evening set	-9885 Apr 17 j 03:41	27°03'35		minimum elong	-9879 May 11 j 19:18	6°59'34	6°43'46
max. Earth dist.	-9885 Apr 29 j 00:11	27°24'13	38.62118 AU	morning rise	-9879 May 25 j 23:17	7°25'43	
				retrograde	-9879 Aug 20 j 19:00	9°00'22	
conjunction	-9885 May 02 j 14:18	27°30'32	4°05'47	opposition	-9879 Nov 06 j 21:28	7°48'47	7°20'52
minimum elong	-9885 May 02 j 14:08	27°30'31	4°05'25	min. Earth dist.	-9879 Nov 10 j 05:52	7°43'58	34.94903 AU
morning rise	-9885 May 17 j 21:11	27°57'15		direct	-9878 Jan 28 j 04:19	6°33'45	
retrograde	-9885 Aug 11 j 09:04	29°24'53		evening set	-9878 Apr 29 j 17:09	8°13'14	
opposition	-9885 Oct 28 j 21:24	28°15'40	4°32'36	max. Earth dist.	-9878 May 10 j 01:39	8°32'27	36.80363 AU
min. Earth dist.	-9885 Nov 01 j 04:03	28°11'08	36.49888 AU				
direct	-9884 Jan 19 j 07:56	27°03'17		conjunction	-9878 May 13 j 18:24	8°39'24	7°10'45
evening set	-9884 Apr 18 j 02:40	28°34'56		minimum elong	-9878 May 13 j 18:08	8°39'22	7°10'29
max. Earth dist.	-9884 Apr 29 j 20:13	28°55'31	38.36418 AU	morning rise	-9878 May 27 j 16:04	9°05'19	
				retrograde	-9878 Aug 22 j 17:52	10°41'20	
conjunction	-9884 May 03 j 09:51	29°01'52	4°31'48	opposition	-9878 Nov 08 j 19:49	9°29'20	7°49'16
minimum elong	-9884 May 03 j 09:41	29°01'51	4°31'27	min. Earth dist.	-9878 Nov 12 j 05:00	9°24'26	34.69225 AU
morning rise	-9884 May 18 j 13:10	29°28'34		direct	-9877 Jan 30 j 00:41	8°13'50	
	-9884 Jun 06 j 13:41	0°		evening set	-9877 May 01 j 23:04	9°54'51	
retrograde	-9884 Aug 12 j 03:37	0°57'14		max. Earth dist.	-9877 May 12 j 02:32	10°13'52	36.54574 AU
	-9884 Oct 20 j 18:22	30°					
opposition	-9884 Oct 29 j 15:51	29°47'42	5°00'14	conjunction	-9877 May 15 j 17:45	10°20'45	7°37'27
min. Earth dist.	-9884 Nov 01 j 22:28	29°43'08	36.24248 AU	minimum elong	-9877 May 15 j 17:27	10°20'44	7°37'11
direct	-9883 Jan 20 j 01:31	28°34'54		morning rise	-9877 May 29 j 08:44	10°46'25	
	-9883 Apr 15 j 15:32	0°		retrograde	-9877 Aug 24 j 16:47	12°23'54	
evening set	-9883 Apr 20 j 02:41	0°07'43		opposition	-9877 Nov 10 j 18:52	11°11'28	8°17'40
max. Earth dist.	-9883 May 01 j 14:24	0°28'05	38.10582 AU	min. Earth dist.	-9877 Nov 14 j 03:12	11°06'36	34.43770 AU
				direct	-9876 Jan 31 j 22:21	9°55'32	
conjunction	-9883 May 05 j 05:51	0°34'37	4°58'00	evening set	-9876 May 03 j 06:18	11°38'09	
minimum elong	-9883 May 05 j 05:40	0°34'36	4°57'39	max. Earth dist.	-9876 May 13 j 01:53	11°56'45	36.29034 AU
morning rise	-9883 May 20 j 05:25	1°01'16					
retrograde	-9883 Aug 14 j 01:43	2°31'02		conjunction	-9876 May 16 j 17:43	12°03'46	8°04'06
opposition	-9883 Oct 31 j 10:56	1°21'07	5°28'04	minimum elong	-9876 May 16 j 17:25	12°03'44	8°03'52
min. Earth dist.	-9883 Nov 03 j 18:29	1°16'29	35.98486 AU	morning rise	-9876 May 30 j 01:48	12°29'08	
direct	-9882 Jan 21 j 17:04	0°07'54		retrograde	-9876 Aug 25 j 19:11	14°08'10	
evening set	-9882 Apr 22 j 03:34	1°41'57		opposition	-9876 Nov 11 j 18:25	12°55'20	8°46'02
max. Earth dist.	-9882 May 03 j 11:22	2°02'12	37.84603 AU	min. Earth dist.	-9876 Nov 15 j 02:34	12°50'27	34.18606 AU
				direct	-9875 Feb 01 j 18:42	11°38'57	
conjunction	-9882 May 07 j 02:35	2°08'46	5°24'20	evening set	-9875 May 05 j 14:38	13°23'18	
minimum elong	-9882 May 07 j 02:23	2°08'45	5°24'01	max. Earth dist.	-9875 May 15 j 03:53	13°41'34	36.03765 AU
morning rise	-9882 May 21 j 21:39	2°35'21					
retrograde	-9882 Aug 15 j 22:46	4°06'15		conjunction	-9875 May 18 j 18:33	13°48'33	8°30'41

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 3

Attention, astronomical year style is used: The year -9875 in astronomical counting style is the year 9876 BCE in historical counting style.

minimum elong	-9875 May 18 j 18:13	13° <del>✕</del> 48'31	8°30'27	max. Earth dist.	-9868 May 28 j 08:55	26° <del>✕</del> 50'10	34.33099 AU
morning rise	-9875 May 31 j 18:52	14° <del>✕</del> 13'34					
retrograde	-9875 Aug 27 j 21:22	15° <del>✕</del> 54'15		conjunction	-9868 May 31 j 20:16	26° <del>✕</del> 57'23	11°31'34
opposition	-9875 Nov 13 j 18:57	14° <del>✕</del> 41'01	9°14'20	minimum elong	-9868 May 31 j 19:51	26° <del>✕</del> 57'21	11°31'28
min. Earth dist.	-9875 Nov 17 j 03:06	14° <del>✕</del> 36'06	33.93714 AU	morning rise	-9868 Jun 10 j 22:08	27° <del>✕</del> 18'13	
direct	-9874 Feb 03 j 18:13	13° <del>✕</del> 24'14		retrograde	-9868 Sep 10 j 09:20	29° <del>✕</del> 12'45	
evening set	-9874 May 08 j 00:23	15° <del>✕</del> 10'22		opposition	-9868 Nov 26 j 21:36	27° <del>✕</del> 56'37	12°26'53
max. Earth dist.	-9874 May 17 j 05:18	15° <del>✕</del> 28'11	35.78771 AU	min. Earth dist.	-9868 Nov 30 j 03:42	27° <del>✕</del> 51'37	32.25816 AU
				direct	-9867 Feb 16 j 09:59	26° <del>✕</del> 36'49	
conjunction	-9874 May 20 j 19:53	15° <del>✕</del> 35'14	8°57'10	evening set	-9867 May 24 j 11:39	28° <del>✕</del> 37'52	
minimum elong	-9874 May 20 j 19:32	15° <del>✕</del> 35'12	8°56'58	max. Earth dist.	-9867 May 30 j 15:43	28° <del>✕</del> 50'43	34.09686 AU
morning rise	-9874 Jun 02 j 12:12	15° <del>✕</del> 59'51					
retrograde	-9874 Aug 30 j 02:31	17° <del>✕</del> 42'15		conjunction	-9867 Jun 03 j 02:50	28° <del>✕</del> 57'58	11°56'05
opposition	-9874 Nov 15 j 20:07	16° <del>✕</del> 28'39	9°42'31	minimum elong	-9867 Jun 03 j 02:24	28° <del>✕</del> 57'56	11°56'00
min. Earth dist.	-9874 Nov 19 j 03:17	16° <del>✕</del> 23'46	33.69097 AU	morning rise	-9867 Jun 12 j 15:46	29° <del>✕</del> 17'54	
direct	-9873 Feb 05 j 18:31	15° <del>✕</del> 11'28			-9867 Jul 03 j 17:52	0° <del>✕</del>	
evening set	-9873 May 10 j 11:19	16° <del>✕</del> 59'29		retrograde	-9867 Sep 12 j 18:47	1° <del>✕</del> 14'46	
max. Earth dist.	-9873 May 19 j 07:55	17° <del>✕</del> 16'49	35.54004 AU		-9867 Nov 28 j 00:12	30° <del>✕</del>	
				opposition	-9867 Nov 29 j 04:46	29° <del>✕</del> 58'10	12°52'57
conjunction	-9873 May 22 j 22:07	17° <del>✕</del> 23'53	9°23'30	min. Earth dist.	-9867 Dec 02 j 09:26	29° <del>✕</del> 53'14	32.02909 AU
minimum elong	-9873 May 22 j 21:46	17° <del>✕</del> 23'51	9°23'18	direct	-9866 Feb 18 j 14:37	28° <del>✕</del> 37'53	
morning rise	-9873 Jun 04 j 05:37	17° <del>✕</del> 48'03			-9866 May 06 j 20:28	0° <del>✕</del>	
retrograde	-9873 Sep 01 j 06:09	19° <del>✕</del> 32'17		evening set	-9866 May 27 j 09:01	0° <del>✕</del> 41'25	
opposition	-9873 Nov 17 j 22:20	18° <del>✕</del> 18'17	10°10'33	max. Earth dist.	-9866 Jun 02 j 00:28	0° <del>✕</del> 53'18	33.86670 AU
min. Earth dist.	-9873 Nov 21 j 06:17	18° <del>✕</del> 13'19	33.44709 AU				
direct	-9872 Feb 07 j 18:57	17° <del>✕</del> 00'42		conjunction	-9866 Jun 05 j 10:10	1° <del>✕</del> 00'30	12°20'05
evening set	-9872 May 11 j 23:39	18° <del>✕</del> 50'41		minimum elong	-9866 Jun 05 j 09:44	1° <del>✕</del> 00'27	12°20'03
max. Earth dist.	-9872 May 20 j 11:39	19° <del>✕</del> 07'29	35.29451 AU	morning rise	-9866 Jun 14 j 09:02	1° <del>✕</del> 19'25	
				retrograde	-9866 Sep 15 j 03:56	3° <del>✕</del> 18'43	
conjunction	-9872 May 24 j 00:55	19° <del>✕</del> 14'34	9°49'39	opposition	-9866 Dec 01 j 13:01	2° <del>✕</del> 01'38	13°18'26
minimum elong	-9872 May 24 j 00:33	19° <del>✕</del> 14'32	9°49'29	min. Earth dist.	-9866 Dec 04 j 17:28	1° <del>✕</del> 56'41	31.80453 AU
morning rise	-9872 Jun 04 j 23:06	19° <del>✕</del> 38'13		direct	-9865 Feb 20 j 22:09	0° <del>✕</del> 40'55	
retrograde	-9872 Sep 02 j 10:21	21° <del>✕</del> 24'20		evening set	-9865 May 30 j 08:21	2° <del>✕</del> 47'02	
opposition	-9872 Nov 19 j 01:14	20° <del>✕</del> 09'57	10°38'23	max. Earth dist.	-9865 Jun 04 j 10:08	2° <del>✕</del> 57'51	33.64170 AU
min. Earth dist.	-9872 Nov 22 j 08:03	20° <del>✕</del> 05'02	33.20516 AU				
direct	-9871 Feb 08 j 22:12	18° <del>✕</del> 51'57		conjunction	-9865 Jun 07 j 18:08	3° <del>✕</del> 04'58	12°43'29
evening set	-9871 May 14 j 13:28	20° <del>✕</del> 43'59		minimum elong	-9865 Jun 07 j 17:42	3° <del>✕</del> 04'56	12°43'26
max. Earth dist.	-9871 May 22 j 14:43	21° <del>✕</del> 00'05	35.05061 AU	morning rise	-9865 Jun 16 j 01:57	3° <del>✕</del> 22'44	
				retrograde	-9865 Sep 17 j 15:36	5° <del>✕</del> 24'36	
conjunction	-9871 May 26 j 04:39	21° <del>✕</del> 07'17	10°15'35	opposition	-9865 Dec 03 j 22:01	4° <del>✕</del> 07'05	13°43'16
minimum elong	-9871 May 26 j 04:15	21° <del>✕</del> 07'15	10°15'25	min. Earth dist.	-9865 Dec 07 j 00:06	4° <del>✕</del> 02'15	31.58554 AU
morning rise	-9871 Jun 06 j 16:54	21° <del>✕</del> 30'21		direct	-9864 Feb 23 j 07:23	2° <del>✕</del> 45'54	
retrograde	-9871 Sep 04 j 15:43	23° <del>✕</del> 18'26		evening set	-9864 Jun 01 j 09:23	4° <del>✕</del> 54'47	
opposition	-9871 Nov 21 j 04:59	22° <del>✕</del> 03'39	11°06'00	max. Earth dist.	-9864 Jun 05 j 19:56	5° <del>✕</del> 04'20	33.42247 AU
min. Earth dist.	-9871 Nov 24 j 12:30	21° <del>✕</del> 58'39	32.96505 AU				
direct	-9870 Feb 10 j 23:31	20° <del>✕</del> 45'13		conjunction	-9864 Jun 09 j 02:52	5° <del>✕</del> 11'25	13°06'11
evening set	-9870 May 17 j 04:49	22° <del>✕</del> 39'23		minimum elong	-9864 Jun 09 j 02:25	5° <del>✕</del> 11'23	13°06'11
max. Earth dist.	-9870 May 24 j 20:43	22° <del>✕</del> 54'51	34.80853 AU	morning rise	-9864 Jun 16 j 18:31	5° <del>✕</del> 27'55	
				retrograde	-9864 Sep 19 j 02:12	7° <del>✕</del> 32'31	
conjunction	-9870 May 28 j 09:13	23° <del>✕</del> 02'00	10°41'15	opposition	-9864 Dec 05 j 08:01	6° <del>✕</del> 14'33	14°07'19
minimum elong	-9870 May 28 j 08:48	23° <del>✕</del> 01'58	10°41'07	min. Earth dist.	-9864 Dec 08 j 09:43	6° <del>✕</del> 09'43	31.37268 AU
morning rise	-9870 Jun 08 j 10:40	23° <del>✕</del> 24'25		direct	-9863 Feb 24 j 15:03	4° <del>✕</del> 52'57	
retrograde	-9870 Sep 06 j 20:19	25° <del>✕</del> 14'34		evening set	-9863 Jun 04 j 12:56	7° <del>✕</del> 04'45	
opposition	-9870 Nov 23 j 09:46	23° <del>✕</del> 59'21	11°33'20	max. Earth dist.	-9863 Jun 08 j 08:07	7° <del>✕</del> 13'01	33.20971 AU
min. Earth dist.	-9870 Nov 26 j 16:21	23° <del>✕</del> 54'22	32.72682 AU				
direct	-9869 Feb 13 j 03:25	22° <del>✕</del> 40'29		conjunction	-9863 Jun 11 j 12:28	7° <del>✕</del> 19'56	13°28'08
evening set	-9869 May 19 j 21:30	24° <del>✕</del> 36'50		minimum elong	-9863 Jun 11 j 12:01	7° <del>✕</del> 19'54	13°28'08
max. Earth dist.	-9869 May 27 j 01:17	24° <del>✕</del> 51'26	34.56849 AU	morning rise	-9863 Jun 18 j 10:19	7° <del>✕</del> 35'00	
				retrograde	-9863 Sep 21 j 13:20	9° <del>✕</del> 42'29	
conjunction	-9869 May 30 j 14:15	24° <del>✕</del> 58'43	11°06'36	opposition	-9863 Dec 07 j 18:48	8° <del>✕</del> 24'06	14°30'33
minimum elong	-9869 May 30 j 13:51	24° <del>✕</del> 58'41	11°06'28	min. Earth dist.	-9863 Dec 10 j 18:02	8° <del>✕</del> 19'24	31.16627 AU
morning rise	-9869 Jun 10 j 04:27	25° <del>✕</del> 20'23		direct	-9862 Feb 27 j 01:36	7° <del>✕</del> 02'07	
retrograde	-9869 Sep 09 j 03:02	27° <del>✕</del> 12'41		evening set	-9862 Jun 07 j 18:58	9° <del>✕</del> 17'02	
opposition	-9869 Nov 25 j 15:17	25° <del>✕</del> 57'01	12°00'19	max. Earth dist.	-9862 Jun 10 j 19:13	9° <del>✕</del> 23'39	33.00355 AU
min. Earth dist.	-9869 Nov 28 j 21:41	25° <del>✕</del> 52'02	32.49106 AU				
direct	-9868 Feb 15 j 05:48	24° <del>✕</del> 37'41		conjunction	-9862 Jun 13 j 22:50	9° <del>✕</del> 30'35	13°49'14
evening set	-9868 May 21 j 15:44	26° <del>✕</del> 36'20		minimum elong	-9862 Jun 13 j 22:23	9° <del>✕</del> 30'33	13°49'16

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 4

Attention, astronomical year style is used: The year -9862 in astronomical counting style is the year 9863 BCE in historical counting style.

morning rise	-9862 Jun 20 j 01:15	9° $\Upsilon$ 43'59		max. Earth dist.	-9854 Jun 30 j 03:12	28° $\Upsilon$ 04'42	31.58928 AU
retrograde	-9862 Sep 24 j 02:49	11° $\Upsilon$ 54'35					
opposition	-9862 Dec 10 j 06:42	10° $\Upsilon$ 35'49	14°52'51	conjunction	-9854 Jul 02 j 12:54	28° $\Upsilon$ 10'21	15°59'21
min. Earth dist.	-9862 Dec 13 j 04:57	10° $\Upsilon$ 31'09	30.96659 AU	minimum elong	-9854 Jul 02 j 12:35	28° $\Upsilon$ 10'20	15°59'34
direct	-9861 Mar 01 j 10:24	9° $\Upsilon$ 13'29			-9854 Aug 23 j 01:49	0° $\mathcal{B}$	
evening set	-9861 Jun 11 j 04:19	11° $\Upsilon$ 31'46		retrograde	-9854 Oct 13 j 11:16	0° $\mathcal{B}$ 45'06	
max. Earth dist.	-9861 Jun 13 j 09:22	11° $\Upsilon$ 36'40	32.80403 AU		-9854 Dec 06 j 14:38	30° $\mathcal{R}\Upsilon$	
				opposition	-9854 Dec 29 j 14:33	29° $\Upsilon$ 23'22	17°08'52
conjunction	-9861 Jun 16 j 09:56	11° $\Upsilon$ 43'23	14°09'26	min. Earth dist.	-9854 Dec 31 j 20:52	29° $\Upsilon$ 19'38	29.60048 AU
minimum elong	-9861 Jun 16 j 09:30	11° $\Upsilon$ 43'21	14°09'28	direct	-9853 Mar 20 j 03:28	27° $\Upsilon$ 58'31	
morning rise	-9861 Jun 21 j 14:14	11° $\Upsilon$ 54'53			-9853 Jun 18 j 20:29	0° $\mathcal{B}$	
retrograde	-9861 Sep 26 j 14:57	14° $\Upsilon$ 08'51		max. Earth dist.	-9853 Jul 02 j 21:46	0° $\mathcal{B}$ 32'55	31.44637 AU
opposition	-9861 Dec 12 j 19:35	12° $\Upsilon$ 49'43	15°14'10				
min. Earth dist.	-9861 Dec 15 j 15:55	12° $\Upsilon$ 45'09	30.77324 AU	conjunction	-9853 Jul 05 j 05:20	0° $\mathcal{B}$ 38'24	16°09'34
direct	-9860 Mar 02 j 21:40	11° $\Upsilon$ 27'02		minimum elong	-9853 Jul 05 j 05:02	0° $\mathcal{B}$ 38'23	16°09'48
evening set	-9860 Jun 13 j 18:30	13° $\Upsilon$ 49'06		retrograde	-9853 Oct 16 j 07:27	3° $\mathcal{B}$ 14'16	
max. Earth dist.	-9860 Jun 14 j 22:06	13° $\Upsilon$ 51'40	32.61091 AU	opposition	-9852 Jan 01 j 10:13	1° $\mathcal{B}$ 52'12	17°19'14
				min. Earth dist.	-9852 Jan 03 j 14:23	1° $\mathcal{B}$ 48'36	29.46417 AU
conjunction	-9860 Jun 17 j 21:50	13° $\Upsilon$ 58'23	14°28'39	direct	-9852 Mar 21 j 21:04	0° $\mathcal{B}$ 27'06	
minimum elong	-9860 Jun 17 j 21:24	13° $\Upsilon$ 58'20	14°28'44	max. Earth dist.	-9852 Jul 04 j 19:04	3° $\mathcal{B}$ 02'49	31.31345 AU
morning rise	-9860 Jun 22 j 00:05	14° $\Upsilon$ 07'33					
retrograde	-9860 Sep 28 j 05:24	16° $\Upsilon$ 25'17		conjunction	-9852 Jul 06 j 22:29	3° $\mathcal{B}$ 07'55	16°18'10
opposition	-9860 Dec 14 j 09:09	15° $\Upsilon$ 05'46	15°34'25	minimum elong	-9852 Jul 06 j 22:14	3° $\mathcal{B}$ 07'54	16°18'26
min. Earth dist.	-9860 Dec 17 j 03:57	15° $\Upsilon$ 01'18	30.58621 AU	retrograde	-9852 Oct 18 j 01:32	5° $\mathcal{B}$ 44'49	
direct	-9859 Mar 05 j 08:05	13° $\Upsilon$ 42'46		opposition	-9851 Jan 03 j 06:21	4° $\mathcal{B}$ 22'27	17°27'47
evening set	-9859 Jun 17 j 18:04	16° $\Upsilon$ 09'25		min. Earth dist.	-9851 Jan 05 j 07:01	4° $\mathcal{B}$ 19'05	29.33781 AU
max. Earth dist.	-9859 Jun 17 j 13:43	16° $\Upsilon$ 09'00	32.42394 AU	direct	-9851 Mar 24 j 16:40	2° $\mathcal{B}$ 57'09	
				max. Earth dist.	-9851 Jul 07 j 14:50	5° $\mathcal{B}$ 33'55	31.19118 AU
conjunction	-9859 Jun 20 j 10:43	16° $\Upsilon$ 15'31	14°46'49				
minimum elong	-9859 Jun 20 j 10:18	16° $\Upsilon$ 15'28	14°46'55	conjunction	-9851 Jul 09 j 15:59	5° $\mathcal{B}$ 38'50	16°25'03
morning rise	-9859 Jun 23 j 02:25	16° $\Upsilon$ 21'31		minimum elong	-9851 Jul 09 j 15:45	5° $\mathcal{B}$ 38'49	16°25'19
retrograde	-9859 Sep 30 j 19:14	18° $\Upsilon$ 43'51		retrograde	-9851 Oct 20 j 22:22	8° $\mathcal{B}$ 16'43	
opposition	-9859 Dec 16 j 23:59	17° $\Upsilon$ 23'58	15°53'31	opposition	-9850 Jan 06 j 03:19	6° $\mathcal{B}$ 54'05	17°34'28
min. Earth dist.	-9859 Dec 19 j 17:36	17° $\Upsilon$ 19'32	30.40513 AU	min. Earth dist.	-9850 Jan 08 j 00:54	6° $\mathcal{B}$ 50'55	29.22217 AU
direct	-9858 Mar 07 j 20:09	16° $\Upsilon$ 00'38		direct	-9850 Mar 27 j 10:52	5° $\mathcal{B}$ 28'38	
max. Earth dist.	-9858 Jun 20 j 04:23	18° $\Upsilon$ 28'16	32.24323 AU	max. Earth dist.	-9850 Jul 10 j 13:28	8° $\mathcal{B}$ 06'37	31.07999 AU
conjunction	-9858 Jun 23 j 00:06	18° $\Upsilon$ 34'43	15°03'53	conjunction	-9850 Jul 12 j 09:58	8° $\mathcal{B}$ 11'06	16°30'10
minimum elong	-9858 Jun 22 j 23:42	18° $\Upsilon$ 34'41	15°04'01	minimum elong	-9850 Jul 12 j 09:48	8° $\mathcal{B}$ 11'05	16°30'28
retrograde	-9858 Oct 03 j 12:12	21° $\Upsilon$ 04'26		retrograde	-9850 Oct 23 j 18:11	10° $\mathcal{B}$ 49'53	
opposition	-9858 Dec 19 j 15:37	19° $\Upsilon$ 44'11	16°11'24	opposition	-9849 Jan 09 j 01:01	9° $\mathcal{B}$ 27'03	17°39'13
min. Earth dist.	-9858 Dec 22 j 06:43	19° $\Upsilon$ 39'55	30.23025 AU	min. Earth dist.	-9849 Jan 10 j 19:27	9° $\mathcal{B}$ 24'05	29.11724 AU
direct	-9857 Mar 10 j 09:09	18° $\Upsilon$ 20'32		direct	-9849 Mar 30 j 06:46	8° $\mathcal{B}$ 01'28	
max. Earth dist.	-9857 Jun 22 j 21:04	20° $\Upsilon$ 49'39	32.06884 AU	max. Earth dist.	-9849 Jul 13 j 10:21	10° $\mathcal{B}$ 40'23	30.98000 AU
conjunction	-9857 Jun 25 j 14:27	20° $\Upsilon$ 55'55	15°19'45	conjunction	-9849 Jul 15 j 04:18	10° $\mathcal{B}$ 44'37	16°33'27
minimum elong	-9857 Jun 25 j 14:04	20° $\Upsilon$ 55'53	15°19'53	minimum elong	-9849 Jul 15 j 04:09	10° $\mathcal{B}$ 44'36	16°33'46
retrograde	-9857 Oct 06 j 04:16	23° $\Upsilon$ 26'59		retrograde	-9849 Oct 26 j 15:36	13° $\mathcal{B}$ 24'15	
opposition	-9857 Dec 22 j 08:12	22° $\Upsilon$ 06'21	16°27'59	opposition	-9848 Jan 11 j 23:00	12° $\mathcal{B}$ 01'13	17°41'58
min. Earth dist.	-9857 Dec 24 j 22:18	22° $\Upsilon$ 02'08	30.06178 AU	min. Earth dist.	-9848 Jan 13 j 13:42	11° $\mathcal{B}$ 58'31	29.02323 AU
direct	-9856 Mar 11 j 23:56	20° $\Upsilon$ 42'23		direct	-9848 Apr 01 j 02:19	10° $\mathcal{B}$ 35'34	
max. Earth dist.	-9856 Jun 24 j 14:06	23° $\Upsilon$ 12'54	31.90140 AU	max. Earth dist.	-9848 Jul 15 j 09:32	13° $\mathcal{B}$ 15'30	30.89092 AU
conjunction	-9856 Jun 27 j 05:17	23° $\Upsilon$ 19'00	15°34'21	conjunction	-9848 Jul 16 j 23:09	13° $\mathcal{B}$ 19'19	16°34'53
minimum elong	-9856 Jun 27 j 04:55	23° $\Upsilon$ 18'58	15°34'31	minimum elong	-9848 Jul 16 j 23:03	13° $\mathcal{B}$ 19'18	16°35'15
retrograde	-9856 Oct 07 j 22:36	25° $\Upsilon$ 51'21			-9848 Aug 30 j 13:46	15° $\mathcal{B}$	
opposition	-9856 Dec 24 j 01:27	24° $\Upsilon$ 30'21	16°43'09	retrograde	-9848 Oct 28 j 11:04	15° $\mathcal{B}$ 59'42	
min. Earth dist.	-9856 Dec 26 j 12:30	24° $\Upsilon$ 26'19	29.90018 AU		-9848 Dec 30 j 16:08	15° $\mathcal{R}\mathcal{B}$	
direct	-9855 Mar 14 j 16:51	23° $\Upsilon$ 06'04		opposition	-9847 Jan 13 j 21:45	14° $\mathcal{B}$ 36'30	17°42'43
max. Earth dist.	-9855 Jun 27 j 07:45	25° $\Upsilon$ 37'55	31.74119 AU	min. Earth dist.	-9847 Jan 15 j 09:51	14° $\mathcal{B}$ 33'58	28.93956 AU
				direct	-9847 Apr 03 j 22:43	13° $\mathcal{B}$ 10'49	
conjunction	-9855 Jun 29 j 20:49	25° $\Upsilon$ 43'51	15°47'34		-9847 Jun 26 j 18:28	15° $\mathcal{B}$	
minimum elong	-9855 Jun 29 j 20:28	25° $\Upsilon$ 43'49	15°47'46	max. Earth dist.	-9847 Jul 18 j 07:17	15° $\mathcal{B}$ 51'28	30.81253 AU
retrograde	-9855 Oct 10 j 16:08	28° $\Upsilon$ 17'26					
opposition	-9855 Dec 26 j 19:37	26° $\Upsilon$ 56'04	16°56'49	conjunction	-9847 Jul 19 j 18:09	15° $\mathcal{B}$ 55'01	16°34'27
min. Earth dist.	-9855 Dec 29 j 05:28	26° $\Upsilon$ 52'06	29.74613 AU	minimum elong	-9847 Jul 19 j 18:05	15° $\mathcal{B}$ 55'00	16°34'49
direct	-9854 Mar 17 j 08:24	25° $\Upsilon$ 31'29		retrograde	-9847 Oct 31 j 10:06	18° $\mathcal{B}$ 36'03	

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 5

Attention, astronomical year style is used: The year -9846 in astronomical counting style is the year 9847 BCE in historical counting style.

opposition	-9846 Jan 16 j 20:48	17° <b>8</b> 12'42	17°41'26	opposition	-9838 Feb 07 j 20:04	8° <b>II</b> 10'36	16°17'18
min. Earth dist.	-9846 Jan 18 j 04:42	17° <b>8</b> 10'29	28.86614 AU	min. Earth dist.	-9838 Feb 07 j 23:27	8° <b>II</b> 10'22	28.65099 AU
direct	-9846 Apr 06 j 19:16	15° <b>8</b> 47'00		direct	-9838 Apr 28 j 11:46	6° <b>II</b> 45'24	
max. Earth dist.	-9846 Jul 21 j 06:42	18° <b>8</b> 28'23	30.74448 AU				
				conjunction	-9838 Aug 12 j 00:56	9° <b>II</b> 28'18	15°05'13
conjunction	-9846 Jul 22 j 13:39	18° <b>8</b> 31'33	16°32'07	minimum elong	-9838 Aug 12 j 01:13	9° <b>II</b> 28'20	15°05'44
minimum elong	-9846 Jul 22 j 13:38	18° <b>8</b> 31'33	16°32'31	max. Earth dist.	-9838 Aug 11 j 23:33	9° <b>II</b> 28'10	30.58827 AU
retrograde	-9846 Nov 03 j 06:16	21° <b>8</b> 13'08		retrograde	-9838 Nov 24 j 11:00	12° <b>II</b> 10'04	
opposition	-9845 Jan 19 j 20:29	19° <b>8</b> 49'39	17°38'06	opposition	-9837 Feb 10 j 19:30	10° <b>II</b> 46'11	15°57'45
min. Earth dist.	-9845 Jan 21 j 02:06	19° <b>8</b> 47'35	28.80270 AU	min. Earth dist.	-9837 Feb 10 j 18:23	10° <b>II</b> 46'15	28.67613 AU
direct	-9845 Apr 09 j 16:33	18° <b>8</b> 23'56		direct	-9837 May 01 j 09:37	9° <b>II</b> 21'11	
max. Earth dist.	-9845 Jul 24 j 05:29	21° <b>8</b> 05'52	30.68682 AU	evening set	-9837 Aug 12 j 04:15	11° <b>II</b> 57'00	
conjunction	-9845 Jul 25 j 09:10	21° <b>8</b> 08'43	16°27'53	conjunction	-9837 Aug 14 j 19:27	12° <b>II</b> 03'26	14°46'06
minimum elong	-9845 Jul 25 j 09:10	21° <b>8</b> 08'43	16°28'17	minimum elong	-9837 Aug 14 j 19:45	12° <b>II</b> 03'28	14°46'38
retrograde	-9845 Nov 06 j 04:38	23° <b>8</b> 50'42		max. Earth dist.	-9837 Aug 14 j 23:07	12° <b>II</b> 03'48	30.62260 AU
opposition	-9844 Jan 22 j 20:14	22° <b>8</b> 27'06	17°32'43	morning rise	-9837 Aug 17 j 11:14	12° <b>II</b> 09'55	
min. Earth dist.	-9844 Jan 23 j 21:28	22° <b>8</b> 25'20	28.74916 AU	retrograde	-9837 Nov 27 j 05:51	14° <b>II</b> 44'47	
direct	-9844 Apr 11 j 15:57	21° <b>8</b> 01'23		opposition	-9836 Feb 13 j 18:41	13° <b>II</b> 21'01	15°36'22
max. Earth dist.	-9844 Jul 26 j 04:41	23° <b>8</b> 43'46	30.63927 AU	min. Earth dist.	-9836 Feb 13 j 14:11	13° <b>II</b> 21'20	28.71335 AU
				direct	-9836 May 03 j 08:25	11° <b>II</b> 56'18	
conjunction	-9844 Jul 27 j 04:58	23° <b>8</b> 46'16	16°21'45	evening set	-9836 Aug 12 j 09:06	14° <b>II</b> 27'36	
minimum elong	-9844 Jul 27 j 05:02	23° <b>8</b> 46'16	16°22'10				
retrograde	-9844 Nov 08 j 01:52	26° <b>8</b> 28'33		conjunction	-9836 Aug 16 j 13:31	14° <b>II</b> 37'48	14°25'20
opposition	-9843 Jan 24 j 20:11	25° <b>8</b> 04'51	17°25'16	minimum elong	-9836 Aug 16 j 13:51	14° <b>II</b> 37'50	14°25'52
min. Earth dist.	-9843 Jan 25 j 19:07	25° <b>8</b> 03'14	28.70557 AU	max. Earth dist.	-9836 Aug 16 j 20:06	14° <b>II</b> 38'28	30.66912 AU
direct	-9843 Apr 14 j 13:06	23° <b>8</b> 39'09		morning rise	-9836 Aug 20 j 18:36	14° <b>II</b> 48'03	
max. Earth dist.	-9843 Jul 29 j 04:19	26° <b>8</b> 21'53	30.60223 AU	retrograde	-9836 Nov 29 j 03:05	17° <b>II</b> 18'39	
				opposition	-9835 Feb 15 j 17:16	15° <b>II</b> 55'03	15°13'14
conjunction	-9843 Jul 30 j 00:46	26° <b>8</b> 23'59	16°13'42	min. Earth dist.	-9835 Feb 15 j 08:08	15° <b>II</b> 55'40	28.76236 AU
minimum elong	-9843 Jul 30 j 00:51	26° <b>8</b> 23'59	16°14'08	direct	-9835 May 06 j 05:52	14° <b>II</b> 30'37	
retrograde	-9843 Nov 11 j 00:00	29° <b>8</b> 06'27		evening set	-9835 Aug 13 j 22:57	16° <b>II</b> 58'20	
opposition	-9842 Jan 27 j 20:16	27° <b>8</b> 42'38	17°15'45				
min. Earth dist.	-9842 Jan 28 j 14:42	27° <b>8</b> 41'21	28.67217 AU	conjunction	-9835 Aug 19 j 07:21	17° <b>II</b> 11'17	14°02'59
direct	-9842 Apr 17 j 13:48	26° <b>8</b> 16'59		minimum elong	-9835 Aug 19 j 07:41	17° <b>II</b> 11'20	14°03'32
				max. Earth dist.	-9835 Aug 19 j 18:31	17° <b>II</b> 12'25	30.72719 AU
conjunction	-9842 Aug 01 j 20:19	29° <b>8</b> 01'39	16°03'45	morning rise	-9835 Aug 24 j 16:21	17° <b>II</b> 24'19	
minimum elong	-9842 Aug 01 j 20:28	29° <b>8</b> 01'39	16°04'12	retrograde	-9835 Dec 01 j 20:55	19° <b>II</b> 51'35	
max. Earth dist.	-9842 Aug 01 j 03:03	28° <b>8</b> 59'52	30.57584 AU	opposition	-9834 Feb 18 j 15:48	18° <b>II</b> 28'09	14°48'26
	-9842 Aug 26 j 01:29	0° <b>II</b>		min. Earth dist.	-9834 Feb 18 j 04:00	18° <b>II</b> 28'58	28.82247 AU
retrograde	-9842 Nov 13 j 22:16	1° <b>II</b> 44'11		direct	-9834 May 09 j 03:03	17° <b>II</b> 04'03	
opposition	-9841 Jan 30 j 20:30	0° <b>II</b> 20'16	17°04'10	evening set	-9834 Aug 15 j 16:44	19° <b>II</b> 28'32	
min. Earth dist.	-9841 Jan 31 j 11:59	0° <b>II</b> 19'12	28.64951 AU				
	-9841 Feb 12 j 01:19	30° <b>8</b> 8		conjunction	-9834 Aug 22 j 00:34	19° <b>II</b> 43'47	13°39'09
direct	-9841 Apr 20 j 12:33	28° <b>8</b> 54'40		minimum elong	-9834 Aug 22 j 00:57	19° <b>II</b> 43'50	13°39'42
	-9841 Jun 22 j 08:46	0° <b>II</b>		max. Earth dist.	-9834 Aug 22 j 14:51	19° <b>II</b> 45'14	30.79628 AU
				morning rise	-9834 Aug 28 j 09:07	19° <b>II</b> 59'07	
conjunction	-9841 Aug 04 j 15:53	1° <b>II</b> 39'03	15°51'54	retrograde	-9834 Dec 04 j 15:39	22° <b>II</b> 23'26	
minimum elong	-9841 Aug 04 j 16:03	1° <b>II</b> 39'04	15°52'22	opposition	-9833 Feb 21 j 13:42	21° <b>II</b> 00'11	14°22'06
max. Earth dist.	-9841 Aug 04 j 03:13	1° <b>II</b> 37'45	30.56078 AU	min. Earth dist.	-9833 Feb 20 j 21:18	21° <b>II</b> 01'19	28.89311 AU
retrograde	-9841 Nov 16 j 19:02	4° <b>II</b> 21'31		direct	-9833 May 12 j 00:27	19° <b>II</b> 36'24	
opposition	-9840 Feb 02 j 20:24	2° <b>II</b> 57'34	16°50'33	evening set	-9833 Aug 17 j 12:47	21° <b>II</b> 57'54	
min. Earth dist.	-9840 Feb 03 j 07:33	2° <b>II</b> 56'47	28.63802 AU				
direct	-9840 Apr 22 j 13:00	1° <b>II</b> 32'03		conjunction	-9833 Aug 24 j 17:32	22° <b>II</b> 15'10	13°13'57
				minimum elong	-9833 Aug 24 j 17:54	22° <b>II</b> 15'12	13°14'31
conjunction	-9840 Aug 06 j 11:07	4° <b>II</b> 16'02	15°38'10	max. Earth dist.	-9833 Aug 25 j 11:35	22° <b>II</b> 16'58	30.87552 AU
minimum elong	-9840 Aug 06 j 11:21	4° <b>II</b> 16'03	15°38'40	morning rise	-9833 Aug 31 j 23:00	22° <b>II</b> 32'30	
max. Earth dist.	-9840 Aug 06 j 01:32	4° <b>II</b> 15'03	30.55749 AU	retrograde	-9833 Dec 07 j 09:03	24° <b>II</b> 54'03	
retrograde	-9840 Nov 18 j 17:03	6° <b>II</b> 58'22		opposition	-9832 Feb 24 j 11:05	23° <b>II</b> 31'01	13°54'21
opposition	-9839 Feb 04 j 20:18	5° <b>II</b> 34'23	16°34'55	min. Earth dist.	-9832 Feb 23 j 16:23	23° <b>II</b> 32'17	28.97363 AU
min. Earth dist.	-9839 Feb 05 j 03:45	5° <b>II</b> 33'51	28.63844 AU	direct	-9832 May 13 j 19:20	22° <b>II</b> 07'34	
direct	-9839 Apr 25 j 11:13	4° <b>II</b> 08'59		evening set	-9832 Aug 18 j 10:31	24° <b>II</b> 26'13	
conjunction	-9839 Aug 09 j 06:12	6° <b>II</b> 52'29	15°22'36	conjunction	-9832 Aug 26 j 10:00	24° <b>II</b> 45'14	12°47'28
minimum elong	-9839 Aug 09 j 06:26	6° <b>II</b> 52'30	15°23'06	minimum elong	-9832 Aug 26 j 10:23	24° <b>II</b> 45'17	12°48'01
max. Earth dist.	-9839 Aug 09 j 01:44	6° <b>II</b> 52'01	30.56655 AU	max. Earth dist.	-9832 Aug 27 j 07:12	24° <b>II</b> 47'21	30.96455 AU
retrograde	-9839 Nov 21 j 13:38	9° <b>II</b> 34'34		morning rise	-9832 Sep 03 j 10:14	25° <b>II</b> 04'21	

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 6

Attention, astronomical year style is used: The year -9832 in astronomical counting style is the year 9833 BCE in historical counting style.

retrograde	-9832 Dec 09 j 02:34	27° $\Pi$ 23'18		evening set	-9825 Aug 31 j 10:23	11° $\ominus$ 01'13	
min. Earth dist.	-9831 Feb 25 j 08:53	26° $\Pi$ 02'01	29.06347 AU				
opposition	-9831 Feb 26 j 07:51	26° $\Pi$ 00'28	13°25'15	conjunction	-9825 Sep 12 j 10:24	11° $\ominus$ 28'25	9°14'07
direct	-9831 May 16 j 16:28	24° $\Pi$ 37'20		minimum elong	-9825 Sep 12 j 10:45	11° $\ominus$ 28'27	9°14'41
evening set	-9831 Aug 20 j 09:00	26° $\Pi$ 53'15		max. Earth dist.	-9825 Sep 14 j 05:27	11° $\ominus$ 32'30	31.84633 AU
				morning rise	-9825 Sep 24 j 11:54	11° $\ominus$ 55'44	
conjunction	-9831 Aug 29 j 01:43	27° $\Pi$ 13'51	12°19'48	retrograde	-9825 Dec 26 j 09:12	13° $\ominus$ 59'00	
minimum elong	-9831 Aug 29 j 02:06	27° $\Pi$ 13'54	12°20'22	min. Earth dist.	-9824 Mar 13 j 15:35	12° $\ominus$ 40'46	29.95285 AU
max. Earth dist.	-9831 Aug 30 j 01:51	27° $\Pi$ 16'15	31.06269 AU	opposition	-9824 Mar 15 j 13:11	12° $\ominus$ 37'45	9°33'08
morning rise	-9831 Sep 06 j 19:20	27° $\Pi$ 34'34		direct	-9824 Jun 02 j 23:25	11° $\ominus$ 17'05	
retrograde	-9831 Dec 11 j 19:18	29° $\Pi$ 51'02		evening set	-9824 Sep 01 j 11:20	13° $\ominus$ 16'24	
min. Earth dist.	-9830 Feb 28 j 02:43	28° $\Pi$ 30'06	29.16246 AU				
opposition	-9830 Mar 01 j 04:13	28° $\Pi$ 28'23	12°54'57	conjunction	-9824 Sep 13 j 21:25	13° $\ominus$ 44'18	8°40'44
direct	-9830 May 19 j 11:39	27° $\Pi$ 05'35		minimum elong	-9824 Sep 13 j 21:46	13° $\ominus$ 44'20	8°41'18
evening set	-9830 Aug 22 j 08:26	29° $\Pi$ 18'51		max. Earth dist.	-9824 Sep 15 j 20:15	13° $\ominus$ 48'43	32.01009 AU
				morning rise	-9824 Sep 26 j 09:01	14° $\ominus$ 12'21	
conjunction	-9830 Aug 31 j 17:02	29° $\Pi$ 40'53	11°51'02	retrograde	-9824 Dec 27 j 20:04	16° $\ominus$ 13'44	
minimum elong	-9830 Aug 31 j 17:26	29° $\Pi$ 40'55	11°51'37	min. Earth dist.	-9823 Mar 16 j 04:32	14° $\ominus$ 55'55	30.11785 AU
max. Earth dist.	-9830 Sep 01 j 20:51	29° $\Pi$ 43'37	31.17000 AU	opposition	-9823 Mar 18 j 04:02	14° $\ominus$ 52'48	8°57'06
	-9830 Sep 08 j 19:39	0° $\ominus$		direct	-9823 Jun 05 j 14:06	13° $\ominus$ 32'34	
morning rise	-9830 Sep 10 j 02:27	0° $\ominus$ 03'00		evening set	-9823 Sep 03 j 12:21	15° $\ominus$ 29'53	
retrograde	-9830 Dec 14 j 11:04	2° $\ominus$ 17'04					
opposition	-9829 Mar 03 j 23:38	0° $\ominus$ 54'37	12°23'32	conjunction	-9823 Sep 16 j 07:37	15° $\ominus$ 58'24	8°06'56
min. Earth dist.	-9829 Mar 02 j 18:32	0° $\ominus$ 56'34	29.27042 AU	minimum elong	-9823 Sep 16 j 07:56	15° $\ominus$ 58'26	8°07'31
	-9829 Apr 09 j 18:56	30° $\kappa$ $\Pi$		max. Earth dist.	-9823 Sep 18 j 08:51	16° $\ominus$ 03'00	32.18252 AU
direct	-9829 May 22 j 07:36	29° $\Pi$ 32'08		morning rise	-9823 Sep 29 j 04:29	16° $\ominus$ 27'05	
	-9829 Jul 02 j 04:02	0° $\ominus$		retrograde	-9823 Dec 30 j 06:15	18° $\ominus$ 26'39	
evening set	-9829 Aug 24 j 08:13	1° $\ominus$ 42'50		min. Earth dist.	-9822 Mar 18 j 14:42	17° $\ominus$ 09'25	30.29120 AU
				opposition	-9822 Mar 20 j 18:00	17° $\ominus$ 06'05	8°20'41
conjunction	-9829 Sep 03 j 07:27	2° $\ominus$ 06'09	11°21'17	direct	-9822 Jun 08 j 04:24	15° $\ominus$ 46'17	
minimum elong	-9829 Sep 03 j 07:51	2° $\ominus$ 06'11	11°21'53	evening set	-9822 Sep 05 j 13:37	17° $\ominus$ 41'40	
max. Earth dist.	-9829 Sep 04 j 13:43	2° $\ominus$ 09'06	31.28627 AU				
morning rise	-9829 Sep 13 j 07:49	2° $\ominus$ 29'33		conjunction	-9822 Sep 18 j 17:15	18° $\ominus$ 10'44	7°32'47
retrograde	-9829 Dec 17 j 03:02	4° $\ominus$ 41'17		minimum elong	-9822 Sep 18 j 17:33	18° $\ominus$ 10'45	7°33'21
min. Earth dist.	-9828 Mar 04 j 10:15	3° $\ominus$ 21'11	29.38763 AU	max. Earth dist.	-9822 Sep 20 j 21:11	18° $\ominus$ 15'33	32.36260 AU
opposition	-9828 Mar 05 j 18:24	3° $\ominus$ 19'02	11°51'05	morning rise	-9822 Oct 01 j 22:45	18° $\ominus$ 39'57	
direct	-9828 May 24 j 01:14	1° $\ominus$ 56'53		retrograde	-9821 Jan 01 j 15:37	20° $\ominus$ 37'48	
evening set	-9828 Aug 25 j 08:21	4° $\ominus$ 05'07		min. Earth dist.	-9821 Mar 21 j 02:15	19° $\ominus$ 21'01	30.47215 AU
				opposition	-9821 Mar 23 j 07:12	19° $\ominus$ 17'35	7°43'58
conjunction	-9828 Sep 04 j 21:19	4° $\ominus$ 29'34	10°50'38	direct	-9821 Jun 10 j 16:06	17° $\ominus$ 58'14	
minimum elong	-9828 Sep 04 j 21:42	4° $\ominus$ 29'36	10°51'12	evening set	-9821 Sep 07 j 14:54	19° $\ominus$ 51'47	
max. Earth dist.	-9828 Sep 06 j 07:45	4° $\ominus$ 32'54	31.41180 AU				
morning rise	-9828 Sep 15 j 11:14	4° $\ominus$ 54'08		conjunction	-9821 Sep 21 j 02:19	20° $\ominus$ 21'18	6°58'22
retrograde	-9828 Dec 18 j 17:27	7° $\ominus$ 03'36		minimum elong	-9821 Sep 21 j 02:36	20° $\ominus$ 21'20	6°58'57
min. Earth dist.	-9827 Mar 07 j 01:02	5° $\ominus$ 43'55	29.51417 AU	max. Earth dist.	-9821 Sep 23 j 08:49	20° $\ominus$ 26'19	32.54968 AU
opposition	-9827 Mar 08 j 12:15	5° $\ominus$ 41'34	11°17'44	morning rise	-9821 Oct 04 j 15:29	20° $\ominus$ 50'59	
direct	-9827 May 26 j 21:18	4° $\ominus$ 19'45		retrograde	-9820 Jan 04 j 00:34	22° $\ominus$ 47'11	
evening set	-9827 Aug 27 j 08:53	6° $\ominus$ 25'36		min. Earth dist.	-9820 Mar 22 j 11:50	21° $\ominus$ 30'54	30.65963 AU
				opposition	-9820 Mar 24 j 19:29	21° $\ominus$ 27'19	7°07'02
conjunction	-9827 Sep 07 j 10:19	6° $\ominus$ 51'05	10°19'09	direct	-9820 Jun 12 j 04:19	20° $\ominus$ 08'24	
minimum elong	-9827 Sep 07 j 10:41	6° $\ominus$ 51'07	10°19'44	evening set	-9820 Sep 08 j 16:22	22° $\ominus$ 00'13	
max. Earth dist.	-9827 Sep 08 j 22:58	6° $\ominus$ 54'36	31.54688 AU				
morning rise	-9827 Sep 18 j 13:05	7° $\ominus$ 16'40		conjunction	-9820 Sep 22 j 10:34	22° $\ominus$ 30'06	6°23'48
retrograde	-9827 Dec 21 j 08:35	9° $\ominus$ 24'00		minimum elong	-9820 Sep 22 j 10:50	22° $\ominus$ 30'07	6°24'21
min. Earth dist.	-9826 Mar 09 j 14:18	8° $\ominus$ 04'47	29.65065 AU	max. Earth dist.	-9820 Sep 24 j 18:37	22° $\ominus$ 35'12	32.74262 AU
opposition	-9826 Mar 11 j 05:27	8° $\ominus$ 02'11	10°43'33	morning rise	-9820 Oct 06 j 06:56	23° $\ominus$ 00'10	
direct	-9826 May 29 j 14:12	6° $\ominus$ 40'43		retrograde	-9819 Jan 05 j 10:06	24° $\ominus$ 54'47	
evening set	-9826 Aug 29 j 09:24	8° $\ominus$ 44'18		min. Earth dist.	-9819 Mar 24 j 21:31	23° $\ominus$ 38'57	30.85303 AU
				opposition	-9819 Mar 27 j 07:06	23° $\ominus$ 35'16	6°30'00
conjunction	-9826 Sep 09 j 22:42	9° $\ominus$ 10'41	9°46'57	direct	-9819 Jun 14 j 14:49	22° $\ominus$ 16'46	
minimum elong	-9826 Sep 09 j 23:05	9° $\ominus$ 10'43	9°47'31	evening set	-9819 Sep 10 j 17:44	24° $\ominus$ 06'55	
max. Earth dist.	-9826 Sep 11 j 15:38	9° $\ominus$ 14'36	31.69176 AU				
morning rise	-9826 Sep 21 j 13:12	9° $\ominus$ 37'12		conjunction	-9819 Sep 24 j 18:21	24° $\ominus$ 37'06	5°49'08
retrograde	-9826 Dec 23 j 20:06	11° $\ominus$ 42'27		minimum elong	-9819 Sep 24 j 18:35	24° $\ominus$ 37'08	5°49'41
min. Earth dist.	-9825 Mar 12 j 04:18	10° $\ominus$ 23'39	29.79691 AU	max. Earth dist.	-9819 Sep 27 j 05:16	24° $\ominus$ 42'26	32.94099 AU
opposition	-9825 Mar 13 j 21:52	10° $\ominus$ 20'54	10°08'39	morning rise	-9819 Oct 08 j 20:56	25° $\ominus$ 07'28	
direct	-9825 Jun 01 j 07:17	8° $\ominus$ 59'50		retrograde	-9818 Jan 07 j 18:13	27° $\ominus$ 00'34	

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 7

Attention, astronomical year style is used: The year -9818 in astronomical counting style is the year 9819 BCE in historical counting style.

min. Earth dist.	-9818 Mar 27 j 06:36	25° $\overline{045}$ '10	31.05161 AU	conjunction	-9812 Oct 08 j 04:11	8° $\Omega$ 33'57	1°49'01
opposition	-9818 Mar 29 j 17:54	25° $\overline{041}$ '23	5°52'55	minimum elong	-9812 Oct 08 j 04:15	8° $\Omega$ 33'58	1°49'30
direct	-9818 Jun 17 j 02:42	24° $\overline{023}$ '18		max. Earth dist.	-9812 Oct 11 j 04:04	8° $\Omega$ 40'04	34.46529 AU
evening set	-9818 Sep 12 j 19:10	26° $\overline{011}$ '51		morning rise	-9812 Oct 23 j 09:57	9° $\Omega$ 04'47	
				retrograde	-9811 Jan 21 j 01:22	10° $\Omega$ 48'58	
conjunction	-9818 Sep 27 j 01:15	26° $\overline{042}$ '16	5°14'26	min. Earth dist.	-9811 Apr 09 j 21:59	9° $\Omega$ 36'30	32.58421 AU
minimum elong	-9818 Sep 27 j 01:29	26° $\overline{042}$ '17	5°14'58	opposition	-9811 Apr 12 j 22:17	9° $\Omega$ 32'04	1°37'42
max. Earth dist.	-9818 Sep 29 j 13:00	26° $\overline{047}$ '37	33.14414 AU	direct	-9811 Jul 01 j 10:05	8° $\Omega$ 16'44	
morning rise	-9818 Oct 11 j 09:44	27° $\overline{012}$ '53		evening set	-9811 Sep 25 j 01:45	9° $\Omega$ 56'00	
retrograde	-9817 Jan 10 j 03:06	29° $\overline{004}$ '30					
min. Earth dist.	-9817 Mar 29 j 14:05	27° $\overline{049}$ '33	31.25514 AU	conjunction	-9811 Oct 10 j 06:17	10° $\Omega$ 26'29	1°15'43
opposition	-9817 Apr 01 j 03:53	27° $\overline{045}$ '38	5°15'52	minimum elong	-9811 Oct 10 j 06:20	10° $\Omega$ 26'29	1°16'13
direct	-9817 Jun 19 j 11:57	26° $\overline{027}$ '57		max. Earth dist.	-9811 Oct 13 j 07:01	10° $\Omega$ 32'36	34.70316 AU
evening set	-9817 Sep 14 j 20:28	28° $\overline{014}$ '58		morning rise	-9811 Oct 25 j 13:52	10° $\Omega$ 57'11	
				retrograde	-9810 Jan 23 j 05:14	12° $\Omega$ 40'22	
conjunction	-9817 Sep 29 j 07:39	28° $\overline{045}$ '33	4°39'47	min. Earth dist.	-9810 Apr 12 j 00:36	11° $\Omega$ 28'21	32.82385 AU
minimum elong	-9817 Sep 29 j 07:50	28° $\overline{045}$ '34	4°40'20	opposition	-9810 Apr 15 j 02:47	11° $\Omega$ 23'50	1°02'31
max. Earth dist.	-9817 Oct 01 j 22:11	28° $\overline{051}$ '06	33.35184 AU	direct	-9810 Jul 03 j 13:13	10° $\Omega$ 08'55	
morning rise	-9817 Oct 13 j 21:04	29° $\overline{016}$ '20		evening set	-9810 Sep 27 j 02:11	11° $\Omega$ 47'09	
	-9817 Nov 05 j 04:03	0° $\Omega$					
retrograde	-9816 Jan 12 j 08:09	1° $\Omega$ 06'33		conjunction	-9810 Oct 12 j 07:57	12° $\Omega$ 17'28	0°42'47
	-9816 Mar 25 j 13:52	30° $\overline{008}$		minimum elong	-9810 Oct 12 j 07:59	12° $\Omega$ 17'28	0°43'15
min. Earth dist.	-9816 Mar 30 j 22:16	29° $\overline{051}$ '57	31.46336 AU	max. Earth dist.	-9810 Oct 15 j 11:16	12° $\Omega$ 23'45	34.94512 AU
opposition	-9816 Apr 02 j 12:53	29° $\overline{048}$ '00	4°38'55	morning rise	-9810 Oct 27 j 16:33	12° $\Omega$ 48'00	
direct	-9816 Jun 20 j 22:27	28° $\overline{030}$ '42		retrograde	-9809 Jan 25 j 07:28	14° $\Omega$ 30'14	
	-9816 Sep 07 j 21:26	0° $\Omega$		min. Earth dist.	-9809 Apr 14 j 03:48	13° $\Omega$ 18'37	33.06722 AU
evening set	-9816 Sep 15 j 21:41	0° $\Omega$ 16'14		opposition	-9809 Apr 17 j 06:34	13° $\Omega$ 14'05	0°27'46
				direct	-9809 Jul 05 j 17:39	11° $\Omega$ 59'35	
conjunction	-9816 Sep 30 j 13:08	0° $\Omega$ 46'55	4°05'13	evening set	-9809 Sep 29 j 02:46	13° $\Omega$ 36'51	
minimum elong	-9816 Sep 30 j 13:18	0° $\Omega$ 46'56	4°05'45				
max. Earth dist.	-9816 Oct 03 j 04:36	0° $\Omega$ 52'31	33.56424 AU	conjunction	-9809 Oct 14 j 09:02	14° $\Omega$ 06'57	0°10'18
morning rise	-9816 Oct 15 j 07:04	1° $\Omega$ 17'49		minimum elong	-9809 Oct 14 j 09:02	14° $\Omega$ 06'57	0°10'45
retrograde	-9815 Jan 13 j 14:16	3° $\Omega$ 06'40		behind sun begin	-9809 Oct 14 j 04:06	14° $\Omega$ 06'34	
min. Earth dist.	-9815 Apr 02 j 03:38	1° $\Omega$ 52'33	31.67666 AU	behind sun end	-9809 Oct 14 j 13:58	14° $\Omega$ 07'21	
opposition	-9815 Apr 04 j 21:07	1° $\Omega$ 48'26	4°02'09	max. Earth dist.	-9809 Oct 17 j 12:29	14° $\Omega$ 13'12	35.19027 AU
direct	-9815 Jun 23 j 08:27	0° $\Omega$ 31'31		morning rise	-9809 Oct 29 j 18:21	14° $\Omega$ 37'18	
evening set	-9815 Sep 17 j 22:37	2° $\Omega$ 15'38			-9809 Nov 10 j 19:58	15° $\Omega$	
				retrograde	-9808 Jan 27 j 10:51	16° $\Omega$ 18'38	
conjunction	-9815 Oct 02 j 17:48	2° $\Omega$ 46'23	3°30'49	desc. node	-9808 Feb 08 j 10:17	16° $\Omega$ 16'36	
minimum elong	-9815 Oct 02 j 17:57	2° $\Omega$ 46'24	3°31'21	min. Earth dist.	-9808 Apr 15 j 04:42	15° $\Omega$ 07'28	33.31363 AU
max. Earth dist.	-9815 Oct 05 j 11:59	2° $\Omega$ 52'10	33.78151 AU	opposition	-9808 Apr 18 j 09:29	15° $\Omega$ 02'51	-0°06'30
morning rise	-9815 Oct 17 j 15:35	3° $\Omega$ 17'21			-9808 Apr 20 j 08:37	15° $\overline{000}$	
retrograde	-9814 Jan 15 j 18:19	5° $\Omega$ 04'55		direct	-9808 Jul 06 j 20:09	13° $\Omega$ 48'45	
min. Earth dist.	-9814 Apr 04 j 10:20	3° $\Omega$ 51'08	31.89533 AU		-9808 Sep 16 j 14:36	15° $\Omega$	
opposition	-9814 Apr 07 j 04:44	3° $\Omega$ 47'00	3°25'35	evening set	-9808 Sep 30 j 03:13	15° $\Omega$ 25'07	
direct	-9814 Jun 25 j 16:50	2° $\Omega$ 30'28					
evening set	-9814 Sep 19 j 23:34	4° $\Omega$ 13'15		conjunction	-9808 Oct 15 j 09:38	15° $\Omega$ 54'59	-0°21'51
				minimum elong	-9808 Oct 15 j 09:37	15° $\Omega$ 54'59	0°21'25
conjunction	-9814 Oct 04 j 21:59	4° $\Omega$ 44'00	2°56'37	max. Earth dist.	-9808 Oct 18 j 14:58	16° $\Omega$ 01'20	35.43775 AU
minimum elong	-9814 Oct 04 j 22:06	4° $\Omega$ 44'00	2°57'07	morning rise	-9808 Oct 30 j 19:05	16° $\Omega$ 25'05	
max. Earth dist.	-9814 Oct 07 j 17:50	4° $\Omega$ 49'52	34.00417 AU	retrograde	-9807 Jan 28 j 10:11	18° $\Omega$ 05'35	
morning rise	-9814 Oct 19 j 22:57	5° $\Omega$ 14'58		min. Earth dist.	-9807 Apr 17 j 07:27	16° $\Omega$ 54'45	33.56221 AU
retrograde	-9813 Jan 17 j 20:40	7° $\Omega$ 01'19		opposition	-9807 Apr 20 j 12:02	16° $\Omega$ 50'09	-0°40'15
min. Earth dist.	-9813 Apr 06 j 14:02	5° $\Omega$ 48'01	32.11955 AU	direct	-9807 Jul 08 j 23:29	15° $\Omega$ 36'28	
opposition	-9813 Apr 09 j 11:13	5° $\Omega$ 43'43	2°49'17	evening set	-9807 Oct 02 j 03:27	17° $\Omega$ 11'57	
direct	-9813 Jun 28 j 00:29	4° $\Omega$ 27'35					
evening set	-9813 Sep 22 j 00:28	6° $\Omega$ 09'07		conjunction	-9807 Oct 17 j 09:38	17° $\Omega$ 41'33	-0°53'27
				minimum elong	-9807 Oct 17 j 09:36	17° $\Omega$ 41'33	0°53'01
conjunction	-9813 Oct 07 j 01:23	6° $\Omega$ 39'49	2°22'40	max. Earth dist.	-9807 Oct 20 j 15:25	17° $\Omega$ 47'53	35.68694 AU
minimum elong	-9813 Oct 07 j 01:29	6° $\Omega$ 39'49	2°23'11	morning rise	-9807 Nov 01 j 18:47	18° $\Omega$ 11'23	
max. Earth dist.	-9813 Oct 09 j 22:55	6° $\Omega$ 45'47	34.23210 AU	retrograde	-9806 Jan 30 j 09:06	19° $\Omega$ 51'05	
morning rise	-9813 Oct 22 j 05:11	7° $\Omega$ 10'45		min. Earth dist.	-9806 Apr 19 j 07:35	18° $\Omega$ 40'40	33.81222 AU
retrograde	-9812 Jan 19 j 23:24	8° $\Omega$ 55'59		opposition	-9806 Apr 22 j 13:50	18° $\Omega$ 35'59	-1°13'28
min. Earth dist.	-9812 Apr 07 j 18:42	7° $\Omega$ 43'04	32.34935 AU	direct	-9806 Jul 11 j 03:28	17° $\Omega$ 22'40	
opposition	-9812 Apr 10 j 17:11	7° $\Omega$ 38'43	2°13'18	evening set	-9806 Oct 04 j 03:50	18° $\Omega$ 57'20	
direct	-9812 Jun 29 j 05:13	6° $\Omega$ 22'59					
evening set	-9812 Sep 23 j 01:03	8° $\Omega$ 03'20		conjunction	-9806 Oct 19 j 09:11	19° $\Omega$ 26'38	-1°24'35

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 8

Attention, astronomical year style is used: The year -9806 in astronomical counting style is the year 9807 BCE in historical counting style.

minimum elong	-9806 Oct 19 j 09:08	19°Ω26'38	1°24'10			-9799 May 15 j 23:02	30°κδ	
max. Earth dist.	-9806 Oct 22 j 15:42	19°Ω32'59	35.93700 AU	direct		-9799 Jul 23 j 01:30	29°Ω05'00	
morning rise	-9806 Nov 03 j 17:46	19°Ω56'11				-9799 Sep 25 j 06:06	0°η	
retrograde	-9805 Feb 01 j 07:45	21°Ω35'07		evening set		-9799 Oct 16 j 00:44	0°η35'10	
min. Earth dist.	-9805 Apr 21 j 08:45	20°Ω25'00	34.06323 AU					
opposition	-9805 Apr 24 j 15:00	20°Ω20'21	-1°46'08	conjunction		-9799 Oct 30 j 14:40	1°η01'45	-4°47'26
direct	-9805 Jul 13 j 04:44	19°Ω07'23		minimum elong		-9799 Oct 30 j 14:30	1°η01'44	4°47'05
evening set	-9805 Oct 06 j 03:53	20°Ω41'16		max. Earth dist.		-9799 Nov 03 j 02:31	1°η08'10	37.71689 AU
				morning rise		-9799 Nov 14 j 07:42	1°η28'33	
conjunction	-9805 Oct 21 j 08:18	21°Ω10'14	-1°55'13	retrograde		-9798 Feb 12 j 10:17	3°η03'22	
minimum elong	-9805 Oct 21 j 08:14	21°Ω10'14	1°54'47	min. Earth dist.		-9798 May 02 j 18:39	1°η55'32	35.85491 AU
max. Earth dist.	-9805 Oct 24 j 15:51	21°Ω16'37	36.18782 AU	opposition		-9798 May 06 j 05:38	1°η50'46	-5°17'54
morning rise	-9805 Nov 05 j 15:38	21°Ω39'27		direct		-9798 Jul 24 j 22:16	0°η40'10	
retrograde	-9804 Feb 03 j 04:57	23°Ω17'40		evening set		-9798 Oct 17 j 23:42	2°η09'54	
min. Earth dist.	-9804 Apr 22 j 08:26	22°Ω07'52	34.31486 AU					
opposition	-9804 Apr 25 j 15:26	22°Ω03'12	-2°18'13	conjunction		-9798 Nov 01 j 10:16	2°η36'01	-5°14'06
direct	-9804 Jul 14 j 06:36	20°Ω50'35		minimum elong		-9798 Nov 01 j 10:06	2°η36'00	5°13'46
evening set	-9804 Oct 07 j 03:46	22°Ω23'42		max. Earth dist.		-9798 Nov 04 j 23:19	2°η42'29	37.97674 AU
				morning rise		-9798 Nov 15 j 23:35	3°η02'22	
conjunction	-9804 Oct 22 j 06:30	22°Ω52'19	-2°25'19	retrograde		-9797 Feb 14 j 04:08	4°η36'47	
minimum elong	-9804 Oct 22 j 06:25	22°Ω52'19	2°24'55	min. Earth dist.		-9797 May 04 j 14:36	3°η29'17	36.11641 AU
max. Earth dist.	-9804 Oct 25 j 13:56	22°Ω58'39	36.43918 AU	opposition		-9797 May 08 j 01:55	3°η24'31	-5°45'36
morning rise	-9804 Nov 06 j 12:29	23°Ω21'11		direct		-9797 Jul 26 j 19:33	2°η14'17	
retrograde	-9803 Feb 04 j 04:10	24°Ω58'43		evening set		-9797 Oct 19 j 22:44	3°η43'37	
min. Earth dist.	-9803 Apr 24 j 07:25	23°Ω49'15	34.56755 AU					
opposition	-9803 Apr 27 j 15:21	23°Ω44'33	-2°49'44	conjunction		-9797 Nov 03 j 05:19	4°η09'16	-5°40'11
direct	-9803 Jul 16 j 05:07	22°Ω32'15		minimum elong		-9797 Nov 03 j 05:08	4°η09'15	5°39'52
evening set	-9803 Oct 09 j 03:27	24°Ω04'41		max. Earth dist.		-9797 Nov 06 j 17:44	4°η15'38	38.23687 AU
				morning rise		-9797 Nov 17 j 14:53	4°η35'08	
conjunction	-9803 Oct 24 j 04:26	24°Ω32'55	-2°54'52	retrograde		-9796 Feb 16 j 01:32	6°η09'11	
minimum elong	-9803 Oct 24 j 04:20	24°Ω32'55	2°54'29	min. Earth dist.		-9796 May 05 j 09:57	5°η02'03	36.37810 AU
max. Earth dist.	-9803 Oct 27 j 13:47	24°Ω39'20	36.69159 AU	opposition		-9796 May 08 j 21:56	4°η57'16	-6°12'40
morning rise	-9803 Nov 08 j 08:24	25°Ω01'24		direct		-9796 Jul 27 j 12:49	3°η47'23	
retrograde	-9802 Feb 06 j 01:42	26°Ω38'18		evening set		-9796 Oct 20 j 21:25	5°η16'21	
min. Earth dist.	-9802 Apr 26 j 06:40	25°Ω29'06	34.82152 AU					
opposition	-9802 Apr 29 j 14:33	25°Ω24'25	-3°20'38	conjunction		-9796 Nov 03 j 23:58	5°η41'32	-6°05'40
direct	-9802 Jul 18 j 04:33	24°Ω12'26		minimum elong		-9796 Nov 03 j 23:46	5°η41'31	6°05'22
evening set	-9802 Oct 11 j 03:01	25°Ω44'14		max. Earth dist.		-9796 Nov 07 j 13:43	5°η47'57	38.49661 AU
				morning rise		-9796 Nov 18 j 05:14	6°η06'54	
conjunction	-9802 Oct 26 j 01:43	26°Ω12'05	-3°23'53	retrograde		-9795 Feb 16 j 20:19	7°η40'38	
minimum elong	-9802 Oct 26 j 01:35	26°Ω12'04	3°23'30	min. Earth dist.		-9795 May 07 j 06:26	6°η33'44	36.63902 AU
max. Earth dist.	-9802 Oct 29 j 10:53	26°Ω18'26	36.94543 AU	opposition		-9795 May 10 j 17:31	6°η29'02	-6°39'05
morning rise	-9802 Nov 10 j 03:31	26°Ω40'10		direct		-9795 Jul 29 j 07:43	5°η19'29	
retrograde	-9801 Feb 08 j 00:13	28°Ω16'27		evening set		-9795 Oct 22 j 20:16	6°η48'08	
min. Earth dist.	-9801 Apr 28 j 03:26	27°Ω07'38	35.07725 AU					
opposition	-9801 May 01 j 13:07	27°Ω02'53	-3°50'54	conjunction		-9795 Nov 05 j 18:22	7°η12'48	-6°30'35
direct	-9801 Jul 20 j 02:22	25°Ω51'13		minimum elong		-9795 Nov 05 j 18:11	7°η12'48	6°30'18
evening set	-9801 Oct 13 j 02:28	27°Ω22'26		max. Earth dist.		-9795 Nov 09 j 07:15	7°η19'07	38.75528 AU
				morning rise		-9795 Nov 19 j 19:12	7°η37'41	
conjunction	-9801 Oct 27 j 22:33	27°Ω49'52	-3°52'19	retrograde		-9794 Feb 18 j 15:51	9°η11'06	
minimum elong	-9801 Oct 27 j 22:26	27°Ω49'52	3°51'58	min. Earth dist.		-9794 May 09 j 00:33	8°η04'33	36.89862 AU
max. Earth dist.	-9801 Oct 31 j 09:19	27°Ω56'18	37.20086 AU	opposition		-9794 May 12 j 12:32	7°η59'49	-7°04'53
morning rise	-9801 Nov 11 j 21:44	28°Ω17'33		direct		-9794 Jul 31 j 02:54	6°η50'34	
retrograde	-9800 Feb 09 j 19:36	29°Ω53'17		evening set		-9794 Oct 24 j 18:59	8°η18'55	
min. Earth dist.	-9800 Apr 29 j 01:45	28°Ω44'45	35.33480 AU					
opposition	-9800 May 02 j 11:06	28°Ω40'01	-4°20'33	conjunction		-9794 Nov 07 j 12:26	8°η43'05	-6°54'55
direct	-9800 Jul 21 j 02:15	27°Ω28'43		minimum elong		-9794 Nov 07 j 12:13	8°η43'04	6°54'38
evening set	-9800 Oct 14 j 01:40	28°Ω59'23		max. Earth dist.		-9794 Nov 11 j 01:40	8°η49'23	39.01212 AU
				morning rise		-9794 Nov 21 j 08:36	9°η07'27	
conjunction	-9800 Oct 28 j 18:56	29°Ω26'24	-4°20'10	retrograde		-9793 Feb 20 j 09:11	10°η40'34	
minimum elong	-9800 Oct 28 j 18:47	29°Ω26'23	4°19'49	min. Earth dist.		-9793 May 10 j 20:29	9°η34'13	37.15626 AU
max. Earth dist.	-9800 Nov 01 j 06:06	29°Ω32'49	37.45816 AU	opposition		-9793 May 14 j 07:16	9°η29'34	-7°30'04
morning rise	-9800 Nov 12 j 15:05	29°Ω53'38		direct		-9793 Aug 01 j 23:22	8°η20'37	
	-9800 Nov 16 j 04:22	0°η		evening set		-9793 Oct 26 j 17:32	9°η48'40	
retrograde	-9799 Feb 10 j 14:49	1°η28'53						
min. Earth dist.	-9799 Apr 30 j 21:38	0°η20'45	35.59411 AU	conjunction		-9793 Nov 09 j 06:10	10°η12'20	-7°18'40
opposition	-9799 May 04 j 08:32	0°η15'57	-4°49'33	minimum elong		-9793 Nov 09 j 05:57	10°η12'19	7°18'25



# Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 9

Attention, astronomical year style is used: The year -9793 in astronomical counting style is the year 9794 BCE in historical counting style.

max. Earth dist.	-9793 Nov 12 j 19:05	10° $\mathring{M}$ 18'34	39.26687 AU	conjunction	-9786 Nov 18 j 22:41	20° $\mathring{M}$ 07'34	-9°48'45
morning rise	-9793 Nov 22 j 21:10	10° $\mathring{M}$ 36'09		minimum elong	-9786 Nov 18 j 22:27	20° $\mathring{M}$ 07'33	9°48'34
retrograde	-9792 Feb 22 j 00:37	12° $\mathring{M}$ 08'59		max. Earth dist.	-9786 Nov 22 j 11:51	20° $\mathring{M}$ 13'33	41.01001 AU
min. Earth dist.	-9792 May 11 j 14:12	11° $\mathring{M}$ 02'55	37.41164 AU	morning rise	-9786 Nov 30 j 19:55	20° $\mathring{M}$ 27'28	
opposition	-9792 May 15 j 01:16	10° $\mathring{M}$ 58'16	-7°54'37	retrograde	-9785 Mar 03 j 11:34	21° $\mathring{M}$ 59'02	
direct	-9792 Aug 02 j 19:58	9° $\mathring{M}$ 49'35		min. Earth dist.	-9785 May 22 j 09:57	20° $\mathring{M}$ 54'31	39.16486 AU
evening set	-9792 Oct 27 j 16:00	11° $\mathring{M}$ 17'22		opposition	-9785 May 25 j 19:56	20° $\mathring{M}$ 50'04	-10°29'01
				direct	-9785 Aug 13 j 18:21	19° $\mathring{M}$ 43'09	
conjunction	-9792 Nov 09 j 23:18	11° $\mathring{M}$ 40'29	-7°41'51	evening set	-9785 Nov 09 j 00:45	21° $\mathring{M}$ 09'48	
minimum elong	-9792 Nov 09 j 23:05	11° $\mathring{M}$ 40'28	7°41'36				
max. Earth dist.	-9792 Nov 13 j 11:34	11° $\mathring{M}$ 46'38	39.51938 AU	conjunction	-9785 Nov 20 j 13:21	21° $\mathring{M}$ 28'59	-10°07'53
morning rise	-9792 Nov 23 j 09:14	12° $\mathring{M}$ 03'47		minimum elong	-9785 Nov 20 j 13:06	21° $\mathring{M}$ 28'58	10°07'44
retrograde	-9791 Feb 22 j 16:40	13° $\mathring{M}$ 36'21		max. Earth dist.	-9785 Nov 24 j 01:25	21° $\mathring{M}$ 34'51	41.25516 AU
min. Earth dist.	-9791 May 13 j 08:22	12° $\mathring{M}$ 30'29	37.66519 AU	morning rise	-9785 Dec 02 j 03:49	21° $\mathring{M}$ 48'18	
opposition	-9791 May 16 j 19:03	12° $\mathring{M}$ 25'53	-8°18'33	retrograde	-9784 Mar 04 j 02:34	23° $\mathring{M}$ 19'49	
direct	-9791 Aug 04 j 13:48	11° $\mathring{M}$ 17'27		min. Earth dist.	-9784 May 23 j 00:50	22° $\mathring{M}$ 15'33	39.41124 AU
evening set	-9791 Oct 29 j 14:03	12° $\mathring{M}$ 44'57		opposition	-9784 May 26 j 10:45	22° $\mathring{M}$ 11'07	-10°48'37
				direct	-9784 Aug 14 j 08:18	21° $\mathring{M}$ 04'29	
conjunction	-9791 Nov 11 j 16:07	13° $\mathring{M}$ 07'32	-8°04'28	evening set	-9784 Nov 09 j 22:11	22° $\mathring{M}$ 31'05	
minimum elong	-9791 Nov 11 j 15:53	13° $\mathring{M}$ 07'31	8°04'14				
max. Earth dist.	-9791 Nov 15 j 05:19	13° $\mathring{M}$ 13'43	39.77017 AU	conjunction	-9784 Nov 21 j 03:55	22° $\mathring{M}$ 49'42	-10°26'28
morning rise	-9791 Nov 24 j 20:25	13° $\mathring{M}$ 30'18		minimum elong	-9784 Nov 21 j 03:41	22° $\mathring{M}$ 49'41	10°26'20
retrograde	-9790 Feb 24 j 07:26	15° $\mathring{M}$ 02'37		max. Earth dist.	-9784 Nov 24 j 16:47	22° $\mathring{M}$ 55'35	41.49844 AU
min. Earth dist.	-9790 May 15 j 02:07	13° $\mathring{M}$ 56'57	37.91708 AU	morning rise	-9784 Dec 02 j 11:14	23° $\mathring{M}$ 08'25	
opposition	-9790 May 18 j 12:17	13° $\mathring{M}$ 52'23	-8°41'51	retrograde	-9783 Mar 05 j 17:15	24° $\mathring{M}$ 39'54	
direct	-9790 Aug 06 j 08:20	12° $\mathring{M}$ 44'12		min. Earth dist.	-9783 May 24 j 16:42	23° $\mathring{M}$ 35'49	39.65534 AU
evening set	-9790 Oct 31 j 12:16	14° $\mathring{M}$ 11'28		opposition	-9783 May 28 j 01:18	23° $\mathring{M}$ 31'28	-11°07'39
				direct	-9783 Aug 15 j 22:21	22° $\mathring{M}$ 25'06	
conjunction	-9790 Nov 13 j 08:32	14° $\mathring{M}$ 33'30	-8°26'29	evening set	-9783 Nov 11 j 19:42	23° $\mathring{M}$ 51'42	
minimum elong	-9790 Nov 13 j 08:18	14° $\mathring{M}$ 33'29	8°26'16				
max. Earth dist.	-9790 Nov 16 j 20:37	14° $\mathring{M}$ 39'33	40.01958 AU	conjunction	-9783 Nov 22 j 18:10	24° $\mathring{M}$ 09'43	-10°44'31
morning rise	-9790 Nov 26 j 07:10	14° $\mathring{M}$ 55'42		minimum elong	-9783 Nov 22 j 17:54	24° $\mathring{M}$ 09'42	10°44'24
retrograde	-9789 Feb 26 j 01:29	16° $\mathring{M}$ 27'49		max. Earth dist.	-9783 Nov 26 j 05:33	24° $\mathring{M}$ 15'28	41.73920 AU
min. Earth dist.	-9789 May 16 j 18:01	15° $\mathring{M}$ 22'23	38.16802 AU	morning rise	-9783 Dec 03 j 18:08	24° $\mathring{M}$ 27'50	
opposition	-9789 May 20 j 04:54	15° $\mathring{M}$ 17'49	-9°04'32	retrograde	-9782 Mar 07 j 09:31	25° $\mathring{M}$ 59'18	
direct	-9789 Aug 07 j 22:58	14° $\mathring{M}$ 09'52		min. Earth dist.	-9782 May 26 j 06:35	24° $\mathring{M}$ 55'29	39.89659 AU
evening set	-9789 Nov 02 j 10:10	15° $\mathring{M}$ 36'57		opposition	-9782 May 29 j 15:30	24° $\mathring{M}$ 51'08	-11°26'07
				direct	-9782 Aug 17 j 10:49	23° $\mathring{M}$ 45'01	
conjunction	-9789 Nov 15 j 00:37	15° $\mathring{M}$ 58'26	-8°47'55	evening set	-9782 Nov 13 j 17:15	25° $\mathring{M}$ 11'39	
minimum elong	-9789 Nov 15 j 00:23	15° $\mathring{M}$ 58'25	8°47'44				
max. Earth dist.	-9789 Nov 18 j 13:43	16° $\mathring{M}$ 04'30	40.26809 AU	conjunction	-9782 Nov 24 j 08:17	25° $\mathring{M}$ 29'03	-11°02'04
morning rise	-9789 Nov 27 j 17:15	16° $\mathring{M}$ 20'04		minimum elong	-9782 Nov 24 j 08:03	25° $\mathring{M}$ 29'02	11°01'57
retrograde	-9788 Feb 27 j 17:07	17° $\mathring{M}$ 51'59		max. Earth dist.	-9782 Nov 27 j 19:26	25° $\mathring{M}$ 34'45	41.97667 AU
min. Earth dist.	-9788 May 17 j 11:30	16° $\mathring{M}$ 46'43	38.41823 AU	morning rise	-9782 Dec 05 j 00:50	25° $\mathring{M}$ 46'33	
opposition	-9788 May 20 j 21:17	16° $\mathring{M}$ 42'13	-9°26'35	retrograde	-9781 Mar 08 j 22:30	27° $\mathring{M}$ 18'02	
direct	-9788 Aug 08 j 15:21	15° $\mathring{M}$ 34'32		min. Earth dist.	-9781 May 27 j 22:16	26° $\mathring{M}$ 14'20	40.13440 AU
evening set	-9788 Nov 03 j 07:52	17° $\mathring{M}$ 01'27		opposition	-9781 May 31 j 05:21	26° $\mathring{M}$ 10'07	-11°44'03
				direct	-9781 Aug 19 j 01:51	25° $\mathring{M}$ 04'13	
conjunction	-9788 Nov 15 j 16:12	17° $\mathring{M}$ 22'22	-9°08'46	evening set	-9781 Nov 15 j 14:45	26° $\mathring{M}$ 30'53	
minimum elong	-9788 Nov 15 j 15:58	17° $\mathring{M}$ 22'21	9°08'34				
max. Earth dist.	-9788 Nov 19 j 04:52	17° $\mathring{M}$ 28'22	40.51609 AU	conjunction	-9781 Nov 25 j 22:11	26° $\mathring{M}$ 47'40	-11°19'05
morning rise	-9788 Nov 28 j 02:31	17° $\mathring{M}$ 43'25		minimum elong	-9781 Nov 25 j 21:56	26° $\mathring{M}$ 47'39	11°18'59
retrograde	-9787 Feb 28 j 08:23	19° $\mathring{M}$ 15'11		max. Earth dist.	-9781 Nov 29 j 08:38	26° $\mathring{M}$ 53'17	42.21068 AU
min. Earth dist.	-9787 May 19 j 02:23	18° $\mathring{M}$ 10'13	38.66790 AU	morning rise	-9781 Dec 06 j 06:48	27° $\mathring{M}$ 04'33	
opposition	-9787 May 22 j 13:12	18° $\mathring{M}$ 05'41	-9°48'00	retrograde	-9780 Mar 09 j 09:34	28° $\mathring{M}$ 36'02	
direct	-9787 Aug 10 j 08:39	16° $\mathring{M}$ 58'14		min. Earth dist.	-9780 May 28 j 11:59	27° $\mathring{M}$ 32'34	40.36850 AU
evening set	-9787 Nov 05 j 05:34	18° $\mathring{M}$ 25'02		opposition	-9780 May 31 j 18:53	27° $\mathring{M}$ 28'21	-12°01'26
				direct	-9780 Aug 19 j 18:20	26° $\mathring{M}$ 22'40	
conjunction	-9787 Nov 17 j 07:30	18° $\mathring{M}$ 45'23	-9°29'03	evening set	-9780 Nov 16 j 12:02	27° $\mathring{M}$ 49'22	
minimum elong	-9787 Nov 17 j 07:15	18° $\mathring{M}$ 45'22	9°28'52				
max. Earth dist.	-9787 Nov 20 j 20:17	18° $\mathring{M}$ 51'22	40.76341 AU	conjunction	-9780 Nov 26 j 11:27	28° $\mathring{M}$ 05'33	-11°35'36
morning rise	-9787 Nov 29 j 11:33	19° $\mathring{M}$ 05'52		minimum elong	-9780 Nov 26 j 11:13	28° $\mathring{M}$ 05'32	11°35'31
retrograde	-9786 Mar 01 j 22:55	20° $\mathring{M}$ 37'31		max. Earth dist.	-9780 Nov 29 j 20:37	28° $\mathring{M}$ 11'03	42.44100 AU
min. Earth dist.	-9786 May 20 j 18:44	19° $\mathring{M}$ 32'45	38.91697 AU	morning rise	-9780 Dec 06 j 12:12	28° $\mathring{M}$ 21'48	
opposition	-9786 May 24 j 04:47	19° $\mathring{M}$ 28'16	-10°08'49	retrograde	-9779 Mar 10 j 22:01	29° $\mathring{M}$ 53'19	
direct	-9786 Aug 12 j 01:08	18° $\mathring{M}$ 21'05		min. Earth dist.	-9779 May 30 j 02:07	28° $\mathring{M}$ 49'59	40.59922 AU
evening set	-9786 Nov 07 j 03:09	19° $\mathring{M}$ 47'48		opposition	-9779 Jun 02 j 08:14	28° $\mathring{M}$ 45'50	-12°18'18

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 10

Attention, astronomical year style is used: The year -9779 in astronomical counting style is the year 9780 BCE in historical counting style.

direct	-9779 Aug 21 j 08:23	27° <u>10</u> 40'21		minimum elong	-9773 Dec 06 j 01:48	6° <u>50</u> 28	13°17'05
evening set	-9779 Nov 18 j 09:18	29° <u>10</u> 07'07		max. Earth dist.	-9773 Dec 09 j 07:52	6° <u>55</u> 35	43.98689 AU
				morning rise	-9773 Dec 13 j 11:11	7° <u>02</u> 04	
conjunction	-9779 Nov 28 j 00:44	29° <u>10</u> 22'39	-11°51'38	retrograde	-9772 Mar 19 j 07:30	8° <u>03</u> 47	
minimum elong	-9779 Nov 28 j 00:29	29° <u>10</u> 22'38	11°51'33	min. Earth dist.	-9772 Jun 07 j 17:12	7° <u>03</u> 20	42.15100 AU
max. Earth dist.	-9779 Dec 01 j 10:14	29° <u>10</u> 28'08	42.66815 AU	opposition	-9772 Jun 10 j 19:54	7° <u>02</u> 26	-14°01'20
morning rise	-9779 Dec 07 j 17:09	29° <u>10</u> 38'16		direct	-9772 Aug 29 j 23:19	6° <u>02</u> 42	
	-9779 Dec 21 j 14:39	0° <u>02</u>		evening set	-9772 Nov 29 j 14:59	7° <u>02</u> 18	
retrograde	-9778 Mar 12 j 08:56	1° <u>02</u> 09'50					
min. Earth dist.	-9778 May 31 j 16:04	0° <u>02</u> 06'38	40.82685 AU	conjunction	-9772 Dec 06 j 13:23	8° <u>03</u> 07	-13°29'38
opposition	-9778 Jun 03 j 21:01	0° <u>02</u> 33	-12°34'37	minimum elong	-9772 Dec 06 j 13:10	8° <u>03</u> 06	13°29'39
	-9778 Jun 05 j 20:52	30° <u>08</u> 10		max. Earth dist.	-9772 Dec 09 j 19:35	8° <u>08</u> 12	44.19953 AU
direct	-9778 Aug 22 j 22:57	28° <u>08</u> 57'15		morning rise	-9772 Dec 13 j 12:10	8° <u>08</u> 13'57	
	-9778 Nov 04 j 17:41	0° <u>02</u>		retrograde	-9771 Mar 20 j 19:11	9° <u>04</u> 36	
evening set	-9778 Nov 20 j 06:42	0° <u>02</u> 24'05		min. Earth dist.	-9771 Jun 09 j 06:04	8° <u>04</u> 36	42.36385 AU
				opposition	-9771 Jun 12 j 06:54	8° <u>04</u> 49	-14°14'01
conjunction	-9778 Nov 29 j 13:36	0° <u>03</u> 38'59	-12°07'08	direct	-9771 Aug 31 j 10:01	7° <u>03</u> 36'56	
minimum elong	-9778 Nov 29 j 13:22	0° <u>03</u> 38'58	12°07'05	evening set	-9771 Dec 01 j 13:17	9° <u>03</u> 05'11	
max. Earth dist.	-9778 Dec 02 j 21:33	0° <u>04</u> 44'20	42.89259 AU				
morning rise	-9778 Dec 08 j 21:31	0° <u>04</u> 53'57		conjunction	-9771 Dec 08 j 00:50	9° <u>04</u> 15'15	-13°41'43
retrograde	-9777 Mar 13 j 23:32	2° <u>05</u> 23'34		minimum elong	-9771 Dec 08 j 00:37	9° <u>04</u> 15'15	13°41'44
min. Earth dist.	-9777 Jun 02 j 04:19	1° <u>05</u> 22'34	41.05212 AU	max. Earth dist.	-9771 Dec 11 j 05:31	9° <u>05</u> 20'13	44.40901 AU
opposition	-9777 Jun 05 j 09:33	1° <u>05</u> 18'29	-12°50'24	morning rise	-9771 Dec 14 j 12:37	9° <u>05</u> 25'21	
direct	-9777 Aug 24 j 09:38	0° <u>05</u> 13'23		retrograde	-9770 Mar 22 j 08:08	10° <u>05</u> 58'16	
evening set	-9777 Nov 22 j 03:50	1° <u>05</u> 40'19		min. Earth dist.	-9770 Jun 10 j 16:44	9° <u>05</u> 56'27	42.57313 AU
				opposition	-9770 Jun 13 j 17:28	9° <u>05</u> 52'42	-14°26'14
conjunction	-9777 Dec 01 j 02:08	1° <u>05</u> 54'34	-12°22'08	direct	-9770 Sep 01 j 19:34	8° <u>05</u> 49'00	
minimum elong	-9777 Dec 01 j 01:53	1° <u>05</u> 54'33	12°22'05	evening set	-9770 Dec 03 j 11:53	10° <u>05</u> 17'37	
max. Earth dist.	-9777 Dec 04 j 10:33	1° <u>05</u> 59'56	43.11478 AU				
morning rise	-9777 Dec 10 j 01:19	2° <u>06</u> 08'53		conjunction	-9770 Dec 09 j 12:03	10° <u>06</u> 26'54	-13°53'22
retrograde	-9776 Mar 14 j 13:22	3° <u>06</u> 40'36		minimum elong	-9770 Dec 09 j 11:50	10° <u>06</u> 26'54	13°53'24
min. Earth dist.	-9776 Jun 02 j 17:59	2° <u>06</u> 37'42	41.27539 AU	max. Earth dist.	-9770 Dec 12 j 15:43	10° <u>06</u> 31'47	44.61450 AU
opposition	-9776 Jun 05 j 21:47	2° <u>06</u> 33'43	-13°05'39	morning rise	-9770 Dec 15 j 12:27	10° <u>06</u> 36'12	
direct	-9776 Aug 24 j 20:41	1° <u>06</u> 28'48		retrograde	-9769 Mar 23 j 19:49	12° <u>06</u> 09'27	
evening set	-9776 Nov 23 j 01:08	2° <u>06</u> 55'52		min. Earth dist.	-9769 Jun 12 j 05:12	11° <u>06</u> 07'44	42.77826 AU
				opposition	-9769 Jun 15 j 04:05	11° <u>06</u> 04'05	-14°38'00
conjunction	-9776 Dec 01 j 14:29	3° <u>06</u> 09'28	-12°36'37	direct	-9769 Sep 03 j 05:53	10° <u>06</u> 00'33	
minimum elong	-9776 Dec 01 j 14:15	3° <u>06</u> 09'27	12°36'36	evening set	-9769 Dec 05 j 11:05	11° <u>06</u> 29'33	
max. Earth dist.	-9776 Dec 04 j 22:13	3° <u>06</u> 14'45	43.33538 AU				
morning rise	-9776 Dec 10 j 04:31	3° <u>06</u> 23'06		conjunction	-9769 Dec 10 j 23:07	11° <u>06</u> 38'02	-14°04'36
retrograde	-9775 Mar 16 j 00:47	4° <u>06</u> 54'56		minimum elong	-9769 Dec 10 j 22:55	11° <u>06</u> 38'01	14°04'38
min. Earth dist.	-9775 Jun 04 j 05:20	3° <u>06</u> 52'16	41.49704 AU	max. Earth dist.	-9769 Dec 14 j 02:09	11° <u>06</u> 42'51	44.81572 AU
opposition	-9775 Jun 07 j 09:40	3° <u>06</u> 48'16	-13°20'21	morning rise	-9769 Dec 16 j 11:13	11° <u>06</u> 46'30	
direct	-9775 Aug 26 j 09:10	2° <u>06</u> 43'32		retrograde	-9768 Mar 24 j 03:05	13° <u>06</u> 20'06	
evening set	-9775 Nov 24 j 22:21	4° <u>06</u> 10'47		min. Earth dist.	-9768 Jun 12 j 16:15	12° <u>06</u> 18'31	42.97876 AU
				opposition	-9768 Jun 15 j 14:19	12° <u>06</u> 14'55	-14°49'20
conjunction	-9775 Dec 03 j 02:26	4° <u>06</u> 23'42	-12°50'36	direct	-9768 Sep 03 j 19:20	11° <u>06</u> 11'33	
minimum elong	-9775 Dec 03 j 02:12	4° <u>06</u> 23'41	12°50'34	evening set	-9768 Dec 06 j 10:58	12° <u>06</u> 40'59	
max. Earth dist.	-9775 Dec 06 j 09:29	4° <u>06</u> 28'55	43.55434 AU				
morning rise	-9775 Dec 11 j 07:17	4° <u>06</u> 36'40		conjunction	-9768 Dec 11 j 09:51	12° <u>06</u> 48'35	-14°15'25
retrograde	-9774 Mar 17 j 10:46	6° <u>06</u> 08'39		minimum elong	-9768 Dec 11 j 09:39	12° <u>06</u> 48'34	14°15'28
min. Earth dist.	-9774 Jun 05 j 18:05	5° <u>06</u> 06'08	41.71710 AU	max. Earth dist.	-9768 Dec 14 j 10:46	12° <u>06</u> 53'15	45.01245 AU
opposition	-9774 Jun 08 j 21:27	5° <u>06</u> 02'12	-13°34'31	morning rise	-9768 Dec 16 j 08:46	12° <u>06</u> 56'11	
direct	-9774 Aug 27 j 22:51	3° <u>06</u> 57'41		retrograde	-9767 Mar 25 j 12:22	14° <u>06</u> 30'11	
evening set	-9774 Nov 26 j 19:47	5° <u>06</u> 25'08		min. Earth dist.	-9767 Jun 14 j 03:11	13° <u>06</u> 28'43	43.17500 AU
				opposition	-9767 Jun 17 j 00:23	13° <u>06</u> 25'10	-15°00'14
conjunction	-9774 Dec 04 j 14:27	5° <u>06</u> 37'22	-13°04'06	direct	-9767 Sep 05 j 06:27	12° <u>06</u> 21'57	
minimum elong	-9774 Dec 04 j 14:13	5° <u>06</u> 37'21	13°04'05	evening set	-9767 Dec 08 j 11:56	13° <u>06</u> 51'54	
max. Earth dist.	-9774 Dec 07 j 21:54	5° <u>06</u> 42'35	43.77166 AU				
morning rise	-9774 Dec 12 j 09:34	5° <u>06</u> 49'38		conjunction	-9767 Dec 12 j 20:30	13° <u>06</u> 58'33	-14°25'49
retrograde	-9773 Mar 18 j 19:07	7° <u>06</u> 21'49		minimum elong	-9767 Dec 12 j 20:19	13° <u>06</u> 58'32	14°25'53
min. Earth dist.	-9773 Jun 07 j 06:02	6° <u>06</u> 19'29	41.93516 AU	max. Earth dist.	-9767 Dec 15 j 21:31	14° <u>06</u> 03'12	45.20502 AU
opposition	-9773 Jun 10 j 08:43	6° <u>06</u> 15'34	-13°48'11	morning rise	-9767 Dec 17 j 04:59	14° <u>06</u> 05'12	
direct	-9773 Aug 29 j 13:10	5° <u>06</u> 11'16		retrograde	-9766 Mar 26 j 21:52	15° <u>06</u> 39'42	
evening set	-9773 Nov 28 j 17:25	6° <u>06</u> 38'58		min. Earth dist.	-9766 Jun 15 j 14:50	14° <u>06</u> 38'16	43.36712 AU
				opposition	-9766 Jun 18 j 10:13	14° <u>06</u> 34'49	-15°10'42
conjunction	-9773 Dec 06 j 02:02	6° <u>06</u> 50'29	-13°17'06	direct	-9766 Sep 06 j 17:05	13° <u>06</u> 31'44	

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 11

Attention, astronomical year style is used: The year -9766 in astronomical counting style is the year 9767 BCE in historical counting style.

evening set	-9766 Dec 10 j 14:41	15° <u>♁</u> 02'20		min. Earth dist.	-9758 Jun 24 j 19:59	23° <u>♁</u> 38'14	44.79987 AU
				opposition	-9758 Jun 27 j 08:57	23° <u>♁</u> 35'11	-16°18'56
conjunction	-9766 Dec 14 j 06:54	15° <u>♁</u> 07'55	-14°35'48	direct	-9758 Sep 15 j 17:03	22° <u>♁</u> 33'21	
minimum elong	-9766 Dec 14 j 06:42	15° <u>♁</u> 07'54	14°35'54				
morning rise	-9766 Dec 17 j 22:57	15° <u>♁</u> 13'30		conjunction	-9758 Dec 23 j 11:32	24° <u>♁</u> 06'50	-15°40'53
max. Earth dist.	-9766 Dec 17 j 06:10	15° <u>♁</u> 12'26	45.39390 AU	minimum elong	-9758 Dec 23 j 11:23	24° <u>♁</u> 06'49	15°41'03
retrograde	-9765 Mar 28 j 09:07	16° <u>♁</u> 48'36		max. Earth dist.	-9758 Dec 26 j 03:20	24° <u>♁</u> 10'45	46.80384 AU
min. Earth dist.	-9765 Jun 17 j 00:06	15° <u>♁</u> 47'20	43.55585 AU	retrograde	-9757 Apr 06 j 08:13	25° <u>♁</u> 44'30	
opposition	-9765 Jun 19 j 19:36	15° <u>♁</u> 43'53	-15°20'45	min. Earth dist.	-9757 Jun 26 j 05:40	24° <u>♁</u> 44'12	44.96308 AU
direct	-9765 Sep 08 j 01:20	14° <u>♁</u> 40'56		opposition	-9757 Jun 28 j 17:01	24° <u>♁</u> 41'14	-16°25'41
evening set	-9765 Dec 12 j 20:13	16° <u>♁</u> 12'22		direct	-9757 Sep 17 j 03:05	23° <u>♁</u> 39'33	
conjunction	-9765 Dec 15 j 17:01	16° <u>♁</u> 16'43	-14°45'22	conjunction	-9757 Dec 24 j 20:41	25° <u>♁</u> 12'43	-15°47'19
minimum elong	-9765 Dec 15 j 16:51	16° <u>♁</u> 16'42	14°45'28	minimum elong	-9757 Dec 24 j 20:32	25° <u>♁</u> 12'43	15°47'31
morning rise	-9765 Dec 18 j 13:38	16° <u>♁</u> 21'03		max. Earth dist.	-9757 Dec 27 j 12:09	25° <u>♁</u> 16'37	46.96343 AU
max. Earth dist.	-9765 Dec 18 j 15:45	16° <u>♁</u> 21'11	45.57961 AU	retrograde	-9756 Apr 06 j 13:53	26° <u>♁</u> 50'03	
retrograde	-9764 Mar 28 j 18:49	17° <u>♁</u> 56'58		min. Earth dist.	-9756 Jun 26 j 15:25	25° <u>♁</u> 49'48	45.12110 AU
min. Earth dist.	-9764 Jun 17 j 11:12	16° <u>♁</u> 55'45	43.74173 AU	opposition	-9756 Jun 29 j 01:01	25° <u>♁</u> 46'55	-16°32'05
opposition	-9764 Jun 20 j 05:01	16° <u>♁</u> 52'24	-15°30'20	direct	-9756 Sep 17 j 14:11	24° <u>♁</u> 45'22	
direct	-9764 Sep 08 j 11:05	15° <u>♁</u> 49'36					
evening set	-9764 Dec 14 j 08:46	17° <u>♁</u> 22'20		conjunction	-9756 Dec 25 j 05:26	26° <u>♁</u> 18'13	-15°53'26
				minimum elong	-9756 Dec 25 j 05:18	26° <u>♁</u> 18'13	15°53'37
conjunction	-9764 Dec 16 j 02:54	17° <u>♁</u> 25'00	-14°54'31	max. Earth dist.	-9756 Dec 27 j 18:29	26° <u>♁</u> 21'57	47.11798 AU
minimum elong	-9764 Dec 16 j 02:42	17° <u>♁</u> 24'59	14°54'37	retrograde	-9755 Apr 07 j 23:07	27° <u>♁</u> 55'12	
morning rise	-9764 Dec 17 j 20:42	17° <u>♁</u> 27'37		min. Earth dist.	-9755 Jun 27 j 23:40	26° <u>♁</u> 55'03	45.27413 AU
max. Earth dist.	-9764 Dec 19 j 01:21	17° <u>♁</u> 29'25	45.76283 AU	opposition	-9755 Jun 30 j 08:49	26° <u>♁</u> 52'13	-16°38'08
retrograde	-9763 Mar 30 j 02:01	19° <u>♁</u> 04'49		direct	-9755 Sep 18 j 21:35	25° <u>♁</u> 50'45	
min. Earth dist.	-9763 Jun 18 j 20:29	18° <u>♁</u> 03'46	43.92505 AU				
opposition	-9763 Jun 21 j 14:06	18° <u>♁</u> 00'26	-15°39'29	conjunction	-9755 Dec 26 j 14:13	27° <u>♁</u> 23'17	-15°59'12
direct	-9763 Sep 09 j 22:41	16° <u>♁</u> 57'46		minimum elong	-9755 Dec 26 j 14:05	27° <u>♁</u> 23'17	15°59'25
				max. Earth dist.	-9755 Dec 29 j 02:29	27° <u>♁</u> 26'57	47.26759 AU
conjunction	-9763 Dec 17 j 12:38	18° <u>♁</u> 32'49	-15°03'14	retrograde	-9754 Apr 09 j 08:18	28° <u>♁</u> 59'55	
minimum elong	-9763 Dec 17 j 12:28	18° <u>♁</u> 32'48	15°03'21	min. Earth dist.	-9754 Jun 29 j 09:35	27° <u>♁</u> 59'46	45.42244 AU
max. Earth dist.	-9763 Dec 20 j 09:33	18° <u>♁</u> 37'08	45.94359 AU	opposition	-9754 Jul 01 j 16:22	27° <u>♁</u> 57'02	-16°43'50
retrograde	-9762 Mar 31 j 11:06	20° <u>♁</u> 12'15		direct	-9754 Sep 20 j 04:32	26° <u>♁</u> 55'39	
min. Earth dist.	-9762 Jun 20 j 06:04	19° <u>♁</u> 11'19	44.10606 AU				
opposition	-9762 Jun 22 j 23:00	19° <u>♁</u> 08'02	-15°48'12	conjunction	-9754 Dec 27 j 22:54	28° <u>♁</u> 27'54	-16°04'38
direct	-9762 Sep 11 j 08:14	18° <u>♁</u> 05'32		minimum elong	-9754 Dec 27 j 22:48	28° <u>♁</u> 27'53	16°04'51
				max. Earth dist.	-9754 Dec 30 j 09:59	28° <u>♁</u> 31'28	47.41295 AU
conjunction	-9762 Dec 18 j 22:22	19° <u>♁</u> 40'14	-15°11'32		-9753 Mar 22 j 05:02	0° <u>♁</u>	
minimum elong	-9762 Dec 18 j 22:11	19° <u>♁</u> 40'13	15°11'39	retrograde	-9753 Apr 10 j 17:00	0° <u>♁</u> 04'09	
max. Earth dist.	-9762 Dec 21 j 19:30	19° <u>♁</u> 44'32	46.12202 AU		-9753 Apr 30 j 04:00	30° <u>♁</u>	
retrograde	-9761 Apr 01 j 18:36	21° <u>♁</u> 19'18		min. Earth dist.	-9753 Jun 30 j 17:14	29° <u>♁</u> 04'05	45.56664 AU
min. Earth dist.	-9761 Jun 21 j 16:12	20° <u>♁</u> 18'29	44.28441 AU	opposition	-9753 Jul 02 j 23:41	29° <u>♁</u> 01'23	-16°49'11
opposition	-9761 Jun 24 j 07:46	20° <u>♁</u> 15'16	-15°56'29	direct	-9753 Sep 21 j 11:58	28° <u>♁</u> 00'05	
direct	-9761 Sep 12 j 18:40	19° <u>♁</u> 12'57					
				conjunction	-9753 Dec 29 j 07:05	29° <u>♁</u> 32'01	-16°09'44
conjunction	-9761 Dec 20 j 07:42	20° <u>♁</u> 47'19	-15°19'26	minimum elong	-9753 Dec 29 j 06:58	29° <u>♁</u> 32'01	16°09'58
minimum elong	-9761 Dec 20 j 07:33	20° <u>♁</u> 47'18	15°19'35	max. Earth dist.	-9753 Dec 31 j 16:34	29° <u>♁</u> 35'30	47.55446 AU
max. Earth dist.	-9761 Dec 23 j 03:08	20° <u>♁</u> 51'30	46.29779 AU		-9752 Jan 17 j 20:39	0° <u>♁</u>	
retrograde	-9760 Apr 02 j 06:02	22° <u>♁</u> 26'01		retrograde	-9752 Apr 11 j 00:30	1° <u>♁</u> 07'56	
min. Earth dist.	-9760 Jun 22 j 00:45	21° <u>♁</u> 25'24	44.45991 AU	min. Earth dist.	-9752 Jul 01 j 01:51	0° <u>♁</u> 07'54	45.70746 AU
opposition	-9760 Jun 24 j 16:18	21° <u>♁</u> 22'12	-16°04'21	opposition	-9752 Jul 03 j 06:58	0° <u>♁</u> 05'16	-16°54'10
direct	-9760 Sep 13 j 01:07	20° <u>♁</u> 20'03			-9752 Jul 07 j 17:29	30° <u>♁</u>	
				direct	-9752 Sep 21 j 19:51	29° <u>♁</u> 04'03	
conjunction	-9760 Dec 20 j 17:01	21° <u>♁</u> 54'06	-15°26'57		-9752 Dec 04 j 07:23	0° <u>♁</u>	
minimum elong	-9760 Dec 20 j 16:52	21° <u>♁</u> 54'06	15°27'06				
max. Earth dist.	-9760 Dec 23 j 12:00	21° <u>♁</u> 58'15	46.47040 AU	conjunction	-9752 Dec 29 j 15:24	0° <u>♁</u> 35'42	-16°14'27
retrograde	-9759 Apr 03 j 17:44	23° <u>♁</u> 32'28		minimum elong	-9752 Dec 29 j 15:19	0° <u>♁</u> 35'42	16°14'42
min. Earth dist.	-9759 Jun 23 j 11:14	22° <u>♁</u> 31'55	44.63199 AU	max. Earth dist.	-9751 Jan 01 j 00:54	0° <u>♁</u> 39'10	47.69294 AU
opposition	-9759 Jun 26 j 00:44	22° <u>♁</u> 28'50	-16°11'50	retrograde	-9751 Apr 12 j 04:19	2° <u>♁</u> 11'17	
direct	-9759 Sep 14 j 07:08	21° <u>♁</u> 26'51		min. Earth dist.	-9751 Jul 02 j 09:54	1° <u>♁</u> 11'18	45.84523 AU
				opposition	-9751 Jul 04 j 13:58	1° <u>♁</u> 08'44	-16°58'46
conjunction	-9759 Dec 22 j 02:22	23° <u>♁</u> 00'37	-15°34'05	direct	-9751 Sep 23 j 06:18	0° <u>♁</u> 07'36	
minimum elong	-9759 Dec 22 j 02:14	23° <u>♁</u> 00'36	15°34'16				
max. Earth dist.	-9759 Dec 24 j 20:20	23° <u>♁</u> 04'41	46.63940 AU	conjunction	-9751 Dec 30 j 23:28	1° <u>♁</u> 38'58	-16°18'50
retrograde	-9758 Apr 05 j 01:11	24° <u>♁</u> 38'38		minimum elong	-9751 Dec 30 j 23:21	1° <u>♁</u> 38'58	16°19'04

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 12

Attention, astronomical year style is used: The year -9750 in astronomical counting style is the year 9751 BCE in historical counting style.

max. Earth dist.	-9750 Jan 02 j 06:58	1°M.42'19	47.82867 AU	opposition	-9742 Jul 14 j 00:04	10°M.27'35	-17°25'01
retrograde	-9750 Apr 13 j 11:33	3°M.14'15		direct	-9742 Oct 02 j 18:11	9°M.27'20	
min. Earth dist.	-9750 Jul 03 j 17:03	2°M.14'22	45.98035 AU				
opposition	-9750 Jul 05 j 20:54	2°M.11'49	-17°03'01	conjunction	-9741 Jan 09 j 20:20	10°M.56'48	-16°43'36
direct	-9750 Sep 24 j 14:02	1°M.10'47		minimum elong	-9741 Jan 09 j 20:17	10°M.56'48	16°43'57
				max. Earth dist.	-9741 Jan 11 j 17:11	10°M.59'26	48.88878 AU
conjunction	-9749 Jan 01 j 07:29	2°M.41'54	-16°22'51	retrograde	-9741 Apr 23 j 02:06	12°M.29'43	
minimum elong	-9749 Jan 01 j 07:24	2°M.41'54	16°23'07	min. Earth dist.	-9741 Jul 13 j 13:48	11°M.30'21	47.02573 AU
max. Earth dist.	-9749 Jan 03 j 14:50	2°M.45'13	47.96166 AU	opposition	-9741 Jul 15 j 05:48	11°M.28'25	-17°26'24
retrograde	-9749 Apr 14 j 20:18	4°M.16'53		direct	-9741 Oct 04 j 03:26	10°M.28'13	
min. Earth dist.	-9749 Jul 05 j 01:42	3°M.17'02	46.11264 AU				
opposition	-9749 Jul 07 j 03:41	3°M.14'34	-17°06'54	conjunction	-9740 Jan 11 j 03:21	11°M.57'29	-16°44'53
direct	-9749 Sep 25 j 19:56	2°M.13'39		minimum elong	-9740 Jan 11 j 03:20	11°M.57'29	16°45'13
				max. Earth dist.	-9740 Jan 12 j 22:00	11°M.59'59	48.98450 AU
conjunction	-9748 Jan 02 j 15:22	3°M.44'32	-16°26'32	retrograde	-9740 Apr 23 j 06:49	13°M.30'10	
minimum elong	-9748 Jan 02 j 15:16	3°M.44'32	16°26'47	min. Earth dist.	-9740 Jul 13 j 20:07	12°M.30'52	47.11998 AU
max. Earth dist.	-9748 Jan 04 j 21:32	3°M.47'46	48.09200 AU	opposition	-9740 Jul 15 j 11:30	12°M.28'57	-17°27'29
retrograde	-9748 Apr 15 j 04:22	5°M.19'14		direct	-9740 Oct 04 j 11:06	11°M.28'49	
min. Earth dist.	-9748 Jul 05 j 08:19	4°M.19'32	46.24199 AU				
opposition	-9748 Jul 07 j 10:17	4°M.17'04	-17°10'26	conjunction	-9739 Jan 11 j 10:16	12°M.57'53	-16°45'51
direct	-9748 Sep 26 j 01:41	3°M.16'16		minimum elong	-9739 Jan 11 j 10:13	12°M.57'53	16°46'11
				max. Earth dist.	-9739 Jan 13 j 04:44	13°M.00'22	49.07688 AU
conjunction	-9747 Jan 02 j 22:57	4°M.46'56	-16°29'52	retrograde	-9739 Apr 24 j 13:23	14°M.30'21	
minimum elong	-9747 Jan 02 j 22:53	4°M.46'56	16°30'09	min. Earth dist.	-9739 Jul 15 j 03:40	13°M.31'02	47.21099 AU
max. Earth dist.	-9747 Jan 05 j 03:36	4°M.50'04	48.21914 AU	opposition	-9739 Jul 16 j 17:12	13°M.29'12	-17°28'14
retrograde	-9747 Apr 16 j 11:42	6°M.21'22		direct	-9739 Oct 05 j 17:20	12°M.29'08	
min. Earth dist.	-9747 Jul 06 j 16:43	5°M.21'43	46.36796 AU				
opposition	-9747 Jul 08 j 16:56	5°M.19'21	-17°13'37	conjunction	-9738 Jan 12 j 17:16	13°M.58'02	-16°46'30
direct	-9747 Sep 27 j 08:53	4°M.18'40		minimum elong	-9738 Jan 12 j 17:15	13°M.58'02	16°46'50
				max. Earth dist.	-9738 Jan 14 j 10:20	14°M.00'26	49.16641 AU
conjunction	-9746 Jan 04 j 06:50	5°M.49'08	-16°32'53		-9738 Mar 02 j 05:16	15°M.	
minimum elong	-9746 Jan 04 j 06:46	5°M.49'07	16°33'10	retrograde	-9738 Apr 25 j 21:35	15°M.30'16	
max. Earth dist.	-9746 Jan 06 j 11:12	5°M.52'14	48.34263 AU		-9738 Jun 20 j 03:52	15°R.M.	
retrograde	-9746 Apr 17 j 15:50	7°M.23'18		min. Earth dist.	-9738 Jul 16 j 08:59	14°M.31'03	47.29915 AU
min. Earth dist.	-9746 Jul 08 j 00:25	6°M.23'44	46.48976 AU	opposition	-9738 Jul 17 j 22:33	14°M.29'14	-17°28'41
opposition	-9746 Jul 09 j 23:14	6°M.21'26	-17°16'30	direct	-9738 Oct 06 j 20:51	13°M.29'14	
direct	-9746 Sep 28 j 18:36	5°M.20'52					
				conjunction	-9737 Jan 14 j 00:04	14°M.57'58	-16°46'51
conjunction	-9745 Jan 05 j 14:32	6°M.51'08	-16°35'36	minimum elong	-9737 Jan 14 j 00:02	14°M.57'58	16°47'12
minimum elong	-9745 Jan 05 j 14:28	6°M.51'08	16°35'54		-9737 Jan 15 j 10:58	15°M.	
max. Earth dist.	-9745 Jan 07 j 16:21	6°M.54'05	48.46173 AU	max. Earth dist.	-9737 Jan 15 j 15:42	15°M.00'16	49.25309 AU
retrograde	-9745 Apr 18 j 23:16	8°M.25'04		retrograde	-9737 Apr 27 j 04:38	16°M.30'00	
min. Earth dist.	-9745 Jul 09 j 07:36	7°M.25'36	46.60696 AU	min. Earth dist.	-9737 Jul 17 j 16:15	15°M.30'48	47.38455 AU
opposition	-9745 Jul 11 j 05:37	7°M.23'21	-17°19'04	opposition	-9737 Jul 19 j 04:06	15°M.29'04	-17°28'48
direct	-9745 Sep 30 j 01:09	6°M.22'52			-9737 Aug 14 j 06:50	15°R.M.	
				direct	-9737 Oct 08 j 01:56	14°M.29'09	
conjunction	-9744 Jan 06 j 22:03	7°M.52'56	-16°38'02		-9737 Dec 01 j 05:29	15°M.	
minimum elong	-9744 Jan 06 j 22:00	7°M.52'56	16°38'19				
max. Earth dist.	-9744 Jan 08 j 23:06	7°M.55'50	48.57589 AU	conjunction	-9736 Jan 15 j 06:46	15°M.57'45	-16°46'53
retrograde	-9744 Apr 19 j 06:29	9°M.26'38		minimum elong	-9736 Jan 15 j 06:46	15°M.57'45	16°47'15
min. Earth dist.	-9744 Jul 09 j 16:17	8°M.27'10	46.71897 AU	max. Earth dist.	-9736 Jan 16 j 22:21	16°M.00'02	49.33703 AU
opposition	-9744 Jul 11 j 11:58	8°M.25'02	-17°21'20	retrograde	-9736 Apr 27 j 08:06	17°M.29'34	
direct	-9744 Sep 30 j 07:45	7°M.24'39		min. Earth dist.	-9736 Jul 17 j 22:23	16°M.30'27	47.46685 AU
				opposition	-9736 Jul 19 j 09:27	16°M.28'45	-17°28'37
conjunction	-9743 Jan 07 j 05:37	8°M.54'30	-16°40'11	direct	-9736 Oct 08 j 10:05	15°M.28'54	
minimum elong	-9743 Jan 07 j 05:33	8°M.54'30	16°40'29				
max. Earth dist.	-9743 Jan 09 j 04:55	8°M.57'18	48.68505 AU	conjunction	-9735 Jan 15 j 13:25	16°M.57'23	-16°46'38
retrograde	-9743 Apr 20 j 15:02	10°M.27'57		minimum elong	-9735 Jan 15 j 13:24	16°M.57'23	16°47'00
min. Earth dist.	-9743 Jul 10 j 22:53	9°M.28'33	46.82587 AU	max. Earth dist.	-9735 Jan 17 j 02:41	16°M.59'32	49.41784 AU
opposition	-9743 Jul 12 j 17:59	9°M.26'27	-17°23'19	retrograde	-9735 Apr 28 j 13:44	18°M.29'01	
direct	-9743 Oct 01 j 12:45	8°M.26'08		min. Earth dist.	-9735 Jul 19 j 04:24	17°M.29'58	47.54586 AU
				opposition	-9735 Jul 20 j 14:39	17°M.28'19	-17°28'08
conjunction	-9742 Jan 08 j 12:59	9°M.55'48	-16°42'02	direct	-9735 Oct 09 j 16:26	16°M.28'33	
minimum elong	-9742 Jan 08 j 12:56	9°M.55'48	16°42'21				
max. Earth dist.	-9742 Jan 10 j 10:20	9°M.58'28	48.78916 AU	conjunction	-9734 Jan 16 j 20:14	17°M.56'54	-16°46'06
retrograde	-9742 Apr 21 j 22:56	11°M.28'59		minimum elong	-9734 Jan 16 j 20:15	17°M.56'54	16°46'30
min. Earth dist.	-9742 Jul 12 j 06:56	10°M.29'35	46.92799 AU	max. Earth dist.	-9734 Jan 18 j 09:01	17°M.59'02	49.49491 AU

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 13

Attention, astronomical year style is used: The year -9734 in astronomical counting style is the year 9735 BCE in historical counting style.

retrograde	-9734 Apr 29 j 18:35	19° <b>ℓ</b> 28'23		direct	-9726 Oct 18 j 18:47	25° <b>ℓ</b> 17'37	
min. Earth dist.	-9734 Jul 20 j 11:55	18° <b>ℓ</b> 29'20	47.62068 AU				
opposition	-9734 Jul 21 j 19:56	18° <b>ℓ</b> 27'48	-17°27'22	conjunction	-9725 Jan 26 j 06:09	26° <b>ℓ</b> 44'57	-16°29'45
direct	-9734 Oct 10 j 23:29	17° <b>ℓ</b> 28'07		minimum elong	-9725 Jan 26 j 06:14	26° <b>ℓ</b> 44'57	16°30'12
				max. Earth dist.	-9725 Jan 27 j 05:02	26° <b>ℓ</b> 46'15	49.97845 AU
conjunction	-9733 Jan 18 j 02:58	18° <b>ℓ</b> 56'20	-16°45'18	retrograde	-9725 May 08 j 21:08	28° <b>ℓ</b> 14'55	
minimum elong	-9733 Jan 18 j 02:58	18° <b>ℓ</b> 56'20	16°45'41	opposition	-9725 Jul 30 j 15:47	27° <b>ℓ</b> 14'56	-17°08'45
max. Earth dist.	-9733 Jan 19 j 13:52	18° <b>ℓ</b> 58'21	49.56763 AU	min. Earth dist.	-9725 Jul 29 j 18:45	27° <b>ℓ</b> 15'56	48.08200 AU
retrograde	-9733 May 01 j 02:23	20° <b>ℓ</b> 27'38		direct	-9725 Oct 20 j 00:42	26° <b>ℓ</b> 15'32	
min. Earth dist.	-9733 Jul 21 j 17:31	19° <b>ℓ</b> 28'40	47.69076 AU				
opposition	-9733 Jul 23 j 00:59	19° <b>ℓ</b> 27'09	-17°26'21	conjunction	-9724 Jan 27 j 12:18	27° <b>ℓ</b> 42'48	-16°26'36
direct	-9733 Oct 12 j 03:31	18° <b>ℓ</b> 27'31		minimum elong	-9724 Jan 27 j 12:21	27° <b>ℓ</b> 42'48	16°27'03
				max. Earth dist.	-9724 Jan 28 j 10:53	27° <b>ℓ</b> 44'05	50.01338 AU
conjunction	-9732 Jan 19 j 09:36	19° <b>ℓ</b> 55'38	-16°44'15	retrograde	-9724 May 09 j 00:55	29° <b>ℓ</b> 12'40	
minimum elong	-9732 Jan 19 j 09:37	19° <b>ℓ</b> 55'38	16°44'39	opposition	-9724 Jul 30 j 20:23	28° <b>ℓ</b> 12'45	-17°05'18
max. Earth dist.	-9732 Jan 20 j 18:31	19° <b>ℓ</b> 57'31	49.63529 AU	min. Earth dist.	-9724 Jul 30 j 01:10	28° <b>ℓ</b> 13'41	48.11477 AU
retrograde	-9732 May 01 j 11:19	21° <b>ℓ</b> 26'46		direct	-9724 Oct 20 j 07:13	27° <b>ℓ</b> 13'25	
min. Earth dist.	-9732 Jul 22 j 01:02	20° <b>ℓ</b> 27'45	47.75568 AU				
opposition	-9732 Jul 23 j 06:13	20° <b>ℓ</b> 26'21	-17°25'04	conjunction	-9723 Jan 27 j 18:20	28° <b>ℓ</b> 40'37	-16°23'11
direct	-9732 Oct 12 j 06:22	19° <b>ℓ</b> 26'47		minimum elong	-9723 Jan 27 j 18:24	28° <b>ℓ</b> 40'38	16°23'39
				max. Earth dist.	-9723 Jan 28 j 15:22	28° <b>ℓ</b> 41'49	50.04516 AU
conjunction	-9731 Jan 19 j 16:15	20° <b>ℓ</b> 54'45	-16°42'57		-9723 Apr 08 j 18:44	0° <b>♂</b>	
minimum elong	-9731 Jan 19 j 16:16	20° <b>ℓ</b> 54'46	16°43'20	retrograde	-9723 May 10 j 07:53	0° <b>♂</b> 10'24	
max. Earth dist.	-9731 Jan 21 j 00:17	20° <b>ℓ</b> 56'36	49.69777 AU		-9723 Jun 11 j 01:02	30° <b>♂</b> <b>ℓ</b>	
retrograde	-9731 May 02 j 15:15	22° <b>ℓ</b> 25'42		min. Earth dist.	-9723 Jul 31 j 05:57	29° <b>ℓ</b> 11'29	48.14403 AU
min. Earth dist.	-9731 Jul 23 j 07:16	21° <b>ℓ</b> 26'42	47.81511 AU	opposition	-9723 Aug 01 j 00:51	29° <b>ℓ</b> 10'35	-17°01'35
opposition	-9731 Jul 24 j 11:17	21° <b>ℓ</b> 25'22	-17°23'32	direct	-9723 Oct 21 j 10:51	28° <b>ℓ</b> 11'18	
direct	-9731 Oct 13 j 13:52	20° <b>ℓ</b> 25'49					
				conjunction	-9722 Jan 29 j 00:28	29° <b>ℓ</b> 38'28	-16°19'30
conjunction	-9730 Jan 20 j 22:48	21° <b>ℓ</b> 53'40	-16°41'24	minimum elong	-9722 Jan 29 j 00:32	29° <b>ℓ</b> 38'29	16°19'58
minimum elong	-9730 Jan 20 j 22:49	21° <b>ℓ</b> 53'40	16°41'49	max. Earth dist.	-9722 Jan 29 j 19:43	29° <b>ℓ</b> 39'34	50.07302 AU
max. Earth dist.	-9730 Jan 22 j 04:07	21° <b>ℓ</b> 55'21	49.75493 AU		-9722 Feb 13 j 22:43	0° <b>♂</b>	
retrograde	-9730 May 03 j 19:11	23° <b>ℓ</b> 24'25		retrograde	-9722 May 11 j 16:47	1° <b>♂</b> 08'10	
opposition	-9730 Jul 25 j 16:10	22° <b>ℓ</b> 24'09	-17°21'45	opposition	-9722 Aug 02 j 05:19	0° <b>♂</b> 08'26	-16°57'37
min. Earth dist.	-9730 Jul 24 j 13:30	22° <b>ℓ</b> 25'25	47.86950 AU	min. Earth dist.	-9722 Aug 01 j 12:40	0° <b>♂</b> 09'14	48.16917 AU
direct	-9730 Oct 14 j 20:52	21° <b>ℓ</b> 24'37			-9722 Aug 09 j 14:38	30° <b>♂</b> <b>ℓ</b>	
				direct	-9722 Oct 22 j 12:30	29° <b>ℓ</b> 09'11	
conjunction	-9729 Jan 22 j 05:21	22° <b>ℓ</b> 52'20	-16°39'36		-9721 Jan 02 j 18:54	0° <b>♂</b>	
minimum elong	-9729 Jan 22 j 05:24	22° <b>ℓ</b> 52'20	16°40'01				
max. Earth dist.	-9729 Jan 23 j 10:04	22° <b>ℓ</b> 53'59	49.80719 AU	conjunction	-9721 Jan 30 j 06:45	0° <b>♂</b> 36'21	-16°15'35
retrograde	-9729 May 04 j 23:03	24° <b>ℓ</b> 22'55		minimum elong	-9721 Jan 30 j 06:50	0° <b>♂</b> 36'21	16°16'04
opposition	-9729 Jul 26 j 21:07	23° <b>ℓ</b> 22'41	-17°19'42	max. Earth dist.	-9721 Jan 31 j 01:14	0° <b>♂</b> 37'24	50.09653 AU
min. Earth dist.	-9729 Jul 25 j 20:28	23° <b>ℓ</b> 23'52	47.91918 AU	retrograde	-9721 May 12 j 21:44	2° <b>♂</b> 05'57	
direct	-9729 Oct 16 j 04:17	22° <b>ℓ</b> 23'11		opposition	-9721 Aug 03 j 09:48	1° <b>♂</b> 06'18	-16°53'24
				min. Earth dist.	-9721 Aug 02 j 18:13	1° <b>♂</b> 07'02	48.18947 AU
conjunction	-9728 Jan 23 j 11:33	23° <b>ℓ</b> 50'46	-16°37'33	direct	-9721 Oct 23 j 17:57	0° <b>♂</b> 07'05	
minimum elong	-9728 Jan 23 j 11:34	23° <b>ℓ</b> 50'46	16°37'59				
max. Earth dist.	-9728 Jan 24 j 14:31	23° <b>ℓ</b> 52'19	49.85523 AU	conjunction	-9720 Jan 31 j 12:40	1° <b>♂</b> 34'13	-16°11'26
retrograde	-9728 May 05 j 05:55	25° <b>ℓ</b> 21'11		minimum elong	-9720 Jan 31 j 12:45	1° <b>♂</b> 34'13	16°11'53
min. Earth dist.	-9728 Jul 26 j 01:25	24° <b>ℓ</b> 22'10	47.96488 AU	max. Earth dist.	-9720 Feb 01 j 04:28	1° <b>♂</b> 35'07	50.11499 AU
opposition	-9728 Jul 27 j 01:51	24° <b>ℓ</b> 21'00	-17°17'23	retrograde	-9720 May 13 j 01:45	3° <b>♂</b> 03'44	
direct	-9728 Oct 16 j 08:13	23° <b>ℓ</b> 21'30		opposition	-9720 Aug 03 j 14:19	2° <b>♂</b> 04'08	-16°48'57
				min. Earth dist.	-9720 Aug 03 j 00:10	2° <b>♂</b> 04'48	48.20462 AU
conjunction	-9727 Jan 23 j 17:47	24° <b>ℓ</b> 48'59	-16°35'14	direct	-9720 Oct 24 j 00:02	1° <b>♂</b> 04'56	
minimum elong	-9727 Jan 23 j 17:50	24° <b>ℓ</b> 48'59	16°35'39				
max. Earth dist.	-9727 Jan 24 j 19:16	24° <b>ℓ</b> 50'26	49.89947 AU	conjunction	-9719 Jan 31 j 18:54	2° <b>♂</b> 32'02	-16°07'03
retrograde	-9727 May 06 j 12:35	26° <b>ℓ</b> 19'14		minimum elong	-9719 Jan 31 j 18:59	2° <b>♂</b> 32'02	16°07'32
min. Earth dist.	-9727 Jul 27 j 08:07	25° <b>ℓ</b> 20'11	48.00709 AU	max. Earth dist.	-9719 Feb 01 j 09:48	2° <b>♂</b> 32'53	50.12809 AU
opposition	-9727 Jul 28 j 06:33	25° <b>ℓ</b> 19'06	-17°14'47	retrograde	-9719 May 14 j 03:57	4° <b>♂</b> 01'27	
direct	-9727 Oct 17 j 12:01	24° <b>ℓ</b> 19'38		opposition	-9719 Aug 04 j 18:44	3° <b>♂</b> 01'54	-16°44'16
				min. Earth dist.	-9719 Aug 04 j 06:49	3° <b>♂</b> 02'28	48.21424 AU
conjunction	-9726 Jan 25 j 00:08	25° <b>ℓ</b> 47'02	-16°32'38	direct	-9719 Oct 25 j 08:21	2° <b>♂</b> 02'42	
minimum elong	-9726 Jan 25 j 00:10	25° <b>ℓ</b> 47'02	16°33'04				
max. Earth dist.	-9726 Jan 26 j 01:15	25° <b>ℓ</b> 48'28	49.94051 AU	conjunction	-9718 Feb 02 j 01:04	3° <b>♂</b> 29'45	-16°02'26
retrograde	-9726 May 07 j 16:29	27° <b>ℓ</b> 17'07		minimum elong	-9718 Feb 02 j 01:09	3° <b>♂</b> 29'45	16°02'55
opposition	-9726 Jul 29 j 11:13	26° <b>ℓ</b> 17'04	-17°11'55	max. Earth dist.	-9718 Feb 02 j 13:46	3° <b>♂</b> 30'28	50.13595 AU
min. Earth dist.	-9726 Jul 28 j 13:25	26° <b>ℓ</b> 18'06	48.04603 AU	retrograde	-9718 May 15 j 10:19	4° <b>♂</b> 59'04	

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 14

Attention, astronomical year style is used: The year -9718 in astronomical counting style is the year 9719 BCE in historical counting style.

opposition	-9718 Aug 05 j 23:04	3°♂59'32	-16°39'21	conjunction	-9709 Feb 11 j 05:59	12°♂04'07	-15°09'40
min. Earth dist.	-9718 Aug 05 j 11:41	4°♂00'04	48.21869 AU	minimum elong	-9709 Feb 11 j 06:07	12°♂04'07	15°10'11
direct	-9718 Oct 26 j 12:32	3°♂00'19		max. Earth dist.	-9709 Feb 11 j 07:17	12°♂04'11	50.03556 AU
				retrograde	-9709 May 24 j 06:08	13°♂32'54	
conjunction	-9717 Feb 03 j 07:01	4°♂27'19	-15°57'36	opposition	-9709 Aug 14 j 12:54	12°♂33'35	-15°43'23
minimum elong	-9717 Feb 03 j 07:07	4°♂27'19	15°58'06	min. Earth dist.	-9709 Aug 14 j 13:09	12°♂33'34	48.09337 AU
max. Earth dist.	-9717 Feb 03 j 17:55	4°♂27'56	50.13872 AU	direct	-9709 Nov 04 j 08:54	11°♂34'16	
retrograde	-9717 May 16 j 17:09	5°♂56'32					
opposition	-9717 Aug 07 j 03:25	4°♂57'01	-16°34'11	conjunction	-9708 Feb 12 j 11:56	13°♂01'19	-15°02'33
min. Earth dist.	-9717 Aug 06 j 18:23	4°♂57'26	48.21845 AU	minimum elong	-9708 Feb 12 j 12:04	13°♂01'19	15°03'06
direct	-9717 Oct 27 j 15:15	3°♂57'46		max. Earth dist.	-9708 Feb 12 j 11:08	13°♂01'16	50.00609 AU
				retrograde	-9708 May 24 j 11:53	14°♂30'05	
conjunction	-9716 Feb 04 j 13:02	5°♂24'43	-15°52'31	opposition	-9708 Aug 14 j 17:01	13°♂30'48	-15°35'54
minimum elong	-9716 Feb 04 j 13:09	5°♂24'44	15°53'00	min. Earth dist.	-9708 Aug 14 j 17:57	13°♂30'45	48.06020 AU
max. Earth dist.	-9716 Feb 04 j 23:23	5°♂25'18	50.13727 AU	direct	-9708 Nov 04 j 13:12	12°♂31'28	
retrograde	-9716 May 16 j 21:46	6°♂53'50		evening set	-9707 Feb 11 j 03:53	13°♂56'25	
opposition	-9716 Aug 07 j 07:35	5°♂54'19	-16°28'46				
min. Earth dist.	-9716 Aug 06 j 23:12	5°♂54'43	48.21413 AU	conjunction	-9707 Feb 12 j 17:55	13°♂58'34	-14°55'13
direct	-9716 Oct 27 j 20:52	4°♂55'03		minimum elong	-9707 Feb 12 j 18:03	13°♂58'35	14°55'45
				max. Earth dist.	-9707 Feb 12 j 15:07	13°♂58'25	49.97136 AU
conjunction	-9715 Feb 04 j 18:48	6°♂21'58	-15°47'10	morning rise	-9707 Feb 14 j 08:15	14°♂00'44	
minimum elong	-9715 Feb 04 j 18:54	6°♂21'58	15°47'41	retrograde	-9707 May 25 j 19:16	15°♂27'20	
max. Earth dist.	-9715 Feb 05 j 02:44	6°♂22'25	50.13207 AU	opposition	-9707 Aug 15 j 21:23	14°♂28'04	-15°28'11
retrograde	-9715 May 18 j 02:03	7°♂50'58		min. Earth dist.	-9707 Aug 16 j 00:47	14°♂27'54	48.02169 AU
opposition	-9715 Aug 08 j 11:49	6°♂51'28	-16°23'05	direct	-9707 Nov 05 j 15:29	13°♂28'43	
min. Earth dist.	-9715 Aug 08 j 04:29	6°♂51'48	48.20640 AU	evening set	-9706 Feb 11 j 08:51	14°♂52'17	
direct	-9715 Oct 29 j 02:31	5°♂52'10					
				conjunction	-9706 Feb 14 j 00:05	14°♂55'51	-14°47'40
conjunction	-9714 Feb 06 j 00:48	7°♂19'04	-15°41'34	minimum elong	-9706 Feb 14 j 00:13	14°♂55'52	14°48'12
minimum elong	-9714 Feb 06 j 00:55	7°♂19'04	15°42'04	max. Earth dist.	-9706 Feb 13 j 20:18	14°♂55'39	49.93144 AU
max. Earth dist.	-9714 Feb 06 j 08:28	7°♂19'30	50.12358 AU	morning rise	-9706 Feb 16 j 15:38	14°♂59'27	
retrograde	-9714 May 19 j 04:30	8°♂48'00		retrograde	-9706 May 27 j 00:10	16°♂24'37	
opposition	-9714 Aug 09 j 15:59	7°♂48'30	-16°17'08	opposition	-9706 Aug 17 j 01:30	15°♂25'20	-15°20'14
min. Earth dist.	-9714 Aug 09 j 10:20	7°♂48'46	48.19547 AU	min. Earth dist.	-9706 Aug 17 j 05:49	15°♂25'08	47.97795 AU
direct	-9714 Oct 30 j 09:30	6°♂49'11		direct	-9706 Nov 06 j 20:59	14°♂25'56	
				evening set	-9705 Feb 11 j 20:42	15°♂48'33	
conjunction	-9713 Feb 07 j 06:37	8°♂16'03	-15°35'43				
minimum elong	-9713 Feb 07 j 06:43	8°♂16'04	15°36'13	conjunction	-9705 Feb 15 j 06:01	15°♂53'09	-14°39'52
max. Earth dist.	-9713 Feb 07 j 12:45	8°♂16'24	50.11227 AU	minimum elong	-9705 Feb 15 j 06:10	15°♂53'09	14°40'24
retrograde	-9713 May 20 j 09:23	9°♂44'56		max. Earth dist.	-9705 Feb 14 j 23:32	15°♂52'47	49.88655 AU
opposition	-9713 Aug 10 j 20:09	8°♂45'28	-16°10'55	morning rise	-9705 Feb 18 j 15:44	15°♂57'45	
min. Earth dist.	-9713 Aug 10 j 14:32	8°♂45'44	48.18176 AU	retrograde	-9705 May 28 j 05:00	17°♂21'53	
direct	-9713 Oct 31 j 14:26	7°♂46'08		opposition	-9705 Aug 18 j 05:44	16°♂22'36	-15°12'03
				min. Earth dist.	-9705 Aug 18 j 11:26	16°♂22'20	47.92963 AU
conjunction	-9712 Feb 08 j 12:15	9°♂13'01	-15°29'35	direct	-9705 Nov 08 j 02:13	15°♂23'09	
minimum elong	-9712 Feb 08 j 12:23	9°♂13'01	15°30'06	evening set	-9704 Feb 12 j 11:31	16°♂44'58	
max. Earth dist.	-9712 Feb 08 j 17:00	9°♂13'17	50.09808 AU				
retrograde	-9712 May 20 j 17:02	10°♂41'51		conjunction	-9704 Feb 16 j 11:55	16°♂50'25	-14°31'51
opposition	-9712 Aug 11 j 00:26	9°♂42'24	-16°04'25	minimum elong	-9704 Feb 16 j 12:03	16°♂50'25	14°32'24
min. Earth dist.	-9712 Aug 10 j 20:42	9°♂42'35	48.16515 AU	max. Earth dist.	-9704 Feb 16 j 05:00	16°♂50'01	49.83726 AU
direct	-9712 Oct 31 j 16:43	8°♂43'05		morning rise	-9704 Feb 20 j 12:39	16°♂55'52	
				retrograde	-9704 May 28 j 07:29	18°♂19'09	
conjunction	-9711 Feb 08 j 18:10	10°♂09'59	-15°23'11	opposition	-9704 Aug 18 j 09:59	17°♂19'51	-15°03'36
minimum elong	-9711 Feb 08 j 18:17	10°♂09'59	15°23'42	min. Earth dist.	-9704 Aug 18 j 17:30	17°♂19'29	47.87709 AU
max. Earth dist.	-9711 Feb 08 j 22:32	10°♂10'14	50.08099 AU	direct	-9704 Nov 08 j 09:35	16°♂20'21	
retrograde	-9711 May 21 j 22:41	11°♂38'47		evening set	-9703 Feb 12 j 04:17	17°♂41'28	
opposition	-9711 Aug 12 j 04:28	10°♂39'23	-15°57'39				
min. Earth dist.	-9711 Aug 12 j 01:24	10°♂39'32	48.14524 AU	conjunction	-9703 Feb 16 j 17:52	17°♂47'40	-14°23'34
direct	-9711 Nov 01 j 20:40	9°♂40'03		minimum elong	-9703 Feb 16 j 18:02	17°♂47'40	14°24'07
				max. Earth dist.	-9703 Feb 16 j 09:14	17°♂47'10	49.78422 AU
conjunction	-9710 Feb 10 j 00:02	11°♂07'00	-15°16'33	morning rise	-9703 Feb 21 j 07:50	17°♂53'53	
minimum elong	-9710 Feb 10 j 00:10	11°♂07'01	15°17'05	retrograde	-9703 May 29 j 12:03	19°♂16'24	
max. Earth dist.	-9710 Feb 10 j 02:00	11°♂07'07	50.06037 AU	opposition	-9703 Aug 19 j 14:00	18°♂17'06	-14°54'54
retrograde	-9710 May 23 j 04:04	12°♂35'47		min. Earth dist.	-9703 Aug 19 j 21:46	18°♂16'44	47.82105 AU
opposition	-9710 Aug 13 j 08:39	11°♂36'26	-15°50'38	direct	-9703 Nov 09 j 14:50	17°♂17'32	
min. Earth dist.	-9710 Aug 13 j 06:59	11°♂36'31	48.12161 AU	evening set	-9702 Feb 12 j 22:12	18°♂38'03	
direct	-9710 Nov 03 j 01:09	10°♂37'07					

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 15

Attention, astronomical year style is used: The year -9702 in astronomical counting style is the year 9703 BCE in historical counting style.

conjunction	-9702 Feb 17 j 23:53	18° $\mathring{A}$ 44'55	-14°15'02	direct	-9696 Nov 15 j 21:45	24° $\mathring{A}$ 00'42	
minimum elong	-9702 Feb 18 j 00:01	18° $\mathring{A}$ 44'56	14°15'35	evening set	-9695 Feb 16 j 22:12	25° $\mathring{A}$ 18'13	
max. Earth dist.	-9702 Feb 17 j 13:39	18° $\mathring{A}$ 44'20	49.72777 AU				
morning rise	-9702 Feb 23 j 01:57	18° $\mathring{A}$ 51'49		conjunction	-9695 Feb 24 j 18:53	25° $\mathring{A}$ 28'56	-13°08'13
retrograde	-9702 May 30 j 19:27	20° $\mathring{A}$ 13'41		minimum elong	-9695 Feb 24 j 19:03	25° $\mathring{A}$ 28'56	13°08'47
opposition	-9702 Aug 20 j 18:20	19° $\mathring{A}$ 14'22	-14°45'57	max. Earth dist.	-9695 Feb 23 j 22:30	25° $\mathring{A}$ 27'46	49.23999 AU
min. Earth dist.	-9702 Aug 21 j 04:03	19° $\mathring{A}$ 13'54	47.76188 AU	morning rise	-9695 Mar 04 j 16:03	25° $\mathring{A}$ 39'40	
direct	-9702 Nov 10 j 17:33	18° $\mathring{A}$ 14'46		retrograde	-9695 Jun 06 j 11:16	26° $\mathring{A}$ 58'07	
evening set	-9701 Feb 13 j 17:03	19° $\mathring{A}$ 34'44		opposition	-9695 Aug 27 j 00:57	25° $\mathring{A}$ 58'45	-13°35'52
				min. Earth dist.	-9695 Aug 27 j 19:19	25° $\mathring{A}$ 57'53	47.25031 AU
conjunction	-9701 Feb 19 j 05:49	19° $\mathring{A}$ 42'14	-14°06'15	direct	-9695 Nov 17 j 01:53	24° $\mathring{A}$ 58'49	
minimum elong	-9701 Feb 19 j 06:00	19° $\mathring{A}$ 42'14	14°06'48	evening set	-9694 Feb 17 j 20:39	26° $\mathring{A}$ 16'01	
max. Earth dist.	-9701 Feb 18 j 19:22	19° $\mathring{A}$ 41'38	49.66845 AU	max. Earth dist.	-9694 Feb 25 j 04:17	26° $\mathring{A}$ 25'59	49.15186 AU
morning rise	-9701 Feb 24 j 18:59	19° $\mathring{A}$ 49'46					
retrograde	-9701 Jun 01 j 02:16	21° $\mathring{A}$ 11'01		conjunction	-9694 Feb 26 j 01:29	26° $\mathring{A}$ 27'12	-12°57'43
opposition	-9701 Aug 21 j 22:33	20° $\mathring{A}$ 11'42	-14°36'43	minimum elong	-9694 Feb 26 j 01:40	26° $\mathring{A}$ 27'12	12°58'17
min. Earth dist.	-9701 Aug 22 j 08:37	20° $\mathring{A}$ 11'13	47.69977 AU	morning rise	-9694 Mar 06 j 06:38	26° $\mathring{A}$ 38'24	
direct	-9701 Nov 11 j 20:30	19° $\mathring{A}$ 12'03		retrograde	-9694 Jun 07 j 14:39	27° $\mathring{A}$ 56'27	
evening set	-9700 Feb 14 j 12:30	20° $\mathring{A}$ 31'31		opposition	-9694 Aug 28 j 05:39	26° $\mathring{A}$ 57'02	-13°24'53
				min. Earth dist.	-9694 Aug 29 j 01:58	26° $\mathring{A}$ 56'04	47.15806 AU
conjunction	-9700 Feb 20 j 11:43	20° $\mathring{A}$ 39'37	-13°57'12	direct	-9694 Nov 18 j 09:42	25° $\mathring{A}$ 57'01	
minimum elong	-9700 Feb 20 j 11:52	20° $\mathring{A}$ 39'38	13°57'46	evening set	-9693 Feb 18 j 19:17	27° $\mathring{A}$ 13'53	
max. Earth dist.	-9700 Feb 19 j 23:02	20° $\mathring{A}$ 38'54	49.60632 AU	max. Earth dist.	-9693 Feb 26 j 08:29	27° $\mathring{A}$ 24'11	49.05864 AU
morning rise	-9700 Feb 26 j 11:25	20° $\mathring{A}$ 47'44					
retrograde	-9700 Jun 01 j 08:34	22° $\mathring{A}$ 08'27		conjunction	-9693 Feb 27 j 07:48	27° $\mathring{A}$ 25'31	-12°46'59
opposition	-9700 Aug 22 j 02:47	21° $\mathring{A}$ 09'08	-14°27'12	minimum elong	-9693 Feb 27 j 07:58	27° $\mathring{A}$ 25'31	12°47'34
min. Earth dist.	-9700 Aug 22 j 13:59	21° $\mathring{A}$ 08'36	47.63494 AU	morning rise	-9693 Mar 07 j 20:43	27° $\mathring{A}$ 37'10	
direct	-9700 Nov 12 j 00:13	20° $\mathring{A}$ 09'27		retrograde	-9693 Jun 08 j 18:47	28° $\mathring{A}$ 54'50	
evening set	-9699 Feb 14 j 08:38	21° $\mathring{A}$ 28'29		opposition	-9693 Aug 29 j 10:11	27° $\mathring{A}$ 55'22	-13°13'39
				min. Earth dist.	-9693 Aug 30 j 07:03	27° $\mathring{A}$ 54'22	47.06096 AU
conjunction	-9699 Feb 20 j 17:51	21° $\mathring{A}$ 37'09	-13°47'54	direct	-9693 Nov 19 j 15:57	26° $\mathring{A}$ 55'14	
minimum elong	-9699 Feb 20 j 18:02	21° $\mathring{A}$ 37'09	13°48'28	evening set	-9692 Feb 19 j 18:05	28° $\mathring{A}$ 11'47	
max. Earth dist.	-9699 Feb 20 j 04:49	21° $\mathring{A}$ 36'25	49.54124 AU				
morning rise	-9699 Feb 27 j 03:28	21° $\mathring{A}$ 45'50		conjunction	-9692 Feb 28 j 14:15	28° $\mathring{A}$ 23'51	-12°36'01
retrograde	-9699 Jun 02 j 10:00	23° $\mathring{A}$ 06'02		minimum elong	-9692 Feb 28 j 14:26	28° $\mathring{A}$ 23'52	12°36'35
opposition	-9699 Aug 23 j 07:10	22° $\mathring{A}$ 06'43	-14°17'26	max. Earth dist.	-9692 Feb 27 j 13:11	28° $\mathring{A}$ 22'26	48.96071 AU
min. Earth dist.	-9699 Aug 23 j 19:58	22° $\mathring{A}$ 06'07	47.56677 AU	morning rise	-9692 Mar 08 j 10:49	28° $\mathring{A}$ 35'58	
direct	-9699 Nov 13 j 08:34	21° $\mathring{A}$ 07'01		retrograde	-9692 Jun 09 j 00:49	29° $\mathring{A}$ 53'16	
evening set	-9698 Feb 15 j 05:26	22° $\mathring{A}$ 25'38		opposition	-9692 Aug 29 j 14:50	28° $\mathring{A}$ 53'43	-13°02'10
max. Earth dist.	-9698 Feb 21 j 09:10	22° $\mathring{A}$ 34'00	49.47275 AU	min. Earth dist.	-9692 Aug 30 j 13:56	28° $\mathring{A}$ 52'37	46.95954 AU
				direct	-9692 Nov 19 j 20:37	27° $\mathring{A}$ 53'29	
conjunction	-9698 Feb 22 j 00:01	22° $\mathring{A}$ 34'50	-13°38'20	evening set	-9691 Feb 19 j 17:15	29° $\mathring{A}$ 09'45	
minimum elong	-9698 Feb 22 j 00:10	22° $\mathring{A}$ 34'51	13°38'53				
morning rise	-9698 Feb 28 j 19:01	22° $\mathring{A}$ 44'04		conjunction	-9691 Feb 28 j 20:49	29° $\mathring{A}$ 22'15	-12°24'47
retrograde	-9698 Jun 03 j 14:36	24° $\mathring{A}$ 03'48		minimum elong	-9691 Feb 28 j 20:59	29° $\mathring{A}$ 22'16	12°25'22
opposition	-9698 Aug 24 j 11:23	23° $\mathring{A}$ 04'30	-14°07'25	max. Earth dist.	-9691 Feb 27 j 19:13	29° $\mathring{A}$ 20'47	48.85885 AU
min. Earth dist.	-9698 Aug 25 j 00:43	23° $\mathring{A}$ 03'51	47.49490 AU	morning rise	-9691 Mar 10 j 00:36	29° $\mathring{A}$ 34'47	
direct	-9698 Nov 14 j 14:24	22° $\mathring{A}$ 04'45			-9691 Mar 29 j 05:16	0° $\mathring{A}$	
evening set	-9697 Feb 16 j 02:34	23° $\mathring{A}$ 22'59		retrograde	-9691 Jun 10 j 07:46	0° $\mathring{A}$ 51'45	
					-9691 Aug 23 j 23:44	30° $\mathring{A}$	
conjunction	-9697 Feb 23 j 06:16	23° $\mathring{A}$ 32'43	-13°28'32	opposition	-9691 Aug 30 j 19:29	29° $\mathring{A}$ 52'08	-12°50'25
minimum elong	-9697 Feb 23 j 06:27	23° $\mathring{A}$ 32'43	13°29'06	min. Earth dist.	-9691 Aug 31 j 19:05	29° $\mathring{A}$ 51'00	46.85431 AU
max. Earth dist.	-9697 Feb 22 j 13:41	23° $\mathring{A}$ 31'46	49.40006 AU	direct	-9691 Nov 21 j 00:42	28° $\mathring{A}$ 51'47	
morning rise	-9697 Mar 02 j 10:24	23° $\mathring{A}$ 42'28			-9690 Feb 14 j 21:55	0° $\mathring{A}$	
retrograde	-9697 Jun 04 j 22:15	25° $\mathring{A}$ 01'46		evening set	-9690 Feb 20 j 16:40	0° $\mathring{A}$ 07'48	
opposition	-9697 Aug 25 j 15:57	24° $\mathring{A}$ 02'27	-13°57'08	max. Earth dist.	-9690 Feb 28 j 23:22	0° $\mathring{A}$ 19'08	48.75343 AU
min. Earth dist.	-9697 Aug 26 j 07:42	24° $\mathring{A}$ 01'42	47.41858 AU				
direct	-9697 Nov 15 j 16:56	23° $\mathring{A}$ 02'40		conjunction	-9690 Mar 02 j 03:18	0° $\mathring{A}$ 20'43	-12°13'18
evening set	-9696 Feb 17 j 00:08	24° $\mathring{A}$ 20'32		minimum elong	-9690 Mar 02 j 03:30	0° $\mathring{A}$ 20'44	12°13'52
				morning rise	-9690 Mar 11 j 14:23	0° $\mathring{A}$ 33'41	
conjunction	-9696 Feb 24 j 12:31	24° $\mathring{A}$ 30'45	-13°18'29	retrograde	-9690 Jun 11 j 15:13	1° $\mathring{A}$ 50'19	
minimum elong	-9696 Feb 24 j 12:41	24° $\mathring{A}$ 30'45	13°19'02	opposition	-9690 Sep 01 j 00:12	0° $\mathring{A}$ 50'39	-12°38'23
max. Earth dist.	-9696 Feb 23 j 19:02	24° $\mathring{A}$ 29'45	49.32269 AU	min. Earth dist.	-9690 Sep 02 j 01:04	0° $\mathring{A}$ 49'27	46.74594 AU
morning rise	-9696 Mar 03 j 01:12	24° $\mathring{A}$ 41'01			-9690 Oct 22 j 21:46	30° $\mathring{A}$	
retrograde	-9696 Jun 05 j 04:14	25° $\mathring{A}$ 59'53		direct	-9690 Nov 22 j 04:22	29° $\mathring{A}$ 50'11	
opposition	-9696 Aug 25 j 20:27	25° $\mathring{A}$ 00'33	-13°46'37		-9690 Dec 22 j 13:36	0° $\mathring{A}$	
min. Earth dist.	-9696 Aug 26 j 12:59	24° $\mathring{A}$ 59'46	47.33711 AU	evening set	-9689 Feb 21 j 16:13	1° $\mathring{A}$ 05'58	

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 16

Attention, astronomical year style is used: The year -9689 in astronomical counting style is the year 9690 BCE in historical counting style.

max. Earth dist.	-9689 Mar 02 j 05:46	1° $\overline{3}$ 17'42	48.64502 AU	min. Earth dist.	-9683 Sep 08 j 20:51	7° $\overline{3}$ 45'34	45.89531 AU
				direct	-9683 Nov 28 j 21:51	6° $\overline{3}$ 46'05	
conjunction	-9689 Mar 03 j 09:58	1° $\overline{3}$ 19'19	-12°01'33	evening set	-9682 Feb 26 j 20:42	8° $\overline{3}$ 00'50	
minimum elong	-9689 Mar 03 j 10:09	1° $\overline{3}$ 19'20	12°02'08	max. Earth dist.	-9682 Mar 08 j 20:00	8° $\overline{3}$ 14'40	47.79130 AU
morning rise	-9689 Mar 13 j 03:54	1° $\overline{3}$ 32'41					
retrograde	-9689 Jun 12 j 18:14	2° $\overline{3}$ 49'02		conjunction	-9682 Mar 10 j 10:53	8° $\overline{3}$ 16'56	-10°31'54
opposition	-9689 Sep 02 j 05:07	1° $\overline{3}$ 49'19	-12°26'05	minimum elong	-9682 Mar 10 j 11:05	8° $\overline{3}$ 16'57	10°32'29
min. Earth dist.	-9689 Sep 03 j 07:13	1° $\overline{3}$ 48'03	46.63463 AU	morning rise	-9682 Mar 22 j 01:04	8° $\overline{3}$ 33'03	
direct	-9689 Nov 23 j 12:10	0° $\overline{3}$ 48'46		retrograde	-9682 Jun 19 j 13:51	9° $\overline{3}$ 47'56	
evening set	-9688 Feb 22 j 15:58	2° $\overline{3}$ 04'20		opposition	-9682 Sep 08 j 17:20	8° $\overline{3}$ 47'50	-10°52'15
max. Earth dist.	-9688 Mar 02 j 10:44	2° $\overline{3}$ 16'23	48.53397 AU	min. Earth dist.	-9682 Sep 10 j 04:51	8° $\overline{3}$ 46'06	45.75597 AU
				direct	-9682 Nov 30 j 04:17	7° $\overline{3}$ 46'37	
conjunction	-9688 Mar 03 j 16:25	2° $\overline{3}$ 18'06	-11°49'32	evening set	-9681 Feb 27 j 22:26	9° $\overline{3}$ 01'13	
minimum elong	-9688 Mar 03 j 16:37	2° $\overline{3}$ 18'06	11°50'06	max. Earth dist.	-9681 Mar 10 j 02:41	9° $\overline{3}$ 15'23	47.65118 AU
morning rise	-9688 Mar 13 j 17:12	2° $\overline{3}$ 31'52					
retrograde	-9688 Jun 12 j 22:48	3° $\overline{3}$ 47'57		conjunction	-9681 Mar 11 j 18:22	9° $\overline{3}$ 17'42	-10°18'04
opposition	-9688 Sep 02 j 09:57	2° $\overline{3}$ 48'11	-12°13'29	minimum elong	-9681 Mar 11 j 18:34	9° $\overline{3}$ 17'42	10°18'39
min. Earth dist.	-9688 Sep 03 j 12:17	2° $\overline{3}$ 46'55	46.52066 AU	morning rise	-9681 Mar 23 j 14:08	9° $\overline{3}$ 34'11	
direct	-9688 Nov 23 j 18:52	1° $\overline{3}$ 47'34		retrograde	-9681 Jun 20 j 21:53	10° $\overline{3}$ 48'52	
evening set	-9687 Feb 22 j 16:00	3° $\overline{3}$ 02'57		opposition	-9681 Sep 09 j 22:52	9° $\overline{3}$ 48'40	-10°37'47
				min. Earth dist.	-9681 Sep 11 j 10:54	9° $\overline{3}$ 46'55	45.61199 AU
conjunction	-9687 Mar 04 j 23:14	3° $\overline{3}$ 17'07	-11°37'15	direct	-9681 Dec 01 j 08:57	8° $\overline{3}$ 47'18	
minimum elong	-9687 Mar 04 j 23:24	3° $\overline{3}$ 17'08	11°37'49	evening set	-9680 Feb 29 j 00:12	10° $\overline{3}$ 01'48	
max. Earth dist.	-9687 Mar 03 j 16:07	3° $\overline{3}$ 15'19	48.42001 AU	max. Earth dist.	-9680 Mar 10 j 07:27	10° $\overline{3}$ 16'10	47.50662 AU
morning rise	-9687 Mar 15 j 06:41	3° $\overline{3}$ 31'18					
retrograde	-9687 Jun 14 j 06:17	4° $\overline{3}$ 47'09		conjunction	-9680 Mar 12 j 01:40	10° $\overline{3}$ 18'38	-10°03'59
opposition	-9687 Sep 03 j 14:54	3° $\overline{3}$ 47'21	-12°00'37	minimum elong	-9680 Mar 12 j 01:51	10° $\overline{3}$ 18'39	10°04'34
min. Earth dist.	-9687 Sep 04 j 19:21	3° $\overline{3}$ 45'58	46.40370 AU	morning rise	-9680 Mar 24 j 03:09	10° $\overline{3}$ 35'29	
direct	-9687 Nov 24 j 22:29	2° $\overline{3}$ 46'39		retrograde	-9680 Jun 21 j 07:32	11° $\overline{3}$ 50'01	
evening set	-9686 Feb 23 j 16:28	4° $\overline{3}$ 01'53		opposition	-9680 Sep 10 j 04:31	10° $\overline{3}$ 49'41	-10°23'02
max. Earth dist.	-9686 Mar 04 j 22:33	4° $\overline{3}$ 14'37	48.30298 AU	min. Earth dist.	-9680 Sep 11 j 18:14	10° $\overline{3}$ 47'51	45.46398 AU
				direct	-9680 Dec 01 j 12:04	9° $\overline{3}$ 48'09	
conjunction	-9686 Mar 06 j 06:12	4° $\overline{3}$ 16'26	-11°24'41	evening set	-9679 Mar 01 j 02:16	11° $\overline{3}$ 02'34	
minimum elong	-9686 Mar 06 j 06:24	4° $\overline{3}$ 16'27	11°25'16	max. Earth dist.	-9679 Mar 11 j 14:49	11° $\overline{3}$ 17'16	47.35821 AU
morning rise	-9686 Mar 16 j 20:00	4° $\overline{3}$ 31'02					
retrograde	-9686 Jun 15 j 13:13	5° $\overline{3}$ 46'40		conjunction	-9679 Mar 13 j 09:22	11° $\overline{3}$ 19'46	-9°49'38
opposition	-9686 Sep 04 j 19:57	4° $\overline{3}$ 46'49	-11°47'28	minimum elong	-9679 Mar 13 j 09:34	11° $\overline{3}$ 19'47	9°50'12
min. Earth dist.	-9686 Sep 06 j 00:49	4° $\overline{3}$ 45'25	46.28326 AU	morning rise	-9679 Mar 25 j 16:06	11° $\overline{3}$ 36'58	
direct	-9686 Nov 26 j 02:58	3° $\overline{3}$ 46'03		retrograde	-9679 Jun 22 j 12:41	12° $\overline{3}$ 51'20	
evening set	-9685 Feb 24 j 17:03	5° $\overline{3}$ 01'08		opposition	-9679 Sep 11 j 10:13	11° $\overline{3}$ 50'53	-10°08'00
max. Earth dist.	-9685 Mar 06 j 02:55	5° $\overline{3}$ 14'08	48.18211 AU	min. Earth dist.	-9679 Sep 13 j 01:10	11° $\overline{3}$ 48'58	45.31235 AU
				direct	-9679 Dec 02 j 20:08	10° $\overline{3}$ 49'11	
conjunction	-9685 Mar 07 j 13:00	5° $\overline{3}$ 16'06	-11°11'52	evening set	-9678 Mar 02 j 04:43	12° $\overline{3}$ 03'32	
minimum elong	-9685 Mar 07 j 13:11	5° $\overline{3}$ 16'06	11°12'26	max. Earth dist.	-9678 Mar 12 j 20:43	12° $\overline{3}$ 18'28	47.20663 AU
morning rise	-9685 Mar 18 j 09:15	5° $\overline{3}$ 31'05					
retrograde	-9685 Jun 16 j 21:54	6° $\overline{3}$ 46'31		conjunction	-9678 Mar 14 j 16:59	12° $\overline{3}$ 21'05	-9°35'00
opposition	-9685 Sep 06 j 01:08	5° $\overline{3}$ 46'38	-11°34'04	minimum elong	-9678 Mar 14 j 17:09	12° $\overline{3}$ 21'05	9°35'34
min. Earth dist.	-9685 Sep 07 j 07:43	5° $\overline{3}$ 45'09	46.15881 AU	morning rise	-9678 Mar 27 j 05:05	12° $\overline{3}$ 38'38	
direct	-9685 Nov 27 j 06:47	4° $\overline{3}$ 45'46		retrograde	-9678 Jun 23 j 17:26	13° $\overline{3}$ 52'51	
evening set	-9684 Feb 25 j 17:55	6° $\overline{3}$ 00'44		opposition	-9678 Sep 12 j 16:02	12° $\overline{3}$ 52'17	-9°52'40
max. Earth dist.	-9684 Mar 06 j 09:32	6° $\overline{3}$ 14'05	48.05681 AU	min. Earth dist.	-9678 Sep 14 j 07:22	12° $\overline{3}$ 50'21	45.15788 AU
				direct	-9678 Dec 04 j 04:52	11° $\overline{3}$ 50'25	
conjunction	-9684 Mar 07 j 20:14	6° $\overline{3}$ 16'06	-10°58'48	evening set	-9677 Mar 03 j 07:04	13° $\overline{3}$ 04'43	
minimum elong	-9684 Mar 07 j 20:25	6° $\overline{3}$ 16'06	10°59'23	max. Earth dist.	-9677 Mar 14 j 03:16	13° $\overline{3}$ 19'56	47.05221 AU
morning rise	-9684 Mar 18 j 22:29	6° $\overline{3}$ 31'28					
retrograde	-9684 Jun 17 j 02:38	7° $\overline{3}$ 46'42		conjunction	-9677 Mar 16 j 00:36	13° $\overline{3}$ 22'37	-9°20'05
opposition	-9684 Sep 06 j 06:24	6° $\overline{3}$ 46'46	-11°20'23	minimum elong	-9677 Mar 16 j 00:48	13° $\overline{3}$ 22'37	9°20'39
min. Earth dist.	-9684 Sep 07 j 14:46	6° $\overline{3}$ 45'11	46.02956 AU	morning rise	-9677 Mar 28 j 17:47	13° $\overline{3}$ 40'30	
direct	-9684 Nov 27 j 14:54	5° $\overline{3}$ 45'48		retrograde	-9677 Jun 24 j 23:17	14° $\overline{3}$ 54'37	
evening set	-9683 Feb 25 j 19:15	7° $\overline{3}$ 00'39		opposition	-9677 Sep 13 j 22:09	13° $\overline{3}$ 53'56	-9°37'03
max. Earth dist.	-9683 Mar 07 j 14:28	7° $\overline{3}$ 14'14	47.92668 AU	min. Earth dist.	-9677 Sep 15 j 15:15	13° $\overline{3}$ 51'54	45.00083 AU
				direct	-9677 Dec 05 j 12:01	12° $\overline{3}$ 51'55	
conjunction	-9683 Mar 09 j 03:28	7° $\overline{3}$ 16'23	-10°45'28	evening set	-9676 Mar 03 j 09:52	14° $\overline{3}$ 06'10	
minimum elong	-9683 Mar 09 j 03:40	7° $\overline{3}$ 16'24	10°46'02	max. Earth dist.	-9676 Mar 14 j 10:43	14° $\overline{3}$ 21'42	46.89553 AU
morning rise	-9683 Mar 20 j 11:49	7° $\overline{3}$ 32'08					
retrograde	-9683 Jun 18 j 08:08	8° $\overline{3}$ 47'11		conjunction	-9676 Mar 16 j 08:27	14° $\overline{3}$ 24'25	-9°04'53
opposition	-9683 Sep 07 j 11:47	7° $\overline{3}$ 47'11	-11°06'27	minimum elong	-9676 Mar 16 j 08:38	14° $\overline{3}$ 24'25	9°05'27



## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 17

Attention, astronomical year style is used: The year -9676 in astronomical counting style is the year 9677 BCE in historical counting style.

morning rise	-9676 Mar 29 j 06:34	14° $\overline{3}$ 42'38	conjunction	-9669 Mar 24 j 20:35	21° $\overline{3}$ 48'46	-7°10'33	
retrograde	-9676 Jun 25 j 06:34	15° $\overline{3}$ 56'41	minimum elong	-9669 Mar 24 j 20:45	21° $\overline{3}$ 48'46	7°11'07	
opposition	-9676 Sep 14 j 04:07	14° $\overline{3}$ 55'54	morning rise	-9669 Apr 08 j 01:33	22° $\overline{3}$ 09'17		
min. Earth dist.	-9676 Sep 15 j 21:12	14° $\overline{3}$ 53'52	44.84145 AU	retrograde	-9669 Jul 03 j 18:32	23° $\overline{3}$ 23'16	
direct	-9676 Dec 05 j 17:51	13° $\overline{3}$ 53'43		opposition	-9669 Sep 22 j 03:44	22° $\overline{3}$ 21'40	-7°21'16
evening set	-9675 Mar 04 j 13:01	15° $\overline{3}$ 07'58		min. Earth dist.	-9669 Sep 24 j 06:14	22° $\overline{3}$ 19'08	43.62780 AU
max. Earth dist.	-9675 Mar 15 j 16:38	15° $\overline{3}$ 23'43	46.73642 AU	direct	-9669 Dec 13 j 16:08	21° $\overline{3}$ 18'22	
				evening set	-9668 Mar 10 j 19:54	22° $\overline{3}$ 33'08	
conjunction	-9675 Mar 17 j 16:27	15° $\overline{3}$ 26'33	-8°49'23	max. Earth dist.	-9668 Mar 22 j 20:12	22° $\overline{3}$ 50'30	45.51833 AU
minimum elong	-9675 Mar 17 j 16:38	15° $\overline{3}$ 26'34	8°49'58				
morning rise	-9675 Mar 30 j 19:34	15° $\overline{3}$ 45'08		conjunction	-9668 Mar 25 j 05:48	22° $\overline{3}$ 54'00	-6°53'06
retrograde	-9675 Jun 26 j 16:44	16° $\overline{3}$ 59'06		minimum elong	-9668 Mar 25 j 05:57	22° $\overline{3}$ 54'01	6°53'39
opposition	-9675 Sep 15 j 10:25	15° $\overline{3}$ 58'13	-9°04'53	morning rise	-9668 Apr 08 j 14:45	23° $\overline{3}$ 14'50	
min. Earth dist.	-9675 Sep 17 j 05:05	15° $\overline{3}$ 56'06	44.67962 AU	retrograde	-9668 Jul 04 j 02:51	24° $\overline{3}$ 28'51	
direct	-9675 Dec 06 j 21:56	14° $\overline{3}$ 55'54		opposition	-9668 Sep 22 j 11:01	23° $\overline{3}$ 27'06	-7°02'57
evening set	-9674 Mar 05 j 16:23	16° $\overline{3}$ 10'11		min. Earth dist.	-9668 Sep 24 j 14:25	23° $\overline{3}$ 24'30	43.43740 AU
max. Earth dist.	-9674 Mar 17 j 00:49	16° $\overline{3}$ 26'15	46.57457 AU	direct	-9668 Dec 14 j 01:15	22° $\overline{3}$ 23'34	
				evening set	-9667 Mar 12 j 01:32	23° $\overline{3}$ 38'28	
conjunction	-9674 Mar 19 j 00:45	16° $\overline{3}$ 29'06	-8°33'37	max. Earth dist.	-9667 Mar 24 j 04:37	23° $\overline{3}$ 56'04	45.32730 AU
minimum elong	-9674 Mar 19 j 00:55	16° $\overline{3}$ 29'07	8°34'11				
morning rise	-9674 Apr 01 j 08:23	16° $\overline{3}$ 48'01		conjunction	-9667 Mar 26 j 15:21	23° $\overline{3}$ 59'40	-6°35'21
retrograde	-9674 Jun 28 j 00:23	18° $\overline{3}$ 01'57		minimum elong	-9667 Mar 26 j 15:30	23° $\overline{3}$ 59'40	6°35'55
opposition	-9674 Sep 16 j 16:51	17° $\overline{3}$ 00'58	-8°48'21	morning rise	-9667 Apr 10 j 03:52	24° $\overline{3}$ 20'48	
min. Earth dist.	-9674 Sep 18 j 12:40	16° $\overline{3}$ 58'47	44.51473 AU	retrograde	-9667 Jul 05 j 09:35	25° $\overline{3}$ 34'52	
direct	-9674 Dec 08 j 05:23	15° $\overline{3}$ 58'31		opposition	-9667 Sep 23 j 18:45	24° $\overline{3}$ 32'57	-6°44'20
evening set	-9673 Mar 06 j 20:13	17° $\overline{3}$ 12'51		min. Earth dist.	-9667 Sep 26 j 00:05	24° $\overline{3}$ 30'14	43.24350 AU
max. Earth dist.	-9673 Mar 18 j 07:08	17° $\overline{3}$ 29'08	46.40952 AU	direct	-9667 Dec 15 j 11:19	23° $\overline{3}$ 29'12	
				evening set	-9666 Mar 13 j 07:32	24° $\overline{3}$ 44'14	
conjunction	-9673 Mar 20 j 09:04	17° $\overline{3}$ 32'06	-8°17'33	max. Earth dist.	-9666 Mar 25 j 13:28	25° $\overline{3}$ 02'05	45.13321 AU
minimum elong	-9673 Mar 20 j 09:15	17° $\overline{3}$ 32'07	8°18'08				
morning rise	-9673 Apr 02 j 21:24	17° $\overline{3}$ 51'21		conjunction	-9666 Mar 28 j 00:53	25° $\overline{3}$ 05'44	-6°17'19
retrograde	-9673 Jun 29 j 08:50	19° $\overline{3}$ 05'16		minimum elong	-9666 Mar 28 j 01:03	25° $\overline{3}$ 05'44	6°17'52
opposition	-9673 Sep 17 j 23:23	18° $\overline{3}$ 04'11	-8°31'31	morning rise	-9666 Apr 11 j 16:56	25° $\overline{3}$ 27'10	
min. Earth dist.	-9673 Sep 19 j 19:52	18° $\overline{3}$ 01'58	44.34640 AU	retrograde	-9666 Jul 06 j 17:35	26° $\overline{3}$ 41'20	
direct	-9673 Dec 09 j 12:23	17° $\overline{3}$ 01'35		opposition	-9666 Sep 25 j 02:31	25° $\overline{3}$ 39'14	-6°25'24
evening set	-9672 Mar 07 j 00:09	18° $\overline{3}$ 15'59		min. Earth dist.	-9666 Sep 27 j 07:46	25° $\overline{3}$ 36'31	43.04680 AU
max. Earth dist.	-9672 Mar 18 j 14:18	18° $\overline{3}$ 32'30	46.24044 AU	direct	-9666 Dec 16 j 19:49	24° $\overline{3}$ 35'16	
				evening set	-9665 Mar 14 j 13:51	25° $\overline{3}$ 50'28	
conjunction	-9672 Mar 20 j 17:37	18° $\overline{3}$ 35'35	-8°01'13	max. Earth dist.	-9665 Mar 26 j 21:17	26° $\overline{3}$ 08'29	44.93644 AU
minimum elong	-9672 Mar 20 j 17:47	18° $\overline{3}$ 35'36	8°01'46				
morning rise	-9672 Apr 03 j 10:19	18° $\overline{3}$ 55'10		conjunction	-9665 Mar 29 j 10:35	26° $\overline{3}$ 12'16	-5°59'00
retrograde	-9672 Jun 29 j 14:53	20° $\overline{3}$ 09'05		minimum elong	-9665 Mar 29 j 10:44	26° $\overline{3}$ 12'16	5°59'33
opposition	-9672 Sep 18 j 06:17	19° $\overline{3}$ 07'53	-8°14'23	morning rise	-9665 Apr 13 j 06:03	26° $\overline{3}$ 34'00	
min. Earth dist.	-9672 Sep 20 j 05:04	19° $\overline{3}$ 05'33	44.17374 AU	retrograde	-9665 Jul 08 j 04:37	27° $\overline{3}$ 48'16	
direct	-9672 Dec 09 j 20:42	18° $\overline{3}$ 05'08		opposition	-9665 Sep 26 j 10:36	26° $\overline{3}$ 46'00	-6°06'09
evening set	-9671 Mar 08 j 04:40	19° $\overline{3}$ 19'37		min. Earth dist.	-9665 Sep 28 j 17:31	26° $\overline{3}$ 43'12	42.84785 AU
max. Earth dist.	-9671 Mar 19 j 22:09	19° $\overline{3}$ 36'23	46.06690 AU	direct	-9665 Dec 18 j 01:36	25° $\overline{3}$ 41'50	
				evening set	-9664 Mar 14 j 20:20	26° $\overline{3}$ 57'13	
conjunction	-9671 Mar 22 j 02:29	19° $\overline{3}$ 39'32	-7°44'36	max. Earth dist.	-9664 Mar 27 j 07:23	27° $\overline{3}$ 15'31	44.73753 AU
minimum elong	-9671 Mar 22 j 02:40	19° $\overline{3}$ 39'33	7°45'10				
morning rise	-9671 Apr 04 j 23:25	19° $\overline{3}$ 59'26		conjunction	-9664 Mar 29 j 20:31	27° $\overline{3}$ 19'18	-5°40'22
retrograde	-9671 Jun 30 j 22:59	21° $\overline{3}$ 13'22		minimum elong	-9664 Mar 29 j 20:40	27° $\overline{3}$ 19'19	5°40'54
opposition	-9671 Sep 19 j 13:09	20° $\overline{3}$ 12'03	-7°56'59	morning rise	-9664 Apr 13 j 19:03	27° $\overline{3}$ 41'20	
min. Earth dist.	-9671 Sep 21 j 12:30	20° $\overline{3}$ 09'41	43.99639 AU	retrograde	-9664 Jul 08 j 15:37	28° $\overline{3}$ 55'44	
direct	-9671 Dec 11 j 03:50	19° $\overline{3}$ 09'08		opposition	-9664 Sep 26 j 18:53	27° $\overline{3}$ 53'18	-5°46'34
evening set	-9670 Mar 09 j 09:34	20° $\overline{3}$ 23'41		min. Earth dist.	-9664 Sep 29 j 02:18	27° $\overline{3}$ 50'28	42.64669 AU
max. Earth dist.	-9670 Mar 21 j 04:28	20° $\overline{3}$ 40'37	45.88853 AU	direct	-9664 Dec 18 j 09:07	26° $\overline{3}$ 48'55	
				evening set	-9663 Mar 16 j 03:30	28° $\overline{3}$ 04'32	
conjunction	-9670 Mar 23 j 11:30	20° $\overline{3}$ 43'56	-7°27'43	max. Earth dist.	-9663 Mar 28 j 15:33	28° $\overline{3}$ 23'00	44.53652 AU
minimum elong	-9670 Mar 23 j 11:40	20° $\overline{3}$ 43'57	7°28'16				
morning rise	-9670 Apr 06 j 12:39	21° $\overline{3}$ 04'09		conjunction	-9663 Mar 31 j 06:39	28° $\overline{3}$ 26'55	-5°21'26
retrograde	-9670 Jul 02 j 10:27	22° $\overline{3}$ 18'06		minimum elong	-9663 Mar 31 j 06:47	28° $\overline{3}$ 26'55	5°21'58
opposition	-9670 Sep 20 j 20:23	21° $\overline{3}$ 16'39	-7°39'16	morning rise	-9663 Apr 15 j 08:22	28° $\overline{3}$ 49'14	
min. Earth dist.	-9670 Sep 22 j 21:45	21° $\overline{3}$ 14'11	43.81437 AU		-9663 Jun 22 j 04:35	0° $\overline{\infty}$	
direct	-9670 Dec 12 j 07:49	20° $\overline{3}$ 13'33		retrograde	-9663 Jul 10 j 03:55	0° $\overline{\infty}$ 03'48	
evening set	-9669 Mar 10 j 14:27	21° $\overline{3}$ 28'12			-9663 Jul 27 j 22:15	30° $\overline{R}$ $\overline{3}$	
max. Earth dist.	-9669 Mar 22 j 13:08	21° $\overline{3}$ 45'24	45.70552 AU	opposition	-9663 Sep 28 j 03:14	29° $\overline{3}$ 01'11	-5°26'40

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 18

Attention, astronomical year style is used: The year -9663 in astronomical counting style is the year 9664 BCE in historical counting style.

min. Earth dist.	-9663 Sep 30 j 11:20	28° $\text{Z}$ 58'19	42.44348 AU	conjunction	-9656 Apr 08 j 13:24	6° $\text{Z}$ 38'33	-3°00'29
direct	-9663 Dec 19 j 16:34	27° $\text{Z}$ 56'36		minimum elong	-9656 Apr 08 j 13:29	6° $\text{Z}$ 38'34	3°01'00
evening set	-9662 Mar 17 j 10:57	29° $\text{Z}$ 12'29		morning rise	-9656 Apr 24 j 07:13	7° $\text{Z}$ 02'43	
max. Earth dist.	-9662 Mar 30 j 01:30	29° $\text{Z}$ 31'11	44.33309 AU	retrograde	-9656 Jul 18 j 06:16	8° $\text{Z}$ 18'58	
				opposition	-9656 Oct 05 j 22:08	7° $\text{Z}$ 14'57	-2°58'21
conjunction	-9662 Apr 01 j 17:11	29° $\text{Z}$ 35'10	-5°02'11	min. Earth dist.	-9656 Oct 08 j 14:24	7° $\text{Z}$ 11'33	40.92564 AU
minimum elong	-9662 Apr 01 j 17:20	29° $\text{Z}$ 35'10	5°02'43	direct	-9656 Dec 27 j 15:09	6° $\text{Z}$ 08'35	
morning rise	-9662 Apr 16 j 21:36	29° $\text{Z}$ 57'45		evening set	-9655 Mar 25 j 04:00	7° $\text{Z}$ 26'47	
	-9662 Apr 18 j 10:37	0° $\text{Z}$		max. Earth dist.	-9655 Apr 07 j 00:23	7° $\text{Z}$ 46'32	42.80837 AU
retrograde	-9662 Jul 11 j 11:46	1° $\text{Z}$ 12'30					
opposition	-9662 Sep 29 j 12:07	0° $\text{Z}$ 09'45	-5°06'27	conjunction	-9655 Apr 10 j 01:45	7° $\text{Z}$ 51'18	-2°39'10
min. Earth dist.	-9662 Oct 01 j 21:55	0° $\text{Z}$ 06'46	42.23769 AU	minimum elong	-9655 Apr 10 j 01:49	7° $\text{Z}$ 51'18	2°39'38
	-9662 Oct 07 j 10:00	30° $\text{R}$ 3		morning rise	-9655 Apr 25 j 21:03	8° $\text{Z}$ 15'41	
direct	-9662 Dec 21 j 03:13	29° $\text{Z}$ 04'57		retrograde	-9655 Jul 19 j 16:32	9° $\text{Z}$ 32'16	
	-9661 Mar 03 j 20:24	0° $\text{Z}$		opposition	-9655 Oct 07 j 08:45	8° $\text{Z}$ 27'59	-2°35'52
evening set	-9661 Mar 18 j 18:44	0° $\text{Z}$ 21'07		min. Earth dist.	-9655 Oct 10 j 03:02	8° $\text{Z}$ 24'28	40.69449 AU
max. Earth dist.	-9661 Mar 31 j 11:10	0° $\text{Z}$ 40'01	44.12695 AU	direct	-9655 Dec 29 j 01:57	7° $\text{Z}$ 21'19	
				evening set	-9654 Mar 26 j 15:06	8° $\text{Z}$ 39'55	
conjunction	-9661 Apr 03 j 03:42	0° $\text{Z}$ 44'04	-4°42'39	max. Earth dist.	-9654 Apr 08 j 13:04	8° $\text{Z}$ 59'53	42.57665 AU
minimum elong	-9661 Apr 03 j 03:49	0° $\text{Z}$ 44'05	4°43'11				
morning rise	-9661 Apr 18 j 10:52	1° $\text{Z}$ 06'57		conjunction	-9654 Apr 11 j 14:21	9° $\text{Z}$ 04'40	-2°17'32
retrograde	-9661 Jul 12 j 20:00	2° $\text{Z}$ 21'54		minimum elong	-9654 Apr 11 j 14:25	9° $\text{Z}$ 04'40	2°18'01
opposition	-9661 Sep 30 j 21:02	1° $\text{Z}$ 18'59	-4°45'54	morning rise	-9654 Apr 27 j 10:55	9° $\text{Z}$ 29'17	
min. Earth dist.	-9661 Oct 03 j 07:05	1° $\text{Z}$ 15'59	42.02889 AU	retrograde	-9654 Jul 21 j 04:14	10° $\text{Z}$ 46'12	
direct	-9661 Dec 22 j 14:10	0° $\text{Z}$ 13'59		opposition	-9654 Oct 08 j 19:43	9° $\text{Z}$ 41'40	-2°13'04
evening set	-9660 Mar 19 j 03:08	1° $\text{Z}$ 30'26		min. Earth dist.	-9654 Oct 11 j 14:01	9° $\text{Z}$ 38'08	40.46117 AU
max. Earth dist.	-9660 Mar 31 j 19:59	1° $\text{Z}$ 49'28	43.91725 AU	direct	-9654 Dec 30 j 12:43	8° $\text{Z}$ 34'41	
				evening set	-9653 Mar 28 j 02:36	9° $\text{Z}$ 53'44	
conjunction	-9660 Apr 03 j 14:40	1° $\text{Z}$ 53'40	-4°22'49	max. Earth dist.	-9653 Apr 09 j 23:45	10° $\text{Z}$ 13'47	42.34298 AU
minimum elong	-9660 Apr 03 j 14:48	1° $\text{Z}$ 53'41	4°23'20				
morning rise	-9660 Apr 19 j 00:21	2° $\text{Z}$ 16'49		conjunction	-9653 Apr 13 j 02:55	10° $\text{Z}$ 18'43	-1°55'36
retrograde	-9660 Jul 13 j 07:27	3° $\text{Z}$ 32'01		minimum elong	-9653 Apr 13 j 02:59	10° $\text{Z}$ 18'43	1°56'04
opposition	-9660 Oct 01 j 06:16	2° $\text{Z}$ 28'54	-4°25'02	morning rise	-9653 Apr 29 j 00:44	10° $\text{Z}$ 43'33	
min. Earth dist.	-9660 Oct 03 j 18:32	2° $\text{Z}$ 25'47	41.81639 AU	retrograde	-9653 Jul 22 j 19:11	12° $\text{Z}$ 00'52	
direct	-9660 Dec 22 j 21:17	1° $\text{Z}$ 23'40		opposition	-9653 Oct 10 j 06:58	10° $\text{Z}$ 56'03	-1°49'56
evening set	-9659 Mar 20 j 12:01	2° $\text{Z}$ 40'26		min. Earth dist.	-9653 Oct 13 j 02:16	10° $\text{Z}$ 52'28	40.22639 AU
max. Earth dist.	-9659 Apr 02 j 06:58	2° $\text{Z}$ 59'41	43.70359 AU	direct	-9653 Dec 31 j 21:00	9° $\text{Z}$ 48'47	
				evening set	-9652 Mar 28 j 14:38	11° $\text{Z}$ 08'19	
conjunction	-9659 Apr 05 j 02:05	3° $\text{Z}$ 03'57	-4°02'41	max. Earth dist.	-9652 Apr 10 j 13:06	11° $\text{Z}$ 28'34	42.10788 AU
minimum elong	-9659 Apr 05 j 02:12	3° $\text{Z}$ 03'57	4°03'11				
morning rise	-9659 Apr 20 j 13:59	3° $\text{Z}$ 27'21		conjunction	-9652 Apr 13 j 16:06	11° $\text{Z}$ 33'31	-1°33'23
retrograde	-9659 Jul 14 j 18:21	4° $\text{Z}$ 42'48		minimum elong	-9652 Apr 13 j 16:09	11° $\text{Z}$ 33'31	1°33'52
opposition	-9659 Oct 02 j 15:53	3° $\text{Z}$ 39'30	-4°03'51	morning rise	-9652 Apr 29 j 14:39	11° $\text{Z}$ 58'34	
min. Earth dist.	-9659 Oct 05 j 04:51	3° $\text{Z}$ 36'19	41.59965 AU	retrograde	-9652 Jul 23 j 07:54	13° $\text{Z}$ 16'18	
direct	-9659 Dec 24 j 06:43	2° $\text{Z}$ 34'00		opposition	-9652 Oct 10 j 18:29	12° $\text{Z}$ 11'15	-1°26'29
evening set	-9658 Mar 21 j 21:26	3° $\text{Z}$ 51'06		min. Earth dist.	-9652 Oct 13 j 14:37	12° $\text{Z}$ 07'36	39.99033 AU
max. Earth dist.	-9658 Apr 03 j 15:59	4° $\text{Z}$ 10'26	43.48562 AU	direct	-9651 Jan 01 j 08:59	11° $\text{Z}$ 03'41	
				evening set	-9651 Mar 30 j 03:27	12° $\text{Z}$ 23'46	
conjunction	-9658 Apr 06 j 13:33	4° $\text{Z}$ 14'52	-3°42'15	max. Earth dist.	-9651 Apr 12 j 01:26	12° $\text{Z}$ 44'07	41.87174 AU
minimum elong	-9658 Apr 06 j 13:39	4° $\text{Z}$ 14'52	3°42'46				
morning rise	-9658 Apr 22 j 03:42	4° $\text{Z}$ 38'32		conjunction	-9651 Apr 15 j 05:32	12° $\text{Z}$ 49'10	-1°10'52
retrograde	-9658 Jul 16 j 08:08	5° $\text{Z}$ 54'14		minimum elong	-9651 Apr 15 j 05:34	12° $\text{Z}$ 49'10	1°11'19
opposition	-9658 Oct 04 j 01:43	4° $\text{Z}$ 50'42	-3°42'20	morning rise	-9651 May 01 j 04:53	13° $\text{Z}$ 14'25	
min. Earth dist.	-9658 Oct 06 j 16:04	4° $\text{Z}$ 47'27	41.37879 AU	retrograde	-9651 Jul 24 j 21:35	14° $\text{Z}$ 32'37	
direct	-9658 Dec 25 j 15:15	3° $\text{Z}$ 44'57		opposition	-9651 Oct 12 j 06:22	13° $\text{Z}$ 27'20	-1°02'42
evening set	-9657 Mar 23 j 07:08	5° $\text{Z}$ 02'23		min. Earth dist.	-9651 Oct 15 j 02:32	13° $\text{Z}$ 23'39	39.75331 AU
max. Earth dist.	-9657 Apr 05 j 03:09	5° $\text{Z}$ 21'55	43.26344 AU	direct	-9650 Jan 02 j 22:18	12° $\text{Z}$ 19'28	
				evening set	-9650 Mar 31 j 16:40	13° $\text{Z}$ 40'08	
conjunction	-9657 Apr 08 j 01:28	5° $\text{Z}$ 26'25	-3°21'31	max. Earth dist.	-9650 Apr 13 j 14:19	14° $\text{Z}$ 00'36	41.63426 AU
minimum elong	-9657 Apr 08 j 01:33	5° $\text{Z}$ 26'25	3°22'01				
morning rise	-9657 Apr 23 j 17:23	5° $\text{Z}$ 50'19		conjunction	-9650 Apr 16 j 19:20	14° $\text{Z}$ 05'45	-0°48'03
retrograde	-9657 Jul 17 j 19:15	7° $\text{Z}$ 06'18		minimum elong	-9650 Apr 16 j 19:21	14° $\text{Z}$ 05'45	0°48'31
opposition	-9657 Oct 05 j 11:52	6° $\text{Z}$ 02'32	-3°20'30	morning rise	-9650 May 02 j 18:58	14° $\text{Z}$ 31'12	
min. Earth dist.	-9657 Oct 08 j 03:55	5° $\text{Z}$ 59'10	41.15392 AU		-9650 May 22 j 05:05	15° $\text{Z}$	
direct	-9657 Dec 27 j 03:14	4° $\text{Z}$ 56'29		retrograde	-9650 Jul 26 j 10:27	15° $\text{Z}$ 49'55	
evening set	-9656 Mar 23 j 17:17	6° $\text{Z}$ 14'17			-9650 Oct 01 j 15:21	15° $\text{R}$	
max. Earth dist.	-9656 Apr 05 j 13:42	6° $\text{Z}$ 33'56	43.03760 AU	opposition	-9650 Oct 13 j 18:45	14° $\text{Z}$ 44'23	-0°38'37

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 19

Attention, astronomical year style is used: The year -9650 in astronomical counting style is the year 9651 BCE in historical counting style.

min. Earth dist.	-9650 Oct 16 j 16:36	14° $\approx$ 40'36	39.51497 AU	opposition	-9644 Oct 21 j 05:08	22° $\approx$ 48'41	1°52'30
direct	-9649 Jan 04 j 11:03	13° $\approx$ 36'15		min. Earth dist.	-9644 Oct 24 j 07:43	22° $\approx$ 44'31	38.03555 AU
evening set	-9649 Apr 02 j 06:33	14° $\approx$ 57'32		direct	-9643 Jan 11 j 19:51	21° $\approx$ 38'33	
	-9649 Apr 03 j 20:13	15° $\approx$		evening set	-9643 Apr 10 j 08:18	23° $\approx$ 04'13	
max. Earth dist.	-9649 Apr 15 j 04:23	15° $\approx$ 18'09	41.39533 AU	max. Earth dist.	-9643 Apr 22 j 19:02	23° $\approx$ 24'59	39.90724 AU
conjunction	-9649 Apr 18 j 09:30	15° $\approx$ 23'20	-0°24'57	conjunction	-9643 Apr 26 j 07:04	23° $\approx$ 30'54	1°59'33
minimum elong	-9649 Apr 18 j 09:30	15° $\approx$ 23'20	0°25'24	minimum elong	-9643 Apr 26 j 07:00	23° $\approx$ 30'54	1°59'09
morning rise	-9649 May 04 j 09:21	15° $\approx$ 48'59		morning rise	-9643 May 12 j 02:22	23° $\approx$ 57'23	
retrograde	-9649 Jul 27 j 23:33	17° $\approx$ 08'14		retrograde	-9643 Aug 04 j 23:15	25° $\approx$ 20'32	
opposition	-9649 Oct 15 j 07:20	16° $\approx$ 02'29	-0°14'12	opposition	-9643 Oct 22 j 20:27	24° $\approx$ 12'59	2°18'43
min. Earth dist.	-9649 Oct 18 j 05:04	15° $\approx$ 58'41	39.27493 AU	min. Earth dist.	-9643 Oct 26 j 00:44	24° $\approx$ 08'42	37.78099 AU
	-9649 Dec 14 j 17:21	15° $\approx$		direct	-9642 Jan 13 j 09:48	23° $\approx$ 02'27	
direct	-9648 Jan 05 j 23:43	14° $\approx$ 54'03		evening set	-9642 Apr 12 j 02:54	24° $\approx$ 28'57	
	-9648 Jan 27 j 23:25	15° $\approx$		max. Earth dist.	-9642 Apr 24 j 12:29	24° $\approx$ 49'47	39.65152 AU
evening set	-9648 Apr 02 j 21:07	16° $\approx$ 16'00		conjunction	-9642 Apr 28 j 00:01	24° $\approx$ 55'43	2°24'33
max. Earth dist.	-9648 Apr 15 j 16:53	16° $\approx$ 36'37	41.15422 AU	minimum elong	-9642 Apr 27 j 23:56	24° $\approx$ 55'43	2°24'10
conjunction	-9648 Apr 18 j 24:00	16° $\approx$ 41'59	-0°01'36	morning rise	-9642 May 13 j 17:26	25° $\approx$ 22'17	
minimum elong	-9648 Apr 18 j 24:00	16° $\approx$ 41'59	0°02'03	retrograde	-9642 Aug 06 j 14:58	26° $\approx$ 46'13	
behind sun begin	-9648 Apr 18 j 17:29	16° $\approx$ 41'34		opposition	-9642 Oct 24 j 12:12	25° $\approx$ 38'18	2°45'12
behind sun end	-9648 Apr 19 j 06:30	16° $\approx$ 42'24		min. Earth dist.	-9642 Oct 27 j 16:17	25° $\approx$ 34'00	37.52548 AU
retrograde	-9650 Jul 26 j 10:27	15° $\approx$ 49'55		direct	-9641 Jan 15 j 01:47	24° $\approx$ 27'23	
direct	-9650 Jul 26 j 10:27	15° $\approx$ 49'55		evening set	-9641 Apr 13 j 22:25	25° $\approx$ 54'45	
morning rise	-9648 May 04 j 23:51	17° $\approx$ 07'49		max. Earth dist.	-9641 Apr 26 j 04:20	26° $\approx$ 15'31	39.39516 AU
asc. node	-9648 May 13 j 01:12	17° $\approx$ 20'21		conjunction	-9641 Apr 29 j 17:19	26° $\approx$ 21'36	2°49'46
retrograde	-9648 Jul 28 j 15:39	18° $\approx$ 27'39		minimum elong	-9641 Apr 29 j 17:13	26° $\approx$ 21'35	2°49'23
opposition	-9648 Oct 15 j 20:28	17° $\approx$ 21'38	0°10'32	morning rise	-9641 May 15 j 08:46	26° $\approx$ 48'13	
min. Earth dist.	-9648 Oct 18 j 19:55	17° $\approx$ 17'44	39.03257 AU	retrograde	-9641 Aug 08 j 10:45	28° $\approx$ 12'58	
direct	-9647 Jan 06 j 09:55	16° $\approx$ 12'55		opposition	-9641 Oct 26 j 04:18	27° $\approx$ 04'42	3°11'56
evening set	-9647 Apr 04 j 12:22	17° $\approx$ 35'32		min. Earth dist.	-9641 Oct 29 j 08:57	27° $\approx$ 00'21	37.26992 AU
max. Earth dist.	-9647 Apr 17 j 08:00	17° $\approx$ 56'18	40.91037 AU	direct	-9640 Jan 16 j 14:51	25° $\approx$ 53'22	
conjunction	-9647 Apr 20 j 15:07	18° $\approx$ 01'42	0°22'09	evening set	-9640 Apr 14 j 18:32	27° $\approx$ 21'42	
minimum elong	-9647 Apr 20 j 15:06	18° $\approx$ 01'42	0°21'44	max. Earth dist.	-9640 Apr 26 j 22:44	27° $\approx$ 42'30	39.13874 AU
morning rise	-9647 May 06 j 14:28	18° $\approx$ 27'41		conjunction	-9640 Apr 30 j 11:13	27° $\approx$ 48'35	3°15'12
retrograde	-9647 Jul 30 j 07:52	19° $\approx$ 48'09		minimum elong	-9640 Apr 30 j 11:06	27° $\approx$ 48'35	3°14'51
opposition	-9647 Oct 17 j 10:03	18° $\approx$ 41'51	0°35'34	morning rise	-9640 May 16 j 00:04	28° $\approx$ 15'16	
min. Earth dist.	-9647 Oct 20 j 10:22	18° $\approx$ 37'53	38.78732 AU	retrograde	-9640 Aug 09 j 05:28	29° $\approx$ 40'53	
direct	-9646 Jan 07 j 22:20	17° $\approx$ 32'49		opposition	-9640 Oct 26 j 21:07	28° $\approx$ 32'15	3°38'55
evening set	-9646 Apr 06 j 04:26	18° $\approx$ 56'10		min. Earth dist.	-9640 Oct 30 j 02:25	28° $\approx$ 27'51	37.01453 AU
max. Earth dist.	-9646 Apr 18 j 21:26	19° $\approx$ 16'54	40.66361 AU	direct	-9639 Jan 17 j 06:47	27° $\approx$ 20'32	
conjunction	-9646 Apr 22 j 06:29	19° $\approx$ 22'28	0°46'06	evening set	-9639 Apr 16 j 15:44	28° $\approx$ 49'53	
minimum elong	-9646 Apr 22 j 06:27	19° $\approx$ 22'28	0°45'41	max. Earth dist.	-9639 Apr 28 j 16:25	29° $\approx$ 10'37	38.88276 AU
morning rise	-9646 May 08 j 05:22	19° $\approx$ 48'36		conjunction	-9639 May 02 j 05:29	29° $\approx$ 16'48	3°40'51
retrograde	-9646 Aug 01 j 01:39	21° $\approx$ 09'42		minimum elong	-9639 May 02 j 05:21	29° $\approx$ 16'47	3°40'29
opposition	-9646 Oct 19 j 00:01	20° $\approx$ 03'07	1°00'55	morning rise	-9639 May 17 j 15:41	29° $\approx$ 43'29	
min. Earth dist.	-9646 Oct 22 j 00:58	19° $\approx$ 59'06	38.53931 AU		-9639 May 27 j 13:40	0° $\approx$	
direct	-9645 Jan 09 j 10:35	18° $\approx$ 53'44		retrograde	-9639 Aug 11 j 01:19	1° $\approx$ 10'02	
evening set	-9645 Apr 07 j 20:51	20° $\approx$ 17'49		opposition	-9639 Oct 28 j 14:16	0° $\approx$ 01'04	4°06'08
max. Earth dist.	-9645 Apr 20 j 12:25	20° $\approx$ 38'37	40.41386 AU		-9639 Oct 29 j 08:59	30° $\approx$	
conjunction	-9645 Apr 23 j 22:13	20° $\approx$ 44'17	1°10'19	min. Earth dist.	-9639 Oct 31 j 19:04	29° $\approx$ 56'40	36.75982 AU
minimum elong	-9645 Apr 23 j 22:11	20° $\approx$ 44'16	1°09'54	direct	-9638 Jan 18 j 23:52	28° $\approx$ 48'58	
morning rise	-9645 May 09 j 20:05	21° $\approx$ 10'32			-9638 Apr 06 j 22:35	0° $\approx$	
retrograde	-9645 Aug 02 j 16:18	22° $\approx$ 32'18		evening set	-9638 Apr 18 j 13:42	0° $\approx$ 19'23	
opposition	-9645 Oct 20 j 14:31	21° $\approx$ 25'24	1°26'34	max. Earth dist.	-9638 Apr 30 j 10:49	0° $\approx$ 40'03	38.62717 AU
min. Earth dist.	-9645 Oct 23 j 17:08	21° $\approx$ 21'16	38.28852 AU	conjunction	-9638 May 04 j 00:25	0° $\approx$ 46'19	4°06'41
direct	-9644 Jan 11 j 02:55	20° $\approx$ 15'39		minimum elong	-9638 May 04 j 00:16	0° $\approx$ 46'18	4°06'21
evening set	-9644 Apr 08 j 14:12	21° $\approx$ 40'31		morning rise	-9638 May 19 j 07:21	1° $\approx$ 13'01	
max. Earth dist.	-9644 Apr 21 j 04:01	22° $\approx$ 01'20	40.16163 AU	retrograde	-9638 Aug 12 j 20:02	2° $\approx$ 40'33	
conjunction	-9644 Apr 24 j 14:25	22° $\approx$ 07'05	1°34'49	opposition	-9638 Oct 30 j 08:12	1° $\approx$ 31'15	4°33'33
minimum elong	-9644 Apr 24 j 14:21	22° $\approx$ 07'05	1°34'24	min. Earth dist.	-9638 Nov 02 j 14:14	1° $\approx$ 26'45	36.50562 AU
morning rise	-9644 May 10 j 11:12	22° $\approx$ 33'28		direct	-9637 Jan 20 j 18:04	0° $\approx$ 18'48	
retrograde	-9644 Aug 03 j 07:13	23° $\approx$ 55'54		evening set	-9637 Apr 20 j 12:27	1° $\approx$ 50'19	

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 20

Attention, astronomical year style is used: The year -9637 in astronomical counting style is the year 9638 BCE in historical counting style.

max. Earth dist.	-9637 May 02 j 06:38	2° $\mathbf{\text{H}}$ 10'57	38.37197 AU	min. Earth dist.	-9631 Nov 13 j 15:54	12° $\mathbf{\text{H}}$ 40'02	34.71459 AU
				direct	-9630 Jan 31 j 10:25	11° $\mathbf{\text{H}}$ 29'35	
conjunction	-9637 May 05 j 19:40	2° $\mathbf{\text{H}}$ 17'14	4°32'41	evening set	-9630 May 03 j 09:37	13° $\mathbf{\text{H}}$ 10'38	
minimum elong	-9637 May 05 j 19:30	2° $\mathbf{\text{H}}$ 17'14	4°32'21	max. Earth dist.	-9630 May 13 j 12:32	13° $\mathbf{\text{H}}$ 29'37	36.56746 AU
morning rise	-9637 May 20 j 23:08	2° $\mathbf{\text{H}}$ 43'55					
retrograde	-9637 Aug 14 j 14:56	4° $\mathbf{\text{H}}$ 12'31		conjunction	-9630 May 17 j 04:14	13° $\mathbf{\text{H}}$ 36'32	7°38'12
opposition	-9637 Nov 01 j 02:34	3° $\mathbf{\text{H}}$ 02'53	5°01'10	minimum elong	-9630 May 17 j 03:56	13° $\mathbf{\text{H}}$ 36'31	7°37'59
min. Earth dist.	-9637 Nov 04 j 08:04	2° $\mathbf{\text{H}}$ 58'23	36.25158 AU	morning rise	-9630 May 30 j 19:14	14° $\mathbf{\text{H}}$ 02'11	
direct	-9636 Jan 22 j 12:52	1° $\mathbf{\text{H}}$ 50'03		retrograde	-9630 Aug 26 j 05:48	15° $\mathbf{\text{H}}$ 39'44	
evening set	-9636 Apr 21 j 12:25	3° $\mathbf{\text{H}}$ 22'47		opposition	-9630 Nov 12 j 05:32	14° $\mathbf{\text{H}}$ 27'24	8°18'29
max. Earth dist.	-9636 May 03 j 01:09	3° $\mathbf{\text{H}}$ 43'12	38.11644 AU	min. Earth dist.	-9630 Nov 15 j 13:58	14° $\mathbf{\text{H}}$ 22'32	34.45853 AU
				direct	-9629 Feb 02 j 09:28	13° $\mathbf{\text{H}}$ 11'35	
conjunction	-9636 May 06 j 15:40	3° $\mathbf{\text{H}}$ 49'39	4°58'51	evening set	-9629 May 05 j 16:45	14° $\mathbf{\text{H}}$ 54'14	
minimum elong	-9636 May 06 j 15:29	3° $\mathbf{\text{H}}$ 49'38	4°58'33	max. Earth dist.	-9629 May 15 j 11:41	15° $\mathbf{\text{H}}$ 12'46	36.30994 AU
morning rise	-9636 May 21 j 15:16	4° $\mathbf{\text{H}}$ 16'17					
retrograde	-9636 Aug 15 j 12:03	5° $\mathbf{\text{H}}$ 46'00		conjunction	-9629 May 19 j 04:09	15° $\mathbf{\text{H}}$ 19'50	8°04'54
opposition	-9636 Nov 01 j 21:29	4° $\mathbf{\text{H}}$ 36'02	5°28'58	minimum elong	-9629 May 19 j 03:51	15° $\mathbf{\text{H}}$ 19'48	8°04'41
min. Earth dist.	-9636 Nov 05 j 04:23	4° $\mathbf{\text{H}}$ 31'26	35.99722 AU	morning rise	-9629 Jun 01 j 12:11	15° $\mathbf{\text{H}}$ 45'11	
direct	-9635 Jan 23 j 04:59	3° $\mathbf{\text{H}}$ 22'49		retrograde	-9629 Aug 28 j 06:31	17° $\mathbf{\text{H}}$ 24'16	
evening set	-9635 Apr 23 j 13:22	4° $\mathbf{\text{H}}$ 56'47		opposition	-9629 Nov 14 j 05:12	16° $\mathbf{\text{H}}$ 11'30	8°46'53
max. Earth dist.	-9635 May 04 j 22:24	5° $\mathbf{\text{H}}$ 17'07	37.86018 AU	min. Earth dist.	-9629 Nov 17 j 14:07	16° $\mathbf{\text{H}}$ 06'34	34.20434 AU
				direct	-9628 Feb 04 j 06:26	14° $\mathbf{\text{H}}$ 55'13	
conjunction	-9635 May 08 j 12:24	5° $\mathbf{\text{H}}$ 23'35	5°25'10	evening set	-9628 May 07 j 01:08	16° $\mathbf{\text{H}}$ 39'33	
minimum elong	-9635 May 08 j 12:12	5° $\mathbf{\text{H}}$ 23'34	5°24'51	max. Earth dist.	-9628 May 16 j 13:55	16° $\mathbf{\text{H}}$ 57'46	36.05444 AU
morning rise	-9635 May 23 j 07:33	5° $\mathbf{\text{H}}$ 50'09					
retrograde	-9635 Aug 17 j 08:38	7° $\mathbf{\text{H}}$ 21'02		conjunction	-9628 May 20 j 04:57	17° $\mathbf{\text{H}}$ 04'47	8°31'31
opposition	-9635 Nov 03 j 17:17	6° $\mathbf{\text{H}}$ 10'43	5°56'56	minimum elong	-9628 May 20 j 04:38	17° $\mathbf{\text{H}}$ 04'45	8°31'20
min. Earth dist.	-9635 Nov 07 j 00:25	6° $\mathbf{\text{H}}$ 06'04	35.74198 AU	morning rise	-9628 Jun 02 j 05:12	17° $\mathbf{\text{H}}$ 29'47	
direct	-9634 Jan 24 j 23:51	4° $\mathbf{\text{H}}$ 57'07		retrograde	-9628 Aug 29 j 07:11	19° $\mathbf{\text{H}}$ 10'28	
evening set	-9634 Apr 25 j 15:21	6° $\mathbf{\text{H}}$ 32'23		opposition	-9628 Nov 15 j 05:37	17° $\mathbf{\text{H}}$ 57'17	9°15'13
max. Earth dist.	-9634 May 06 j 18:01	6° $\mathbf{\text{H}}$ 52'26	37.60292 AU	min. Earth dist.	-9628 Nov 18 j 14:05	17° $\mathbf{\text{H}}$ 52'21	33.95256 AU
				direct	-9627 Feb 05 j 05:03	16° $\mathbf{\text{H}}$ 40'33	
conjunction	-9634 May 10 j 09:27	6° $\mathbf{\text{H}}$ 59'05	5°51'37	evening set	-9627 May 09 j 10:58	18° $\mathbf{\text{H}}$ 26'39	
minimum elong	-9634 May 10 j 09:14	6° $\mathbf{\text{H}}$ 59'04	5°51'20	max. Earth dist.	-9627 May 18 j 14:57	18° $\mathbf{\text{H}}$ 44'22	35.80173 AU
morning rise	-9634 May 25 j 00:01	7° $\mathbf{\text{H}}$ 25'32					
retrograde	-9634 Aug 19 j 08:55	8° $\mathbf{\text{H}}$ 57'38		conjunction	-9627 May 22 j 06:20	18° $\mathbf{\text{H}}$ 51'28	8°58'01
opposition	-9634 Nov 05 j 13:37	7° $\mathbf{\text{H}}$ 46'57	6°25'03	minimum elong	-9627 May 22 j 05:59	18° $\mathbf{\text{H}}$ 51'27	8°57'50
min. Earth dist.	-9634 Nov 08 j 21:05	7° $\mathbf{\text{H}}$ 42'16	35.48591 AU	morning rise	-9627 Jun 03 j 22:32	19° $\mathbf{\text{H}}$ 16'04	
direct	-9633 Jan 26 j 17:52	6° $\mathbf{\text{H}}$ 32'56		retrograde	-9627 Aug 31 j 11:18	20° $\mathbf{\text{H}}$ 58'28	
evening set	-9633 Apr 27 j 18:16	8° $\mathbf{\text{H}}$ 09'34		opposition	-9627 Nov 17 j 06:49	19° $\mathbf{\text{H}}$ 44'51	9°43'26
max. Earth dist.	-9633 May 08 j 15:57	8° $\mathbf{\text{H}}$ 29'25	37.34457 AU	min. Earth dist.	-9627 Nov 20 j 14:29	19° $\mathbf{\text{H}}$ 39'56	33.70399 AU
				direct	-9626 Feb 07 j 02:55	18° $\mathbf{\text{H}}$ 27'40	
conjunction	-9633 May 12 j 07:21	8° $\mathbf{\text{H}}$ 36'07	6°18'10	evening set	-9626 May 11 j 21:44	20° $\mathbf{\text{H}}$ 15'39	
minimum elong	-9633 May 12 j 07:07	8° $\mathbf{\text{H}}$ 36'06	6°17'53	max. Earth dist.	-9626 May 20 j 18:07	20° $\mathbf{\text{H}}$ 32'56	35.55208 AU
morning rise	-9633 May 26 j 16:35	9° $\mathbf{\text{H}}$ 02'25					
retrograde	-9633 Aug 21 j 07:27	10° $\mathbf{\text{H}}$ 35'48		conjunction	-9626 May 24 j 08:25	20° $\mathbf{\text{H}}$ 40'00	9°24'23
opposition	-9633 Nov 07 j 10:37	9° $\mathbf{\text{H}}$ 24'44	6°53'18	minimum elong	-9626 May 24 j 08:03	20° $\mathbf{\text{H}}$ 39'58	9°24'13
min. Earth dist.	-9633 Nov 10 j 19:14	9° $\mathbf{\text{H}}$ 19'57	35.22897 AU	morning rise	-9626 Jun 05 j 15:44	21° $\mathbf{\text{H}}$ 04'08	
direct	-9632 Jan 28 j 13:43	8° $\mathbf{\text{H}}$ 10'17		retrograde	-9626 Sep 02 j 14:57	22° $\mathbf{\text{H}}$ 48'21	
evening set	-9632 Apr 28 j 22:22	9° $\mathbf{\text{H}}$ 48'19		opposition	-9626 Nov 19 j 08:57	21° $\mathbf{\text{H}}$ 34'19	10°11'29
max. Earth dist.	-9632 May 09 j 13:53	10° $\mathbf{\text{H}}$ 07'54	37.08560 AU	min. Earth dist.	-9626 Nov 22 j 16:48	21° $\mathbf{\text{H}}$ 29'22	33.45862 AU
				direct	-9625 Feb 09 j 03:46	20° $\mathbf{\text{H}}$ 16'43	
conjunction	-9632 May 13 j 05:42	10° $\mathbf{\text{H}}$ 14'42	6°44'48	evening set	-9625 May 14 j 10:08	22° $\mathbf{\text{H}}$ 06'38	
minimum elong	-9632 May 13 j 05:27	10° $\mathbf{\text{H}}$ 14'41	6°44'33	max. Earth dist.	-9625 May 22 j 21:37	22° $\mathbf{\text{H}}$ 23'23	35.30573 AU
morning rise	-9632 May 27 j 09:28	10° $\mathbf{\text{H}}$ 40'50					
retrograde	-9632 Aug 22 j 07:10	12° $\mathbf{\text{H}}$ 15'32		conjunction	-9625 May 26 j 11:11	22° $\mathbf{\text{H}}$ 30'28	9°50'32
opposition	-9632 Nov 08 j 08:10	11° $\mathbf{\text{H}}$ 04'03	7°21'38	minimum elong	-9625 May 26 j 10:49	22° $\mathbf{\text{H}}$ 30'26	9°50'22
min. Earth dist.	-9632 Nov 11 j 16:19	10° $\mathbf{\text{H}}$ 59'16	34.97168 AU	morning rise	-9625 Jun 07 j 09:15	22° $\mathbf{\text{H}}$ 54'05	
direct	-9631 Jan 29 j 12:29	9° $\mathbf{\text{H}}$ 49'09		retrograde	-9625 Sep 04 j 21:17	24° $\mathbf{\text{H}}$ 40'10	
evening set	-9631 May 01 j 03:26	11° $\mathbf{\text{H}}$ 28'40		opposition	-9625 Nov 21 j 11:34	23° $\mathbf{\text{H}}$ 25'45	10°39'19
max. Earth dist.	-9631 May 11 j 12:04	11° $\mathbf{\text{H}}$ 47'55	36.82624 AU	min. Earth dist.	-9625 Nov 24 j 18:09	23° $\mathbf{\text{H}}$ 20'50	33.21653 AU
				direct	-9624 Feb 11 j 07:01	22° $\mathbf{\text{H}}$ 07'43	
conjunction	-9631 May 15 j 04:41	11° $\mathbf{\text{H}}$ 54'50	7°11'30	evening set	-9624 May 15 j 23:48	23° $\mathbf{\text{H}}$ 59'42	
minimum elong	-9631 May 15 j 04:25	11° $\mathbf{\text{H}}$ 54'49	7°11'15	max. Earth dist.	-9624 May 24 j 01:19	24° $\mathbf{\text{H}}$ 15'48	35.06221 AU
morning rise	-9631 May 29 j 02:17	12° $\mathbf{\text{H}}$ 20'45					
retrograde	-9631 Aug 24 j 06:43	13° $\mathbf{\text{H}}$ 56'50		conjunction	-9624 May 27 j 14:51	24° $\mathbf{\text{H}}$ 22'57	10°16'27
opposition	-9631 Nov 10 j 06:31	12° $\mathbf{\text{H}}$ 44'56	7°50'03	minimum elong	-9624 May 27 j 14:27	24° $\mathbf{\text{H}}$ 22'55	10°16'20

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 21

Attention, astronomical year style is used: The year -9624 in astronomical counting style is the year 9625 BCE in historical counting style.

morning rise	-9624 Jun 08 j 02:53	24° $\mathbf{\text{H}}$ 45'59		opposition	-9618 Dec 05 j 08:12	7° $\mathbf{\text{V}}$ 22'15	13°44'05
retrograde	-9624 Sep 06 j 03:23	26° $\mathbf{\text{H}}$ 34'02		min. Earth dist.	-9618 Dec 08 j 10:51	7° $\mathbf{\text{V}}$ 17'23	31.59998 AU
opposition	-9624 Nov 22 j 15:20	25° $\mathbf{\text{H}}$ 19'12	11°06'54	direct	-9617 Feb 24 j 16:02	6° $\mathbf{\text{V}}$ 01'06	
min. Earth dist.	-9624 Nov 25 j 22:39	25° $\mathbf{\text{H}}$ 14'13	32.97726 AU	evening set	-9617 Jun 03 j 20:24	8° $\mathbf{\text{V}}$ 09'59	
direct	-9623 Feb 12 j 09:17	24° $\mathbf{\text{H}}$ 00'46		max. Earth dist.	-9617 Jun 08 j 05:55	8° $\mathbf{\text{V}}$ 19'26	33.43558 AU
evening set	-9623 May 18 j 15:05	25° $\mathbf{\text{H}}$ 54'53					
max. Earth dist.	-9623 May 26 j 07:02	26° $\mathbf{\text{H}}$ 10'21	34.82135 AU	conjunction	-9617 Jun 11 j 13:21	8° $\mathbf{\text{V}}$ 26'34	13°07'01
				minimum elong	-9617 Jun 11 j 12:55	8° $\mathbf{\text{V}}$ 26'31	13°07'01
conjunction	-9623 May 29 j 19:11	26° $\mathbf{\text{H}}$ 17'28	10°42'05	morning rise	-9617 Jun 19 j 04:26	8° $\mathbf{\text{V}}$ 43'00	
minimum elong	-9623 May 29 j 18:48	26° $\mathbf{\text{H}}$ 17'26	10°41'59	retrograde	-9617 Sep 21 j 11:02	10° $\mathbf{\text{V}}$ 47'35	
morning rise	-9623 Jun 09 j 20:27	26° $\mathbf{\text{H}}$ 39'51		opposition	-9617 Dec 07 j 18:01	9° $\mathbf{\text{V}}$ 29'37	14°08'13
retrograde	-9623 Sep 08 j 07:59	28° $\mathbf{\text{H}}$ 29'57		min. Earth dist.	-9617 Dec 10 j 20:28	9° $\mathbf{\text{V}}$ 24'44	31.38445 AU
opposition	-9623 Nov 24 j 19:56	27° $\mathbf{\text{H}}$ 14'43	11°34'12	direct	-9616 Feb 26 j 24:00	8° $\mathbf{\text{V}}$ 08'01	
min. Earth dist.	-9623 Nov 28 j 01:55	27° $\mathbf{\text{H}}$ 09'47	32.74051 AU	evening set	-9616 Jun 06 j 00:04	10° $\mathbf{\text{V}}$ 19'48	
direct	-9622 Feb 14 j 13:46	25° $\mathbf{\text{H}}$ 55'51		max. Earth dist.	-9616 Jun 09 j 17:32	10° $\mathbf{\text{V}}$ 27'54	33.21988 AU
evening set	-9622 May 21 j 07:48	27° $\mathbf{\text{H}}$ 52'11					
max. Earth dist.	-9622 May 28 j 11:38	28° $\mathbf{\text{H}}$ 06'47	34.58285 AU	conjunction	-9616 Jun 12 j 22:54	10° $\mathbf{\text{V}}$ 34'55	13°29'01
				minimum elong	-9616 Jun 12 j 22:27	10° $\mathbf{\text{V}}$ 34'53	13°29'03
conjunction	-9622 Jun 01 j 00:20	28° $\mathbf{\text{H}}$ 14'01	11°07'24	morning rise	-9616 Jun 19 j 20:04	10° $\mathbf{\text{V}}$ 49'54	
minimum elong	-9622 May 31 j 23:55	28° $\mathbf{\text{H}}$ 13'59	11°07'20	retrograde	-9616 Sep 22 j 23:38	12° $\mathbf{\text{V}}$ 57'22	
morning rise	-9622 Jun 11 j 14:17	28° $\mathbf{\text{H}}$ 35'40		opposition	-9616 Dec 09 j 04:46	11° $\mathbf{\text{V}}$ 38'57	14°31'30
	-9622 Jul 30 j 05:02	0° $\mathbf{\text{V}}$		min. Earth dist.	-9616 Dec 12 j 04:42	11° $\mathbf{\text{V}}$ 34'12	31.17503 AU
retrograde	-9622 Sep 10 j 14:38	0° $\mathbf{\text{V}}$ 27'56		direct	-9615 Feb 28 j 11:17	10° $\mathbf{\text{V}}$ 16'56	
	-9622 Oct 24 j 06:01	30° $\mathbf{\text{R}}$ $\mathbf{\text{H}}$		evening set	-9615 Jun 09 j 06:10	12° $\mathbf{\text{V}}$ 31'50	
opposition	-9622 Nov 27 j 01:27	29° $\mathbf{\text{H}}$ 12'16	12°01'08	max. Earth dist.	-9615 Jun 12 j 04:57	12° $\mathbf{\text{V}}$ 38'18	33.01064 AU
min. Earth dist.	-9622 Nov 30 j 07:42	29° $\mathbf{\text{H}}$ 07'17	32.50634 AU				
direct	-9621 Feb 16 j 16:31	27° $\mathbf{\text{H}}$ 52'58		conjunction	-9615 Jun 15 j 09:09	12° $\mathbf{\text{V}}$ 45'17	13°50'11
evening set	-9621 May 24 j 02:02	29° $\mathbf{\text{H}}$ 51'35		minimum elong	-9615 Jun 15 j 08:43	12° $\mathbf{\text{V}}$ 45'15	13°50'14
	-9621 May 28 j 04:15	0° $\mathbf{\text{V}}$		morning rise	-9615 Jun 21 j 10:41	12° $\mathbf{\text{V}}$ 58'36	
max. Earth dist.	-9621 May 30 j 19:19	0° $\mathbf{\text{V}}$ 05'26	34.34683 AU	retrograde	-9615 Sep 25 j 12:47	15° $\mathbf{\text{V}}$ 09'11	
				opposition	-9615 Dec 11 j 16:34	13° $\mathbf{\text{V}}$ 50'20	14°53'52
conjunction	-9621 Jun 03 j 06:15	0° $\mathbf{\text{V}}$ 12'36	11°32'21	min. Earth dist.	-9615 Dec 14 j 15:41	13° $\mathbf{\text{V}}$ 45'37	30.97253 AU
minimum elong	-9621 Jun 03 j 05:50	0° $\mathbf{\text{V}}$ 12'34	11°32'16	direct	-9614 Mar 02 j 20:50	12° $\mathbf{\text{V}}$ 27'55	
morning rise	-9621 Jun 13 j 07:51	0° $\mathbf{\text{V}}$ 33'24		evening set	-9614 Jun 12 j 15:48	14° $\mathbf{\text{V}}$ 46'13	
retrograde	-9621 Sep 12 j 20:47	2° $\mathbf{\text{V}}$ 27'55		max. Earth dist.	-9614 Jun 14 j 18:59	14° $\mathbf{\text{V}}$ 50'56	32.80874 AU
opposition	-9621 Nov 29 j 07:52	1° $\mathbf{\text{V}}$ 11'50	12°27'40				
min. Earth dist.	-9621 Dec 02 j 13:21	1° $\mathbf{\text{V}}$ 06'51	32.27461 AU	conjunction	-9614 Jun 17 j 20:14	14° $\mathbf{\text{V}}$ 57'43	14°10'25
	-9620 Jan 26 j 12:34	30° $\mathbf{\text{R}}$ $\mathbf{\text{H}}$		minimum elong	-9614 Jun 17 j 19:47	14° $\mathbf{\text{V}}$ 57'40	14°10'30
direct	-9620 Feb 18 j 21:21	29° $\mathbf{\text{H}}$ 52'04		morning rise	-9614 Jun 22 j 23:20	15° $\mathbf{\text{V}}$ 09'06	
	-9620 Mar 12 j 22:13	0° $\mathbf{\text{V}}$		retrograde	-9614 Sep 28 j 00:52	17° $\mathbf{\text{V}}$ 23'03	
evening set	-9620 May 25 j 22:01	1° $\mathbf{\text{V}}$ 53'05		opposition	-9614 Dec 14 j 05:10	16° $\mathbf{\text{V}}$ 03'49	15°15'13
max. Earth dist.	-9620 Jun 01 j 01:39	2° $\mathbf{\text{V}}$ 05'54	34.11348 AU	min. Earth dist.	-9614 Dec 17 j 01:38	15° $\mathbf{\text{V}}$ 59'14	30.77739 AU
				direct	-9613 Mar 05 j 08:41	14° $\mathbf{\text{V}}$ 41'02	
conjunction	-9620 Jun 04 j 12:55	2° $\mathbf{\text{V}}$ 13'10	11°56'51	evening set	-9613 Jun 16 j 06:07	17° $\mathbf{\text{V}}$ 03'08	
minimum elong	-9620 Jun 04 j 12:28	2° $\mathbf{\text{V}}$ 13'08	11°56'48	max. Earth dist.	-9613 Jun 17 j 07:44	17° $\mathbf{\text{V}}$ 05'32	32.61441 AU
morning rise	-9620 Jun 14 j 01:32	2° $\mathbf{\text{V}}$ 33'03					
retrograde	-9620 Sep 14 j 05:32	4° $\mathbf{\text{V}}$ 29'55		conjunction	-9613 Jun 20 j 07:55	17° $\mathbf{\text{V}}$ 12'16	14°29'39
opposition	-9620 Nov 30 j 14:58	3° $\mathbf{\text{V}}$ 13'21	12°53'44	minimum elong	-9613 Jun 20 j 07:30	17° $\mathbf{\text{V}}$ 12'14	14°29'45
min. Earth dist.	-9620 Dec 03 j 19:51	3° $\mathbf{\text{V}}$ 08'24	32.04593 AU	morning rise	-9613 Jun 24 j 08:39	17° $\mathbf{\text{V}}$ 21'17	
direct	-9619 Feb 20 j 01:56	1° $\mathbf{\text{V}}$ 53'08		retrograde	-9613 Sep 30 j 15:23	19° $\mathbf{\text{V}}$ 39'03	
evening set	-9619 May 28 j 19:42	3° $\mathbf{\text{V}}$ 56'39		opposition	-9613 Dec 16 j 18:43	18° $\mathbf{\text{V}}$ 19'27	15°35'28
max. Earth dist.	-9619 Jun 03 j 10:51	4° $\mathbf{\text{V}}$ 08'30	33.88327 AU	min. Earth dist.	-9613 Dec 19 j 13:44	18° $\mathbf{\text{V}}$ 14'57	30.58980 AU
				direct	-9612 Mar 06 j 18:50	16° $\mathbf{\text{V}}$ 56'21	
conjunction	-9619 Jun 06 j 20:29	4° $\mathbf{\text{V}}$ 15'42	12°20'51	evening set	-9612 Jun 19 j 06:27	19° $\mathbf{\text{V}}$ 23'08	
minimum elong	-9619 Jun 06 j 20:03	4° $\mathbf{\text{V}}$ 15'39	12°20'48	max. Earth dist.	-9612 Jun 18 j 23:38	19° $\mathbf{\text{V}}$ 22'30	32.42759 AU
morning rise	-9619 Jun 15 j 18:58	4° $\mathbf{\text{V}}$ 34'33					
retrograde	-9619 Sep 16 j 13:37	6° $\mathbf{\text{V}}$ 33'52		conjunction	-9612 Jun 21 j 20:34	19° $\mathbf{\text{V}}$ 28'59	14°47'49
opposition	-9619 Dec 02 j 23:15	5° $\mathbf{\text{V}}$ 16'50	13°19'14	minimum elong	-9612 Jun 21 j 20:08	19° $\mathbf{\text{V}}$ 28'57	14°47'57
min. Earth dist.	-9619 Dec 06 j 03:46	5° $\mathbf{\text{V}}$ 11'53	31.82073 AU	morning rise	-9612 Jun 24 j 09:44	19° $\mathbf{\text{V}}$ 34'45	
direct	-9618 Feb 22 j 08:35	3° $\mathbf{\text{V}}$ 56'09		retrograde	-9612 Oct 02 j 05:23	21° $\mathbf{\text{V}}$ 57'12	
evening set	-9618 May 31 j 19:04	6° $\mathbf{\text{V}}$ 02'17		opposition	-9612 Dec 18 j 09:13	20° $\mathbf{\text{V}}$ 37'15	15°54'33
max. Earth dist.	-9618 Jun 05 j 19:35	6° $\mathbf{\text{V}}$ 12'58	33.65709 AU	min. Earth dist.	-9612 Dec 21 j 02:21	20° $\mathbf{\text{V}}$ 32'52	30.40944 AU
				direct	-9611 Mar 09 j 07:00	19° $\mathbf{\text{V}}$ 13'51	
conjunction	-9618 Jun 09 j 04:26	6° $\mathbf{\text{V}}$ 20'10	12°44'15	max. Earth dist.	-9611 Jun 21 j 14:12	21° $\mathbf{\text{V}}$ 41'26	32.24820 AU
minimum elong	-9618 Jun 09 j 03:59	6° $\mathbf{\text{V}}$ 20'07	12°44'15				
morning rise	-9618 Jun 17 j 11:52	6° $\mathbf{\text{V}}$ 37'53		conjunction	-9611 Jun 24 j 09:51	21° $\mathbf{\text{V}}$ 47'53	15°04'50
retrograde	-9618 Sep 19 j 00:36	8° $\mathbf{\text{V}}$ 39'45		minimum elong	-9611 Jun 24 j 09:27	21° $\mathbf{\text{V}}$ 47'50	15°04'58

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Attention, astronomical year style is used: The year -9611 in astronomical counting style is the year 9612 BCE in historical counting style.

retrograde	-9611 Oct 04 j 21:45	24° $\Upsilon$ 17'30		retrograde	-9603 Oct 25 j 03:24	14° $\text{S}$ 03'17	
opposition	-9611 Dec 21 j 00:43	22° $\Upsilon$ 57'13	16°12'21	opposition	-9602 Jan 10 j 09:48	12° $\text{S}$ 40'25	17°40'01
min. Earth dist.	-9611 Dec 23 j 15:38	22° $\Upsilon$ 52'57	30.23639 AU	min. Earth dist.	-9602 Jan 12 j 04:37	12° $\text{S}$ 37'26	29.12715 AU
direct	-9610 Mar 11 j 19:25	21° $\Upsilon$ 33'32		direct	-9602 Mar 31 j 16:30	11° $\text{S}$ 14'48	
max. Earth dist.	-9610 Jun 24 j 07:16	24° $\Upsilon$ 02'40	32.07597 AU	max. Earth dist.	-9602 Jul 14 j 19:23	13° $\text{S}$ 53'33	30.98875 AU
conjunction	-9610 Jun 26 j 23:56	24° $\Upsilon$ 08'53	15°20'37	conjunction	-9602 Jul 16 j 14:07	13° $\text{S}$ 57'52	16°34'15
minimum elong	-9610 Jun 26 j 23:33	24° $\Upsilon$ 08'50	15°20'48	minimum elong	-9602 Jul 16 j 13:58	13° $\text{S}$ 57'51	16°34'36
retrograde	-9610 Oct 07 j 12:52	26° $\Upsilon$ 39'52			-9602 Aug 11 j 21:15	15° $\text{S}$	
opposition	-9610 Dec 23 j 17:14	25° $\Upsilon$ 19'15	16°28'51	retrograde	-9602 Oct 28 j 00:48	16° $\text{S}$ 37'22	
min. Earth dist.	-9610 Dec 26 j 06:47	25° $\Upsilon$ 15'04	30.07025 AU	opposition	-9601 Jan 13 j 07:51	15° $\text{S}$ 14'17	17°42'49
direct	-9609 Mar 14 j 09:22	23° $\Upsilon$ 55'17		min. Earth dist.	-9601 Jan 14 j 23:23	15° $\text{S}$ 11'31	29.03136 AU
max. Earth dist.	-9609 Jun 26 j 23:45	26° $\Upsilon$ 25'48	31.91098 AU		-9601 Jan 21 j 21:40	15° $\text{R}$ $\text{S}$	
conjunction	-9609 Jun 29 j 14:44	26° $\Upsilon$ 31'53	15°35'08	direct	-9601 Apr 03 j 11:57	13° $\text{S}$ 48'33	
minimum elong	-9609 Jun 29 j 14:23	26° $\Upsilon$ 31'51	15°35'19		-9601 Jun 09 j 00:12	15° $\text{S}$	
retrograde	-9609 Oct 10 j 07:09	29° $\Upsilon$ 04'12		max. Earth dist.	-9601 Jul 17 j 18:57	16° $\text{S}$ 28'20	30.89829 AU
opposition	-9609 Dec 26 j 10:17	27° $\Upsilon$ 43'14	16°43'56	conjunction	-9601 Jul 19 j 08:59	16° $\text{S}$ 32'11	16°35'43
min. Earth dist.	-9609 Dec 28 j 20:58	27° $\Upsilon$ 39'14	29.91117 AU	minimum elong	-9601 Jul 19 j 08:52	16° $\text{S}$ 32'11	16°36'04
direct	-9608 Mar 15 j 23:48	26° $\Upsilon$ 18'59		retrograde	-9601 Oct 30 j 21:01	19° $\text{S}$ 12'24	
max. Earth dist.	-9608 Jun 28 j 17:51	28° $\Upsilon$ 50'54	31.75314 AU	opposition	-9600 Jan 16 j 06:18	17° $\text{S}$ 49'08	17°43'36
conjunction	-9608 Jul 01 j 06:23	28° $\Upsilon$ 56'48	15°48'18	min. Earth dist.	-9600 Jan 17 j 18:34	17° $\text{S}$ 46'36	28.94674 AU
minimum elong	-9608 Jul 01 j 06:02	28° $\Upsilon$ 56'46	15°48'31	direct	-9600 Apr 05 j 09:15	16° $\text{S}$ 23'22	
	-9608 Jul 29 j 01:37	0° $\text{S}$		max. Earth dist.	-9600 Jul 19 j 16:37	19° $\text{S}$ 03'52	30.81948 AU
retrograde	-9608 Oct 12 j 00:29	1° $\text{S}$ 30'21		conjunction	-9600 Jul 21 j 03:58	19° $\text{S}$ 07'28	16°35'17
opposition	-9608 Dec 28 j 04:31	0° $\text{S}$ 09'04	16°57'31	minimum elong	-9600 Jul 21 j 03:55	19° $\text{S}$ 07'27	16°35'41
min. Earth dist.	-9608 Dec 30 j 14:05	0° $\text{S}$ 05'07	29.75922 AU	retrograde	-9600 Nov 01 j 19:29	21° $\text{S}$ 48'19	
	-9607 Jan 02 j 16:59	30° $\text{R}$ $\Upsilon$		opposition	-9599 Jan 18 j 05:15	20° $\text{S}$ 24'55	17°42'18
direct	-9607 Mar 18 j 15:36	28° $\Upsilon$ 44'33		min. Earth dist.	-9599 Jan 19 j 13:31	20° $\text{S}$ 22'40	28.87344 AU
	-9607 May 27 j 12:40	0° $\text{S}$		direct	-9599 Apr 08 j 05:50	18° $\text{S}$ 59'07	
max. Earth dist.	-9607 Jul 01 j 12:35	1° $\text{S}$ 17'46	31.60301 AU	conjunction	-9599 Jul 23 j 23:15	21° $\text{S}$ 43'36	16°32'56
conjunction	-9607 Jul 03 j 22:26	1° $\text{S}$ 23'27	16°00'01	minimum elong	-9599 Jul 23 j 23:14	21° $\text{S}$ 43'35	16°33'20
minimum elong	-9607 Jul 03 j 22:07	1° $\text{S}$ 23'25	16°00'14	max. Earth dist.	-9599 Jul 22 j 16:27	21° $\text{S}$ 40'27	30.75205 AU
retrograde	-9607 Oct 14 j 20:06	3° $\text{S}$ 58'11		retrograde	-9599 Nov 04 j 15:20	24° $\text{S}$ 25'00	
opposition	-9607 Dec 30 j 23:24	2° $\text{S}$ 36'33	17°09'32	opposition	-9598 Jan 21 j 04:48	23° $\text{S}$ 01'30	17°38'56
min. Earth dist.	-9606 Jan 02 j 05:34	2° $\text{S}$ 32'50	29.61489 AU	min. Earth dist.	-9598 Jan 22 j 10:15	22° $\text{S}$ 59'26	28.81099 AU
direct	-9606 Mar 21 j 10:40	1° $\text{S}$ 11'47		direct	-9598 Apr 11 j 03:20	21° $\text{S}$ 35'44	
max. Earth dist.	-9606 Jul 04 j 07:34	3° $\text{S}$ 46'13	31.46089 AU	conjunction	-9598 Jul 26 j 18:44	24° $\text{S}$ 20'26	16°28'39
conjunction	-9606 Jul 06 j 15:09	3° $\text{S}$ 51'42	16°10'13	minimum elong	-9598 Jul 26 j 18:45	24° $\text{S}$ 20'27	16°29'05
minimum elong	-9606 Jul 06 j 14:52	3° $\text{S}$ 51'41	16°10'29	max. Earth dist.	-9598 Jul 25 j 14:51	24° $\text{S}$ 17'35	30.69579 AU
retrograde	-9606 Oct 17 j 15:02	6° $\text{S}$ 27'33		retrograde	-9598 Nov 07 j 14:18	27° $\text{S}$ 02'17	
opposition	-9605 Jan 02 j 19:01	5° $\text{S}$ 05'35	17°19'53	opposition	-9597 Jan 24 j 04:20	25° $\text{S}$ 38'42	17°33'29
min. Earth dist.	-9605 Jan 04 j 23:43	5° $\text{S}$ 01'57	29.47881 AU	min. Earth dist.	-9597 Jan 25 j 05:31	25° $\text{S}$ 36'57	28.75920 AU
direct	-9605 Mar 24 j 03:49	3° $\text{S}$ 40'33		direct	-9597 Apr 14 j 00:50	24° $\text{S}$ 12'58	
max. Earth dist.	-9605 Jul 07 j 04:18	6° $\text{S}$ 16'14	31.32770 AU	conjunction	-9597 Jul 29 j 14:28	26° $\text{S}$ 57'50	16°22'27
conjunction	-9605 Jul 09 j 08:18	6° $\text{S}$ 21'24	16°18'49	minimum elong	-9597 Jul 29 j 14:32	26° $\text{S}$ 57'50	16°22'54
minimum elong	-9605 Jul 09 j 08:03	6° $\text{S}$ 21'22	16°19'06	max. Earth dist.	-9597 Jul 28 j 14:35	26° $\text{S}$ 55'23	30.65017 AU
retrograde	-9605 Oct 20 j 10:44	8° $\text{S}$ 58'16		retrograde	-9597 Nov 10 j 11:01	29° $\text{S}$ 40'02	
opposition	-9604 Jan 05 j 15:15	7° $\text{S}$ 35'59	17°28'28	opposition	-9596 Jan 27 j 04:23	28° $\text{S}$ 16'23	17°25'58
min. Earth dist.	-9604 Jan 07 j 16:14	7° $\text{S}$ 32'35	29.35157 AU	min. Earth dist.	-9596 Jan 28 j 03:12	28° $\text{S}$ 14'47	28.71759 AU
direct	-9604 Mar 25 j 23:58	6° $\text{S}$ 10'43		direct	-9596 Apr 15 j 21:53	26° $\text{S}$ 50'43	
max. Earth dist.	-9604 Jul 09 j 00:04	8° $\text{S}$ 47'26	31.20398 AU	conjunction	-9596 Jul 31 j 10:10	29° $\text{S}$ 35'34	16°14'21
conjunction	-9604 Jul 11 j 01:49	8° $\text{S}$ 52'24	16°25'44	minimum elong	-9596 Jul 31 j 10:16	29° $\text{S}$ 35'35	16°14'49
minimum elong	-9604 Jul 11 j 01:36	8° $\text{S}$ 52'22	16°26'04	max. Earth dist.	-9596 Jul 30 j 13:38	29° $\text{S}$ 33'28	30.61507 AU
retrograde	-9604 Oct 22 j 08:05	11° $\text{S}$ 30'13			-9596 Aug 10 j 09:06	0° $\text{II}$	
opposition	-9603 Jan 07 j 12:12	10° $\text{S}$ 07'37	17°35'12	retrograde	-9596 Nov 12 j 09:18	2° $\text{II}$ 17'59	
min. Earth dist.	-9603 Jan 09 j 10:48	10° $\text{S}$ 04'23	29.23412 AU	opposition	-9595 Jan 29 j 04:29	0° $\text{II}$ 54'17	17°16'23
direct	-9603 Mar 28 j 19:17	8° $\text{S}$ 42'09		min. Earth dist.	-9595 Jan 29 j 22:50	0° $\text{II}$ 53'00	28.68600 AU
max. Earth dist.	-9603 Jul 11 j 22:36	11° $\text{S}$ 20'02	31.09079 AU		-9595 Mar 05 j 05:29	30° $\text{R}$ $\text{S}$	
conjunction	-9603 Jul 13 j 19:54	11° $\text{S}$ 24'35	16°30'54	direct	-9595 Apr 18 j 22:02	29° $\text{S}$ 28'42	
minimum elong	-9603 Jul 13 j 19:43	11° $\text{S}$ 24'34	16°31'13		-9595 May 31 j 18:42	0° $\text{II}$	

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Attention, astronomical year style is used: The year -9595 in astronomical counting style is the year 9596 BCE in historical counting style.

conjunction	-9595 Aug 03 j 06:00	2°II13'27	16°04'22	min. Earth dist.	-9587 Feb 19 j 13:16	21°II42'25	28.82053 AU
minimum elong	-9595 Aug 03 j 06:08	2°II13'28	16°04'50	direct	-9587 May 10 j 13:14	20°II17'28	
max. Earth dist.	-9595 Aug 02 j 12:55	2°II11'42	30.59020 AU	evening set	-9587 Aug 17 j 03:45	22°II42'02	
retrograde	-9595 Nov 15 j 06:37	4°II55'58					
opposition	-9594 Feb 01 j 04:48	3°II32'13	17°04'47	conjunction	-9587 Aug 23 j 10:44	22°II57'13	13°40'07
min. Earth dist.	-9594 Feb 01 j 20:37	3°II31'07	28.66449 AU	minimum elong	-9587 Aug 23 j 11:06	22°II57'15	13°40'41
direct	-9594 Apr 21 j 19:40	2°II06'44		max. Earth dist.	-9587 Aug 23 j 24:00	22°II58'33	30.79334 AU
				morning rise	-9587 Aug 29 j 18:26	23°II12'27	
conjunction	-9594 Aug 06 j 01:39	4°II51'13	15°52'29	retrograde	-9587 Dec 06 j 02:16	25°II36'45	
minimum elong	-9594 Aug 06 j 01:50	4°II51'14	15°52'59	opposition	-9586 Feb 22 j 22:12	24°II13'27	14°23'09
max. Earth dist.	-9594 Aug 05 j 12:26	4°II49'52	30.57583 AU	min. Earth dist.	-9586 Feb 22 j 06:24	24°II14'33	28.88976 AU
retrograde	-9594 Nov 18 j 04:25	7°II33'43		direct	-9586 May 13 j 10:25	22°II49'35	
opposition	-9593 Feb 04 j 04:53	6°II09'57	16°51'10	evening set	-9586 Aug 18 j 23:30	25°II11'09	
min. Earth dist.	-9593 Feb 04 j 16:16	6°II09'09	28.65304 AU				
direct	-9593 Apr 24 j 19:47	4°II44'33		conjunction	-9586 Aug 26 j 03:33	25°II28'21	13°14'54
				minimum elong	-9586 Aug 26 j 03:57	25°II28'23	13°15'28
conjunction	-9593 Aug 08 j 21:07	7°II28'40	15°38'47	max. Earth dist.	-9586 Aug 26 j 21:20	25°II30'08	30.87171 AU
minimum elong	-9593 Aug 08 j 21:20	7°II28'41	15°39'17	morning rise	-9586 Sep 02 j 08:17	25°II45'36	
max. Earth dist.	-9593 Aug 08 j 10:54	7°II27'37	30.57189 AU	retrograde	-9586 Dec 08 j 19:30	28°II07'09	
retrograde	-9593 Nov 21 j 02:17	10°II11'02		opposition	-9585 Feb 25 j 19:37	26°II44'03	13°55'22
opposition	-9592 Feb 07 j 04:48	8°II47'14	16°35'34	min. Earth dist.	-9585 Feb 25 j 01:18	26°II45'18	28.96980 AU
min. Earth dist.	-9592 Feb 07 j 13:18	8°II46'38	28.65211 AU	direct	-9585 May 16 j 06:49	25°II20'30	
direct	-9592 Apr 26 j 18:34	7°II21'57		evening set	-9585 Aug 20 j 20:57	27°II39'13	
conjunction	-9592 Aug 10 j 16:24	10°II05'35	15°23'16	conjunction	-9585 Aug 28 j 19:49	27°II58'12	12°48'23
minimum elong	-9592 Aug 10 j 16:39	10°II05'37	15°23'47	minimum elong	-9585 Aug 28 j 20:12	27°II58'14	12°48'57
max. Earth dist.	-9592 Aug 10 j 10:47	10°II05'01	30.57901 AU	max. Earth dist.	-9585 Aug 29 j 16:30	28°II00'15	30.96072 AU
retrograde	-9592 Nov 22 j 22:58	12°II47'42		morning rise	-9585 Sep 05 j 19:27	28°II17'14	
opposition	-9591 Feb 09 j 04:38	11°II23'53	16°18'01		-9585 Oct 26 j 02:33	0°☾	
min. Earth dist.	-9591 Feb 09 j 08:53	11°II23'35	28.66208 AU	retrograde	-9585 Dec 11 j 12:26	0°☾36'10	
direct	-9591 Apr 29 j 19:19	9°II58'46			-9584 Jan 29 j 07:21	30°☾II	
				opposition	-9584 Feb 28 j 16:13	29°II13'18	13°26'14
conjunction	-9591 Aug 13 j 11:06	12°II41'47	15°05'58	min. Earth dist.	-9584 Feb 27 j 17:25	29°II14'51	29.06002 AU
minimum elong	-9591 Aug 13 j 11:22	12°II41'48	15°06'29	direct	-9584 May 18 j 03:26	27°II50'06	
max. Earth dist.	-9591 Aug 13 j 08:34	12°II41'31	30.59757 AU		-9584 Aug 19 j 05:09	0°☾	
retrograde	-9591 Nov 25 j 19:58	15°II23'33		evening set	-9584 Aug 21 j 19:23	0°☾06'06	
opposition	-9590 Feb 12 j 04:13	13°II59'46	15°58'34				
min. Earth dist.	-9590 Feb 12 j 04:41	13°II59'44	28.68371 AU	conjunction	-9584 Aug 30 j 11:36	0°☾26'39	12°20'40
direct	-9590 May 02 j 16:51	12°II34'48		minimum elong	-9584 Aug 30 j 12:01	0°☾26'42	12°21'15
evening set	-9590 Aug 13 j 16:33	15°II10'54		max. Earth dist.	-9584 Aug 31 j 11:55	0°☾29'04	31.05952 AU
				morning rise	-9584 Sep 08 j 04:42	0°☾47'18	
conjunction	-9590 Aug 16 j 05:44	15°II17'08	14°46'56	retrograde	-9584 Dec 13 j 04:17	3°☾03'45	
minimum elong	-9590 Aug 16 j 06:04	15°II17'10	14°47'28	min. Earth dist.	-9583 Mar 01 j 11:26	1°☾42'48	29.15983 AU
max. Earth dist.	-9590 Aug 16 j 08:16	15°II17'23	30.62817 AU	opposition	-9583 Mar 02 j 12:33	1°☾41'05	12°55'52
morning rise	-9590 Aug 18 j 19:34	15°II23'25		direct	-9583 May 20 j 21:51	0°☾18'15	
retrograde	-9590 Nov 28 j 16:02	17°II58'27		evening set	-9583 Aug 23 j 18:40	2°☾31'37	
opposition	-9589 Feb 15 j 03:14	16°II34'44	15°37'17				
min. Earth dist.	-9589 Feb 14 j 23:52	16°II34'58	28.71721 AU	conjunction	-9583 Sep 02 j 02:48	2°☾53'36	11°51'52
direct	-9589 May 05 j 17:16	15°II09'59		minimum elong	-9583 Sep 02 j 03:12	2°☾53'38	11°52'26
evening set	-9589 Aug 14 j 20:39	17°II41'29		max. Earth dist.	-9583 Sep 03 j 06:14	2°☾56'18	31.16771 AU
				morning rise	-9583 Sep 11 j 11:48	3°☾15'41	
conjunction	-9589 Aug 18 j 23:48	17°II51'32	14°26'13	retrograde	-9583 Dec 15 j 20:24	5°☾29'44	
minimum elong	-9589 Aug 19 j 00:08	17°II51'34	14°26'46	min. Earth dist.	-9582 Mar 04 j 02:54	4°☾09'16	29.26860 AU
max. Earth dist.	-9589 Aug 19 j 05:11	17°II52'05	30.67107 AU	opposition	-9582 Mar 05 j 08:01	4°☾07'18	12°24'24
morning rise	-9589 Aug 23 j 03:36	18°II01'39		direct	-9582 May 23 j 17:19	2°☾44'48	
retrograde	-9589 Dec 01 j 12:50	20°II32'20		evening set	-9582 Aug 25 j 18:33	4°☾55'38	
opposition	-9588 Feb 18 j 01:58	19°II08'43	15°14'13				
min. Earth dist.	-9588 Feb 17 j 18:05	19°II09'15	28.76294 AU	conjunction	-9582 Sep 04 j 17:26	5°☾18'54	11°22'04
direct	-9588 May 07 j 15:04	17°II44'13		minimum elong	-9582 Sep 04 j 17:50	5°☾18'56	11°22'38
evening set	-9588 Aug 15 j 10:12	20°II12'04		max. Earth dist.	-9582 Sep 05 j 23:31	5°☾21'50	31.28453 AU
				morning rise	-9582 Sep 14 j 17:24	5°☾42'16	
conjunction	-9588 Aug 20 j 17:31	20°II24'55	14°03'55	retrograde	-9582 Dec 18 j 11:34	7°☾54'01	
minimum elong	-9588 Aug 20 j 17:53	20°II24'57	14°04'29	min. Earth dist.	-9581 Mar 06 j 19:16	6°☾33'55	29.38603 AU
max. Earth dist.	-9588 Aug 21 j 03:54	20°II25'58	30.72622 AU	opposition	-9581 Mar 08 j 02:43	6°☾31'49	11°51'54
morning rise	-9588 Aug 26 j 01:29	20°II37'50		direct	-9581 May 26 j 11:11	5°☾09'39	
retrograde	-9588 Dec 03 j 06:25	23°II05'08		evening set	-9581 Aug 27 j 18:51	7°☾18'01	
opposition	-9587 Feb 20 j 00:24	21°II41'39	14°49'28				

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 24

Attention, astronomical year style is used: The year -9581 in astronomical counting style is the year 9582 BCE in historical counting style.

conjunction	-9581 Sep 07 j 07:28	7° $\overline{42}$ '26	10°51'22	direct	-9574 Jun 12 j 02:50	21° $\overline{40}$ '47	
minimum elong	-9581 Sep 07 j 07:51	7° $\overline{42}$ '28	10°51'57	evening set	-9574 Sep 09 j 01:05	23° $\overline{40}$ '24	
max. Earth dist.	-9581 Sep 08 j 17:06	7° $\overline{45}$ '42	31.40991 AU				
morning rise	-9581 Sep 17 j 21:01	8° $\overline{06}$ '58		conjunction	-9574 Sep 22 j 12:18	23° $\overline{43}$ '55	6°59'00
retrograde	-9581 Dec 21 j 01:54	10° $\overline{16}$ '28		minimum elong	-9574 Sep 22 j 12:35	23° $\overline{43}$ '56	6°59'33
min. Earth dist.	-9580 Mar 08 j 09:59	8° $\overline{56}$ '49	29.51181 AU	max. Earth dist.	-9574 Sep 24 j 18:09	23° $\overline{43}$ '52	32.53183 AU
opposition	-9580 Mar 09 j 20:43	8° $\overline{54}$ '29	11°18'31	morning rise	-9574 Oct 06 j 01:17	24° $\overline{03}$ '35	
direct	-9580 May 28 j 06:07	7° $\overline{32}$ '40		retrograde	-9573 Jan 05 j 09:54	25° $\overline{59}$ '45	
evening set	-9580 Aug 28 j 19:19	9° $\overline{38}$ '39		min. Earth dist.	-9573 Mar 24 j 20:06	24° $\overline{43}$ '25	30.64198 AU
				opposition	-9573 Mar 27 j 03:50	24° $\overline{39}$ '49	7°07'42
conjunction	-9580 Sep 08 j 20:29	10° $\overline{04}$ '06	10°19'52	direct	-9573 Jun 14 j 15:20	23° $\overline{40}$ '47	
minimum elong	-9580 Sep 08 j 20:53	10° $\overline{04}$ '08	10°20'27	evening set	-9573 Sep 11 j 02:21	25° $\overline{41}$ '24	
max. Earth dist.	-9580 Sep 10 j 08:21	10° $\overline{07}$ '34	31.54359 AU				
morning rise	-9580 Sep 19 j 22:57	10° $\overline{29}$ '40		conjunction	-9573 Sep 24 j 20:27	25° $\overline{42}$ '34	6°24'22
retrograde	-9580 Dec 22 j 16:25	12° $\overline{37}$ '02		minimum elong	-9573 Sep 24 j 20:43	25° $\overline{42}$ '35	6°24'55
min. Earth dist.	-9579 Mar 11 j 00:11	11° $\overline{17}$ '47	29.64627 AU	max. Earth dist.	-9573 Sep 27 j 04:37	25° $\overline{47}$ '41	32.72549 AU
opposition	-9579 Mar 12 j 14:03	11° $\overline{15}$ '16	10°44'20	morning rise	-9573 Oct 08 j 16:39	26° $\overline{12}$ '37	
direct	-9579 May 30 j 22:09	9° $\overline{53}$ '46		retrograde	-9572 Jan 07 j 17:59	28° $\overline{07}$ '14	
evening set	-9579 Aug 30 j 19:59	11° $\overline{57}$ '28		min. Earth dist.	-9572 Mar 26 j 06:05	26° $\overline{51}$ '20	30.83668 AU
				opposition	-9572 Mar 28 j 15:29	26° $\overline{47}$ '39	6°30'35
conjunction	-9579 Sep 11 j 09:02	12° $\overline{23}$ '50	9°47'40	direct	-9572 Jun 16 j 01:27	25° $\overline{29}$ '06	
minimum elong	-9579 Sep 11 j 09:24	12° $\overline{23}$ '52	9°48'15	evening set	-9572 Sep 12 j 03:29	27° $\overline{19}$ '19	
max. Earth dist.	-9579 Sep 13 j 00:54	12° $\overline{27}$ '39	31.68595 AU				
morning rise	-9579 Sep 22 j 23:12	12° $\overline{50}$ '20		conjunction	-9572 Sep 26 j 03:58	27° $\overline{49}$ '30	5°49'38
retrograde	-9579 Dec 25 j 04:53	14° $\overline{55}$ '36		minimum elong	-9572 Sep 26 j 04:13	27° $\overline{49}$ '32	5°50'11
min. Earth dist.	-9578 Mar 13 j 13:52	13° $\overline{36}$ '45	29.78955 AU	max. Earth dist.	-9572 Sep 28 j 14:54	27° $\overline{54}$ '50	32.92571 AU
opposition	-9578 Mar 15 j 06:24	13° $\overline{34}$ '04	10°09'26	morning rise	-9572 Oct 10 j 06:24	28° $\overline{19}$ '52	
direct	-9578 Jun 02 j 16:20	12° $\overline{12}$ '56			-9572 Dec 11 j 02:32	0° $\Omega$	
evening set	-9578 Sep 01 j 20:54	14° $\overline{14}$ '25		retrograde	-9571 Jan 09 j 01:32	0° $\Omega$ 12'59	
					-9571 Feb 07 j 21:09	30° $\overline{R}$ $\overline{48}$	
conjunction	-9578 Sep 13 j 20:39	14° $\overline{41}$ '36	9°14'50	min. Earth dist.	-9571 Mar 28 j 14:29	28° $\overline{57}$ '35	31.03750 AU
minimum elong	-9578 Sep 13 j 21:01	14° $\overline{41}$ '39	9°15'24	opposition	-9571 Mar 31 j 02:15	28° $\overline{53}$ '47	5°53'26
max. Earth dist.	-9578 Sep 15 j 14:30	14° $\overline{45}$ '35	31.83721 AU	direct	-9571 Jun 18 j 11:50	27° $\overline{35}$ '40	
morning rise	-9578 Sep 25 j 21:55	15° $\overline{08}$ '55		evening set	-9571 Sep 14 j 04:57	29° $\overline{24}$ '18	
retrograde	-9578 Dec 27 j 18:56	17° $\overline{12}$ '11					
min. Earth dist.	-9577 Mar 16 j 01:35	15° $\overline{53}$ '50	29.94208 AU	conjunction	-9571 Sep 28 j 10:53	29° $\overline{54}$ '43	5°14'53
opposition	-9577 Mar 17 j 21:55	15° $\overline{50}$ '55	9°33'55	minimum elong	-9571 Sep 28 j 11:06	29° $\overline{54}$ '45	5°15'25
direct	-9577 Jun 05 j 08:15	14° $\overline{30}$ '09			-9571 Sep 30 j 21:45	0° $\Omega$	
evening set	-9577 Sep 03 j 21:45	16° $\overline{29}$ '33		max. Earth dist.	-9571 Sep 30 j 23:03	0° $\Omega$ 00'07	33.13141 AU
				morning rise	-9571 Oct 12 j 19:12	0° $\Omega$ 25'20	
conjunction	-9577 Sep 16 j 07:38	16° $\overline{57}$ '27	8°41'28	retrograde	-9570 Jan 11 j 09:57	2° $\Omega$ 17'00	
minimum elong	-9577 Sep 16 j 07:59	16° $\overline{57}$ '28	8°42'01	min. Earth dist.	-9570 Mar 30 j 22:24	1° $\Omega$ 02'05	31.24385 AU
max. Earth dist.	-9577 Sep 18 j 05:31	17° $\overline{01}$ '46	31.99754 AU	opposition	-9570 Apr 02 j 12:12	0° $\Omega$ 58'10	5°16'19
morning rise	-9577 Sep 28 j 18:56	17° $\overline{25}$ '28			-9570 May 15 j 13:26	30° $\overline{R}$ $\overline{48}$	
retrograde	-9577 Dec 30 j 04:59	19° $\overline{26}$ '50		direct	-9570 Jun 20 j 19:57	29° $\overline{40}$ '29	
min. Earth dist.	-9576 Mar 17 j 14:13	18° $\overline{08}$ '54	30.10382 AU		-9570 Jul 26 j 02:30	0° $\Omega$	
opposition	-9576 Mar 19 j 12:40	18° $\overline{05}$ '52	8°57'53	evening set	-9570 Sep 16 j 06:14	1° $\Omega$ 27'36	
direct	-9576 Jun 06 j 23:35	16° $\overline{45}$ '30					
evening set	-9576 Sep 04 j 22:53	18° $\overline{42}$ '53		conjunction	-9570 Sep 30 j 17:18	1° $\Omega$ 58'12	4°40'09
				minimum elong	-9570 Sep 30 j 17:30	1° $\Omega$ 58'13	4°40'41
conjunction	-9576 Sep 17 j 17:52	19° $\overline{11}$ '24	8°07'38	max. Earth dist.	-9570 Oct 03 j 08:12	2° $\Omega$ 03'47	33.34194 AU
minimum elong	-9576 Sep 17 j 18:12	19° $\overline{11}$ '26	8°08'12	morning rise	-9570 Oct 15 j 06:32	2° $\Omega$ 28'59	
max. Earth dist.	-9576 Sep 19 j 17:54	19° $\overline{15}$ '53	32.16709 AU	retrograde	-9569 Jan 13 j 16:28	4° $\Omega$ 19'16	
morning rise	-9576 Sep 30 j 14:31	19° $\overline{40}$ '03		min. Earth dist.	-9569 Apr 02 j 06:21	3° $\Omega$ 04'45	31.45472 AU
retrograde	-9576 Dec 31 j 15:50	21° $\overline{39}$ '36		opposition	-9569 Apr 04 j 21:22	3° $\Omega$ 00'46	4°39'18
min. Earth dist.	-9575 Mar 20 j 00:01	20° $\overline{22}$ '15	30.27481 AU	direct	-9569 Jun 23 j 06:45	1° $\Omega$ 43'30	
opposition	-9575 Mar 22 j 02:33	20° $\overline{18}$ '57	8°21'27	evening set	-9569 Sep 18 j 07:34	3° $\Omega$ 29'10	
direct	-9575 Jun 09 j 13:57	18° $\overline{59}$ '01					
evening set	-9575 Sep 06 j 23:52	20° $\overline{54}$ '29		conjunction	-9569 Oct 02 j 22:49	3° $\Omega$ 59'52	4°05'32
				minimum elong	-9569 Oct 02 j 22:59	3° $\Omega$ 59'53	4°06'03
conjunction	-9575 Sep 20 j 03:22	21° $\overline{23}$ '32	7°33'27	max. Earth dist.	-9569 Oct 05 j 14:16	4° $\Omega$ 05'27	33.55661 AU
minimum elong	-9575 Sep 20 j 03:40	21° $\overline{23}$ '34	7°34'01	morning rise	-9569 Oct 17 j 16:36	4° $\Omega$ 30'47	
max. Earth dist.	-9575 Sep 22 j 06:54	21° $\overline{28}$ '19	32.34535 AU	retrograde	-9568 Jan 16 j 00:30	6° $\Omega$ 19'43	
morning rise	-9575 Oct 03 j 08:37	21° $\overline{52}$ '44		min. Earth dist.	-9568 Apr 03 j 12:14	5° $\Omega$ 05'39	31.66986 AU
retrograde	-9574 Jan 03 j 01:00	23° $\overline{50}$ '34		opposition	-9568 Apr 06 j 05:45	5° $\Omega$ 01'33	4°02'27
min. Earth dist.	-9574 Mar 22 j 11:28	22° $\overline{33}$ '39	30.45445 AU	direct	-9568 Jun 24 j 15:20	3° $\Omega$ 44'40	
opposition	-9574 Mar 24 j 15:46	22° $\overline{30}$ '15	7°44'41	evening set	-9568 Sep 19 j 08:44	5° $\Omega$ 28'57	



## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 25

Attention, astronomical year style is used: The year -9568 in astronomical counting style is the year 9569 BCE in historical counting style.

conjunction	-9568 Oct 04 j 03:50	5°Ω59'42	3°31'05	max. Earth dist.	-9562 Oct 18 j 22:16	17°Ω26'51	35.17571 AU
minimum elong	-9568 Oct 04 j 03:59	5°Ω59'43	3°31'35	morning rise	-9562 Oct 31 j 04:29	17°Ω50'58	
max. Earth dist.	-9568 Oct 06 j 21:54	6°Ω05'28	33.77517 AU	retrograde	-9561 Jan 28 j 17:53	19°Ω32'16	
morning rise	-9568 Oct 19 j 01:23	6°Ω30'40		desc. node	-9561 Feb 09 j 07:31	19°Ω30'23	
retrograde	-9567 Jan 17 j 04:23	8°Ω18'20		min. Earth dist.	-9561 Apr 17 j 14:06	18°Ω21'01	33.29900 AU
min. Earth dist.	-9567 Apr 05 j 19:22	7°Ω04'36	31.88907 AU	opposition	-9561 Apr 20 j 18:36	18°Ω16'24	-0°06'33
opposition	-9567 Apr 08 j 13:25	7°Ω00'29	3°25'49	direct	-9561 Jul 09 j 05:49	17°Ω02'14	
direct	-9567 Jun 26 j 23:38	5°Ω43'59		evening set	-9561 Oct 02 j 13:22	18°Ω38'36	
evening set	-9567 Sep 21 j 09:43	7°Ω26'54					
conjunction	-9567 Oct 06 j 08:00	7°Ω57'39	2°56'49	conjunction	-9561 Oct 17 j 19:42	19°Ω08'28	-0°21'56
minimum elong	-9567 Oct 06 j 08:07	7°Ω57'40	2°57'19	minimum elong	-9561 Oct 17 j 19:42	19°Ω08'28	0°21'30
max. Earth dist.	-9567 Oct 09 j 03:02	8°Ω03'28	33.99773 AU	max. Earth dist.	-9561 Oct 21 j 01:04	19°Ω14'49	35.42331 AU
morning rise	-9567 Oct 21 j 08:52	8°Ω28'38		morning rise	-9561 Nov 02 j 04:58	19°Ω38'34	
retrograde	-9566 Jan 19 j 07:59	10°Ω15'03		retrograde	-9560 Jan 30 j 18:11	21°Ω19'03	
min. Earth dist.	-9566 Apr 07 j 23:24	9°Ω01'46	32.11254 AU	min. Earth dist.	-9560 Apr 18 j 16:27	20°Ω08'09	33.54814 AU
opposition	-9566 Apr 10 j 20:07	8°Ω57'31	2°49'29	opposition	-9560 Apr 21 j 21:07	20°Ω03'33	-0°40'21
direct	-9566 Jun 29 j 08:25	7°Ω41'23		direct	-9560 Jul 10 j 09:25	18°Ω49'48	
evening set	-9566 Sep 23 j 10:43	9°Ω23'02		evening set	-9560 Oct 03 j 13:40	20°Ω25'19	
conjunction	-9566 Oct 08 j 11:33	9°Ω53'44	2°22'50	conjunction	-9560 Oct 18 j 19:41	20°Ω54'54	-0°53'34
minimum elong	-9566 Oct 08 j 11:39	9°Ω53'45	2°23'18	minimum elong	-9560 Oct 18 j 19:39	20°Ω54'54	0°53'09
max. Earth dist.	-9566 Oct 11 j 08:39	9°Ω59'40	34.22431 AU	max. Earth dist.	-9560 Oct 22 j 01:15	21°Ω01'14	35.67361 AU
morning rise	-9566 Oct 23 j 15:10	10°Ω24'40		morning rise	-9560 Nov 03 j 04:43	21°Ω24'44	
retrograde	-9565 Jan 21 j 10:14	12°Ω09'55		retrograde	-9559 Jan 31 j 19:31	23°Ω04'26	
min. Earth dist.	-9565 Apr 10 j 04:34	10°Ω56'59	32.34055 AU	min. Earth dist.	-9559 Apr 20 j 16:19	21°Ω54'01	33.79975 AU
opposition	-9565 Apr 13 j 02:02	10°Ω52'41	2°13'27	opposition	-9559 Apr 23 j 22:53	21°Ω49'19	-1°13'37
direct	-9565 Jul 01 j 15:11	9°Ω36'56		direct	-9559 Jul 12 j 12:05	20°Ω35'58	
evening set	-9565 Sep 25 j 11:27	11°Ω17'22		evening set	-9559 Oct 05 j 13:55	22°Ω10'42	
conjunction	-9565 Oct 10 j 14:28	11°Ω47'59	1°49'08	conjunction	-9559 Oct 20 j 19:11	22°Ω40'00	-1°24'45
minimum elong	-9565 Oct 10 j 14:32	11°Ω47'59	1°49'36	minimum elong	-9559 Oct 20 j 19:07	22°Ω40'00	1°24'21
max. Earth dist.	-9565 Oct 13 j 13:18	11°Ω54'01	34.45548 AU	max. Earth dist.	-9559 Oct 24 j 02:13	22°Ω46'24	35.92561 AU
morning rise	-9565 Oct 25 j 20:06	12°Ω18'49		morning rise	-9559 Nov 05 j 03:34	23°Ω09'33	
retrograde	-9564 Jan 23 j 11:39	14°Ω02'59		retrograde	-9558 Feb 02 j 18:38	24°Ω48'31	
min. Earth dist.	-9564 Apr 11 j 07:24	12°Ω50'29	32.57329 AU	min. Earth dist.	-9558 Apr 22 j 17:55	23°Ω38'25	34.05289 AU
opposition	-9564 Apr 14 j 07:12	12°Ω46'04	1°37'48	opposition	-9558 Apr 26 j 00:12	23°Ω33'46	-1°46'19
direct	-9564 Jul 02 j 21:36	11°Ω30'41		direct	-9558 Jul 14 j 13:50	22°Ω20'49	
evening set	-9564 Sep 26 j 12:06	13°Ω10'00		evening set	-9558 Oct 07 j 14:05	23°Ω54'47	
conjunction	-9564 Oct 11 j 16:31	13°Ω40'29	1°15'47	conjunction	-9558 Oct 22 j 18:19	24°Ω23'46	-1°55'24
minimum elong	-9564 Oct 11 j 16:34	13°Ω40'29	1°16'14	minimum elong	-9558 Oct 22 j 18:15	24°Ω23'45	1°55'01
max. Earth dist.	-9564 Oct 14 j 16:37	13°Ω46'34	34.69118 AU	max. Earth dist.	-9558 Oct 26 j 01:55	24°Ω30'09	36.17863 AU
morning rise	-9564 Oct 26 j 23:56	14°Ω11'11		morning rise	-9558 Nov 07 j 01:27	24°Ω52'59	
retrograde	-9564 Nov 22 j 19:59	15°Ω		retrograde	-9557 Feb 04 j 15:35	26°Ω31'16	
min. Earth dist.	-9563 Jan 24 j 13:51	15°Ω54'20		min. Earth dist.	-9557 Apr 24 j 17:08	25°Ω21'34	34.30671 AU
opposition	-9563 Apr 01 j 02:24	15°Ω		opposition	-9557 Apr 28 j 00:37	25°Ω16'52	-2°18'27
direct	-9563 Apr 13 j 10:35	14°Ω42'14	32.81095 AU	direct	-9557 Jul 16 j 15:53	24°Ω04'17	
evening set	-9563 Apr 16 j 11:50	14°Ω37'45	1°02'33	evening set	-9557 Oct 09 j 14:15	25°Ω37'34	
conjunction	-9563 Oct 13 j 18:17	15°Ω31'20	0°42'48	conjunction	-9557 Oct 24 j 16:48	26°Ω06'11	-2°25'33
minimum elong	-9563 Oct 13 j 18:18	15°Ω31'20	0°43'15	minimum elong	-9557 Oct 24 j 16:42	26°Ω06'11	2°25'11
max. Earth dist.	-9563 Oct 16 j 20:51	15°Ω37'34	34.93145 AU	max. Earth dist.	-9557 Oct 28 j 00:28	26°Ω12'32	36.43188 AU
morning rise	-9563 Oct 29 j 02:41	16°Ω01'52		morning rise	-9557 Nov 08 j 22:34	26°Ω35'04	
retrograde	-9562 Jan 26 j 15:03	17°Ω44'04		retrograde	-9556 Feb 06 j 13:55	28°Ω12'42	
min. Earth dist.	-9562 Apr 15 j 13:03	16°Ω32'21	33.05297 AU	min. Earth dist.	-9556 Apr 25 j 17:01	27°Ω03'19	34.56088 AU
opposition	-9562 Apr 18 j 15:29	16°Ω27'50	0°27'46	opposition	-9556 Apr 29 j 00:46	26°Ω58'38	-2°50'00
direct	-9562 Jul 07 j 04:32	15°Ω13'15		direct	-9556 Jul 17 j 14:54	25°Ω46'25	
evening set	-9562 Sep 30 j 13:08	16°Ω50'32		evening set	-9556 Oct 10 j 13:58	27°Ω19'00	
conjunction	-9562 Oct 15 j 19:16	17°Ω20'38	0°10'16	conjunction	-9556 Oct 25 j 14:49	27°Ω47'16	-2°55'10
minimum elong	-9562 Oct 15 j 19:17	17°Ω20'38	0°10'42	minimum elong	-9556 Oct 25 j 14:43	27°Ω47'15	2°54'47
behind sun begin	-9562 Oct 15 j 14:19	17°Ω20'14		max. Earth dist.	-9556 Oct 28 j 23:48	27°Ω53'40	36.68520 AU
behind sun end	-9562 Oct 16 j 00:14	17°Ω21'01		morning rise	-9556 Nov 09 j 18:33	28°Ω15'45	
				retrograde	-9555 Feb 07 j 10:44	29°Ω52'47	
				min. Earth dist.	-9555 Apr 27 j 16:22	28°Ω43'42	34.81499 AU
				opposition	-9555 May 01 j 00:11	28°Ω39'01	-3°20'57
				direct	-9555 Jul 19 j 14:36	27°Ω27'08	

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Attention, astronomical year style is used: The year -9555 in astronomical counting style is the year 9556 BCE in historical counting style.

evening set	-9555 Oct 12 j 13:48	28°02'59.05		max. Earth dist.	-9549 Nov 09 j 23:58	9°03'49	38.47306 AU
				morning rise	-9549 Nov 20 j 15:38	9°02'24.7	
conjunction	-9555 Oct 27 j 12:17	29°02'26.57	-3°24'13	retrograde	-9548 Feb 19 j 03:15	10°05'56.31	
minimum elong	-9555 Oct 27 j 12:10	29°02'26.56	3°23'52	min. Earth dist.	-9548 May 08 j 16:23	9°04'49.33	36.61511 AU
max. Earth dist.	-9555 Oct 30 j 20:47	29°02'33.15	36.93841 AU	opposition	-9548 May 12 j 03:29	9°04'44.50	-6°39'54
morning rise	-9555 Nov 11 j 13:55	29°02'55.03		direct	-9548 Jul 30 j 21:43	8°04'35.10	
	-9555 Nov 14 j 07:06	0°00'		evening set	-9548 Oct 24 j 07:03	10°04'03.50	
retrograde	-9554 Feb 09 j 09:44	1°04'31.29					
min. Earth dist.	-9554 Apr 29 j 13:57	0°04'22.43	35.06938 AU	conjunction	-9548 Nov 07 j 04:51	10°04'28.30	-6°31'21
opposition	-9554 May 02 j 22:51	0°04'18.01	-3°51'18	minimum elong	-9548 Nov 07 j 04:39	10°04'28.29	6°31'05
	-9554 May 15 j 23:01	30°04'02		max. Earth dist.	-9548 Nov 10 j 17:24	10°04'34.47	38.73129 AU
direct	-9554 Jul 21 j 12:18	29°02'06.26		morning rise	-9548 Nov 21 j 05:24	10°04'53.22	
	-9554 Sep 22 j 10:54	0°00'		retrograde	-9547 Feb 19 j 23:53	12°04'26.46	
evening set	-9554 Oct 14 j 13:18	0°04'37.47		min. Earth dist.	-9547 May 10 j 10:31	11°04'20.08	36.87489 AU
				opposition	-9547 May 13 j 22:34	11°04'15.24	-7°05'44
conjunction	-9554 Oct 29 j 09:17	1°04'05.15	-3°52'43	direct	-9547 Aug 01 j 14:47	10°04'06.03	
minimum elong	-9554 Oct 29 j 09:09	1°04'05.14	3°52'22	evening set	-9547 Oct 26 j 05:42	11°04'34.25	
max. Earth dist.	-9554 Nov 01 j 19:24	1°04'11.37	37.19183 AU				
morning rise	-9554 Nov 13 j 08:13	1°04'32.56		conjunction	-9547 Nov 08 j 22:52	11°04'58.34	-6°55'43
retrograde	-9553 Feb 11 j 06:45	3°04'08.48		minimum elong	-9547 Nov 08 j 22:39	11°04'58.33	6°55'29
min. Earth dist.	-9553 May 01 j 12:35	2°04'00.16	35.32427 AU	max. Earth dist.	-9547 Nov 12 j 12:31	12°04'04.54	38.98888 AU
opposition	-9553 May 04 j 21:03	1°04'55.37	-4°21'01	morning rise	-9547 Nov 22 j 18:39	12°04'22.55	
direct	-9553 Jul 23 j 11:22	0°04'44.21		retrograde	-9546 Feb 21 j 18:46	13°04'56.03	
evening set	-9553 Oct 16 j 12:33	2°04'15.08		min. Earth dist.	-9546 May 12 j 06:13	12°04'49.37	37.13374 AU
				opposition	-9546 May 15 j 17:05	12°04'44.58	-7°30'55
conjunction	-9553 Oct 31 j 05:34	2°04'42.10	-4°20'38	direct	-9546 Aug 03 j 09:04	11°04'35.57	
minimum elong	-9553 Oct 31 j 05:25	2°04'42.09	4°20'20	evening set	-9546 Oct 28 j 04:17	13°04'04.02	
max. Earth dist.	-9553 Nov 03 j 15:33	2°04'48.29	37.44596 AU				
morning rise	-9553 Nov 15 j 01:31	3°04'09.25		conjunction	-9546 Nov 10 j 16:32	13°04'27.40	-7°19'29
retrograde	-9552 Feb 13 j 04:29	4°04'44.46		minimum elong	-9546 Nov 10 j 16:19	13°04'27.39	7°19'15
min. Earth dist.	-9552 May 02 j 08:28	3°04'36.36	35.58018 AU	max. Earth dist.	-9546 Nov 14 j 05:30	13°04'33.54	39.24522 AU
opposition	-9552 May 05 j 18:35	3°04'31.52	-4°50'05	morning rise	-9546 Nov 24 j 07:13	13°04'51.29	
direct	-9552 Jul 24 j 09:14	2°04'20.54		retrograde	-9545 Feb 23 j 12:15	15°04'24.21	
evening set	-9552 Oct 17 j 11:47	3°04'51.11		min. Earth dist.	-9545 May 13 j 23:34	14°04'18.14	37.39098 AU
				opposition	-9545 May 17 j 11:12	14°04'13.34	-7°55'29
conjunction	-9552 Nov 01 j 01:28	4°04'17.46	-4°47'59	direct	-9545 Aug 05 j 03:50	13°04'04.50	
minimum elong	-9552 Nov 01 j 01:19	4°04'17.45	4°47'39	evening set	-9545 Oct 30 j 02:40	14°04'32.40	
max. Earth dist.	-9552 Nov 04 j 12:33	4°04'24.08	37.70109 AU				
morning rise	-9552 Nov 15 j 18:13	4°04'44.34		conjunction	-9545 Nov 12 j 09:37	14°04'55.46	-7°42'41
retrograde	-9551 Feb 13 j 22:12	6°04'19.27		minimum elong	-9545 Nov 12 j 09:23	14°04'55.45	7°42'28
min. Earth dist.	-9551 May 04 j 05:51	5°04'11.32	35.83743 AU	max. Earth dist.	-9545 Nov 15 j 22:24	15°04'01.57	39.49952 AU
opposition	-9551 May 07 j 15:39	5°04'06.50	-5°18'31	morning rise	-9545 Nov 25 j 19:09	15°04'19.04	
direct	-9551 Jul 26 j 07:28	3°04'56.12		retrograde	-9544 Feb 25 j 03:38	16°04'51.41	
evening set	-9551 Oct 19 j 10:45	5°04'26.01		min. Earth dist.	-9544 May 14 j 18:26	15°04'45.46	37.64618 AU
				opposition	-9544 May 18 j 05:06	15°04'41.10	-8°19'26
conjunction	-9551 Nov 02 j 21:03	5°04'52.08	-5°14'43	direct	-9544 Aug 05 j 23:13	14°04'32.43	
minimum elong	-9551 Nov 02 j 20:53	5°04'52.07	5°14'26	evening set	-9544 Oct 31 j 00:58	16°04'00.18	
max. Earth dist.	-9551 Nov 06 j 08:57	5°04'58.31	37.95756 AU				
morning rise	-9551 Nov 17 j 10:05	6°04'18.28		conjunction	-9544 Nov 13 j 02:39	16°04'22.52	-8°05'18
retrograde	-9550 Feb 15 j 14:50	7°04'52.55		minimum elong	-9544 Nov 13 j 02:25	16°04'22.51	8°05'05
min. Earth dist.	-9550 May 06 j 01:12	6°04'45.21	36.09583 AU	max. Earth dist.	-9544 Nov 16 j 15:42	16°04'29.02	39.75166 AU
opposition	-9550 May 09 j 12:03	6°04'40.36	-5°46'18	morning rise	-9544 Nov 26 j 06:30	16°04'45.37	
direct	-9550 Jul 28 j 06:26	5°04'30.17		retrograde	-9543 Feb 25 j 17:39	18°04'18.01	
evening set	-9550 Oct 21 j 09:44	6°04'59.40		min. Earth dist.	-9543 May 16 j 11:54	17°04'12.20	37.89896 AU
				opposition	-9543 May 19 j 22:20	17°04'07.45	-8°42'46
conjunction	-9550 Nov 04 j 16:00	7°04'25.19	-5°40'52	direct	-9543 Aug 07 j 18:54	15°04'59.33	
minimum elong	-9550 Nov 04 j 15:49	7°04'25.19	5°40'34	evening set	-9543 Nov 01 j 23:15	17°04'26.55	
max. Earth dist.	-9550 Nov 08 j 03:50	7°04'31.39	38.21492 AU				
morning rise	-9550 Nov 19 j 01:16	7°04'51.11		conjunction	-9543 Nov 14 j 19:07	17°04'48.57	-8°27'21
retrograde	-9549 Feb 17 j 09:46	9°04'25.15		minimum elong	-9543 Nov 14 j 18:53	17°04'48.56	8°27'10
min. Earth dist.	-9549 May 07 j 20:39	8°04'18.00	36.35526 AU	max. Earth dist.	-9543 Nov 18 j 07:00	17°04'54.59	40.00138 AU
opposition	-9549 May 11 j 07:59	8°04'13.15	-6°13'25	morning rise	-9543 Nov 27 j 17:22	18°04'11.08	
direct	-9549 Jul 30 j 01:27	7°04'03.16		retrograde	-9542 Feb 27 j 10:36	19°04'43.19	
evening set	-9549 Oct 23 j 08:25	8°04'32.16		min. Earth dist.	-9542 May 18 j 04:44	18°04'37.52	38.14963 AU
				opposition	-9542 May 21 j 15:14	18°04'33.19	-9°05'29
conjunction	-9549 Nov 06 j 10:43	8°04'57.26	-6°06'24	direct	-9542 Aug 09 j 10:53	17°04'25.21	
minimum elong	-9549 Nov 06 j 10:31	8°04'57.25	6°06'09	evening set	-9542 Nov 03 j 21:12	18°04'52.31	

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 27

Attention, astronomical year style is used: The year -9542 in astronomical counting style is the year 9543 BCE in historical counting style.

conjunction	-9542 Nov 16 j 11:16	19° $\mathring{M}$ 13'59	-8°48'50	direct	-9535 Aug 18 j 23:16	27° $\mathring{M}$ 00'30	
minimum elong	-9542 Nov 16 j 11:02	19° $\mathring{M}$ 13'58	8°48'40	evening set	-9535 Nov 15 j 04:04	28° $\mathring{M}$ 27'12	
max. Earth dist.	-9542 Nov 20 j 00:01	19° $\mathring{M}$ 20'03	40.24905 AU				
morning rise	-9542 Nov 29 j 03:24	19° $\mathring{M}$ 35'36		conjunction	-9535 Nov 25 j 18:31	28° $\mathring{M}$ 44'35	-11°03'10
retrograde	-9541 Mar 01 j 01:41	21° $\mathring{M}$ 07'37		minimum elong	-9535 Nov 25 j 18:16	28° $\mathring{M}$ 44'34	11°03'04
min. Earth dist.	-9541 May 19 j 22:07	20° $\mathring{M}$ 02'19	38.39844 AU	max. Earth dist.	-9535 Nov 29 j 06:34	28° $\mathring{M}$ 50'20	41.95321 AU
opposition	-9541 May 23 j 07:34	19° $\mathring{M}$ 57'50	-9°27'35	morning rise	-9535 Dec 06 j 10:25	29° $\mathring{M}$ 02'04	
direct	-9541 Aug 11 j 04:00	18° $\mathring{M}$ 50'07			-9534 Jan 15 j 10:06	0° $\mathring{A}$	
evening set	-9541 Nov 05 j 19:07	20° $\mathring{M}$ 17'07		retrograde	-9534 Mar 10 j 07:55	0° $\mathring{A}$ 33'38	
					-9534 May 04 j 15:32	30° $\mathring{R}$ $\mathring{M}$	
conjunction	-9541 Nov 18 j 02:57	20° $\mathring{M}$ 38'01	-9°09'44	min. Earth dist.	-9534 May 29 j 07:55	29° $\mathring{M}$ 29'57	40.11250 AU
minimum elong	-9541 Nov 18 j 02:42	20° $\mathring{M}$ 38'00	9°09'35	opposition	-9534 Jun 01 j 15:43	29° $\mathring{M}$ 25'41	-11°45'12
max. Earth dist.	-9541 Nov 21 j 14:43	20° $\mathring{M}$ 43'58	40.49527 AU	direct	-9534 Aug 20 j 12:34	28° $\mathring{M}$ 19'47	
morning rise	-9541 Nov 30 j 12:50	20° $\mathring{M}$ 59'04		evening set	-9534 Nov 17 j 01:32	29° $\mathring{M}$ 46'32	
retrograde	-9540 Mar 01 j 18:56	22° $\mathring{M}$ 30'54			-9534 Nov 25 j 07:58	0° $\mathring{A}$	
min. Earth dist.	-9540 May 20 j 13:12	21° $\mathring{M}$ 25'52	38.64614 AU				
opposition	-9540 May 23 j 23:31	21° $\mathring{M}$ 21'22	-9°49'04	conjunction	-9534 Nov 27 j 08:17	0° $\mathring{A}$ 03'18	-11°20'09
direct	-9540 Aug 11 j 19:00	20° $\mathring{M}$ 13'53		minimum elong	-9534 Nov 27 j 08:03	0° $\mathring{A}$ 03'17	11°20'06
evening set	-9540 Nov 06 j 16:46	21° $\mathring{M}$ 40'45		max. Earth dist.	-9534 Nov 30 j 19:15	0° $\mathring{A}$ 08'57	42.19034 AU
				morning rise	-9534 Dec 07 j 16:14	0° $\mathring{A}$ 20'09	
conjunction	-9540 Nov 18 j 18:14	22° $\mathring{M}$ 01'05	-9°30'04	retrograde	-9533 Mar 11 j 22:35	1° $\mathring{A}$ 51'45	
minimum elong	-9540 Nov 18 j 18:00	22° $\mathring{M}$ 01'04	9°29'55	min. Earth dist.	-9533 May 30 j 21:14	0° $\mathring{A}$ 48'20	40.35002 AU
max. Earth dist.	-9540 Nov 22 j 06:42	22° $\mathring{M}$ 07'03	40.74044 AU	opposition	-9533 Jun 03 j 05:10	0° $\mathring{A}$ 44'04	-12°02'33
morning rise	-9540 Nov 30 j 21:45	22° $\mathring{M}$ 21'33			-9533 Jul 10 j 19:50	30° $\mathring{R}$ $\mathring{M}$	
retrograde	-9539 Mar 03 j 10:34	23° $\mathring{M}$ 53'16		direct	-9533 Aug 22 j 02:15	29° $\mathring{M}$ 38'24	
min. Earth dist.	-9539 May 22 j 05:54	22° $\mathring{M}$ 48'25	38.89303 AU		-9533 Oct 02 j 12:13	0° $\mathring{A}$	
opposition	-9539 May 25 j 15:13	22° $\mathring{M}$ 43'58	-10°09'56	evening set	-9533 Nov 18 j 22:59	1° $\mathring{A}$ 05'14	
direct	-9539 Aug 13 j 10:37	21° $\mathring{M}$ 36'44					
evening set	-9539 Nov 08 j 14:26	23° $\mathring{M}$ 03'31		conjunction	-9533 Nov 28 j 21:44	1° $\mathring{A}$ 21'22	-11°36'38
				minimum elong	-9533 Nov 28 j 21:29	1° $\mathring{A}$ 21'21	11°36'34
conjunction	-9539 Nov 20 j 09:25	23° $\mathring{M}$ 23'16	-9°49'49	max. Earth dist.	-9533 Dec 02 j 07:54	1° $\mathring{A}$ 26'57	42.42412 AU
minimum elong	-9539 Nov 20 j 09:09	23° $\mathring{M}$ 23'15	9°49'41	morning rise	-9533 Dec 08 j 21:48	1° $\mathring{A}$ 37'36	
max. Earth dist.	-9539 Nov 23 j 21:50	23° $\mathring{M}$ 29'12	40.98501 AU	retrograde	-9532 Mar 12 j 11:12	3° $\mathring{A}$ 09'15	
morning rise	-9539 Dec 02 j 06:05	23° $\mathring{M}$ 43'09		min. Earth dist.	-9532 May 31 j 12:01	2° $\mathring{A}$ 05'58	40.58413 AU
retrograde	-9538 Mar 04 j 22:47	25° $\mathring{M}$ 14'46		opposition	-9532 Jun 03 j 18:33	2° $\mathring{A}$ 01'48	-12°19'22
min. Earth dist.	-9538 May 23 j 20:19	24° $\mathring{M}$ 10'11	39.13921 AU	direct	-9532 Aug 22 j 16:16	0° $\mathring{A}$ 56'22	
opposition	-9538 May 27 j 06:13	24° $\mathring{M}$ 05'44	-10°30'11	evening set	-9532 Nov 19 j 20:22	2° $\mathring{A}$ 23'16	
direct	-9538 Aug 15 j 04:08	22° $\mathring{M}$ 58'45					
evening set	-9538 Nov 10 j 12:01	24° $\mathring{M}$ 25'29		conjunction	-9532 Nov 29 j 11:06	2° $\mathring{A}$ 38'46	-11°52'37
				minimum elong	-9532 Nov 29 j 10:52	2° $\mathring{A}$ 38'45	11°52'35
conjunction	-9538 Nov 22 j 00:03	24° $\mathring{M}$ 44'38	-10°08'59	max. Earth dist.	-9532 Dec 02 j 21:07	2° $\mathring{A}$ 44'18	42.65433 AU
minimum elong	-9538 Nov 21 j 23:49	24° $\mathring{M}$ 44'37	10°08'52	morning rise	-9532 Dec 09 j 02:48	2° $\mathring{A}$ 54'21	
max. Earth dist.	-9538 Nov 25 j 11:54	24° $\mathring{M}$ 50'30	41.22881 AU	retrograde	-9531 Mar 13 j 20:29	4° $\mathring{A}$ 26'05	
morning rise	-9538 Dec 03 j 13:59	25° $\mathring{M}$ 03'56		min. Earth dist.	-9531 Jun 02 j 01:49	3° $\mathring{A}$ 22'58	40.81426 AU
retrograde	-9537 Mar 06 j 12:12	26° $\mathring{M}$ 35'30		opposition	-9531 Jun 05 j 07:33	3° $\mathring{A}$ 18'50	-12°35'40
min. Earth dist.	-9537 May 25 j 11:32	25° $\mathring{M}$ 31'09	39.38475 AU	direct	-9531 Aug 24 j 08:33	2° $\mathring{A}$ 13'36	
opposition	-9537 May 28 j 21:09	25° $\mathring{M}$ 26'44	-10°49'49	evening set	-9531 Nov 21 j 17:57	3° $\mathring{A}$ 40'35	
direct	-9537 Aug 16 j 19:42	24° $\mathring{M}$ 20'01					
evening set	-9537 Nov 12 j 09:13	25° $\mathring{M}$ 46'42		conjunction	-9531 Dec 01 j 00:08	3° $\mathring{A}$ 55'27	-12°08'07
				minimum elong	-9531 Nov 30 j 23:53	3° $\mathring{A}$ 55'26	12°08'05
conjunction	-9537 Nov 23 j 14:24	26° $\mathring{M}$ 05'17	-10°27'36	max. Earth dist.	-9531 Dec 04 j 08:10	4° $\mathring{A}$ 00'50	42.88061 AU
minimum elong	-9537 Nov 23 j 14:09	26° $\mathring{M}$ 05'16	10°27'29	morning rise	-9531 Dec 10 j 07:21	4° $\mathring{A}$ 10'23	
max. Earth dist.	-9537 Nov 27 j 03:12	26° $\mathring{M}$ 11'10	41.47181 AU	retrograde	-9530 Mar 15 j 09:11	5° $\mathring{A}$ 42'10	
morning rise	-9537 Dec 04 j 21:05	26° $\mathring{M}$ 23'58		min. Earth dist.	-9530 Jun 03 j 14:50	4° $\mathring{A}$ 39'13	41.04071 AU
retrograde	-9536 Mar 07 j 01:10	27° $\mathring{M}$ 55'32		opposition	-9530 Jun 06 j 20:08	4° $\mathring{A}$ 35'08	-12°51'27
min. Earth dist.	-9536 May 26 j 02:42	26° $\mathring{M}$ 51'24	39.62911 AU	direct	-9530 Aug 25 j 21:09	3° $\mathring{A}$ 30'05	
opposition	-9536 May 29 j 11:42	26° $\mathring{M}$ 47'01	-11°08'51	evening set	-9530 Nov 23 j 15:18	4° $\mathring{A}$ 57'09	
direct	-9536 Aug 17 j 10:57	25° $\mathring{M}$ 40'35					
evening set	-9536 Nov 13 j 06:43	27° $\mathring{M}$ 07'16		conjunction	-9530 Dec 02 j 12:54	5° $\mathring{A}$ 11'22	-12°23'08
				minimum elong	-9530 Dec 02 j 12:40	5° $\mathring{A}$ 11'21	12°23'07
conjunction	-9536 Nov 24 j 04:32	27° $\mathring{M}$ 25'15	-10°45'39	max. Earth dist.	-9530 Dec 05 j 21:20	5° $\mathring{A}$ 16'44	43.10333 AU
minimum elong	-9536 Nov 24 j 04:18	27° $\mathring{M}$ 25'14	10°45'33	morning rise	-9530 Dec 11 j 11:20	5° $\mathring{A}$ 25'39	
max. Earth dist.	-9536 Nov 27 j 16:08	27° $\mathring{M}$ 31'01	41.71350 AU	retrograde	-9529 Mar 16 j 21:12	6° $\mathring{A}$ 57'31	
morning rise	-9536 Dec 05 j 03:56	27° $\mathring{M}$ 43'20		min. Earth dist.	-9529 Jun 05 j 04:54	5° $\mathring{A}$ 54'39	41.26373 AU
retrograde	-9535 Mar 08 j 17:04	29° $\mathring{M}$ 14'54		opposition	-9529 Jun 08 j 08:32	5° $\mathring{A}$ 50'39	-13°06'43
min. Earth dist.	-9535 May 27 j 16:22	28° $\mathring{M}$ 11'03	39.87197 AU	direct	-9529 Aug 27 j 09:38	4° $\mathring{A}$ 45'47	
opposition	-9535 May 31 j 01:48	28° $\mathring{M}$ 06'40	-11°27'19	evening set	-9529 Nov 25 j 12:39	6° $\mathring{A}$ 12'58	

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 28

Attention, astronomical year style is used: The year -9529 in astronomical counting style is the year 9530 BCE in historical counting style.

conjunction	-9529 Dec 04 j 01:11	6° <u>♁</u> 26'31	-12°37'39	direct	-9522 Sep 04 j 16:53	13° <u>♁</u> 17'12	
minimum elong	-9529 Dec 04 j 00:57	6° <u>♁</u> 26'30	12°37'38	evening set	-9522 Dec 06 j 23:17	14° <u>♁</u> 46'19	
max. Earth dist.	-9529 Dec 07 j 08:20	6° <u>♁</u> 31'46	43.32306 AU				
morning rise	-9529 Dec 12 j 14:26	6° <u>♁</u> 40'07		conjunction	-9522 Dec 12 j 09:54	14° <u>♁</u> 54'42	-14°05'45
retrograde	-9528 Mar 17 j 10:26	8° <u>♁</u> 12'05		minimum elong	-9522 Dec 12 j 09:41	14° <u>♁</u> 54'41	14°05'50
min. Earth dist.	-9528 Jun 05 j 16:27	7° <u>♁</u> 09'24	41.48403 AU	max. Earth dist.	-9522 Dec 15 j 13:15	14° <u>♁</u> 59'32	44.79803 AU
opposition	-9528 Jun 08 j 20:33	7° <u>♁</u> 05'25	-13°21'27	morning rise	-9522 Dec 17 j 20:31	15° <u>♁</u> 03'05	
direct	-9528 Aug 27 j 20:55	6° <u>♁</u> 00'42		retrograde	-9521 Mar 26 j 14:39	16° <u>♁</u> 36'50	
evening set	-9528 Nov 26 j 10:04	7° <u>♁</u> 28'02		min. Earth dist.	-9521 Jun 15 j 02:35	15° <u>♁</u> 35'16	42.96220 AU
				opposition	-9521 Jun 18 j 01:26	15° <u>♁</u> 31'37	-14°50'32
conjunction	-9528 Dec 04 j 13:20	7° <u>♁</u> 40'55	-12°51'40	direct	-9521 Sep 06 j 05:22	14° <u>♁</u> 28'16	
minimum elong	-9528 Dec 04 j 13:05	7° <u>♁</u> 40'54	12°51'41	evening set	-9521 Dec 08 j 23:12	15° <u>♁</u> 57'52	
max. Earth dist.	-9528 Dec 07 j 20:13	7° <u>♁</u> 46'07	43.54022 AU				
morning rise	-9528 Dec 12 j 17:19	7° <u>♁</u> 53'50		conjunction	-9521 Dec 13 j 20:32	16° <u>♁</u> 05'22	-14°16'32
retrograde	-9527 Mar 18 j 22:29	9° <u>♁</u> 25'55		minimum elong	-9521 Dec 13 j 20:20	16° <u>♁</u> 05'21	14°16'37
min. Earth dist.	-9527 Jun 07 j 05:39	8° <u>♁</u> 23'20	41.70209 AU	max. Earth dist.	-9521 Dec 16 j 22:10	16° <u>♁</u> 10'05	44.99669 AU
opposition	-9527 Jun 10 j 08:19	8° <u>♁</u> 19'26	-13°35'41	morning rise	-9521 Dec 18 j 17:55	16° <u>♁</u> 12'53	
direct	-9527 Aug 29 j 09:11	7° <u>♁</u> 14'54		retrograde	-9520 Mar 27 j 00:01	17° <u>♁</u> 47'05	
evening set	-9527 Nov 28 j 07:42	8° <u>♁</u> 42'25		min. Earth dist.	-9520 Jun 15 j 14:11	16° <u>♁</u> 45'38	43.16032 AU
				opposition	-9520 Jun 18 j 11:40	16° <u>♁</u> 42'04	-15°01'24
conjunction	-9527 Dec 06 j 01:23	8° <u>♁</u> 54'36	-13°05'12	direct	-9520 Sep 06 j 16:56	15° <u>♁</u> 38'54	
minimum elong	-9527 Dec 06 j 01:10	8° <u>♁</u> 54'35	13°05'13	evening set	-9520 Dec 10 j 00:30	17° <u>♁</u> 09'03	
max. Earth dist.	-9527 Dec 09 j 08:07	8° <u>♁</u> 59'47	43.75543 AU				
morning rise	-9527 Dec 13 j 19:31	9° <u>♁</u> 06'49		conjunction	-9520 Dec 14 j 07:21	17° <u>♁</u> 15'36	-14°26'55
retrograde	-9526 Mar 20 j 07:46	10° <u>♁</u> 39'04		minimum elong	-9520 Dec 14 j 07:09	17° <u>♁</u> 15'35	14°27'00
min. Earth dist.	-9526 Jun 08 j 17:09	9° <u>♁</u> 36'40	41.91807 AU	max. Earth dist.	-9520 Dec 17 j 08:44	17° <u>♁</u> 20'17	45.19086 AU
opposition	-9526 Jun 11 j 19:43	9° <u>♁</u> 32'47	-13°49'23	morning rise	-9520 Dec 18 j 14:04	17° <u>♁</u> 22'09	
direct	-9526 Aug 30 j 23:07	8° <u>♁</u> 28'25		retrograde	-9519 Mar 28 j 08:03	18° <u>♁</u> 56'53	
evening set	-9526 Nov 30 j 05:19	9° <u>♁</u> 56'10		min. Earth dist.	-9519 Jun 17 j 01:40	17° <u>♁</u> 55'31	43.35359 AU
				opposition	-9519 Jun 19 j 21:29	17° <u>♁</u> 52'03	-15°11'52
conjunction	-9526 Dec 07 j 12:54	10° <u>♁</u> 07'39	-13°18'15	direct	-9519 Sep 08 j 05:09	16° <u>♁</u> 49'02	
minimum elong	-9526 Dec 07 j 12:40	10° <u>♁</u> 07'38	13°18'17	evening set	-9519 Dec 12 j 03:44	18° <u>♁</u> 19'53	
max. Earth dist.	-9526 Dec 10 j 18:24	10° <u>♁</u> 12'43	43.96862 AU				
morning rise	-9526 Dec 14 j 21:00	10° <u>♁</u> 19'09		conjunction	-9519 Dec 15 j 17:53	18° <u>♁</u> 25'20	-14°36'53
retrograde	-9525 Mar 21 j 18:38	11° <u>♁</u> 51'37		minimum elong	-9519 Dec 15 j 17:42	18° <u>♁</u> 25'20	14°37'00
min. Earth dist.	-9525 Jun 10 j 04:48	10° <u>♁</u> 49'23	42.13219 AU	morning rise	-9519 Dec 19 j 07:53	18° <u>♁</u> 30'48	
opposition	-9525 Jun 13 j 06:59	10° <u>♁</u> 45'31	-14°02'35	max. Earth dist.	-9519 Dec 18 j 17:01	18° <u>♁</u> 29'51	45.38031 AU
direct	-9525 Sep 01 j 10:36	9° <u>♁</u> 41'22		retrograde	-9518 Mar 29 j 19:16	20° <u>♁</u> 06'11	
evening set	-9525 Dec 02 j 03:08	11° <u>♁</u> 09'23		min. Earth dist.	-9518 Jun 18 j 11:43	19° <u>♁</u> 04'58	43.54225 AU
				opposition	-9518 Jun 21 j 07:10	19° <u>♁</u> 01'31	-15°21'54
conjunction	-9525 Dec 09 j 00:25	11° <u>♁</u> 20'07	-13°30'49	direct	-9518 Sep 09 j 14:03	17° <u>♁</u> 58'39	
minimum elong	-9525 Dec 09 j 00:13	11° <u>♁</u> 20'06	13°30'51	evening set	-9518 Dec 14 j 09:56	19° <u>♁</u> 30'23	
max. Earth dist.	-9525 Dec 12 j 06:30	11° <u>♁</u> 25'12	44.17994 AU				
morning rise	-9525 Dec 15 j 22:02	11° <u>♁</u> 30'53		conjunction	-9518 Dec 17 j 04:02	19° <u>♁</u> 34'33	-14°46'29
retrograde	-9524 Mar 22 j 04:12	13° <u>♁</u> 03'37		minimum elong	-9518 Dec 17 j 03:51	19° <u>♁</u> 34'32	14°46'36
min. Earth dist.	-9524 Jun 10 j 16:57	12° <u>♁</u> 01'31	42.34412 AU	morning rise	-9518 Dec 19 j 21:54	19° <u>♁</u> 38'43	
opposition	-9524 Jun 13 j 17:57	11° <u>♁</u> 57'44	-14°15'17	max. Earth dist.	-9518 Dec 20 j 02:48	19° <u>♁</u> 39'01	45.56521 AU
direct	-9524 Sep 01 j 22:59	10° <u>♁</u> 53'47		retrograde	-9517 Mar 31 j 06:16	21° <u>♁</u> 14'58	
evening set	-9524 Dec 03 j 01:21	12° <u>♁</u> 22'06		min. Earth dist.	-9517 Jun 19 j 23:12	20° <u>♁</u> 13'47	43.72659 AU
				opposition	-9517 Jun 22 j 16:37	20° <u>♁</u> 10'27	-15°31'32
conjunction	-9524 Dec 09 j 11:40	12° <u>♁</u> 32'05	-13°42'54	direct	-9517 Sep 10 j 22:37	19° <u>♁</u> 07'43	
minimum elong	-9524 Dec 09 j 11:26	12° <u>♁</u> 32'04	13°42'58	evening set	-9517 Dec 17 j 00:57	20° <u>♁</u> 40'53	
max. Earth dist.	-9524 Dec 12 j 16:06	12° <u>♁</u> 37'03	44.38903 AU				
morning rise	-9524 Dec 15 j 22:13	12° <u>♁</u> 42'06		conjunction	-9517 Dec 18 j 14:07	20° <u>♁</u> 43'13	-14°55'39
retrograde	-9523 Mar 23 j 17:34	14° <u>♁</u> 15'07		minimum elong	-9517 Dec 18 j 13:57	20° <u>♁</u> 43'12	14°55'49
min. Earth dist.	-9523 Jun 12 j 03:33	13° <u>♁</u> 13'14	42.55354 AU	morning rise	-9517 Dec 20 j 02:59	20° <u>♁</u> 45'32	
opposition	-9523 Jun 15 j 04:41	13° <u>♁</u> 09'28	-14°27'29	max. Earth dist.	-9517 Dec 21 j 11:43	20° <u>♁</u> 47'36	45.74633 AU
direct	-9523 Sep 03 j 07:40	12° <u>♁</u> 05'42		retrograde	-9516 Mar 31 j 16:55	22° <u>♁</u> 23'11	
evening set	-9523 Dec 04 j 23:58	13° <u>♁</u> 34'24		min. Earth dist.	-9516 Jun 20 j 08:23	21° <u>♁</u> 22'08	43.90732 AU
				opposition	-9516 Jun 23 j 01:41	21° <u>♁</u> 18'49	-15°40'44
conjunction	-9523 Dec 10 j 22:50	13° <u>♁</u> 43'36	-13°54'33	direct	-9516 Sep 11 j 07:16	20° <u>♁</u> 16'12	
minimum elong	-9523 Dec 10 j 22:38	13° <u>♁</u> 43'36	13°54'37				
max. Earth dist.	-9523 Dec 14 j 03:05	13° <u>♁</u> 48'31	44.59520 AU	conjunction	-9516 Dec 18 j 23:53	21° <u>♁</u> 51'20	-15°04'26
morning rise	-9523 Dec 16 j 21:54	13° <u>♁</u> 52'49		minimum elong	-9516 Dec 18 j 23:42	21° <u>♁</u> 51'19	15°04'35
retrograde	-9522 Mar 25 j 05:31	15° <u>♁</u> 26'11		max. Earth dist.	-9516 Dec 21 j 20:14	21° <u>♁</u> 55'37	45.92408 AU
min. Earth dist.	-9522 Jun 13 j 16:01	14° <u>♁</u> 24'25	42.75979 AU	retrograde	-9515 Apr 02 j 01:09	23° <u>♁</u> 30'53	
opposition	-9522 Jun 16 j 15:10	14° <u>♁</u> 20'45	-14°39'14	min. Earth dist.	-9515 Jun 21 j 18:45	22° <u>♁</u> 29'54	44.08508 AU

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 29

Attention, astronomical year style is used: The year -9515 in astronomical counting style is the year 9516 BCE in historical counting style.

opposition	-9515 Jun 24 j 10:44	22° <u>♂</u> 26'40	-15°49'30	retrograde	-9507 Apr 10 j 17:33	2° <u>♂</u> 17'43	
direct	-9515 Sep 12 j 17:27	21° <u>♂</u> 24'10		min. Earth dist.	-9507 Jun 30 j 20:30	1° <u>♂</u> 17'32	45.40142 AU
				opposition	-9507 Jul 03 j 04:00	1° <u>♂</u> 14'46	-16°45'00
conjunction	-9515 Dec 20 j 09:39	22° <u>♂</u> 58'55	-15°12'48	direct	-9507 Sep 21 j 17:52	0° <u>♂</u> 13'23	
minimum elong	-9515 Dec 20 j 09:29	22° <u>♂</u> 58'55	15°12'58				
max. Earth dist.	-9515 Dec 23 j 06:09	23° <u>♂</u> 03'12	46.09911 AU	conjunction	-9507 Dec 29 j 09:47	1° <u>♂</u> 45'39	-16°05'43
retrograde	-9514 Apr 03 j 05:58	24° <u>♂</u> 38'04		minimum elong	-9507 Dec 29 j 09:39	1° <u>♂</u> 45'38	16°05'57
min. Earth dist.	-9514 Jun 23 j 04:12	23° <u>♂</u> 37'12	44.26008 AU	max. Earth dist.	-9507 Dec 31 j 21:03	1° <u>♂</u> 49'15	47.39264 AU
opposition	-9514 Jun 25 j 19:20	23° <u>♂</u> 34'00	-15°57'51	retrograde	-9506 Apr 12 j 03:35	3° <u>♂</u> 21'59	
direct	-9514 Sep 14 j 06:09	22° <u>♂</u> 31'38		min. Earth dist.	-9506 Jul 02 j 04:15	2° <u>♂</u> 21'55	45.54722 AU
				opposition	-9506 Jul 04 j 11:21	2° <u>♂</u> 19'11	-16°50'18
conjunction	-9514 Dec 21 j 19:03	24° <u>♂</u> 06'02	-15°20'45	direct	-9506 Sep 22 j 23:50	1° <u>♂</u> 17'53	
minimum elong	-9514 Dec 21 j 18:53	24° <u>♂</u> 06'02	15°20'54				
max. Earth dist.	-9514 Dec 24 j 13:40	24° <u>♂</u> 10'11	46.27172 AU	conjunction	-9506 Dec 30 j 18:12	2° <u>♂</u> 49'52	-16°10'46
retrograde	-9513 Apr 04 j 15:14	25° <u>♂</u> 44'48		minimum elong	-9506 Dec 30 j 18:06	2° <u>♂</u> 49'52	16°11'02
min. Earth dist.	-9513 Jun 24 j 12:49	24° <u>♂</u> 44'04	44.43280 AU	max. Earth dist.	-9505 Jan 02 j 04:06	2° <u>♂</u> 53'22	47.53521 AU
opposition	-9513 Jun 27 j 03:56	24° <u>♂</u> 40'53	-16°05'46	retrograde	-9505 Apr 13 j 12:01	4° <u>♂</u> 25'52	
direct	-9513 Sep 15 j 14:47	23° <u>♂</u> 38'40		min. Earth dist.	-9505 Jul 03 j 13:42	3° <u>♂</u> 25'48	45.68848 AU
				opposition	-9505 Jul 05 j 18:44	3° <u>♂</u> 23'11	-16°55'15
conjunction	-9513 Dec 23 j 04:13	25° <u>♂</u> 12'44	-15°28'17	direct	-9505 Sep 24 j 06:36	2° <u>♂</u> 21'57	
minimum elong	-9513 Dec 23 j 04:04	25° <u>♂</u> 12'43	15°28'28				
max. Earth dist.	-9513 Dec 25 j 23:05	25° <u>♂</u> 16'52	46.44197 AU	conjunction	-9504 Jan 01 j 02:26	3° <u>♂</u> 53'39	-16°15'29
retrograde	-9512 Apr 05 j 00:43	26° <u>♂</u> 51'08		minimum elong	-9504 Jan 01 j 02:20	3° <u>♂</u> 53'39	16°15'44
min. Earth dist.	-9512 Jun 24 j 23:06	25° <u>♂</u> 50'28	44.60300 AU	max. Earth dist.	-9504 Jan 03 j 11:52	3° <u>♂</u> 57'07	47.67361 AU
opposition	-9512 Jun 27 j 12:25	25° <u>♂</u> 47'23	-16°13'16	retrograde	-9504 Apr 13 j 16:42	5° <u>♂</u> 29'19	
direct	-9512 Sep 15 j 22:50	24° <u>♂</u> 45'19		min. Earth dist.	-9504 Jul 03 j 21:32	4° <u>♂</u> 29'19	45.82561 AU
				opposition	-9504 Jul 06 j 01:50	4° <u>♂</u> 26'44	-16°59'52
conjunction	-9512 Dec 23 j 13:27	26° <u>♂</u> 19'03	-15°35'26	direct	-9504 Sep 24 j 17:09	3° <u>♂</u> 25'36	
minimum elong	-9512 Dec 23 j 13:19	26° <u>♂</u> 19'02	15°35'37				
max. Earth dist.	-9512 Dec 26 j 07:07	26° <u>♂</u> 23'06	46.60978 AU	conjunction	-9503 Jan 01 j 10:33	4° <u>♂</u> 57'01	-16°19'52
retrograde	-9511 Apr 06 j 10:41	27° <u>♂</u> 57'05		minimum elong	-9503 Jan 01 j 10:28	4° <u>♂</u> 57'01	16°20'08
min. Earth dist.	-9511 Jun 26 j 07:06	26° <u>♂</u> 56'35	44.77043 AU	max. Earth dist.	-9503 Jan 03 j 17:51	5° <u>♂</u> 00'21	47.80825 AU
opposition	-9511 Jun 28 j 20:29	26° <u>♂</u> 53'31	-16°20'21	retrograde	-9503 Apr 14 j 23:03	6° <u>♂</u> 32'22	
direct	-9511 Sep 17 j 06:00	25° <u>♂</u> 51'35		min. Earth dist.	-9503 Jul 05 j 05:12	5° <u>♂</u> 32'27	45.95938 AU
				opposition	-9503 Jul 07 j 08:41	5° <u>♂</u> 29'54	-17°04'07
conjunction	-9511 Dec 24 j 22:29	27° <u>♂</u> 25'02	-15°42'12	direct	-9503 Sep 26 j 01:38	4° <u>♂</u> 28'51	
minimum elong	-9511 Dec 24 j 22:20	27° <u>♂</u> 25'01	15°42'24				
max. Earth dist.	-9511 Dec 27 j 14:53	27° <u>♂</u> 28'59	46.77451 AU	conjunction	-9502 Jan 02 j 18:39	6° <u>♂</u> 00'01	-16°23'54
retrograde	-9510 Apr 07 j 20:21	29° <u>♂</u> 02'42		minimum elong	-9502 Jan 02 j 18:33	6° <u>♂</u> 00'01	16°24'10
min. Earth dist.	-9510 Jun 27 j 16:58	28° <u>♂</u> 02'18	44.93463 AU	max. Earth dist.	-9502 Jan 05 j 01:58	6° <u>♂</u> 03'20	47.93972 AU
opposition	-9510 Jun 30 j 04:38	27° <u>♂</u> 59'19	-16°27'03	retrograde	-9502 Apr 16 j 05:19	7° <u>♂</u> 35'04	
direct	-9510 Sep 18 j 13:45	26° <u>♂</u> 57'32		min. Earth dist.	-9502 Jul 06 j 13:43	6° <u>♂</u> 35'11	46.09006 AU
				opposition	-9502 Jul 08 j 15:32	6° <u>♂</u> 32'43	-17°08'01
conjunction	-9510 Dec 26 j 07:25	28° <u>♂</u> 30'41	-15°48'35	direct	-9502 Sep 27 j 09:58	5° <u>♂</u> 31'47	
minimum elong	-9510 Dec 26 j 07:18	28° <u>♂</u> 30'41	15°48'48				
max. Earth dist.	-9510 Dec 28 j 23:33	28° <u>♂</u> 34'37	46.93577 AU	conjunction	-9501 Jan 04 j 02:23	7° <u>♂</u> 02'41	-16°27'35
	-9509 Mar 13 j 02:25	0° <u>♂</u>		minimum elong	-9501 Jan 04 j 02:18	7° <u>♂</u> 02'41	16°27'52
retrograde	-9509 Apr 09 j 02:12	0° <u>♂</u> 08'02		max. Earth dist.	-9501 Jan 06 j 08:13	7° <u>♂</u> 05'54	48.06845 AU
	-9509 May 06 j 06:54	30° <u>♂</u> 19'41		retrograde	-9501 Apr 17 j 14:09	8° <u>♂</u> 37'27	
min. Earth dist.	-9509 Jun 29 j 01:54	29° <u>♂</u> 07'44	45.09482 AU	min. Earth dist.	-9501 Jul 07 j 20:12	7° <u>♂</u> 37'42	46.21805 AU
opposition	-9509 Jul 01 j 12:30	29° <u>♂</u> 04'48	-16°33'23	opposition	-9501 Jul 09 j 22:10	7° <u>♂</u> 35'15	-17°11'33
direct	-9509 Sep 20 j 00:30	28° <u>♂</u> 03'10		direct	-9501 Sep 28 j 15:17	6° <u>♂</u> 34'24	
conjunction	-9509 Dec 27 j 16:14	29° <u>♂</u> 36'01	-15°54'38	conjunction	-9500 Jan 05 j 10:04	8° <u>♂</u> 05'06	-16°30'55
minimum elong	-9509 Dec 27 j 16:05	29° <u>♂</u> 36'01	15°54'51	minimum elong	-9500 Jan 05 j 10:00	8° <u>♂</u> 05'05	16°31'12
max. Earth dist.	-9509 Dec 30 j 06:02	29° <u>♂</u> 39'48	47.09284 AU	max. Earth dist.	-9500 Jan 07 j 14:58	8° <u>♂</u> 08'15	48.19450 AU
	-9508 Jan 13 j 04:28	0° <u>♂</u>		retrograde	-9500 Apr 17 j 23:19	9° <u>♂</u> 39'35	
retrograde	-9508 Apr 09 j 10:01	1° <u>♂</u> 13'02		min. Earth dist.	-9500 Jul 08 j 04:31	8° <u>♂</u> 39'53	46.34336 AU
min. Earth dist.	-9508 Jun 29 j 10:35	0° <u>♂</u> 12'51	45.25065 AU	opposition	-9500 Jul 10 j 04:46	8° <u>♂</u> 37'31	-17°14'43
opposition	-9508 Jul 01 j 20:17	0° <u>♂</u> 09'58	-16°39'22	direct	-9500 Sep 28 j 20:23	7° <u>♂</u> 36'48	
	-9508 Jul 10 j 05:08	30° <u>♂</u> 19'41					
direct	-9508 Sep 20 j 08:51	29° <u>♂</u> 08'27		conjunction	-9499 Jan 05 j 17:51	9° <u>♂</u> 07'17	-16°33'55
	-9508 Nov 29 j 00:09	0° <u>♂</u>		minimum elong	-9499 Jan 05 j 17:47	9° <u>♂</u> 07'17	16°34'14
				max. Earth dist.	-9499 Jan 07 j 22:21	9° <u>♂</u> 10'24	48.31792 AU
conjunction	-9508 Dec 28 j 01:05	0° <u>♂</u> 41'01	-16°00'20	retrograde	-9499 Apr 19 j 05:13	10° <u>♂</u> 41'31	
minimum elong	-9508 Dec 28 j 00:59	0° <u>♂</u> 41'01	16°00'34	min. Earth dist.	-9499 Jul 09 j 11:33	9° <u>♂</u> 41'56	46.46562 AU
max. Earth dist.	-9508 Dec 30 j 14:26	0° <u>♂</u> 44'46	47.24520 AU	opposition	-9499 Jul 11 j 11:10	9° <u>♂</u> 39'36	-17°17'34

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 30

Attention, astronomical year style is used: The year -9499 in astronomical counting style is the year 9500 BCE in historical counting style.

direct	-9499 Sep 30 j 04:22	8° <b>ℳ</b> 39'00		min. Earth dist.	-9491 Jul 17 j 21:51	17° <b>ℳ</b> 51'00	47.28394 AU
				opposition	-9491 Jul 19 j 11:02	17° <b>ℳ</b> 49'11	-17°29'22
conjunction	-9498 Jan 07 j 01:23	10° <b>ℳ</b> 09'18	-16°36'35	direct	-9491 Oct 08 j 11:51	16° <b>ℳ</b> 49'12	
minimum elong	-9498 Jan 07 j 01:20	10° <b>ℳ</b> 09'18	16°36'54				
max. Earth dist.	-9498 Jan 09 j 03:49	10° <b>ℳ</b> 12'18	48.43810 AU	conjunction	-9490 Jan 15 j 11:38	18° <b>ℳ</b> 17'58	-16°47'30
retrograde	-9498 Apr 20 j 11:45	11° <b>ℳ</b> 43'18		minimum elong	-9490 Jan 15 j 11:38	18° <b>ℳ</b> 17'58	16°47'54
min. Earth dist.	-9498 Jul 10 j 18:52	10° <b>ℳ</b> 43'49	46.58452 AU	max. Earth dist.	-9490 Jan 17 j 03:06	18° <b>ℳ</b> 20'15	49.23631 AU
opposition	-9498 Jul 12 j 17:27	10° <b>ℳ</b> 41'32	-17°20'04	retrograde	-9490 Apr 28 j 14:57	19° <b>ℳ</b> 50'03	
direct	-9498 Oct 01 j 11:23	9° <b>ℳ</b> 41'04		min. Earth dist.	-9490 Jul 19 j 05:21	18° <b>ℳ</b> 50'47	47.36640 AU
				opposition	-9490 Jul 20 j 16:33	18° <b>ℳ</b> 49'05	-17°29'31
conjunction	-9497 Jan 08 j 09:00	11° <b>ℳ</b> 11'10	-16°38'56	direct	-9490 Oct 09 j 16:16	17° <b>ℳ</b> 49'08	
minimum elong	-9497 Jan 08 j 08:56	11° <b>ℳ</b> 11'10	16°39'16				
max. Earth dist.	-9497 Jan 10 j 11:11	11° <b>ℳ</b> 14'09	48.55461 AU	conjunction	-9489 Jan 16 j 18:29	19° <b>ℳ</b> 17'44	-16°47'34
retrograde	-9497 Apr 21 j 16:15	12° <b>ℳ</b> 44'57		minimum elong	-9489 Jan 16 j 18:28	19° <b>ℳ</b> 17'44	16°47'57
min. Earth dist.	-9497 Jul 12 j 03:04	11° <b>ℳ</b> 45'31	46.69930 AU	max. Earth dist.	-9489 Jan 18 j 09:19	19° <b>ℳ</b> 19'59	49.31724 AU
opposition	-9497 Jul 13 j 23:43	11° <b>ℳ</b> 43'20	-17°22'15	retrograde	-9489 Apr 29 j 21:37	20° <b>ℳ</b> 49'35	
direct	-9497 Oct 02 j 20:28	10° <b>ℳ</b> 42'58		min. Earth dist.	-9489 Jul 20 j 11:00	19° <b>ℳ</b> 50'23	47.44575 AU
				opposition	-9489 Jul 21 j 21:54	19° <b>ℳ</b> 48'42	-17°29'22
conjunction	-9496 Jan 09 j 16:25	12° <b>ℳ</b> 12'54	-16°41'00	direct	-9489 Oct 10 j 21:22	18° <b>ℳ</b> 48'48	
minimum elong	-9496 Jan 09 j 16:23	12° <b>ℳ</b> 12'54	16°41'20				
max. Earth dist.	-9496 Jan 11 j 16:26	12° <b>ℳ</b> 15'44	48.66684 AU	conjunction	-9488 Jan 18 j 01:01	20° <b>ℳ</b> 17'15	-16°47'21
retrograde	-9496 Apr 22 j 01:25	13° <b>ℳ</b> 46'27		minimum elong	-9488 Jan 18 j 01:01	20° <b>ℳ</b> 17'15	16°47'45
min. Earth dist.	-9496 Jul 12 j 09:44	12° <b>ℳ</b> 47'07	46.80939 AU	max. Earth dist.	-9488 Jan 19 j 13:55	20° <b>ℳ</b> 19'24	49.39518 AU
opposition	-9496 Jul 14 j 05:52	12° <b>ℳ</b> 44'58	-17°24'09	retrograde	-9488 Apr 30 j 03:44	21° <b>ℳ</b> 48'55	
direct	-9496 Oct 03 j 01:11	11° <b>ℳ</b> 44'42		min. Earth dist.	-9488 Jul 20 j 17:32	20° <b>ℳ</b> 49'44	47.52219 AU
				opposition	-9488 Jul 22 j 03:17	20° <b>ℳ</b> 48'07	-17°28'54
conjunction	-9495 Jan 09 j 23:57	13° <b>ℳ</b> 14'27	-16°42'47	direct	-9488 Oct 11 j 03:05	19° <b>ℳ</b> 48'17	
minimum elong	-9495 Jan 09 j 23:53	13° <b>ℳ</b> 14'27	16°43'07				
max. Earth dist.	-9495 Jan 11 j 22:29	13° <b>ℳ</b> 17'11	48.77398 AU	conjunction	-9487 Jan 18 j 07:48	21° <b>ℳ</b> 16'35	-16°46'49
retrograde	-9495 Apr 23 j 10:37	14° <b>ℳ</b> 47'46		minimum elong	-9487 Jan 18 j 07:49	21° <b>ℳ</b> 16'35	16°47'12
min. Earth dist.	-9495 Jul 13 j 18:21	13° <b>ℳ</b> 48'26	46.91425 AU	max. Earth dist.	-9487 Jan 19 j 20:34	21° <b>ℳ</b> 18'43	49.47014 AU
opposition	-9495 Jul 15 j 11:58	13° <b>ℳ</b> 46'25	-17°25'46	retrograde	-9487 May 01 j 06:09	22° <b>ℳ</b> 48'04	
direct	-9495 Oct 04 j 04:51	12° <b>ℳ</b> 46'13		min. Earth dist.	-9487 Jul 22 j 00:11	21° <b>ℳ</b> 48'55	47.59537 AU
				opposition	-9487 Jul 23 j 08:26	21° <b>ℳ</b> 47'22	-17°28'08
conjunction	-9494 Jan 11 j 07:28	14° <b>ℳ</b> 15'47	-16°44'17	direct	-9487 Oct 12 j 11:50	20° <b>ℳ</b> 47'36	
minimum elong	-9494 Jan 11 j 07:27	14° <b>ℳ</b> 15'47	16°44'38				
max. Earth dist.	-9494 Jan 13 j 04:52	14° <b>ℳ</b> 18'27	48.87593 AU	conjunction	-9486 Jan 19 j 14:25	22° <b>ℳ</b> 15'47	-16°46'00
	-9494 Feb 12 j 23:18	15° <b>ℳ</b>		minimum elong	-9486 Jan 19 j 14:26	22° <b>ℳ</b> 15'48	16°46'25
retrograde	-9494 Apr 24 j 15:57	15° <b>ℳ</b> 48'50		max. Earth dist.	-9486 Jan 21 j 01:10	22° <b>ℳ</b> 17'48	49.54189 AU
	-9494 Jul 06 j 00:39	15° <b>ℳ</b>		retrograde	-9486 May 02 j 12:45	23° <b>ℳ</b> 47'06	
min. Earth dist.	-9494 Jul 15 j 01:09	14° <b>ℳ</b> 49'34	47.01369 AU	min. Earth dist.	-9486 Jul 23 j 05:43	22° <b>ℳ</b> 48'03	47.66512 AU
opposition	-9494 Jul 16 j 17:55	14° <b>ℳ</b> 47'35	-17°27'06	opposition	-9486 Jul 24 j 13:34	22° <b>ℳ</b> 46'31	-17°27'05
direct	-9494 Oct 05 j 13:08	13° <b>ℳ</b> 47'27		direct	-9486 Oct 13 j 17:01	21° <b>ℳ</b> 46'49	
	-9494 Dec 31 j 13:52	15° <b>ℳ</b>					
conjunction	-9493 Jan 12 j 14:31	15° <b>ℳ</b> 16'49	-16°45'31	conjunction	-9485 Jan 20 j 20:51	23° <b>ℳ</b> 14'54	-16°44'55
minimum elong	-9493 Jan 12 j 14:28	15° <b>ℳ</b> 16'49	16°45'52	minimum elong	-9485 Jan 20 j 20:53	23° <b>ℳ</b> 14'55	16°45'19
max. Earth dist.	-9493 Jan 14 j 09:21	15° <b>ℳ</b> 19'20	48.97261 AU	max. Earth dist.	-9485 Jan 22 j 06:37	23° <b>ℳ</b> 16'51	49.60980 AU
retrograde	-9493 Apr 25 j 20:58	16° <b>ℳ</b> 49'38		retrograde	-9485 May 03 j 20:59	24° <b>ℳ</b> 46'04	
min. Earth dist.	-9493 Jul 16 j 08:29	15° <b>ℳ</b> 50'21	47.10816 AU	opposition	-9485 Jul 25 j 18:46	23° <b>ℳ</b> 45'35	-17°25'45
opposition	-9493 Jul 17 j 23:49	15° <b>ℳ</b> 48'27	-17°28'09	min. Earth dist.	-9485 Jul 24 j 13:12	23° <b>ℳ</b> 47'01	47.73078 AU
	-9493 Sep 04 j 07:36	15° <b>ℳ</b>		direct	-9485 Oct 14 j 20:11	22° <b>ℳ</b> 45'58	
direct	-9493 Oct 06 j 20:53	14° <b>ℳ</b> 48'22		conjunction	-9484 Jan 22 j 03:32	24° <b>ℳ</b> 13'58	-16°43'33
	-9493 Nov 08 j 05:02	15° <b>ℳ</b>		minimum elong	-9484 Jan 22 j 03:33	24° <b>ℳ</b> 13'58	16°43'59
				max. Earth dist.	-9484 Jan 23 j 12:08	24° <b>ℳ</b> 15'50	49.67347 AU
conjunction	-9492 Jan 13 j 21:43	16° <b>ℳ</b> 17'32	-16°46'28	retrograde	-9484 May 04 j 02:41	25° <b>ℳ</b> 44'58	
minimum elong	-9492 Jan 13 j 21:43	16° <b>ℳ</b> 17'32	16°46'50	opposition	-9484 Jul 25 j 23:41	24° <b>ℳ</b> 44'36	-17°24'09
max. Earth dist.	-9492 Jan 15 j 16:18	16° <b>ℳ</b> 20'02	49.06454 AU	min. Earth dist.	-9484 Jul 24 j 18:54	24° <b>ℳ</b> 45'58	47.79168 AU
retrograde	-9492 Apr 26 j 00:31	17° <b>ℳ</b> 50'06		direct	-9484 Oct 15 j 01:52	23° <b>ℳ</b> 45'02	
min. Earth dist.	-9492 Jul 16 j 16:03	16° <b>ℳ</b> 50'48	47.19800 AU				
opposition	-9492 Jul 18 j 05:29	16° <b>ℳ</b> 48'59	-17°28'54	conjunction	-9483 Jan 22 j 10:08	25° <b>ℳ</b> 12'56	-16°41'57
direct	-9492 Oct 07 j 05:51	15° <b>ℳ</b> 48'57		minimum elong	-9483 Jan 22 j 10:11	25° <b>ℳ</b> 12'56	16°42'22
				max. Earth dist.	-9483 Jan 23 j 16:05	25° <b>ℳ</b> 14'39	49.73209 AU
conjunction	-9491 Jan 14 j 04:46	17° <b>ℳ</b> 17'55	-16°47'08	retrograde	-9483 May 05 j 08:27	26° <b>ℳ</b> 43'47	
minimum elong	-9491 Jan 14 j 04:44	17° <b>ℳ</b> 17'54	16°47'30	min. Earth dist.	-9483 Jul 26 j 01:47	25° <b>ℳ</b> 44'47	47.84744 AU
max. Earth dist.	-9491 Jan 15 j 21:14	17° <b>ℳ</b> 20'16	49.15232 AU	opposition	-9483 Jul 27 j 04:47	25° <b>ℳ</b> 43'30	-17°22'18
retrograde	-9491 Apr 27 j 07:06	18° <b>ℳ</b> 50'14		direct	-9483 Oct 16 j 07:46	24° <b>ℳ</b> 43'59	

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 31

Attention, astronomical year style is used: The year -9482 in astronomical counting style is the year 9483 BCE in historical counting style.

conjunction	-9482 Jan 23 j 16:45	26° <del>M</del> 11'48	-16°40'06	direct	-9475 Oct 24 j 04:07	2° <del>♂</del> 29'31	
minimum elong	-9482 Jan 23 j 16:46	26° <del>M</del> 11'48	16°40'32				
max. Earth dist.	-9482 Jan 24 j 22:04	26° <del>M</del> 13'29	49.78540 AU	conjunction	-9474 Jan 31 j 18:09	3° <del>♂</del> 56'39	-16°15'58
retrograde	-9482 May 06 j 11:11	27° <del>M</del> 42'29		minimum elong	-9474 Jan 31 j 18:14	3° <del>♂</del> 56'39	16°16'27
min. Earth dist.	-9482 Jul 27 j 08:38	26° <del>M</del> 43'29	47.89768 AU	max. Earth dist.	-9474 Feb 01 j 12:59	3° <del>♂</del> 57'43	50.06274 AU
opposition	-9482 Jul 28 j 09:43	26° <del>M</del> 42'17	-17°20'13	retrograde	-9474 May 14 j 07:46	5° <del>♂</del> 26'16	
direct	-9482 Oct 17 j 16:18	25° <del>M</del> 42'48		opposition	-9474 Aug 04 j 22:28	4° <del>♂</del> 26'30	-16°53'47
				min. Earth dist.	-9474 Aug 04 j 05:56	4° <del>♂</del> 27'18	48.15632 AU
conjunction	-9481 Jan 24 j 23:09	27° <del>M</del> 10'30	-16°38'00	direct	-9474 Oct 25 j 07:45	3° <del>♂</del> 27'12	
minimum elong	-9481 Jan 24 j 23:13	27° <del>M</del> 10'30	16°38'27				
max. Earth dist.	-9481 Jan 26 j 02:01	27° <del>M</del> 12'03	49.83354 AU	conjunction	-9473 Feb 02 j 00:05	4° <del>♂</del> 54'19	-16°11'44
retrograde	-9481 May 07 j 16:48	28° <del>M</del> 41'03		minimum elong	-9473 Feb 02 j 00:09	4° <del>♂</del> 54'19	16°12'15
opposition	-9481 Jul 29 j 14:31	27° <del>M</del> 40'53	-17°17'52	max. Earth dist.	-9473 Feb 02 j 16:41	4° <del>♂</del> 55'15	50.08271 AU
min. Earth dist.	-9481 Jul 28 j 14:02	27° <del>M</del> 42'04	47.94294 AU	retrograde	-9473 May 15 j 14:23	6° <del>♂</del> 23'50	
direct	-9481 Oct 18 j 21:48	26° <del>M</del> 41'26		opposition	-9473 Aug 06 j 02:53	5° <del>♂</del> 24'09	-16°49'15
				min. Earth dist.	-9473 Aug 05 j 12:07	5° <del>♂</del> 24'51	48.17366 AU
conjunction	-9480 Jan 26 j 05:27	28° <del>M</del> 09'01	-16°35'39	direct	-9473 Oct 26 j 11:36	4° <del>♂</del> 24'53	
minimum elong	-9480 Jan 26 j 05:29	28° <del>M</del> 09'01	16°36'06				
max. Earth dist.	-9480 Jan 27 j 07:00	28° <del>M</del> 10'29	49.87679 AU	conjunction	-9472 Feb 03 j 06:11	5° <del>♂</del> 51'58	-16°07'16
retrograde	-9480 May 07 j 23:44	29° <del>M</del> 39'25		minimum elong	-9472 Feb 03 j 06:17	5° <del>♂</del> 51'58	16°07'45
opposition	-9480 Jul 29 j 19:22	28° <del>M</del> 39'18	-17°15'15	max. Earth dist.	-9472 Feb 03 j 22:25	5° <del>♂</del> 52'53	50.09857 AU
min. Earth dist.	-9480 Jul 28 j 21:12	28° <del>M</del> 40'22	47.98355 AU	retrograde	-9472 May 15 j 16:54	7° <del>♂</del> 21'25	
direct	-9480 Oct 19 j 02:01	27° <del>M</del> 39'52		opposition	-9472 Aug 06 j 07:20	6° <del>♂</del> 21'47	-16°44'28
				min. Earth dist.	-9472 Aug 05 j 18:15	6° <del>♂</del> 22'24	48.18633 AU
conjunction	-9479 Jan 26 j 11:50	29° <del>M</del> 07'21	-16°33'03	direct	-9472 Oct 26 j 19:26	5° <del>♂</del> 22'32	
minimum elong	-9479 Jan 26 j 11:55	29° <del>M</del> 07'21	16°33'31				
max. Earth dist.	-9479 Jan 27 j 12:29	29° <del>M</del> 08'45	49.91584 AU	conjunction	-9471 Feb 03 j 12:18	6° <del>♂</del> 49'36	-16°02'34
	-9479 Mar 08 j 10:02	0° <del>♂</del>		minimum elong	-9471 Feb 03 j 12:22	6° <del>♂</del> 49'36	16°03'03
retrograde	-9479 May 09 j 06:46	0° <del>♂</del> 37'34		max. Earth dist.	-9471 Feb 04 j 01:53	6° <del>♂</del> 50'22	50.10960 AU
	-9479 Jul 10 j 21:26	30° <del>R</del> <del>M</del>		retrograde	-9471 May 16 j 21:36	8° <del>♂</del> 18'58	
opposition	-9479 Jul 30 j 23:53	29° <del>M</del> 37'30	-17°12'23	opposition	-9471 Aug 07 j 11:38	7° <del>♂</del> 19'23	-16°39'26
min. Earth dist.	-9479 Jul 30 j 02:13	29° <del>M</del> 38'32	48.02013 AU	min. Earth dist.	-9471 Aug 06 j 23:23	7° <del>♂</del> 19'58	48.19397 AU
direct	-9479 Oct 20 j 05:38	28° <del>M</del> 38'05		direct	-9471 Oct 28 j 00:53	6° <del>♂</del> 20'08	
	-9478 Jan 23 j 17:59	0° <del>♂</del>					
conjunction	-9478 Jan 27 j 17:59	0° <del>♂</del> 05'29	-16°30'11	conjunction	-9470 Feb 04 j 18:26	7° <del>♂</del> 47'10	-15°57'38
minimum elong	-9478 Jan 27 j 18:02	0° <del>♂</del> 05'29	16°30'38	minimum elong	-9470 Feb 04 j 18:33	7° <del>♂</del> 47'11	15°58'07
max. Earth dist.	-9478 Jan 28 j 16:28	0° <del>♂</del> 06'45	49.95114 AU	max. Earth dist.	-9470 Feb 05 j 06:33	7° <del>♂</del> 47'51	50.11533 AU
retrograde	-9478 May 10 j 13:00	1° <del>♂</del> 35'32		retrograde	-9470 May 18 j 03:00	9° <del>♂</del> 16'28	
min. Earth dist.	-9478 Jul 31 j 08:14	0° <del>♂</del> 36'30	48.05338 AU	opposition	-9470 Aug 08 j 16:09	8° <del>♂</del> 16'54	-16°34'11
opposition	-9478 Aug 01 j 04:33	0° <del>♂</del> 35'32	-17°09'14	min. Earth dist.	-9470 Aug 08 j 06:22	8° <del>♂</del> 17'22	48.19623 AU
	-9478 Sep 03 j 08:32	30° <del>R</del> <del>M</del>		direct	-9470 Oct 29 j 06:00	7° <del>♂</del> 17'40	
direct	-9478 Oct 21 j 09:59	29° <del>M</del> 36'07					
	-9478 Dec 08 j 05:35	0° <del>♂</del>		conjunction	-9469 Feb 06 j 00:23	8° <del>♂</del> 44'39	-15°52'28
conjunction	-9477 Jan 29 j 00:00	1° <del>♂</del> 03'26	-16°27'03	minimum elong	-9469 Feb 06 j 00:28	8° <del>♂</del> 44'39	15°52'58
minimum elong	-9477 Jan 29 j 00:05	1° <del>♂</del> 03'26	16°27'31	max. Earth dist.	-9469 Feb 06 j 11:15	8° <del>♂</del> 45'16	50.11592 AU
max. Earth dist.	-9477 Jan 29 j 22:27	1° <del>♂</del> 04'42	49.98332 AU	retrograde	-9469 May 19 j 09:34	10° <del>♂</del> 13'51	
retrograde	-9477 May 11 j 14:11	2° <del>♂</del> 33'22		opposition	-9469 Aug 09 j 20:27	9° <del>♂</del> 14'19	-16°28'42
opposition	-9477 Aug 02 j 09:09	1° <del>♂</del> 33'24	-17°05'47	min. Earth dist.	-9469 Aug 09 j 11:20	9° <del>♂</del> 14'45	48.19331 AU
min. Earth dist.	-9477 Aug 01 j 14:03	1° <del>♂</del> 34'19	48.08350 AU	direct	-9469 Oct 30 j 09:43	8° <del>♂</del> 15'04	
direct	-9477 Oct 22 j 18:25	0° <del>♂</del> 34'00					
conjunction	-9476 Jan 30 j 06:02	2° <del>♂</del> 01'14	-16°23'38	conjunction	-9468 Feb 07 j 06:21	9° <del>♂</del> 42'01	-15°47'04
minimum elong	-9476 Jan 30 j 06:06	2° <del>♂</del> 01'15	16°24'05	minimum elong	-9468 Feb 07 j 06:28	9° <del>♂</del> 42'02	15°47'35
max. Earth dist.	-9476 Jan 31 j 02:33	2° <del>♂</del> 02'25	50.01271 AU	max. Earth dist.	-9468 Feb 07 j 14:43	9° <del>♂</del> 42'30	50.11148 AU
retrograde	-9476 May 11 j 18:26	3° <del>♂</del> 31'04		retrograde	-9468 May 19 j 16:23	11° <del>♂</del> 11'07	
opposition	-9476 Aug 02 j 13:33	2° <del>♂</del> 31'09	-17°02'04	opposition	-9468 Aug 10 j 00:41	10° <del>♂</del> 11'36	-16°22'59
min. Earth dist.	-9476 Aug 01 j 18:43	2° <del>♂</del> 32'03	48.11088 AU	min. Earth dist.	-9468 Aug 09 j 17:25	10° <del>♂</del> 11'57	48.18575 AU
direct	-9476 Oct 23 j 00:43	1° <del>♂</del> 31'47		direct	-9468 Oct 30 j 12:59	9° <del>♂</del> 12'19	
conjunction	-9475 Jan 30 j 12:08	2° <del>♂</del> 58'58	-16°19'56				
minimum elong	-9475 Jan 30 j 12:12	2° <del>♂</del> 58'58	16°20'25	conjunction	-9467 Feb 07 j 12:28	10° <del>♂</del> 39'15	-15°41'26
max. Earth dist.	-9475 Jan 31 j 07:48	3° <del>♂</del> 00'05	50.03921 AU	minimum elong	-9467 Feb 07 j 12:35	10° <del>♂</del> 39'16	15°41'57
retrograde	-9475 May 13 j 01:45	4° <del>♂</del> 28'41		max. Earth dist.	-9467 Feb 07 j 20:22	10° <del>♂</del> 39'42	50.10266 AU
opposition	-9475 Aug 03 j 18:08	3° <del>♂</del> 28'51	-16°58'04	retrograde	-9467 May 20 j 18:41	12° <del>♂</del> 08'16	
min. Earth dist.	-9475 Aug 03 j 01:20	3° <del>♂</del> 29'39	48.13526 AU	opposition	-9467 Aug 11 j 04:57	11° <del>♂</del> 08'46	-16°17'00
				min. Earth dist.	-9467 Aug 10 j 23:04	11° <del>♂</del> 09'03	48.17391 AU
				direct	-9467 Oct 31 j 20:22	10° <del>♂</del> 09'27	
				conjunction	-9466 Feb 08 j 18:16	11° <del>♂</del> 36'23	-15°35'33

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Attention, astronomical year style is used: The year -9466 in astronomical counting style is the year 9467 BCE in historical counting style.

minimum elong	-9466 Feb 08 j 18:23	11°♂36'23	15°36'05	conjunction	-9458 Feb 16 j 17:47	19°♂14'24	-14°39'20
max. Earth dist.	-9466 Feb 09 j 00:06	11°♂36'42	50.08999 AU	minimum elong	-9458 Feb 16 j 17:55	19°♂14'25	14°39'53
retrograde	-9466 May 21 j 22:05	13°♂05'19		max. Earth dist.	-9458 Feb 16 j 12:03	19°♂14'05	49.86596 AU
opposition	-9466 Aug 12 j 09:05	12°♂05'50	-16°10'46	morning rise	-9458 Feb 20 j 04:33	19°♂19'05	
min. Earth dist.	-9466 Aug 12 j 03:43	12°♂06'05	48.15857 AU	retrograde	-9458 May 29 j 20:55	20°♂43'17	
direct	-9466 Nov 02 j 02:41	11°♂06'30		opposition	-9458 Aug 19 j 19:00	19°♂44'03	-15°11'28
				min. Earth dist.	-9458 Aug 20 j 00:30	19°♂43'47	47.90954 AU
conjunction	-9465 Feb 10 j 00:08	12°♂33'25	-15°29'25	direct	-9458 Nov 09 j 11:52	18°♂44'40	
minimum elong	-9465 Feb 10 j 00:15	12°♂33'26	15°29'56	evening set	-9457 Feb 13 j 22:36	20°♂06'31	
max. Earth dist.	-9465 Feb 10 j 05:03	12°♂33'42	50.07393 AU				
retrograde	-9465 May 23 j 04:04	14°♂02'20		conjunction	-9457 Feb 17 j 23:58	20°♂12'01	-14°31'15
opposition	-9465 Aug 13 j 13:20	13°♂02'51	-16°04'15	minimum elong	-9457 Feb 18 j 00:08	20°♂12'02	14°31'48
min. Earth dist.	-9465 Aug 13 j 09:54	13°♂03'01	48.14005 AU	max. Earth dist.	-9457 Feb 17 j 17:32	20°♂11'39	49.81746 AU
direct	-9465 Nov 03 j 06:44	12°♂03'31		morning rise	-9457 Feb 22 j 01:42	20°♂17'32	
				retrograde	-9457 May 31 j 00:20	21°♂40'54	
conjunction	-9464 Feb 11 j 06:00	13°♂30'27	-15°23'00	opposition	-9457 Aug 20 j 23:17	20°♂41'38	-15°02'58
minimum elong	-9464 Feb 11 j 06:08	13°♂30'27	15°23'33	min. Earth dist.	-9457 Aug 21 j 06:20	20°♂41'18	47.85710 AU
max. Earth dist.	-9464 Feb 11 j 10:05	13°♂30'41	50.05502 AU	direct	-9457 Nov 10 j 18:34	19°♂42'12	
retrograde	-9464 May 23 j 10:22	14°♂59'19		evening set	-9456 Feb 14 j 15:28	21°♂03'21	
opposition	-9464 Aug 13 j 17:30	13°♂59'53	-15°57'28				
min. Earth dist.	-9464 Aug 13 j 14:12	14°♂00'02	48.11852 AU	conjunction	-9456 Feb 19 j 05:58	21°♂09'36	-14°22'56
direct	-9464 Nov 03 j 09:38	13°♂00'32		minimum elong	-9456 Feb 19 j 06:07	21°♂09'37	14°23'29
				max. Earth dist.	-9456 Feb 18 j 21:03	21°♂09'06	49.76387 AU
conjunction	-9463 Feb 11 j 11:51	14°♂27'31	-15°16'21	morning rise	-9456 Feb 23 j 20:52	21°♂15'52	
minimum elong	-9463 Feb 11 j 11:59	14°♂27'31	15°16'52	retrograde	-9456 May 31 j 02:48	22°♂38'28	
max. Earth dist.	-9463 Feb 11 j 13:51	14°♂27'37	50.03307 AU	opposition	-9456 Aug 21 j 03:31	21°♂39'11	-14°54'15
retrograde	-9463 May 24 j 16:56	15°♂56'21		min. Earth dist.	-9456 Aug 21 j 11:30	21°♂38'48	47.79980 AU
opposition	-9463 Aug 14 j 21:41	14°♂56'58	-15°50'26	direct	-9456 Nov 11 j 01:52	20°♂39'40	
min. Earth dist.	-9463 Aug 14 j 19:59	14°♂57'02	48.09403 AU	evening set	-9455 Feb 14 j 09:36	22°♂00'12	
direct	-9463 Nov 04 j 13:09	13°♂57'37					
				conjunction	-9455 Feb 19 j 12:07	22°♂07'08	-14°14'23
conjunction	-9462 Feb 12 j 17:51	15°♂24'39	-15°09'25	minimum elong	-9455 Feb 19 j 12:17	22°♂07'09	14°14'57
minimum elong	-9462 Feb 12 j 17:59	15°♂24'40	15°09'58	max. Earth dist.	-9455 Feb 19 j 01:55	22°♂06'33	49.70548 AU
max. Earth dist.	-9462 Feb 12 j 19:43	15°♂24'45	50.00806 AU	morning rise	-9455 Feb 24 j 15:03	22°♂14'05	
retrograde	-9462 May 25 j 19:29	16°♂53'29		retrograde	-9455 Jun 01 j 06:50	23°♂36'00	
opposition	-9462 Aug 16 j 01:57	15°♂54'08	-15°43'07	opposition	-9455 Aug 22 j 07:48	22°♂36'41	-14°45'16
min. Earth dist.	-9462 Aug 16 j 01:30	15°♂54'10	48.06613 AU	min. Earth dist.	-9455 Aug 22 j 17:59	22°♂36'11	47.73805 AU
direct	-9462 Nov 05 j 20:24	14°♂54'49		direct	-9455 Nov 12 j 08:09	21°♂37'05	
				evening set	-9454 Feb 15 j 04:38	22°♂57'03	
conjunction	-9461 Feb 13 j 23:34	16°♂21'55	-15°02'15				
minimum elong	-9461 Feb 13 j 23:43	16°♂21'55	15°02'47	conjunction	-9454 Feb 20 j 18:12	23°♂04'36	-14°05'35
max. Earth dist.	-9461 Feb 13 j 23:13	16°♂21'53	49.97954 AU	minimum elong	-9454 Feb 20 j 18:21	23°♂04'37	14°06'08
retrograde	-9461 May 27 j 00:07	17°♂50'45		max. Earth dist.	-9454 Feb 20 j 06:59	23°♂03'58	49.64318 AU
opposition	-9461 Aug 17 j 06:07	16°♂51'27	-15°35'33	morning rise	-9454 Feb 26 j 08:07	23°♂12'11	
min. Earth dist.	-9461 Aug 17 j 06:19	16°♂51'27	48.03444 AU	retrograde	-9454 Jun 02 j 13:07	24°♂33'28	
direct	-9461 Nov 07 j 01:46	15°♂52'08		opposition	-9454 Aug 23 j 12:02	23°♂34'07	-14°36'02
evening set	-9460 Feb 13 j 14:02	17°♂17'04		min. Earth dist.	-9454 Aug 23 j 22:23	23°♂33'37	47.67259 AU
				direct	-9454 Nov 13 j 11:36	22°♂34'26	
conjunction	-9460 Feb 15 j 05:38	17°♂19'18	-14°54'50	evening set	-9453 Feb 16 j 00:02	23°♂53'53	
minimum elong	-9460 Feb 15 j 05:46	17°♂19'18	14°55'23	max. Earth dist.	-9453 Feb 21 j 10:47	24°♂01'17	49.57735 AU
max. Earth dist.	-9460 Feb 15 j 04:00	17°♂19'12	49.94672 AU				
morning rise	-9460 Feb 16 j 21:32	17°♂21'33		conjunction	-9453 Feb 22 j 00:00	24°♂02'02	-13°56'33
retrograde	-9460 May 27 j 05:20	18°♂48'10		minimum elong	-9453 Feb 22 j 00:11	24°♂02'02	13°57'06
opposition	-9460 Aug 17 j 10:22	17°♂48'55	-15°27'45	morning rise	-9453 Feb 28 j 00:27	24°♂10'12	
min. Earth dist.	-9460 Aug 17 j 13:06	17°♂48'47	47.99810 AU	retrograde	-9453 Jun 03 j 20:01	25°♂30'55	
direct	-9460 Nov 07 j 06:47	16°♂49'35		opposition	-9453 Aug 24 j 16:24	24°♂31'31	-14°26'32
evening set	-9459 Feb 12 j 19:24	18°♂13'10		min. Earth dist.	-9453 Aug 25 j 04:27	24°♂30'57	47.60395 AU
				direct	-9453 Nov 14 j 14:44	23°♂31'47	
conjunction	-9459 Feb 15 j 11:49	18°♂16'49	-14°47'12	evening set	-9452 Feb 16 j 20:18	24°♂50'45	
minimum elong	-9459 Feb 15 j 11:59	18°♂16'49	14°47'44				
max. Earth dist.	-9459 Feb 15 j 08:51	18°♂16'39	49.90908 AU	conjunction	-9452 Feb 23 j 06:11	24°♂59'27	-13°47'14
morning rise	-9459 Feb 18 j 04:36	18°♂20'29		minimum elong	-9452 Feb 23 j 06:21	24°♂59'28	13°47'47
retrograde	-9459 May 28 j 12:31	19°♂45'42		max. Earth dist.	-9452 Feb 22 j 16:51	24°♂58'42	49.50853 AU
opposition	-9459 Aug 18 j 14:38	18°♂46'27	-15°19'43	morning rise	-9452 Feb 29 j 16:27	25°♂08'11	
min. Earth dist.	-9459 Aug 18 j 18:05	18°♂46'18	47.95654 AU	retrograde	-9452 Jun 03 j 23:48	26°♂28'21	
direct	-9459 Nov 08 j 09:59	17°♂47'06		opposition	-9452 Aug 24 j 20:39	25°♂28'56	-14°16'46
evening set	-9458 Feb 13 j 07:22	19°♂09'45		min. Earth dist.	-9452 Aug 25 j 09:39	25°♂28'19	47.53229 AU



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Attention, astronomical year style is used: The year -9452 in astronomical counting style is the year 9453 BCE in historical counting style.

direct	-9452 Nov 14 j 21:11	24° $\nearrow$ 29'08		max. Earth dist.	-9445 Mar 01 j 02:11	1° $\searrow$ 43'50	48.92898 AU
evening set	-9451 Feb 16 j 17:06	25° $\nearrow$ 47'41					
				conjunction	-9445 Mar 02 j 02:23	1° $\searrow$ 45'13	-12°34'58
conjunction	-9451 Feb 23 j 12:17	25° $\nearrow$ 56'56	-13°37'40	minimum elong	-9445 Mar 02 j 02:33	1° $\searrow$ 45'14	12°35'32
minimum elong	-9451 Feb 23 j 12:27	25° $\nearrow$ 56'56	13°38'14	morning rise	-9445 Mar 10 j 23:38	1° $\searrow$ 57'22	
max. Earth dist.	-9451 Feb 22 j 20:50	25° $\nearrow$ 56'03	49.43692 AU	retrograde	-9445 Jun 11 j 13:22	3° $\searrow$ 14'45	
morning rise	-9451 Mar 02 j 07:58	26° $\nearrow$ 06'11		opposition	-9445 Sep 01 j 04:26	2° $\searrow$ 15'13	-13°01'03
retrograde	-9451 Jun 05 j 04:28	27° $\nearrow$ 25'52		min. Earth dist.	-9445 Sep 02 j 03:07	2° $\searrow$ 14'07	46.92803 AU
opposition	-9451 Aug 26 j 01:00	26° $\nearrow$ 26'27	-14°06'44	direct	-9445 Nov 22 j 10:05	1° $\searrow$ 15'00	
min. Earth dist.	-9451 Aug 26 j 14:29	26° $\nearrow$ 25'48	47.45787 AU	evening set	-9444 Feb 22 j 04:49	2° $\searrow$ 31'19	
direct	-9451 Nov 16 j 02:55	25° $\nearrow$ 26'35		max. Earth dist.	-9444 Mar 01 j 07:32	2° $\searrow$ 42'24	48.82762 AU
evening set	-9450 Feb 17 j 14:05	26° $\nearrow$ 44'44					
				conjunction	-9444 Mar 02 j 09:02	2° $\searrow$ 43'52	-12°23'40
conjunction	-9450 Feb 24 j 18:23	26° $\nearrow$ 54'30	-13°27'50	minimum elong	-9444 Mar 02 j 09:14	2° $\searrow$ 43'53	12°24'15
minimum elong	-9450 Feb 24 j 18:34	26° $\nearrow$ 54'31	13°28'24	morning rise	-9444 Mar 11 j 13:35	2° $\searrow$ 56'27	
max. Earth dist.	-9450 Feb 24 j 02:08	26° $\nearrow$ 53'35	49.36232 AU	retrograde	-9444 Jun 11 j 20:13	4° $\searrow$ 13'30	
morning rise	-9450 Mar 03 j 23:06	27° $\nearrow$ 04'17		opposition	-9444 Sep 01 j 09:00	3° $\searrow$ 13'54	-12°49'14
retrograde	-9450 Jun 06 j 08:42	28° $\nearrow$ 23'32		min. Earth dist.	-9444 Sep 02 j 08:11	3° $\searrow$ 12'47	46.82276 AU
opposition	-9450 Aug 27 j 05:29	27° $\nearrow$ 24'05	-13°56'25	direct	-9444 Nov 22 j 14:01	2° $\searrow$ 13'35	
min. Earth dist.	-9450 Aug 27 j 20:58	27° $\nearrow$ 23'21	47.38033 AU	evening set	-9443 Feb 22 j 04:17	3° $\searrow$ 29'39	
direct	-9450 Nov 17 j 08:43	26° $\nearrow$ 24'11		max. Earth dist.	-9443 Mar 02 j 11:48	3° $\searrow$ 41'02	48.72165 AU
evening set	-9449 Feb 18 j 11:41	27° $\nearrow$ 41'59					
max. Earth dist.	-9449 Feb 25 j 07:26	27° $\nearrow$ 51'16	49.28460 AU	conjunction	-9443 Mar 03 j 15:40	3° $\searrow$ 42'37	-12°12'08
				minimum elong	-9443 Mar 03 j 15:51	3° $\searrow$ 42'38	12°12'43
conjunction	-9449 Feb 26 j 00:36	27° $\nearrow$ 52'14	-13°17'45	morning rise	-9443 Mar 13 j 03:28	3° $\searrow$ 55'38	
minimum elong	-9449 Feb 26 j 00:47	27° $\nearrow$ 52'15	13°18'20	retrograde	-9443 Jun 13 j 03:57	5° $\searrow$ 12'22	
morning rise	-9449 Mar 05 j 13:55	28° $\nearrow$ 02'32		opposition	-9443 Sep 02 j 13:51	4° $\searrow$ 12'42	-12°37'10
retrograde	-9449 Jun 07 j 14:58	29° $\nearrow$ 21'22		min. Earth dist.	-9443 Sep 03 j 15:03	4° $\searrow$ 11'29	46.71333 AU
opposition	-9449 Aug 28 j 09:47	28° $\nearrow$ 21'55	-13°45'50	direct	-9443 Nov 23 j 17:00	3° $\searrow$ 12'16	
min. Earth dist.	-9449 Aug 29 j 01:40	28° $\nearrow$ 21'09	47.29928 AU	evening set	-9442 Feb 23 j 03:49	4° $\searrow$ 28'05	
direct	-9449 Nov 18 j 12:46	27° $\nearrow$ 21'58					
evening set	-9448 Feb 19 j 09:36	28° $\nearrow$ 39'26		conjunction	-9442 Mar 04 j 22:16	4° $\searrow$ 31'29	-12°00'21
max. Earth dist.	-9448 Feb 26 j 11:18	28° $\nearrow$ 49'04	49.20295 AU	minimum elong	-9442 Mar 04 j 22:28	4° $\searrow$ 31'29	12°00'56
				max. Earth dist.	-9442 Mar 03 j 18:12	4° $\searrow$ 39'52	48.61178 AU
conjunction	-9448 Feb 27 j 06:54	28° $\nearrow$ 50'11	-13°07'24	morning rise	-9442 Mar 14 j 16:54	4° $\searrow$ 54'55	
minimum elong	-9448 Feb 27 j 07:05	28° $\nearrow$ 50'12	13°07'58	retrograde	-9442 Jun 14 j 09:02	6° $\searrow$ 11'20	
morning rise	-9448 Mar 06 j 04:43	29° $\nearrow$ 00'58		opposition	-9442 Sep 03 j 18:41	5° $\searrow$ 11'35	-12°24'50
	-9448 Apr 25 j 17:08	0° $\searrow$		min. Earth dist.	-9442 Sep 04 j 20:45	5° $\searrow$ 10'20	46.60020 AU
retrograde	-9448 Jun 07 j 23:53	0° $\searrow$ 19'24		direct	-9442 Nov 24 j 23:41	4° $\searrow$ 11'03	
	-9448 Jul 21 j 07:48	30° $\nearrow$		evening set	-9441 Feb 24 j 03:42	5° $\searrow$ 26'39	
opposition	-9448 Aug 28 j 14:22	29° $\nearrow$ 19'57	-13°35'00	max. Earth dist.	-9441 Mar 04 j 22:38	5° $\searrow$ 38'43	48.49865 AU
min. Earth dist.	-9448 Aug 29 j 08:15	29° $\nearrow$ 19'06	47.21403 AU				
direct	-9448 Nov 18 j 14:41	28° $\nearrow$ 19'58		conjunction	-9441 Mar 06 j 04:50	5° $\searrow$ 40'28	-11°48'18
evening set	-9447 Feb 19 j 07:59	29° $\nearrow$ 37'08		minimum elong	-9441 Mar 06 j 05:00	5° $\searrow$ 40'28	11°48'52
				morning rise	-9441 Mar 16 j 06:20	5° $\searrow$ 54'18	
conjunction	-9447 Feb 27 j 13:28	29° $\nearrow$ 48'21	-12°56'49	retrograde	-9441 Jun 15 j 14:03	7° $\searrow$ 10'25	
minimum elong	-9447 Feb 27 j 13:38	29° $\nearrow$ 48'22	12°57'24	opposition	-9441 Sep 04 j 23:26	6° $\searrow$ 10'37	-12°12'12
max. Earth dist.	-9447 Feb 26 j 17:16	29° $\nearrow$ 47'12	49.11671 AU	min. Earth dist.	-9441 Sep 06 j 02:06	6° $\searrow$ 09'20	46.48413 AU
morning rise	-9447 Mar 07 j 19:15	29° $\nearrow$ 59'36		direct	-9441 Nov 26 j 06:20	5° $\searrow$ 09'58	
	-9447 Mar 08 j 02:22	0° $\searrow$		evening set	-9440 Feb 25 j 03:42	6° $\searrow$ 25'22	
retrograde	-9447 Jun 09 j 04:58	1° $\searrow$ 17'40		max. Earth dist.	-9440 Mar 05 j 04:42	6° $\searrow$ 37'48	48.38260 AU
opposition	-9447 Aug 29 j 18:57	0° $\searrow$ 18'12	-13°23'56				
min. Earth dist.	-9447 Aug 30 j 14:18	0° $\searrow$ 17'17	47.12381 AU	conjunction	-9440 Mar 06 j 11:37	6° $\searrow$ 39'35	-11°35'59
	-9447 Sep 14 j 20:09	30° $\nearrow$		minimum elong	-9440 Mar 06 j 11:49	6° $\searrow$ 39'36	11°36'34
direct	-9447 Nov 19 j 20:42	29° $\nearrow$ 18'09		morning rise	-9440 Mar 16 j 19:45	6° $\searrow$ 53'49	
	-9446 Jan 23 j 22:23	0° $\searrow$		retrograde	-9440 Jun 15 j 18:03	8° $\searrow$ 09'42	
evening set	-9446 Feb 20 j 06:45	0° $\searrow$ 35'02		opposition	-9440 Sep 05 j 04:32	7° $\searrow$ 09'49	-11°59'18
				min. Earth dist.	-9440 Sep 06 j 09:02	7° $\searrow$ 08'26	46.36524 AU
conjunction	-9446 Feb 28 j 19:55	0° $\searrow$ 46'42	-12°46'01	direct	-9440 Nov 26 j 13:27	6° $\searrow$ 09'04	
minimum elong	-9446 Feb 28 j 20:07	0° $\searrow$ 46'43	12°46'34	evening set	-9439 Feb 25 j 04:07	7° $\searrow$ 24'17	
max. Earth dist.	-9446 Feb 27 j 21:09	0° $\searrow$ 45'24	49.02547 AU	max. Earth dist.	-9439 Mar 06 j 10:43	7° $\searrow$ 37'03	48.26399 AU
morning rise	-9446 Mar 09 j 09:35	0° $\searrow$ 58'24					
retrograde	-9446 Jun 10 j 09:23	2° $\searrow$ 16'07		conjunction	-9439 Mar 07 j 18:27	7° $\searrow$ 38'54	-11°23'23
opposition	-9446 Aug 30 j 23:37	1° $\searrow$ 16'38	-13°12'37	minimum elong	-9439 Mar 07 j 18:39	7° $\searrow$ 38'54	11°23'57
min. Earth dist.	-9446 Aug 31 j 19:59	1° $\searrow$ 15'39	47.02853 AU	morning rise	-9439 Mar 18 j 08:57	7° $\searrow$ 53'31	
direct	-9446 Nov 21 j 02:57	0° $\searrow$ 16'30		retrograde	-9439 Jun 16 j 23:54	9° $\searrow$ 09'10	
evening set	-9445 Feb 21 j 05:28	1° $\searrow$ 33'06		opposition	-9439 Sep 06 j 09:29	8° $\searrow$ 09'15	-11°46'07

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 34

Attention, astronomical year style is used: The year -9439 in astronomical counting style is the year 9440 BCE in historical counting style.

min. Earth dist.	-9439 Sep 07 j 13:58	8° $\overline{3}$ 07'52	46.24377 AU	morning rise	-9432 Mar 27 j 05:13	14° $\overline{3}$ 59'21	
direct	-9439 Nov 27 j 18:58	7° $\overline{3}$ 08'23		retrograde	-9432 Jun 24 j 01:24	16° $\overline{3}$ 13'46	
evening set	-9438 Feb 26 j 04:39	8° $\overline{3}$ 23'27		opposition	-9432 Sep 13 j 00:01	15° $\overline{3}$ 13'20	-10°06'03
max. Earth dist.	-9438 Mar 07 j 15:33	8° $\overline{3}$ 36'30	48.14271 AU	min. Earth dist.	-9432 Sep 14 j 14:23	15° $\overline{3}$ 11'26	45.28699 AU
				direct	-9432 Dec 04 j 09:44	14° $\overline{3}$ 11'38	
conjunction	-9438 Mar 09 j 01:19	8° $\overline{3}$ 38'27	-11°10'31	evening set	-9431 Mar 03 j 16:36	15° $\overline{3}$ 26'00	
minimum elong	-9438 Mar 09 j 01:30	8° $\overline{3}$ 38'28	11°11'06	max. Earth dist.	-9431 Mar 14 j 09:08	15° $\overline{3}$ 40'59	47.18132 AU
morning rise	-9438 Mar 19 j 22:15	8° $\overline{3}$ 53'29					
retrograde	-9438 Jun 18 j 09:43	10° $\overline{3}$ 08'54		conjunction	-9431 Mar 16 j 05:31	15° $\overline{3}$ 43'36	-9°33'05
opposition	-9438 Sep 07 j 14:42	9° $\overline{3}$ 08'56	-11°32'38	minimum elong	-9431 Mar 16 j 05:43	15° $\overline{3}$ 43'37	9°33'40
min. Earth dist.	-9438 Sep 08 j 20:54	9° $\overline{3}$ 07'28	46.11962 AU	morning rise	-9431 Mar 28 j 18:22	16° $\overline{3}$ 01'12	
direct	-9438 Nov 28 j 20:51	8° $\overline{3}$ 07'59		retrograde	-9431 Jun 25 j 09:08	17° $\overline{3}$ 15'29	
evening set	-9437 Feb 27 j 05:19	9° $\overline{3}$ 22'54		opposition	-9431 Sep 14 j 05:53	16° $\overline{3}$ 14'55	-9°50'40
max. Earth dist.	-9437 Mar 08 j 22:31	9° $\overline{3}$ 36'21	48.01855 AU	min. Earth dist.	-9431 Sep 15 j 21:20	16° $\overline{3}$ 12'58	45.13190 AU
				direct	-9431 Dec 05 j 16:14	15° $\overline{3}$ 13'04	
conjunction	-9437 Mar 10 j 08:18	9° $\overline{3}$ 38'18	-10°57'22	evening set	-9430 Mar 04 j 19:13	16° $\overline{3}$ 27'23	
minimum elong	-9437 Mar 10 j 08:30	9° $\overline{3}$ 38'19	10°57'56	max. Earth dist.	-9430 Mar 15 j 16:16	16° $\overline{3}$ 42'40	47.02572 AU
morning rise	-9437 Mar 21 j 11:16	9° $\overline{3}$ 53'43					
retrograde	-9437 Jun 19 j 16:57	11° $\overline{3}$ 08'57		conjunction	-9430 Mar 17 j 13:28	16° $\overline{3}$ 45'20	-9°18'07
opposition	-9437 Sep 08 j 19:57	10° $\overline{3}$ 08'55	-11°18'53	minimum elong	-9430 Mar 17 j 13:39	16° $\overline{3}$ 45'20	9°18'41
min. Earth dist.	-9437 Sep 10 j 03:08	10° $\overline{3}$ 07'24	45.99214 AU	morning rise	-9430 Mar 30 j 07:19	17° $\overline{3}$ 03'16	
direct	-9437 Nov 30 j 01:56	9° $\overline{3}$ 07'53		retrograde	-9430 Jun 26 j 14:32	18° $\overline{3}$ 17'26	
evening set	-9436 Feb 28 j 06:35	10° $\overline{3}$ 22'41		opposition	-9430 Sep 15 j 12:01	17° $\overline{3}$ 16'45	-9°35'00
max. Earth dist.	-9436 Mar 09 j 03:20	10° $\overline{3}$ 36'22	47.89081 AU	min. Earth dist.	-9430 Sep 17 j 05:19	17° $\overline{3}$ 14'42	44.97307 AU
				direct	-9430 Dec 07 j 00:25	16° $\overline{3}$ 14'43	
conjunction	-9436 Mar 10 j 15:28	10° $\overline{3}$ 38'28	-10°43'58	evening set	-9429 Mar 05 j 22:03	17° $\overline{3}$ 29'00	
minimum elong	-9436 Mar 10 j 15:39	10° $\overline{3}$ 38'29	10°44'33	max. Earth dist.	-9429 Mar 16 j 23:03	17° $\overline{3}$ 44'33	46.86681 AU
morning rise	-9436 Mar 22 j 00:33	10° $\overline{3}$ 54'16					
retrograde	-9436 Jun 19 j 23:40	12° $\overline{3}$ 09'19		conjunction	-9429 Mar 18 j 21:17	17° $\overline{3}$ 47'17	-9°02'53
opposition	-9436 Sep 09 j 01:11	11° $\overline{3}$ 09'14	-11°04'51	minimum elong	-9429 Mar 18 j 21:29	17° $\overline{3}$ 47'18	9°03'27
min. Earth dist.	-9436 Sep 10 j 09:29	11° $\overline{3}$ 07'40	45.86083 AU	morning rise	-9429 Mar 31 j 20:10	18° $\overline{3}$ 05'35	
direct	-9436 Nov 30 j 07:39	10° $\overline{3}$ 08'06		retrograde	-9429 Jun 27 j 20:23	19° $\overline{3}$ 19'39	
evening set	-9435 Feb 28 j 08:03	11° $\overline{3}$ 22'49		opposition	-9429 Sep 16 j 18:07	18° $\overline{3}$ 18'50	-9°19'02
max. Earth dist.	-9435 Mar 10 j 09:36	11° $\overline{3}$ 36'47	47.75868 AU	min. Earth dist.	-9429 Sep 18 j 11:30	18° $\overline{3}$ 16'47	44.81112 AU
				direct	-9429 Dec 08 j 07:57	17° $\overline{3}$ 16'39	
conjunction	-9435 Mar 11 j 22:58	11° $\overline{3}$ 38'58	-10°30'18	evening set	-9428 Mar 06 j 01:15	18° $\overline{3}$ 30'55	
minimum elong	-9435 Mar 11 j 23:10	11° $\overline{3}$ 38'59	10°30'52	max. Earth dist.	-9428 Mar 17 j 05:13	18° $\overline{3}$ 46'41	46.70483 AU
morning rise	-9435 Mar 23 j 13:50	11° $\overline{3}$ 55'08					
retrograde	-9435 Jun 21 j 03:20	13° $\overline{3}$ 10'01		conjunction	-9428 Mar 19 j 05:23	18° $\overline{3}$ 49'33	-8°47'22
opposition	-9435 Sep 10 j 06:51	12° $\overline{3}$ 09'52	-10°50'33	minimum elong	-9428 Mar 19 j 05:34	18° $\overline{3}$ 49'33	8°47'54
min. Earth dist.	-9435 Sep 11 j 17:19	12° $\overline{3}$ 08'11	45.72484 AU	morning rise	-9428 Apr 01 j 09:09	19° $\overline{3}$ 08'10	
direct	-9435 Dec 01 j 16:39	11° $\overline{3}$ 08'37		retrograde	-9428 Jun 28 j 05:35	20° $\overline{3}$ 22'11	
evening set	-9434 Mar 01 j 09:45	12° $\overline{3}$ 23'14		opposition	-9428 Sep 17 j 00:25	19° $\overline{3}$ 21'15	-9°02'45
max. Earth dist.	-9434 Mar 11 j 15:34	12° $\overline{3}$ 37'29	47.62181 AU	min. Earth dist.	-9428 Sep 18 j 19:37	19° $\overline{3}$ 19'06	44.64643 AU
				direct	-9428 Dec 08 j 12:24	18° $\overline{3}$ 18'54	
conjunction	-9434 Mar 13 j 06:20	12° $\overline{3}$ 39'45	-10°16'23	evening set	-9427 Mar 07 j 04:43	19° $\overline{3}$ 33'11	
minimum elong	-9434 Mar 13 j 06:31	12° $\overline{3}$ 39'46	10°16'57	max. Earth dist.	-9427 Mar 18 j 13:36	19° $\overline{3}$ 49'17	46.54031 AU
morning rise	-9434 Mar 25 j 02:51	12° $\overline{3}$ 56'17					
retrograde	-9434 Jun 22 j 09:27	14° $\overline{3}$ 11'01		conjunction	-9427 Mar 20 j 13:43	19° $\overline{3}$ 52'09	-8°31'33
opposition	-9434 Sep 11 j 12:27	13° $\overline{3}$ 10'47	-10°35'59	minimum elong	-9427 Mar 20 j 13:54	19° $\overline{3}$ 52'10	8°32'07
min. Earth dist.	-9434 Sep 12 j 23:27	13° $\overline{3}$ 09'04	45.58386 AU	morning rise	-9427 Apr 02 j 22:02	20° $\overline{3}$ 11'07	
direct	-9434 Dec 02 j 23:12	12° $\overline{3}$ 09'24		retrograde	-9427 Jun 29 j 14:33	21° $\overline{3}$ 25'05	
evening set	-9433 Mar 02 j 11:45	13° $\overline{3}$ 23'55		opposition	-9427 Sep 18 j 06:57	20° $\overline{3}$ 24'02	-8°46'11
max. Earth dist.	-9433 Mar 12 j 20:41	13° $\overline{3}$ 38'24	47.47978 AU	min. Earth dist.	-9427 Sep 20 j 02:36	20° $\overline{3}$ 21'52	44.47917 AU
				direct	-9427 Dec 09 j 17:53	19° $\overline{3}$ 21'33	
conjunction	-9433 Mar 14 j 13:56	13° $\overline{3}$ 40'48	-10°02'13	evening set	-9426 Mar 08 j 08:23	20° $\overline{3}$ 35'52	
minimum elong	-9433 Mar 14 j 14:08	13° $\overline{3}$ 40'49	10°02'47	max. Earth dist.	-9426 Mar 19 j 19:42	20° $\overline{3}$ 52'11	46.37329 AU
morning rise	-9433 Mar 26 j 16:07	13° $\overline{3}$ 57'42					
retrograde	-9433 Jun 23 j 18:09	15° $\overline{3}$ 12'17		conjunction	-9426 Mar 21 j 21:51	20° $\overline{3}$ 55'10	-8°15'27
opposition	-9433 Sep 12 j 18:10	14° $\overline{3}$ 11'57	-10°21'09	minimum elong	-9426 Mar 21 j 22:02	20° $\overline{3}$ 55'11	8°16'00
min. Earth dist.	-9433 Sep 14 j 07:31	14° $\overline{3}$ 10'07	45.43787 AU	morning rise	-9426 Apr 04 j 10:53	21° $\overline{3}$ 14'28	
direct	-9433 Dec 04 j 02:51	13° $\overline{3}$ 10'25		retrograde	-9426 Jun 30 j 24:00	22° $\overline{3}$ 28'25	
evening set	-9432 Mar 02 j 14:01	14° $\overline{3}$ 24'51		opposition	-9426 Sep 19 j 13:32	21° $\overline{3}$ 27'16	-8°29'18
max. Earth dist.	-9432 Mar 13 j 03:51	14° $\overline{3}$ 39'38	47.33286 AU	min. Earth dist.	-9426 Sep 21 j 10:04	21° $\overline{3}$ 25'03	44.30945 AU
				direct	-9426 Dec 10 j 23:21	20° $\overline{3}$ 24'38	
conjunction	-9432 Mar 14 j 21:47	14° $\overline{3}$ 42'06	-9°47'47	evening set	-9425 Mar 09 j 12:20	21° $\overline{3}$ 39'02	
minimum elong	-9432 Mar 14 j 21:58	14° $\overline{3}$ 42'06	9°48'21	max. Earth dist.	-9425 Mar 21 j 03:43	21° $\overline{3}$ 55'38	46.20348 AU

## Planetary Phenomena of Pluto from -9900 through -9398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 35

Attention, astronomical year style is used: The year -9425 in astronomical counting style is the year 9426 BCE in historical counting style.

conjunction	-9425 Mar 23 j 06:28	21° $\overline{3}$ 58'41	-7°59'03	min. Earth dist.	-9419 Sep 28 j 22:21	29° $\overline{3}$ 01'06	43.01179 AU
minimum elong	-9425 Mar 23 j 06:39	21° $\overline{3}$ 58'41	7°59'38	direct	-9419 Dec 18 j 08:10	27° $\overline{3}$ 59'52	
morning rise	-9425 Apr 05 j 23:47	22° $\overline{3}$ 18'18		evening set	-9418 Mar 16 j 02:28	29° $\overline{3}$ 15'07	
retrograde	-9425 Jul 02 j 05:20	23° $\overline{3}$ 32'15		max. Earth dist.	-9418 Mar 28 j 10:17	29° $\overline{3}$ 33'09	44.90040 AU
opposition	-9425 Sep 20 j 20:17	22° $\overline{3}$ 31'01	-8°12'07				
min. Earth dist.	-9425 Sep 22 j 18:33	22° $\overline{3}$ 28'42	44.13668 AU	conjunction	-9418 Mar 30 j 23:48	29° $\overline{3}$ 36'57	-5°56'22
direct	-9425 Dec 12 j 09:18	21° $\overline{3}$ 28'14		minimum elong	-9418 Mar 30 j 23:57	29° $\overline{3}$ 36'58	5°56'54
evening set	-9424 Mar 09 j 16:51	22° $\overline{3}$ 42'43		morning rise	-9418 Apr 14 j 19:48	29° $\overline{3}$ 58'45	
max. Earth dist.	-9424 Mar 21 j 11:12	22° $\overline{3}$ 59'34	46.03048 AU		-9418 Apr 15 j 16:43	0° $\approx$	
				retrograde	-9418 Jul 09 j 18:00	1° $\approx$ 13'05	
conjunction	-9424 Mar 23 j 15:14	23° $\overline{3}$ 02'42	-7°42'23	opposition	-9418 Sep 28 j 01:02	0° $\approx$ 10'46	-6°03'23
minimum elong	-9424 Mar 23 j 15:25	23° $\overline{3}$ 02'43	7°42'56	min. Earth dist.	-9418 Sep 30 j 08:29	0° $\approx$ 07'56	42.81011 AU
morning rise	-9424 Apr 06 j 12:53	23° $\overline{3}$ 22'39			-9418 Oct 06 j 20:41	30° $\overline{R}$ $\overline{3}$	
retrograde	-9424 Jul 02 j 12:17	24° $\overline{3}$ 36'37		direct	-9418 Dec 19 j 17:01	29° $\overline{3}$ 06'34	
opposition	-9424 Sep 21 j 03:10	23° $\overline{3}$ 35'17	-7°54'38		-9417 Mar 01 j 14:48	0° $\approx$	
min. Earth dist.	-9424 Sep 23 j 01:50	23° $\overline{3}$ 32'57	43.96035 AU	evening set	-9417 Mar 17 j 09:10	0° $\approx$ 21'58	
direct	-9424 Dec 12 j 17:49	22° $\overline{3}$ 32'21		max. Earth dist.	-9417 Mar 29 j 20:15	0° $\approx$ 40'17	44.69846 AU
evening set	-9423 Mar 10 j 21:38	23° $\overline{3}$ 46'57					
max. Earth dist.	-9423 Mar 22 j 18:03	24° $\overline{3}$ 03'58	45.85336 AU	conjunction	-9417 Apr 01 j 09:51	0° $\approx$ 44'07	-5°37'41
				minimum elong	-9417 Apr 01 j 09:59	0° $\approx$ 44'07	5°38'12
conjunction	-9423 Mar 25 j 00:12	24° $\overline{3}$ 07'15	-7°25'25	morning rise	-9417 Apr 16 j 08:57	1° $\approx$ 06'11	
minimum elong	-9423 Mar 25 j 00:22	24° $\overline{3}$ 07'15	7°25'58	retrograde	-9417 Jul 11 j 03:42	2° $\approx$ 20'38	
morning rise	-9423 Apr 08 j 01:58	24° $\overline{3}$ 27'31		opposition	-9417 Sep 29 j 09:10	1° $\approx$ 18'07	-5°43'45
retrograde	-9423 Jul 03 j 21:50	25° $\overline{3}$ 41'33		min. Earth dist.	-9417 Oct 01 j 16:50	1° $\approx$ 15'15	42.60570 AU
opposition	-9423 Sep 22 j 10:25	24° $\overline{3}$ 40'05	-7°36'50	direct	-9417 Dec 21 j 00:31	0° $\approx$ 13'39	
min. Earth dist.	-9423 Sep 24 j 11:27	24° $\overline{3}$ 37'37	43.77977 AU	evening set	-9416 Mar 17 j 16:23	1° $\approx$ 29'16	
direct	-9423 Dec 13 j 23:01	23° $\overline{3}$ 36'59		max. Earth dist.	-9416 Mar 30 j 04:19	1° $\approx$ 47'44	44.49402 AU
evening set	-9422 Mar 12 j 02:45	24° $\overline{3}$ 51'41					
max. Earth dist.	-9422 Mar 24 j 02:43	25° $\overline{3}$ 08'59	45.67183 AU	conjunction	-9416 Apr 01 j 20:02	1° $\approx$ 51'41	-5°18'42
				minimum elong	-9416 Apr 01 j 20:11	1° $\approx$ 51'42	5°19'14
conjunction	-9422 Mar 26 j 09:27	25° $\overline{3}$ 12'18	-7°08'10	morning rise	-9416 Apr 16 j 22:18	2° $\approx$ 14'03	
minimum elong	-9422 Mar 26 j 09:38	25° $\overline{3}$ 12'19	7°08'43	retrograde	-9416 Jul 11 j 15:29	3° $\approx$ 28'38	
morning rise	-9422 Apr 09 j 15:03	25° $\overline{3}$ 32'54		opposition	-9416 Sep 29 j 17:40	2° $\approx$ 25'55	-5°23'48
retrograde	-9422 Jul 05 j 07:07	26° $\overline{3}$ 46'58		min. Earth dist.	-9416 Oct 02 j 02:31	2° $\approx$ 23'00	42.39919 AU
opposition	-9422 Sep 23 j 17:47	25° $\overline{3}$ 45'23	-7°18'45	direct	-9416 Dec 21 j 06:44	1° $\approx$ 21'13	
min. Earth dist.	-9422 Sep 25 j 19:31	25° $\overline{3}$ 42'52	43.59452 AU	evening set	-9415 Mar 18 j 23:46	2° $\approx$ 37'03	
direct	-9422 Dec 15 j 06:24	24° $\overline{3}$ 42'06		max. Earth dist.	-9415 Mar 31 j 14:43	2° $\approx$ 55'47	44.28748 AU
evening set	-9421 Mar 13 j 08:11	25° $\overline{3}$ 56'55					
max. Earth dist.	-9421 Mar 25 j 09:15	26° $\overline{3}$ 14'21	45.48558 AU	conjunction	-9415 Apr 03 j 06:30	2° $\approx$ 59'46	-4°59'25
				minimum elong	-9415 Apr 03 j 06:38	2° $\approx$ 59'46	4°59'55
conjunction	-9421 Mar 27 j 18:40	26° $\overline{3}$ 17'51	-6°50'39	morning rise	-9415 Apr 18 j 11:24	3° $\approx$ 22'24	
minimum elong	-9421 Mar 27 j 18:50	26° $\overline{3}$ 17'51	6°51'11	retrograde	-9415 Jul 13 j 01:12	4° $\approx$ 37'09	
morning rise	-9421 Apr 11 j 04:16	26° $\overline{3}$ 38'44		opposition	-9415 Oct 01 j 02:28	3° $\approx$ 34'14	-5°03'31
retrograde	-9421 Jul 06 j 18:49	27° $\overline{3}$ 52'52		min. Earth dist.	-9415 Oct 03 j 12:15	3° $\approx$ 31'15	42.19071 AU
opposition	-9421 Sep 25 j 01:19	26° $\overline{3}$ 51'07	-7°00'22	direct	-9415 Dec 22 j 16:59	2° $\approx$ 29'18	
min. Earth dist.	-9421 Sep 27 j 04:35	26° $\overline{3}$ 48'32	43.40463 AU	evening set	-9414 Mar 20 j 07:43	3° $\approx$ 45'24	
direct	-9421 Dec 16 j 12:27	25° $\overline{3}$ 47'37		max. Earth dist.	-9414 Apr 02 j 00:05	4° $\approx$ 04'19	44.07925 AU
evening set	-9420 Mar 13 j 13:59	27° $\overline{3}$ 02'35					
max. Earth dist.	-9420 Mar 25 j 18:09	27° $\overline{3}$ 20'16	45.29457 AU	conjunction	-9414 Apr 04 j 17:05	4° $\approx$ 08'24	-4°39'49
				minimum elong	-9414 Apr 04 j 17:12	4° $\approx$ 08'24	4°40'21
conjunction	-9420 Mar 28 j 04:22	27° $\overline{3}$ 23'49	-6°32'50	morning rise	-9414 Apr 20 j 00:46	4° $\approx$ 31'18	
minimum elong	-9420 Mar 28 j 04:32	27° $\overline{3}$ 23'50	6°33'22	retrograde	-9414 Jul 14 j 11:20	5° $\approx$ 46'15	
morning rise	-9420 Apr 11 j 17:27	27° $\overline{3}$ 45'01		opposition	-9414 Oct 02 j 11:20	4° $\approx$ 43'09	-4°42'55
retrograde	-9420 Jul 07 j 03:26	28° $\overline{3}$ 59'12		min. Earth dist.	-9414 Oct 04 j 21:12	4° $\approx$ 40'09	41.98058 AU
opposition	-9420 Sep 25 j 09:02	27° $\overline{3}$ 57'16	-6°41'41	direct	-9414 Dec 24 j 03:21	3° $\approx$ 37'59	
min. Earth dist.	-9420 Sep 27 j 14:10	27° $\overline{3}$ 54'35	43.21014 AU	evening set	-9413 Mar 21 j 15:54	4° $\approx$ 54'24	
direct	-9420 Dec 16 j 22:03	26° $\overline{3}$ 53'33		max. Earth dist.	-9413 Apr 03 j 09:47	5° $\approx$ 13'29	43.86900 AU
evening set	-9419 Mar 14 j 20:12	28° $\overline{3}$ 08'39					
max. Earth dist.	-9419 Mar 27 j 02:16	28° $\overline{3}$ 26'31	45.09938 AU	conjunction	-9413 Apr 06 j 03:57	5° $\approx$ 17'40	-4°19'56
				minimum elong	-9413 Apr 06 j 04:04	5° $\approx$ 17'40	4°20'25
conjunction	-9419 Mar 29 j 14:05	28° $\overline{3}$ 30'12	-6°14'45	morning rise	-9413 Apr 21 j 14:05	5° $\approx$ 40'51	
minimum elong	-9419 Mar 29 j 14:14	28° $\overline{3}$ 30'12	6°15'17	retrograde	-9413 Jul 15 j 20:58	6° $\approx$ 56'01	
morning rise	-9419 Apr 13 j 06:46	28° $\overline{3}$ 51'42		opposition	-9413 Oct 03 j 20:37	5° $\approx$ 52'45	-4°21'59
	-9419 Jun 15 j 22:04	0° $\approx$		min. Earth dist.	-9413 Oct 06 j 08:27	5° $\approx$ 49'38	41.76829 AU
retrograde	-9419 Jul 08 j 10:15	0° $\approx$ 05'56		direct	-9413 Dec 25 j 12:54	4° $\approx$ 47'22	
	-9419 Jul 31 j 00:43	30° $\overline{R}$ $\overline{3}$		evening set	-9412 Mar 22 j 00:44	6° $\approx$ 04'06	
opposition	-9419 Sep 26 j 16:53	29° $\overline{3}$ 03'49	-6°22'41	max. Earth dist.	-9412 Apr 03 j 20:43	6° $\approx$ 23'25	43.65638 AU

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Attention, astronomical year style is used: The year -9412 in astronomical counting style is the year 9413 BCE in historical counting style.

conjunction	-9412 Apr 06 j 15:13	6°27'38	-3°59'43	min. Earth dist.	-9406 Oct 14 j 17:00	14°17'10	40.18946 AU
minimum elong	-9412 Apr 06 j 15:19	6°27'39	4°00'14	direct	-9405 Jan 02 j 11:36	13°13'31	
morning rise	-9412 Apr 22 j 03:37	6°51'05		evening set	-9405 Mar 31 j 03:59	14°33'10	
retrograde	-9412 Jul 16 j 07:03	8°06'31		max. Earth dist.	-9405 Apr 13 j 02:47	14°53'27	42.07047 AU
opposition	-9412 Oct 04 j 06:01	7°03'05	-4°00'43				
min. Earth dist.	-9412 Oct 06 j 18:03	6°59'57	41.55330 AU	conjunction	-9405 Apr 16 j 05:44	14°58'24	-1°29'57
direct	-9412 Dec 25 j 22:39	5°57'29		minimum elong	-9405 Apr 16 j 05:47	14°58'25	1°30'24
evening set	-9411 Mar 23 j 10:09	7°14'33			-9405 Apr 17 j 05:49	15°	
max. Earth dist.	-9411 Apr 05 j 05:53	7°33'58	43.44066 AU	morning rise	-9405 May 02 j 04:35	15°23'31	
				retrograde	-9405 Jul 25 j 21:34	16°41'23	
conjunction	-9411 Apr 08 j 02:42	7°38'22	-3°39'13	opposition	-9405 Oct 13 j 09:01	15°36'19	-1°22'51
minimum elong	-9411 Apr 08 j 02:48	7°38'22	3°39'42	min. Earth dist.	-9405 Oct 16 j 05:02	15°32'39	39.95201 AU
morning rise	-9411 Apr 23 j 17:18	8°02'04			-9405 Nov 12 j 02:19	15°R	
retrograde	-9411 Jul 17 j 20:59	9°17'48		direct	-9404 Jan 03 j 23:15	14°28'44	
opposition	-9411 Oct 05 j 15:53	8°14'10	-3°39'08		-9404 Feb 25 j 02:54	15°	
min. Earth dist.	-9411 Oct 08 j 05:37	8°10'57	41.33511 AU	evening set	-9404 Mar 31 j 16:54	15°48'54	
direct	-9411 Dec 27 j 05:24	7°08'20		max. Earth dist.	-9404 Apr 13 j 14:34	16°09'15	41.83260 AU
evening set	-9410 Mar 24 j 19:43	8°25'48					
max. Earth dist.	-9410 Apr 06 j 17:25	8°45'26	43.22132 AU	conjunction	-9404 Apr 16 j 19:11	16°14'21	-1°07'22
				minimum elong	-9404 Apr 16 j 19:13	16°14'21	1°07'49
conjunction	-9410 Apr 09 j 14:27	8°49'52	-3°18'25	morning rise	-9404 May 02 j 18:48	16°39'39	
minimum elong	-9410 Apr 09 j 14:33	8°49'52	3°18'55	retrograde	-9404 Jul 26 j 13:43	17°57'58	
morning rise	-9410 Apr 25 j 06:48	9°13'49		opposition	-9404 Oct 13 j 20:53	16°52'38	-0°59'01
retrograde	-9410 Jul 19 j 09:19	10°29'52		min. Earth dist.	-9404 Oct 16 j 17:23	16°48'56	39.71324 AU
opposition	-9410 Oct 07 j 02:07	9°26'01	-3°17'14	direct	-9403 Jan 04 j 10:08	15°44'44	
min. Earth dist.	-9410 Oct 09 j 17:05	9°22'43	41.11307 AU	evening set	-9403 Apr 02 j 06:13	17°05'29	
direct	-9410 Dec 28 j 15:25	8°19'56		max. Earth dist.	-9403 Apr 15 j 04:17	17°25'59	41.59341 AU
evening set	-9409 Mar 26 j 06:05	9°37'48					
max. Earth dist.	-9409 Apr 08 j 03:25	9°57'32	42.99814 AU	conjunction	-9403 Apr 18 j 09:07	17°31'07	-0°44'30
				minimum elong	-9403 Apr 18 j 09:08	17°31'07	0°44'56
conjunction	-9409 Apr 11 j 02:30	10°02'07	-2°57'19	morning rise	-9403 May 04 j 08:56	17°56'36	
minimum elong	-9409 Apr 11 j 02:35	10°02'07	2°57'48	retrograde	-9403 Jul 28 j 03:47	19°15'25	
morning rise	-9409 Apr 26 j 20:44	10°26'19		opposition	-9403 Oct 15 j 09:23	18°09'49	-0°34'51
retrograde	-9409 Jul 20 j 22:01	11°42'40		min. Earth dist.	-9403 Oct 18 j 07:08	18°06'02	39.47343 AU
opposition	-9409 Oct 08 j 12:20	10°38'37	-2°55'00	direct	-9402 Jan 05 j 22:57	17°01'37	
min. Earth dist.	-9409 Oct 11 j 04:04	10°35'16	40.88725 AU	evening set	-9402 Apr 03 j 20:02	18°22'57	
direct	-9409 Dec 30 j 01:50	9°32'15		max. Earth dist.	-9402 Apr 16 j 17:52	18°43'35	41.35341 AU
evening set	-9408 Mar 26 j 16:53	10°50'32					
max. Earth dist.	-9408 Apr 08 j 14:31	11°10'24	42.77095 AU	conjunction	-9402 Apr 19 j 23:05	18°48'47	-0°21'21
				minimum elong	-9402 Apr 19 j 23:06	18°48'47	0°21'47
conjunction	-9408 Apr 11 j 15:01	11°15'06	-2°35'55	morning rise	-9402 May 05 j 23:11	19°14'27	
minimum elong	-9408 Apr 11 j 15:06	11°15'07	2°36'25	retrograde	-9402 Jul 29 j 15:54	20°33'48	
morning rise	-9408 Apr 27 j 10:38	11°39'32		opposition	-9402 Oct 16 j 22:02	19°27'56	-0°10'23
retrograde	-9408 Jul 21 j 07:55	12°56'14		min. Earth dist.	-9402 Oct 19 j 19:24	19°24'09	39.23286 AU
opposition	-9408 Oct 08 j 23:11	11°51'57	-2°32'27	direct	-9401 Jan 07 j 13:23	18°19'26	
min. Earth dist.	-9408 Oct 11 j 16:56	11°48'28	40.65764 AU	asc. node	-9401 Mar 19 j 14:43	19°15'56	
direct	-9408 Dec 30 j 14:53	10°45'18		evening set	-9401 Apr 05 j 10:39	19°41'25	
evening set	-9407 Mar 28 j 04:08	12°04'01		max. Earth dist.	-9401 Apr 18 j 06:59	20°02'06	41.11236 AU
max. Earth dist.	-9407 Apr 10 j 02:34	12°24'02	42.54029 AU				
				conjunction	-9401 Apr 21 j 13:41	20°07'26	0°02'10
conjunction	-9407 Apr 13 j 03:38	12°28'49	-2°14'14	minimum elong	-9401 Apr 21 j 13:41	20°07'26	0°01'45
minimum elong	-9407 Apr 13 j 03:42	12°28'49	2°14'42	behind sun begin	-9401 Apr 21 j 07:10	20°07'02	
morning rise	-9407 Apr 29 j 00:35	12°53'29		behind sun end	-9401 Apr 21 j 20:12	20°07'51	
retrograde	-9407 Jul 22 j 18:34	14°10'32		morning rise	-9401 May 07 j 13:38	20°33'17	
opposition	-9407 Oct 10 j 10:07	13°06'00	-2°09'34	retrograde	-9401 Jul 31 j 05:26	21°53'12	
min. Earth dist.	-9407 Oct 13 j 03:58	13°02'30	40.42481 AU	opposition	-9401 Oct 18 j 11:04	20°47'05	0°14'24
direct	-9406 Jan 01 j 02:54	11°59'03		min. Earth dist.	-9401 Oct 21 j 10:07	20°43'11	38.99126 AU
evening set	-9406 Mar 29 j 15:54	13°18'13		direct	-9400 Jan 09 j 01:38	19°38'16	
max. Earth dist.	-9406 Apr 11 j 13:25	13°38'19	42.30654 AU	evening set	-9400 Apr 06 j 01:58	21°00'56	
				max. Earth dist.	-9400 Apr 18 j 22:25	21°21'46	40.87002 AU
conjunction	-9406 Apr 14 j 16:31	13°43'15	-1°52'14	conjunction	-9400 Apr 22 j 04:48	21°27'08	0°25'51
minimum elong	-9406 Apr 14 j 16:34	13°43'15	1°52'43	minimum elong	-9400 Apr 22 j 04:47	21°27'08	0°25'27
morning rise	-9406 Apr 30 j 14:36	14°08'08		morning rise	-9400 May 08 j 04:18	21°53'08	
	-9406 Jun 08 j 09:08	15°		retrograde	-9400 Jul 31 j 19:57	23°13'40	
retrograde	-9406 Jul 24 j 08:12	15°25'35		opposition	-9400 Oct 19 j 00:38	22°07'18	0°39'30
	-9406 Sep 09 j 00:24	15°R		min. Earth dist.	-9400 Oct 21 j 23:52	22°03'23	38.74809 AU
opposition	-9406 Oct 11 j 21:23	14°20'47	-1°46'23				

Attention, astronomical year style is used: The year -9399 in astronomical counting style is the year 9400 BCE in historical counting style.

direct	-9399 Jan 09 j 13:53	20° $\approx$ 58'11	
evening set	-9399 Apr 07 j 18:01	22° $\approx$ 21'35	
max. Earth dist.	-9399 Apr 20 j 11:47	22° $\approx$ 42'23	40.62571 AU
conjunction	-9399 Apr 23 j 20:06	22° $\approx$ 47'55	0°49'51
minimum elong	-9399 Apr 23 j 20:04	22° $\approx$ 47'55	0°49'27
morning rise	-9399 May 09 j 19:03	23° $\approx$ 14'05	
retrograde	-9399 Aug 02 j 13:34	24° $\approx$ 35'16	
opposition	-9399 Oct 20 j 14:38	23° $\approx$ 28'37	1°04'54
min. Earth dist.	-9399 Oct 23 j 15:04	23° $\approx$ 24'37	38.50290 AU