

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 1

Attention, astronomical year style is used: The year -9400 in astronomical counting style is the year 9401 BCE in historical counting style.

direct	-9400 Jan 09 j 01:38	19° $\approx$ 38'16		conjunction	-9394 May 01 j 07:52	29° $\approx$ 48'16	2°53'46
evening set	-9400 Apr 06 j 01:58	21° $\approx$ 00'56		minimum elong	-9394 May 01 j 07:46	29° $\approx$ 48'16	2°53'26
max. Earth dist.	-9400 Apr 18 j 22:25	21° $\approx$ 21'46	40.87002 AU		-9394 May 08 j 04:05	0° $\approx$	
				morning rise	-9394 May 16 j 23:07	0° $\approx$ 14'54	
conjunction	-9400 Apr 22 j 04:48	21° $\approx$ 27'08	0°25'51	retrograde	-9394 Aug 10 j 01:55	1° $\approx$ 39'49	
minimum elong	-9400 Apr 22 j 04:47	21° $\approx$ 27'08	0°25'27	opposition	-9394 Oct 27 j 19:38	0° $\approx$ 31'32	3°16'12
morning rise	-9400 May 08 j 04:18	21° $\approx$ 53'08		min. Earth dist.	-9394 Oct 31 j 00:48	0° $\approx$ 27'09	37.23897 AU
retrograde	-9400 Jul 31 j 19:57	23° $\approx$ 13'40			-9394 Nov 20 j 18:26	30° $\approx$	
opposition	-9400 Oct 19 j 00:38	22° $\approx$ 07'18	0°39'30	direct	-9393 Jan 18 j 05:52	29° $\approx$ 20'12	
min. Earth dist.	-9400 Oct 21 j 23:52	22° $\approx$ 03'23	38.74809 AU		-9393 Mar 16 j 10:23	0° $\approx$	
direct	-9399 Jan 09 j 13:53	20° $\approx$ 58'11		evening set	-9393 Apr 17 j 09:32	0° $\approx$ 48'41	
evening set	-9399 Apr 07 j 18:01	22° $\approx$ 21'35		max. Earth dist.	-9393 Apr 29 j 13:11	1° $\approx$ 09'28	39.10661 AU
max. Earth dist.	-9399 Apr 20 j 11:47	22° $\approx$ 42'23	40.62571 AU				
				conjunction	-9393 May 03 j 01:58	1° $\approx$ 15'35	3°19'17
conjunction	-9399 Apr 23 j 20:06	22° $\approx$ 47'55	0°49'51	minimum elong	-9393 May 03 j 01:51	1° $\approx$ 15'34	3°18'56
minimum elong	-9399 Apr 23 j 20:04	22° $\approx$ 47'55	0°49'27	morning rise	-9393 May 18 j 14:36	1° $\approx$ 42'16	
morning rise	-9399 May 09 j 19:03	23° $\approx$ 14'05		retrograde	-9393 Aug 11 j 19:20	3° $\approx$ 08'03	
retrograde	-9399 Aug 02 j 13:34	24° $\approx$ 35'16		opposition	-9393 Oct 29 j 12:23	1° $\approx$ 59'24	3°43'15
opposition	-9399 Oct 20 j 14:38	23° $\approx$ 28'37	1°04'54	min. Earth dist.	-9393 Nov 01 j 17:53	1° $\approx$ 54'58	36.98109 AU
min. Earth dist.	-9399 Oct 23 j 15:04	23° $\approx$ 24'37	38.50290 AU	direct	-9392 Jan 19 j 21:52	0° $\approx$ 47'39	
direct	-9398 Jan 11 j 01:13	22° $\approx$ 19'11		evening set	-9392 Apr 18 j 06:57	2° $\approx$ 17'08	
evening set	-9398 Apr 09 j 10:42	23° $\approx$ 43'21		max. Earth dist.	-9392 Apr 30 j 06:25	2° $\approx$ 37'48	38.84766 AU
max. Earth dist.	-9398 Apr 22 j 03:30	24° $\approx$ 04'14	40.37891 AU				
				conjunction	-9392 May 03 j 20:24	2° $\approx$ 44'03	3°44'59
conjunction	-9398 Apr 25 j 12:04	24° $\approx$ 09'49	1°14'07	minimum elong	-9392 May 03 j 20:16	2° $\approx$ 44'02	3°44'41
minimum elong	-9398 Apr 25 j 12:02	24° $\approx$ 09'49	1°13'44	morning rise	-9392 May 19 j 06:20	3° $\approx$ 10'45	
morning rise	-9398 May 11 j 09:56	24° $\approx$ 36'06		retrograde	-9392 Aug 12 j 16:18	4° $\approx$ 37'28	
retrograde	-9398 Aug 04 j 06:31	25° $\approx$ 57'59		opposition	-9392 Oct 30 j 05:42	3° $\approx$ 28'26	4°10'33
opposition	-9398 Oct 22 j 05:08	24° $\approx$ 51'02	1°30'35	min. Earth dist.	-9392 Nov 02 j 11:20	3° $\approx$ 23'59	36.72318 AU
min. Earth dist.	-9398 Oct 25 j 06:50	24° $\approx$ 46'57	38.25507 AU	direct	-9391 Jan 20 j 13:57	2° $\approx$ 16'17	
direct	-9397 Jan 12 j 15:53	23° $\approx$ 41'16		evening set	-9391 Apr 20 j 04:56	3° $\approx$ 46'49	
evening set	-9397 Apr 11 j 04:14	25° $\approx$ 06'13		max. Earth dist.	-9391 May 02 j 01:26	4° $\approx$ 07'27	38.58866 AU
max. Earth dist.	-9397 Apr 23 j 18:21	25° $\approx$ 27'05	40.12941 AU				
				conjunction	-9391 May 05 j 15:18	4° $\approx$ 13'45	4°10'53
conjunction	-9397 Apr 27 j 04:20	25° $\approx$ 32'49	1°38'39	minimum elong	-9391 May 05 j 15:09	4° $\approx$ 13'44	4°10'34
minimum elong	-9397 Apr 27 j 04:17	25° $\approx$ 32'49	1°38'16	morning rise	-9391 May 20 j 21:51	4° $\approx$ 40'26	
morning rise	-9397 May 13 j 01:08	25° $\approx$ 59'13		retrograde	-9391 Aug 14 j 12:08	6° $\approx$ 08'09	
retrograde	-9397 Aug 06 j 00:58	27° $\approx$ 21'48		opposition	-9391 Oct 31 j 23:44	4° $\approx$ 58'45	4°38'02
opposition	-9397 Oct 23 j 20:01	26° $\approx$ 14'33	1°56'34	min. Earth dist.	-9391 Nov 04 j 06:14	4° $\approx$ 54'13	36.46566 AU
min. Earth dist.	-9397 Oct 26 j 21:58	26° $\approx$ 10'25	38.00452 AU	direct	-9390 Jan 22 j 08:30	3° $\approx$ 46'12	
direct	-9396 Jan 14 j 07:28	25° $\approx$ 04'25		evening set	-9390 Apr 22 j 03:59	5° $\approx$ 17'52	
evening set	-9396 Apr 11 j 22:30	26° $\approx$ 30'12		max. Earth dist.	-9390 May 03 j 20:52	5° $\approx$ 38'25	38.33040 AU
max. Earth dist.	-9396 Apr 24 j 09:53	26° $\approx$ 51'02	39.87690 AU				
				conjunction	-9390 May 07 j 10:42	5° $\approx$ 44'46	4°36'57
conjunction	-9396 Apr 27 j 21:12	26° $\approx$ 56'54	2°03'27	minimum elong	-9390 May 07 j 10:31	5° $\approx$ 44'45	4°36'40
minimum elong	-9396 Apr 27 j 21:08	26° $\approx$ 56'54	2°03'06	morning rise	-9390 May 22 j 13:46	6° $\approx$ 11'26	
morning rise	-9396 May 13 j 16:21	27° $\approx$ 23'24		retrograde	-9390 Aug 16 j 08:46	7° $\approx$ 40'11	
retrograde	-9396 Aug 06 j 16:38	28° $\approx$ 46'43		opposition	-9390 Nov 02 j 18:02	6° $\approx$ 30'26	5°05'43
opposition	-9396 Oct 24 j 11:28	27° $\approx$ 39'08	2°22'51	min. Earth dist.	-9390 Nov 05 j 23:43	6° $\approx$ 25'55	36.20911 AU
min. Earth dist.	-9396 Oct 27 j 15:25	27° $\approx$ 34'53	37.75128 AU	direct	-9389 Jan 24 j 03:39	5° $\approx$ 17'30	
direct	-9395 Jan 14 j 23:09	26° $\approx$ 28'37		evening set	-9389 Apr 24 j 03:55	6° $\approx$ 50'21	
evening set	-9395 Apr 13 j 17:31	27° $\approx$ 55'16		max. Earth dist.	-9389 May 05 j 16:02	7° $\approx$ 10'44	38.07288 AU
max. Earth dist.	-9395 Apr 26 j 02:59	28° $\approx$ 16'07	39.62196 AU				
				conjunction	-9389 May 09 j 06:43	7° $\approx$ 17'13	5°03'11
conjunction	-9395 Apr 29 j 14:27	28° $\approx$ 22'03	2°28'30	minimum elong	-9389 May 09 j 06:32	7° $\approx$ 17'12	5°02'53
minimum elong	-9395 Apr 29 j 14:21	28° $\approx$ 22'02	2°28'08	morning rise	-9389 May 24 j 05:47	7° $\approx$ 43'50	
morning rise	-9395 May 15 j 07:46	28° $\approx$ 48'37		retrograde	-9389 Aug 18 j 04:07	9° $\approx$ 13'42	
	-9395 Jul 08 j 12:55	0° $\approx$		opposition	-9389 Nov 04 j 13:07	8° $\approx$ 03'37	5°33'34
retrograde	-9395 Aug 08 j 07:49	0° $\approx$ 12'43		min. Earth dist.	-9389 Nov 07 j 20:04	7° $\approx$ 59'00	35.95342 AU
	-9395 Sep 08 j 12:36	30° $\approx$		direct	-9388 Jan 25 j 21:11	6° $\approx$ 50'17	
opposition	-9395 Oct 26 j 03:20	29° $\approx$ 04'48	2°49'24	evening set	-9388 Apr 25 j 04:53	8° $\approx$ 24'25	
min. Earth dist.	-9395 Oct 29 j 07:08	29° $\approx$ 00'31	37.49588 AU	max. Earth dist.	-9388 May 06 j 13:31	8° $\approx$ 44'43	37.81605 AU
direct	-9394 Jan 16 j 16:09	27° $\approx$ 53'53					
evening set	-9394 Apr 15 j 13:08	29° $\approx$ 21'24		conjunction	-9388 May 10 j 03:20	8° $\approx$ 51'12	5°29'32
max. Earth dist.	-9394 Apr 27 j 18:34	29° $\approx$ 42'09	39.36497 AU	minimum elong	-9388 May 10 j 03:07	8° $\approx$ 51'11	5°29'16

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 2

Attention, astronomical year style is used: The year -9388 in astronomical counting style is the year 9389 BCE in historical counting style.

morning rise	-9388 May 24 j 21:57	9° $\mathbf{H}$ 17'44	conjunction	-9381 May 22 j 20:50	20° $\mathbf{H}$ 34'38	8°35'59	
retrograde	-9388 Aug 18 j 23:40	10° $\mathbf{H}$ 48'47	minimum elong	-9381 May 22 j 20:31	20° $\mathbf{H}$ 34'36	8°35'49	
opposition	-9388 Nov 05 j 08:47	9° $\mathbf{H}$ 38'22	6°01'35	morning rise	-9381 Jun 04 j 19:56	20° $\mathbf{H}$ 59'34	
min. Earth dist.	-9388 Nov 08 j 15:19	9° $\mathbf{H}$ 33'44	35.69830 AU	retrograde	-9381 Sep 01 j 00:35	22° $\mathbf{H}$ 40'32	
direct	-9387 Jan 26 j 16:15	8° $\mathbf{H}$ 24'40		opposition	-9381 Nov 17 j 21:41	21° $\mathbf{H}$ 27'17	9°20'00
evening set	-9387 Apr 27 j 07:00	10° $\mathbf{H}$ 00'06		min. Earth dist.	-9381 Nov 21 j 06:12	21° $\mathbf{H}$ 22'20	33.91395 AU
max. Earth dist.	-9387 May 08 j 09:17	10° $\mathbf{H}$ 20'09	37.55950 AU	direct	-9380 Feb 07 j 22:19	20° $\mathbf{H}$ 10'28	
				evening set	-9380 May 11 j 04:12	21° $\mathbf{H}$ 56'51	
				max. Earth dist.	-9380 May 20 j 06:15	22° $\mathbf{H}$ 14'26	35.76169 AU
conjunction	-9387 May 12 j 00:29	10° $\mathbf{H}$ 26'47	5°56'00				
minimum elong	-9387 May 12 j 00:16	10° $\mathbf{H}$ 26'46	5°55'44	conjunction	-9380 May 23 j 22:18	22° $\mathbf{H}$ 21'36	9°02'31
morning rise	-9387 May 26 j 14:25	10° $\mathbf{H}$ 53'13		minimum elong	-9380 May 23 j 21:56	22° $\mathbf{H}$ 21'34	9°02'23
retrograde	-9387 Aug 20 j 23:00	12° $\mathbf{H}$ 25'31		morning rise	-9380 Jun 05 j 13:14	22° $\mathbf{H}$ 46'08	
opposition	-9387 Nov 07 j 05:08	11° $\mathbf{H}$ 14'44	6°29'43	retrograde	-9380 Sep 02 j 03:42	24° $\mathbf{H}$ 28'47	
min. Earth dist.	-9387 Nov 10 j 12:24	11° $\mathbf{H}$ 10'03	35.44351 AU	opposition	-9380 Nov 18 j 22:55	23° $\mathbf{H}$ 15'04	9°48'15
direct	-9386 Jan 28 j 08:22	10° $\mathbf{H}$ 00'39		min. Earth dist.	-9380 Nov 22 j 07:26	23° $\mathbf{H}$ 10'05	33.66324 AU
evening set	-9386 Apr 29 j 09:52	11° $\mathbf{H}$ 37'28		direct	-9379 Feb 08 j 20:48	21° $\mathbf{H}$ 57'46	
max. Earth dist.	-9386 May 10 j 07:39	11° $\mathbf{H}$ 57'21	37.30278 AU	evening set	-9379 May 13 j 15:19	23° $\mathbf{H}$ 45'59	
				max. Earth dist.	-9379 May 22 j 10:01	24° $\mathbf{H}$ 03'09	35.50974 AU
conjunction	-9386 May 13 j 22:16	12° $\mathbf{H}$ 04'00	6°22'34				
minimum elong	-9386 May 13 j 22:01	12° $\mathbf{H}$ 03'59	6°22'20	conjunction	-9379 May 26 j 00:33	24° $\mathbf{H}$ 10'16	9°28'55
morning rise	-9386 May 28 j 06:48	12° $\mathbf{H}$ 30'18		minimum elong	-9379 May 26 j 00:12	24° $\mathbf{H}$ 10'14	9°28'47
retrograde	-9386 Aug 22 j 21:20	14° $\mathbf{H}$ 03'55		morning rise	-9379 Jun 07 j 06:26	24° $\mathbf{H}$ 34'19	
opposition	-9386 Nov 09 j 02:14	12° $\mathbf{H}$ 52'46	6°57'59	retrograde	-9379 Sep 04 j 05:52	26° $\mathbf{H}$ 18'45	
min. Earth dist.	-9386 Nov 12 j 10:03	12° $\mathbf{H}$ 48'01	35.18840 AU	opposition	-9379 Nov 21 j 01:05	25° $\mathbf{H}$ 04'34	10°16'20
direct	-9385 Jan 30 j 04:09	11° $\mathbf{H}$ 38'16		min. Earth dist.	-9379 Nov 24 j 09:09	24° $\mathbf{H}$ 59'35	33.41567 AU
evening set	-9385 May 01 j 14:12	13° $\mathbf{H}$ 16'32		direct	-9378 Feb 10 j 21:31	23° $\mathbf{H}$ 46'48	
max. Earth dist.	-9385 May 12 j 05:08	13° $\mathbf{H}$ 36'06	37.04567 AU	evening set	-9378 May 16 j 03:46	25° $\mathbf{H}$ 36'57	
				max. Earth dist.	-9378 May 24 j 12:52	25° $\mathbf{H}$ 53'31	35.26135 AU
conjunction	-9385 May 15 j 20:41	13° $\mathbf{H}$ 42'53	6°49'13				
minimum elong	-9385 May 15 j 20:26	13° $\mathbf{H}$ 42'52	6°48'59	conjunction	-9378 May 28 j 03:14	26° $\mathbf{H}$ 00'41	9°55'05
morning rise	-9385 May 29 j 23:41	14° $\mathbf{H}$ 09'00		minimum elong	-9378 May 28 j 02:51	26° $\mathbf{H}$ 00'39	9°54'59
retrograde	-9385 Aug 24 j 23:10	15° $\mathbf{H}$ 43'58		morning rise	-9378 Jun 08 j 23:47	26° $\mathbf{H}$ 24'12	
opposition	-9385 Nov 10 j 23:47	14° $\mathbf{H}$ 32'26	7°26'20	retrograde	-9378 Sep 06 j 11:45	28° $\mathbf{H}$ 10'31	
min. Earth dist.	-9385 Nov 14 j 07:33	14° $\mathbf{H}$ 27'40	34.93300 AU	opposition	-9378 Nov 23 j 03:51	26° $\mathbf{H}$ 55'53	10°44'11
direct	-9384 Feb 01 j 01:24	13° $\mathbf{H}$ 17'30		min. Earth dist.	-9378 Nov 26 j 10:40	26° $\mathbf{H}$ 50'57	33.17198 AU
evening set	-9384 May 02 j 19:32	14° $\mathbf{H}$ 57'16		direct	-9377 Feb 12 j 22:20	25° $\mathbf{H}$ 37'40	
max. Earth dist.	-9384 May 13 j 04:03	15° $\mathbf{H}$ 16'32	36.78797 AU	evening set	-9377 May 18 j 17:34	27° $\mathbf{H}$ 29'52	
				max. Earth dist.	-9377 May 26 j 17:32	27° $\mathbf{H}$ 45'50	35.01673 AU
conjunction	-9384 May 16 j 19:56	15° $\mathbf{H}$ 23'24	7°15'55				
minimum elong	-9384 May 16 j 19:39	15° $\mathbf{H}$ 23'23	7°15'42	conjunction	-9377 May 30 j 06:55	27° $\mathbf{H}$ 52'59	10°21'00
morning rise	-9384 May 30 j 16:37	15° $\mathbf{H}$ 49'17		minimum elong	-9377 May 30 j 06:32	27° $\mathbf{H}$ 52'57	10°20'54
retrograde	-9384 Aug 26 j 00:17	17° $\mathbf{H}$ 25'40		morning rise	-9377 Jun 10 j 17:13	28° $\mathbf{H}$ 15'54	
opposition	-9384 Nov 11 j 22:21	16° $\mathbf{H}$ 13'44	7°54'45		-9377 Aug 23 j 09:30	0° $\mathbf{Y}$	
min. Earth dist.	-9384 Nov 15 j 07:24	16° $\mathbf{H}$ 08'51	34.67728 AU	retrograde	-9377 Sep 08 j 16:41	0° $\mathbf{Y}$ 04'11	
direct	-9383 Feb 01 j 23:28	14° $\mathbf{H}$ 58'21			-9377 Sep 25 j 03:53	30° $\mathbf{R}$ $\mathbf{H}$	
evening set	-9383 May 05 j 01:57	16° $\mathbf{H}$ 39'41		opposition	-9377 Nov 25 j 07:31	28° $\mathbf{H}$ 49'09	11°11'45
max. Earth dist.	-9383 May 15 j 03:52	16° $\mathbf{H}$ 58'37	36.53020 AU	min. Earth dist.	-9377 Nov 28 j 14:38	28° $\mathbf{H}$ 44'10	32.93228 AU
				direct	-9376 Feb 14 j 23:54	27° $\mathbf{H}$ 30'29	
conjunction	-9383 May 18 j 19:31	17° $\mathbf{H}$ 05'32	7°42'38	evening set	-9376 May 20 j 09:00	29° $\mathbf{H}$ 24'49	
minimum elong	-9383 May 18 j 19:14	17° $\mathbf{H}$ 05'31	7°42'26	max. Earth dist.	-9376 May 27 j 23:06	29° $\mathbf{H}$ 40'09	34.77627 AU
morning rise	-9383 Jun 01 j 09:35	17° $\mathbf{H}$ 31'09					
retrograde	-9383 Aug 28 j 00:14	19° $\mathbf{H}$ 09'00		conjunction	-9376 May 31 j 11:15	29° $\mathbf{H}$ 47'16	10°46'36
opposition	-9383 Nov 13 j 21:26	17° $\mathbf{H}$ 56'38	8°23'12	minimum elong	-9376 May 31 j 10:51	29° $\mathbf{H}$ 47'14	10°46'31
min. Earth dist.	-9383 Nov 17 j 05:38	17° $\mathbf{H}$ 51'47	34.42179 AU		-9376 Jun 06 j 17:31	0° $\mathbf{Y}$	
direct	-9382 Feb 03 j 23:27	16° $\mathbf{H}$ 40'48		morning rise	-9376 Jun 11 j 10:45	0° $\mathbf{Y}$ 09'31	
evening set	-9382 May 07 j 09:30	18° $\mathbf{H}$ 23'44		retrograde	-9376 Sep 09 j 23:41	1° $\mathbf{Y}$ 59'53	
max. Earth dist.	-9382 May 17 j 03:16	18° $\mathbf{H}$ 42'13	36.27270 AU	opposition	-9376 Nov 26 j 12:06	0° $\mathbf{Y}$ 44'26	11°39'00
				min. Earth dist.	-9376 Nov 29 j 17:30	0° $\mathbf{Y}$ 39'31	32.69670 AU
conjunction	-9382 May 20 j 19:51	18° $\mathbf{H}$ 49'17	8°09'20		-9376 Dec 27 j 11:57	30° $\mathbf{R}$ $\mathbf{H}$	
minimum elong	-9382 May 20 j 19:32	18° $\mathbf{H}$ 49'15	8°09'09	direct	-9375 Feb 16 j 04:53	29° $\mathbf{H}$ 25'22	
morning rise	-9382 Jun 03 j 02:46	19° $\mathbf{H}$ 14'35			-9375 Apr 06 j 10:23	0° $\mathbf{Y}$	
retrograde	-9382 Aug 30 j 00:33	20° $\mathbf{H}$ 53'57		evening set	-9375 May 23 j 01:40	1° $\mathbf{Y}$ 21'56	
opposition	-9382 Nov 15 j 21:09	19° $\mathbf{H}$ 41'09	8°51'37	max. Earth dist.	-9375 May 30 j 04:18	1° $\mathbf{Y}$ 36'28	34.53958 AU
min. Earth dist.	-9382 Nov 19 j 06:25	19° $\mathbf{H}$ 36'11	34.16714 AU				
direct	-9381 Feb 05 j 22:05	18° $\mathbf{H}$ 24'50		conjunction	-9375 Jun 02 j 16:17	1° $\mathbf{Y}$ 43'38	11°11'50
evening set	-9381 May 09 j 18:14	20° $\mathbf{H}$ 09'27		minimum elong	-9375 Jun 02 j 15:53	1° $\mathbf{Y}$ 43'36	11°11'47
max. Earth dist.	-9381 May 19 j 05:30	20° $\mathbf{H}$ 27'35	36.01630 AU				

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 3

Attention, astronomical year style is used: The year -9375 in astronomical counting style is the year 9376 BCE in historical counting style.

morning rise	-9375 Jun 13 j 04:15	2°♊05'08		conjunction	-9368 Jun 17 j 02:25	16°♊17'38	13°53'46
retrograde	-9375 Sep 12 j 07:34	3°♊57'41		minimum elong	-9368 Jun 17 j 01:58	16°♊17'36	13°53'52
opposition	-9375 Nov 28 j 17:38	2°♊41'50	12°05'51	morning rise	-9368 Jun 23 j 00:17	16°♊30'39	
min. Earth dist.	-9375 Dec 01 j 23:24	2°♊36'52	32.46494 AU	retrograde	-9368 Sep 27 j 05:16	18°♊41'50	
direct	-9374 Feb 18 j 08:31	1°♊22'22		opposition	-9368 Dec 13 j 09:41	17°♊23'00	14°57'41
evening set	-9374 May 25 j 20:10	3°♊21'17		min. Earth dist.	-9368 Dec 16 j 09:08	17°♊18'16	30.94695 AU
max. Earth dist.	-9374 Jun 01 j 12:03	3°♊35'02	34.30654 AU	direct	-9367 Mar 04 j 11:06	16°♊00'35	
				evening set	-9367 Jun 14 j 13:29	18°♊19'34	
conjunction	-9374 Jun 04 j 22:15	3°♊42'09	11°36'40	max. Earth dist.	-9367 Jun 16 j 11:53	18°♊23'51	32.78218 AU
minimum elong	-9374 Jun 04 j 21:49	3°♊42'06	11°36'38				
morning rise	-9374 Jun 14 j 21:45	4°♊02'48		conjunction	-9367 Jun 19 j 13:31	18°♊30'40	14°13'55
retrograde	-9374 Sep 14 j 14:11	5°♊57'38		minimum elong	-9367 Jun 19 j 13:06	18°♊30'38	14°14'03
opposition	-9374 Nov 30 j 23:54	4°♊41'23	12°32'15	morning rise	-9367 Jun 24 j 12:20	18°♊41'41	
min. Earth dist.	-9374 Dec 04 j 04:17	4°♊36'29	32.23663 AU	retrograde	-9367 Sep 29 j 19:17	20°♊56'17	
direct	-9373 Feb 20 j 14:21	3°♊21'31		opposition	-9367 Dec 15 j 22:27	19°♊37'01	15°18'57
evening set	-9373 May 28 j 16:21	5°♊22'54		min. Earth dist.	-9367 Dec 18 j 19:07	19°♊32'26	30.75073 AU
max. Earth dist.	-9373 Jun 03 j 18:30	5°♊35'36	34.07679 AU	direct	-9366 Mar 07 j 00:07	18°♊14'13	
				evening set	-9366 Jun 18 j 05:15	20°♊37'05	
conjunction	-9373 Jun 07 j 05:00	5°♊42'48	12°01'03	max. Earth dist.	-9366 Jun 19 j 01:04	20°♊38'56	32.58658 AU
minimum elong	-9373 Jun 07 j 04:34	5°♊42'46	12°01'02				
morning rise	-9373 Jun 16 j 15:25	6°♊02'32		conjunction	-9366 Jun 22 j 01:29	20°♊45'42	14°33'04
retrograde	-9373 Sep 16 j 22:39	7°♊59'45		minimum elong	-9366 Jun 22 j 01:03	20°♊45'39	14°33'12
opposition	-9373 Dec 03 j 07:14	6°♊43'06	12°58'10	morning rise	-9366 Jun 25 j 20:37	20°♊54'13	
min. Earth dist.	-9373 Dec 06 j 11:32	6°♊38'11	32.01171 AU	retrograde	-9366 Oct 02 j 10:52	23°♊12'43	
direct	-9372 Feb 22 j 18:32	5°♊22'49		opposition	-9366 Dec 18 j 12:02	21°♊53'02	15°39'06
evening set	-9372 May 30 j 14:17	7°♊26'45		min. Earth dist.	-9366 Dec 21 j 07:37	21°♊48'30	30.56203 AU
max. Earth dist.	-9372 Jun 05 j 04:04	7°♊38'30	33.85030 AU	direct	-9365 Mar 09 j 11:52	20°♊29'52	
				evening set	-9365 Jun 22 j 09:21	22°♊57'44	
conjunction	-9372 Jun 08 j 12:36	7°♊45'37	12°24'55	max. Earth dist.	-9365 Jun 21 j 17:07	22°♊56'12	32.39894 AU
minimum elong	-9372 Jun 08 j 12:09	7°♊45'34	12°24'55				
morning rise	-9372 Jun 17 j 08:39	8°♊04'17		conjunction	-9365 Jun 24 j 14:17	23°♊02'44	14°51'07
retrograde	-9372 Sep 18 j 06:23	10°♊04'02		minimum elong	-9365 Jun 24 j 13:53	23°♊02'41	14°51'16
opposition	-9372 Dec 04 j 15:37	8°♊46'57	13°23'31	morning rise	-9365 Jun 26 j 18:22	23°♊07'38	
min. Earth dist.	-9372 Dec 07 j 19:07	8°♊42'03	31.79004 AU	retrograde	-9365 Oct 05 j 00:37	25°♊31'08	
direct	-9371 Feb 24 j 00:45	7°♊26'15		opposition	-9365 Dec 21 j 02:39	24°♊11'05	15°58'03
evening set	-9371 Jun 02 j 14:10	9°♊32'52		min. Earth dist.	-9365 Dec 23 j 19:29	24°♊06'42	30.38120 AU
max. Earth dist.	-9371 Jun 07 j 12:26	9°♊43'22	33.62737 AU	direct	-9364 Mar 11 j 01:50	22°♊47'35	
				max. Earth dist.	-9364 Jun 23 j 07:46	25°♊15'20	32.21952 AU
conjunction	-9371 Jun 10 j 20:54	9°♊50'32	12°48'11				
minimum elong	-9371 Jun 10 j 20:28	9°♊50'30	12°48'13	conjunction	-9364 Jun 26 j 03:35	25°♊21'47	15°07'59
morning rise	-9371 Jun 19 j 01:45	10°♊08'03		minimum elong	-9364 Jun 26 j 03:10	25°♊21'45	15°08'10
retrograde	-9371 Sep 20 j 17:40	12°♊10'25		retrograde	-9364 Oct 06 j 16:44	27°♊51'35	
opposition	-9371 Dec 07 j 00:42	10°♊52'55	13°48'14	opposition	-9364 Dec 22 j 18:12	26°♊31'11	16°15'41
min. Earth dist.	-9371 Dec 10 j 03:01	10°♊48'04	31.57225 AU	min. Earth dist.	-9364 Dec 25 j 09:12	26°♊26'54	30.20866 AU
direct	-9370 Feb 26 j 06:31	9°♊31'46		direct	-9363 Mar 13 j 14:15	25°♊07'22	
evening set	-9370 Jun 05 j 15:56	11°♊41'12		max. Earth dist.	-9363 Jun 26 j 01:38	27°♊36'44	32.04844 AU
max. Earth dist.	-9370 Jun 09 j 23:13	11°♊50'27	33.40835 AU				
conjunction	-9370 Jun 13 j 06:02	11°♊57'32	13°10'49	conjunction	-9363 Jun 28 j 17:51	27°♊42'54	15°23'36
minimum elong	-9370 Jun 13 j 05:34	11°♊57'30	13°10'52	minimum elong	-9363 Jun 28 j 17:29	27°♊42'52	15°23'48
morning rise	-9370 Jun 20 j 18:13	12°♊13'45			-9363 Sep 10 j 21:50	0°♊	
retrograde	-9370 Sep 23 j 03:49	14°♊18'52		retrograde	-9363 Oct 09 j 08:15	0°♊14'02	
opposition	-9370 Dec 09 j 10:51	13°♊00'56	14°12'14		-9363 Nov 07 j 11:45	30°♊	
min. Earth dist.	-9370 Dec 12 j 12:48	12°♊56'04	31.35855 AU	opposition	-9363 Dec 25 j 10:37	28°♊53'18	16°31'58
direct	-9369 Feb 28 j 15:17	11°♊39'22		min. Earth dist.	-9363 Dec 27 j 23:32	28°♊49'09	30.04415 AU
evening set	-9369 Jun 08 j 20:12	13°♊51'45		direct	-9362 Mar 16 j 04:27	27°♊29'14	
max. Earth dist.	-9369 Jun 12 j 10:09	13°♊59'32	33.19396 AU		-9362 Jun 28 j 18:27	0°♊	
				max. Earth dist.	-9362 Jun 28 j 17:49	29°♊59'56	31.88558 AU
conjunction	-9369 Jun 15 j 15:48	14°♊06'35	13°32'42				
minimum elong	-9369 Jun 15 j 15:22	14°♊06'33	13°32'47	conjunction	-9362 Jul 01 j 08:35	0°♊06'01	15°37'54
morning rise	-9369 Jun 22 j 09:51	14°♊21'19		minimum elong	-9362 Jul 01 j 08:13	0°♊05'59	15°38'08
retrograde	-9369 Sep 25 j 16:56	16°♊29'21		retrograde	-9362 Oct 12 j 02:32	2°♊38'28	
opposition	-9369 Dec 11 j 21:40	15°♊10'58	14°35'25	opposition	-9362 Dec 28 j 03:50	1°♊17'25	16°46'47
min. Earth dist.	-9369 Dec 14 j 21:33	15°♊06'13	31.14985 AU	min. Earth dist.	-9362 Dec 30 j 14:13	1°♊13'26	29.88758 AU
direct	-9368 Mar 02 j 01:33	13°♊48'58			-9361 Feb 25 j 22:41	30°♊	
evening set	-9368 Jun 11 j 03:03	16°♊04'31		direct	-9361 Mar 18 j 18:40	29°♊53'05	
max. Earth dist.	-9368 Jun 13 j 22:15	16°♊10'39	32.98486 AU		-9361 Apr 08 j 07:40	0°♊	
				max. Earth dist.	-9361 Jul 01 j 12:40	2°♊25'16	31.73054 AU

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 4

Attention, astronomical year style is used: The year -9361 in astronomical counting style is the year 9362 BCE in historical counting style.

conjunction	-9361 Jul 04 j 00:15	2° <del>8</del> 31'04	15°50'48	max. Earth dist.	-9353 Jul 22 j 11:17	22° <del>8</del> 40'46	30.80047 AU
minimum elong	-9361 Jul 03 j 23:56	2° <del>8</del> 31'02	15°51'03				
retrograde	-9361 Oct 14 j 18:36	5° <del>8</del> 04'47		conjunction	-9353 Jul 23 j 23:16	22° <del>8</del> 44'25	16°35'58
opposition	-9361 Dec 30 j 22:07	3° <del>8</del> 43'26	17°00'06	minimum elong	-9353 Jul 23 j 23:13	22° <del>8</del> 44'25	16°36'22
min. Earth dist.	-9360 Jan 02 j 06:56	3° <del>8</del> 39'32	29.73855 AU	retrograde	-9353 Nov 04 j 14:23	25° <del>8</del> 25'22	
direct	-9360 Mar 20 j 10:42	2° <del>8</del> 18'52		opposition	-9352 Jan 21 j 00:04	24° <del>8</del> 01'53	17°42'58
max. Earth dist.	-9360 Jul 03 j 06:50	4° <del>8</del> 52'18	31.58346 AU	min. Earth dist.	-9352 Jan 22 j 09:09	23° <del>8</del> 59'34	28.85368 AU
				direct	-9352 Apr 10 j 01:05	22° <del>8</del> 35'59	
conjunction	-9360 Jul 05 j 16:28	4° <del>8</del> 57'57	16°02'15	max. Earth dist.	-9352 Jul 24 j 11:36	25° <del>8</del> 17'23	30.73147 AU
minimum elong	-9360 Jul 05 j 16:08	4° <del>8</del> 57'55	16°02'31				
retrograde	-9360 Oct 16 j 14:20	7° <del>8</del> 32'51		conjunction	-9352 Jul 25 j 18:42	25° <del>8</del> 20'33	16°33'24
opposition	-9359 Jan 01 j 17:09	6° <del>8</del> 11'12	17°11'49	minimum elong	-9352 Jul 25 j 18:41	25° <del>8</del> 20'33	16°33'50
min. Earth dist.	-9359 Jan 03 j 22:44	6° <del>8</del> 07'31	29.59724 AU	retrograde	-9352 Nov 06 j 11:15	28° <del>8</del> 02'01	
direct	-9359 Mar 23 j 03:26	4° <del>8</del> 46'24		opposition	-9351 Jan 22 j 23:32	26° <del>8</del> 38'24	17°39'21
max. Earth dist.	-9359 Jul 06 j 02:32	7° <del>8</del> 21'06	31.44419 AU	min. Earth dist.	-9351 Jan 24 j 05:03	26° <del>8</del> 36'20	28.79007 AU
				direct	-9351 Apr 12 j 23:40	25° <del>8</del> 12'31	
conjunction	-9359 Jul 08 j 09:18	7° <del>8</del> 26'31	16°12'11	max. Earth dist.	-9351 Jul 27 j 09:47	27° <del>8</del> 54'26	30.67464 AU
minimum elong	-9359 Jul 08 j 09:02	7° <del>8</del> 26'30	16°12'28				
retrograde	-9359 Oct 19 j 08:41	10° <del>8</del> 02'33		conjunction	-9351 Jul 28 j 14:01	27° <del>8</del> 57'19	16°28'52
opposition	-9358 Jan 04 j 13:04	8° <del>8</del> 40'35	17°21'52	minimum elong	-9351 Jul 28 j 14:03	27° <del>8</del> 57'19	16°29'18
min. Earth dist.	-9358 Jan 06 j 17:18	8° <del>8</del> 36'59	29.46363 AU		-9351 Sep 23 j 04:14	0° <del>II</del>	
direct	-9358 Mar 25 j 20:13	7° <del>8</del> 15'33		retrograde	-9351 Nov 09 j 10:34	0° <del>II</del> 39'13	
max. Earth dist.	-9358 Jul 08 j 22:42	9° <del>8</del> 51'26	31.31317 AU		-9351 Dec 29 j 01:33	30° <del>R</del> <del>8</del>	
				opposition	-9350 Jan 25 j 23:08	29° <del>8</del> 15'31	17°33'37
conjunction	-9358 Jul 11 j 02:43	9° <del>8</del> 56'37	16°20'31	min. Earth dist.	-9350 Jan 27 j 00:25	29° <del>8</del> 13'45	28.73825 AU
minimum elong	-9358 Jul 11 j 02:27	9° <del>8</del> 56'35	16°20'49	direct	-9350 Apr 15 j 21:04	27° <del>8</del> 49'40	
retrograde	-9358 Oct 22 j 05:07	12° <del>8</del> 33'40			-9350 Jul 17 j 05:18	0° <del>II</del>	
opposition	-9357 Jan 07 j 09:19	11° <del>8</del> 11'25	17°30'11	max. Earth dist.	-9350 Jul 30 j 10:10	0° <del>II</del> 32'11	30.62964 AU
min. Earth dist.	-9357 Jan 09 j 10:02	11° <del>8</del> 08'02	29.33807 AU				
direct	-9357 Mar 28 j 16:51	9° <del>8</del> 46'10		conjunction	-9350 Jul 31 j 09:44	0° <del>II</del> 34'36	16°22'23
max. Earth dist.	-9357 Jul 11 j 19:07	12° <del>8</del> 23'07	31.19060 AU	minimum elong	-9350 Jul 31 j 09:48	0° <del>II</del> 34'37	16°22'52
				retrograde	-9350 Nov 12 j 06:23	3° <del>II</del> 16'49	
conjunction	-9357 Jul 13 j 20:40	12° <del>8</del> 28'04	16°27'12	opposition	-9349 Jan 28 j 22:57	1° <del>II</del> 53'05	17°25'46
minimum elong	-9357 Jul 13 j 20:28	12° <del>8</del> 28'03	16°27'31	min. Earth dist.	-9349 Jan 29 j 21:23	1° <del>II</del> 51'31	28.69771 AU
	-9357 Oct 06 j 15:31	15° <del>8</del>		direct	-9349 Apr 18 j 19:26	0° <del>II</del> 27'20	
retrograde	-9357 Oct 25 j 01:21	15° <del>8</del> 06'05		max. Earth dist.	-9349 Aug 02 j 08:49	3° <del>II</del> 10'09	30.59626 AU
	-9357 Nov 12 j 19:30	15° <del>R</del> <del>8</del>					
opposition	-9356 Jan 10 j 06:33	13° <del>8</del> 43'31	17°36'40	conjunction	-9349 Aug 03 j 05:21	3° <del>II</del> 12'16	16°13'58
min. Earth dist.	-9356 Jan 12 j 05:31	13° <del>8</del> 40'16	29.22110 AU	minimum elong	-9349 Aug 03 j 05:28	3° <del>II</del> 12'17	16°14'26
direct	-9356 Mar 30 j 11:50	12° <del>8</del> 18'05		retrograde	-9349 Nov 15 j 05:03	5° <del>II</del> 54'42	
max. Earth dist.	-9356 Jul 13 j 17:02	14° <del>8</del> 56'07	31.07735 AU	opposition	-9348 Jan 31 j 22:58	4° <del>II</del> 30'56	17°15'50
				min. Earth dist.	-9348 Feb 01 j 16:54	4° <del>II</del> 29'41	28.66829 AU
conjunction	-9356 Jul 15 j 14:51	15° <del>8</del> 00'43	16°32'08	direct	-9348 Apr 20 j 17:37	3° <del>II</del> 05'17	
minimum elong	-9356 Jul 15 j 14:39	15° <del>8</del> 00'42	16°32'30	max. Earth dist.	-9348 Aug 04 j 08:48	5° <del>II</del> 48'27	30.57394 AU
	-9356 Jul 15 j 07:40	15° <del>8</del>					
retrograde	-9356 Oct 26 j 21:54	17° <del>8</del> 39'35		conjunction	-9348 Aug 05 j 01:02	5° <del>II</del> 50'07	16°03'38
opposition	-9355 Jan 12 j 04:16	16° <del>8</del> 16'46	17°41'16	minimum elong	-9348 Aug 05 j 01:11	5° <del>II</del> 50'08	16°04'08
min. Earth dist.	-9355 Jan 13 j 23:18	16° <del>8</del> 13'46	29.11337 AU	retrograde	-9348 Nov 17 j 01:59	8° <del>II</del> 32'40	
	-9355 Mar 10 j 02:13	15° <del>R</del> <del>8</del>		opposition	-9347 Feb 02 j 23:16	7° <del>II</del> 08'53	17°03'51
direct	-9355 Apr 02 j 09:23	14° <del>8</del> 51'09		min. Earth dist.	-9347 Feb 03 j 14:41	7° <del>II</del> 07'49	28.64949 AU
	-9355 Apr 25 j 05:33	15° <del>8</del>		direct	-9347 Apr 23 j 14:47	5° <del>II</del> 43'21	
max. Earth dist.	-9355 Jul 16 j 14:07	17° <del>8</del> 30'03	30.97399 AU				
				conjunction	-9347 Aug 07 j 20:41	8° <del>II</del> 27'56	15°51'25
conjunction	-9355 Jul 18 j 09:23	17° <del>8</del> 34'25	16°35'18	minimum elong	-9347 Aug 07 j 20:53	8° <del>II</del> 27'57	15°51'54
minimum elong	-9355 Jul 18 j 09:16	17° <del>8</del> 34'24	16°35'40	max. Earth dist.	-9347 Aug 07 j 07:46	8° <del>II</del> 26'36	30.56253 AU
retrograde	-9355 Oct 29 j 19:49	20° <del>8</del> 14'04		retrograde	-9347 Nov 19 j 23:26	11° <del>II</del> 10'28	
opposition	-9354 Jan 15 j 02:23	18° <del>8</del> 50'58	17°43'53	opposition	-9346 Feb 05 j 23:10	9° <del>II</del> 46'42	16°49'51
min. Earth dist.	-9354 Jan 16 j 18:53	18° <del>8</del> 48'09	29.01582 AU	min. Earth dist.	-9346 Feb 06 j 10:00	9° <del>II</del> 45'56	28.64108 AU
direct	-9354 Apr 05 j 05:39	17° <del>8</del> 25'13		direct	-9346 Apr 26 j 14:56	8° <del>II</del> 21'17	
max. Earth dist.	-9354 Jul 19 j 13:32	20° <del>8</del> 05'05	30.88151 AU				
				conjunction	-9346 Aug 10 j 16:16	11° <del>II</del> 05'31	15°37'22
conjunction	-9354 Jul 21 j 04:17	20° <del>8</del> 09'01	16°36'35	minimum elong	-9346 Aug 10 j 16:30	11° <del>II</del> 05'32	15°37'53
minimum elong	-9354 Jul 21 j 04:10	20° <del>8</del> 09'00	16°36'59	max. Earth dist.	-9346 Aug 10 j 06:54	11° <del>II</del> 04'33	30.56156 AU
retrograde	-9354 Nov 01 j 16:37	22° <del>8</del> 49'21		retrograde	-9346 Nov 22 j 19:57	13° <del>II</del> 47'55	
opposition	-9353 Jan 18 j 01:02	21° <del>8</del> 26'02	17°44'28	opposition	-9345 Feb 08 j 23:15	12° <del>II</del> 24'09	16°33'53
min. Earth dist.	-9353 Jan 19 j 13:40	21° <del>8</del> 23'29	28.92898 AU	min. Earth dist.	-9345 Feb 09 j 07:35	12° <del>II</del> 23'34	28.64287 AU
direct	-9353 Apr 08 j 04:28	20° <del>8</del> 00'11		direct	-9345 Apr 29 j 12:39	10° <del>II</del> 58'53	

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 5

Attention, astronomical year style is used: The year -9345 in astronomical counting style is the year 9346 BCE in historical counting style.

conjunction	-9345 Aug 13 j 11:31	13°II42'36	15°21'30			-9338 Jul 19 j 12:30	0°☾	
minimum elong	-9345 Aug 13 j 11:46	13°II42'38	15°22'02	evening set		-9338 Aug 22 j 13:41	1°☾14'35	
max. Earth dist.	-9345 Aug 13 j 05:55	13°II42'02	30.57114 AU					
retrograde	-9345 Nov 25 j 16:58	16°II24'45		conjunction		-9338 Aug 30 j 14:47	1°☾33'47	12°44'58
opposition	-9344 Feb 11 j 23:03	15°II01'00	16°16'00	minimum elong		-9338 Aug 30 j 15:12	1°☾33'49	12°45'33
min. Earth dist.	-9344 Feb 12 j 02:49	15°II00'44	28.65482 AU	max. Earth dist.		-9338 Aug 31 j 11:19	1°☾35'49	30.95305 AU
direct	-9344 May 01 j 12:14	13°II35'53		morning rise		-9338 Sep 07 j 16:46	1°☾53'02	
				retrograde		-9338 Dec 13 j 06:47	4°☾11'33	
conjunction	-9344 Aug 15 j 06:30	16°II18'59	15°03'55	min. Earth dist.		-9337 Mar 01 j 11:09	2°☾50'08	29.05283 AU
minimum elong	-9344 Aug 15 j 06:47	16°II19'01	15°04'28	opposition		-9337 Mar 02 j 10:10	2°☾48'34	13°22'28
max. Earth dist.	-9344 Aug 15 j 04:05	16°II18'45	30.59122 AU	direct		-9337 May 20 j 22:20	1°☾25'14	
retrograde	-9344 Nov 27 j 13:38	19°II00'47		evening set		-9337 Aug 24 j 11:53	3°☾40'54	
opposition	-9343 Feb 13 j 22:40	17°II37'02	15°56'15					
min. Earth dist.	-9343 Feb 13 j 23:33	17°II36'58	28.67737 AU	conjunction		-9337 Sep 02 j 06:19	4°☾01'40	12°17'00
direct	-9343 May 04 j 10:46	16°II12'05		minimum elong		-9337 Sep 02 j 06:42	4°☾01'43	12°17'35
evening set	-9343 Aug 15 j 06:31	18°II47'41		max. Earth dist.		-9337 Sep 03 j 07:18	4°☾04'09	31.05405 AU
				morning rise		-9337 Sep 11 j 01:30	4°☾22'30	
conjunction	-9343 Aug 18 j 01:05	18°II54'28	14°44'37	retrograde		-9337 Dec 15 j 22:50	6°☾38'35	
minimum elong	-9343 Aug 18 j 01:24	18°II54'29	14°45'09	min. Earth dist.		-9336 Mar 03 j 04:47	5°☾17'34	29.15530 AU
max. Earth dist.	-9343 Aug 18 j 03:08	18°II54'40	30.62228 AU	opposition		-9336 Mar 04 j 06:20	5°☾15'50	12°51'50
morning rise	-9343 Aug 20 j 20:16	19°II01'18		direct		-9336 May 22 j 17:43	3°☾52'54	
retrograde	-9343 Nov 30 j 09:33	21°II35'46		evening set		-9336 Aug 25 j 11:11	6°☾05'58	
opposition	-9342 Feb 16 j 21:47	20°II12'04	15°34'42					
min. Earth dist.	-9342 Feb 16 j 18:27	20°II12'18	28.71068 AU	conjunction		-9336 Sep 03 j 21:20	6°☾28'08	11°47'57
direct	-9342 May 07 j 11:01	18°II47'17		minimum elong		-9336 Sep 03 j 21:45	6°☾28'11	11°48'32
evening set	-9342 Aug 16 j 12:21	21°II18'26		max. Earth dist.		-9336 Sep 05 j 01:09	6°☾30'53	31.16548 AU
				morning rise		-9336 Sep 13 j 08:25	6°☾50'24	
conjunction	-9342 Aug 20 j 19:09	21°II28'50	14°23'41	retrograde		-9336 Dec 17 j 14:58	9°☾04'07	
minimum elong	-9342 Aug 20 j 19:29	21°II28'53	14°24'14	min. Earth dist.		-9335 Mar 05 j 19:41	7°☾43'40	29.26779 AU
max. Earth dist.	-9342 Aug 21 j 00:12	21°II29'21	30.66452 AU	opposition		-9335 Mar 07 j 01:36	7°☾41'39	12°20'05
morning rise	-9342 Aug 25 j 02:36	21°II39'20		direct		-9335 May 25 j 12:55	6°☾19'06	
retrograde	-9342 Dec 03 j 05:20	24°II09'35		evening set		-9335 Aug 27 j 10:53	8°☾29'40	
opposition	-9341 Feb 19 j 20:26	22°II45'56	15°11'24					
min. Earth dist.	-9341 Feb 19 j 13:28	22°II46'25	28.75546 AU	conjunction		-9335 Sep 06 j 11:46	8°☾53'07	11°17'54
direct	-9341 May 10 j 08:03	21°II21'22		minimum elong		-9335 Sep 06 j 12:10	8°☾53'09	11°18'28
evening set	-9341 Aug 18 j 02:32	23°II48'52		max. Earth dist.		-9335 Sep 07 j 19:00	8°☾56'10	31.28635 AU
				morning rise		-9335 Sep 16 j 13:40	9°☾16'40	
conjunction	-9341 Aug 23 j 12:54	24°II02'01	14°01'10	retrograde		-9335 Dec 20 j 05:09	11°☾28'07	
minimum elong	-9341 Aug 23 j 13:16	24°II02'03	14°01'43	opposition		-9334 Mar 09 j 20:23	10°☾05'55	11°47'20
max. Earth dist.	-9341 Aug 23 j 22:53	24°II03'02	30.71861 AU	min. Earth dist.		-9334 Mar 08 j 12:19	10°☾08'05	29.38947 AU
morning rise	-9341 Aug 28 j 23:51	24°II15'14		direct		-9334 May 28 j 06:10	8°☾43'46	
retrograde	-9341 Dec 06 j 00:04	26°II42'07		evening set		-9334 Aug 29 j 11:14	10°☾51'56	
opposition	-9340 Feb 22 j 18:46	25°II18'34	14°46'26					
min. Earth dist.	-9340 Feb 22 j 07:50	25°II19'19	28.81198 AU	conjunction		-9334 Sep 09 j 01:39	11°☾16'31	10°46'58
direct	-9340 May 12 j 07:43	23°II54'15		minimum elong		-9334 Sep 09 j 02:03	11°☾16'34	10°47'32
evening set	-9340 Aug 18 j 20:16	26°II18'29		max. Earth dist.		-9334 Sep 10 j 11:50	11°☾19'51	31.41608 AU
				morning rise		-9334 Sep 19 j 17:04	11°☾41'13	
conjunction	-9340 Aug 25 j 05:55	26°II33'55	13°37'09	retrograde		-9334 Dec 22 j 19:34	13°☾50'29	
minimum elong	-9340 Aug 25 j 06:18	26°II33'58	13°37'43	min. Earth dist.		-9333 Mar 11 j 02:27	12°☾30'58	29.51959 AU
max. Earth dist.	-9340 Aug 25 j 18:49	26°II35'13	30.78479 AU	opposition		-9333 Mar 12 j 14:15	12°☾28'34	11°13'41
morning rise	-9340 Aug 31 j 16:21	26°II49'26		direct		-9333 May 30 j 23:40	11°☾06'49	
retrograde	-9340 Dec 07 j 20:08	29°II13'19		evening set		-9333 Aug 31 j 11:55	13°☾12'39	
opposition	-9339 Feb 24 j 16:32	27°II49'54	14°19'53					
min. Earth dist.	-9339 Feb 24 j 01:11	27°II50'57	28.88062 AU	conjunction		-9333 Sep 11 j 14:50	13°☾38'15	10°15'15
direct	-9339 May 15 j 05:02	26°II25'52		minimum elong		-9333 Sep 11 j 15:13	13°☾38'17	10°15'48
evening set	-9339 Aug 20 j 16:14	28°II47'06		max. Earth dist.		-9333 Sep 13 j 03:31	13°☾41'47	31.55388 AU
				morning rise		-9333 Sep 22 j 19:03	14°☾03'59	
conjunction	-9339 Aug 27 j 22:43	29°II04'31	13°11'43	retrograde		-9333 Dec 25 j 09:38	16°☾11'08	
minimum elong	-9339 Aug 27 j 23:06	29°II04'33	13°12'16	min. Earth dist.		-9332 Mar 12 j 17:30	14°☾52'02	29.65787 AU
max. Earth dist.	-9339 Aug 28 j 16:27	29°II06'18	30.86306 AU	opposition		-9332 Mar 14 j 07:37	14°☾49'30	10°39'16
morning rise	-9339 Sep 04 j 05:51	29°II22'01		direct		-9332 Jun 01 j 15:42	13°☾28'08	
	-9339 Sep 20 j 13:00	0°☾		evening set		-9332 Sep 01 j 12:44	15°☾31'41	
retrograde	-9339 Dec 10 j 12:29	1°☾43'08						
opposition	-9338 Feb 27 j 13:37	0°☾19'55	13°51'52	conjunction		-9332 Sep 13 j 03:24	15°☾58'12	9°42'51
min. Earth dist.	-9338 Feb 26 j 19:10	0°☾21'10	28.96101 AU	minimum elong		-9332 Sep 13 j 03:47	15°☾58'15	9°43'25
	-9338 Mar 11 j 19:22	30°☾II		max. Earth dist.		-9332 Sep 14 j 19:31	16°☾02'03	31.69957 AU
direct	-9338 May 18 j 02:07	28°II56'13		morning rise		-9332 Sep 24 j 19:12	16°☾24'51	

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 6

Attention, astronomical year style is used: The year -9332 in astronomical counting style is the year 9333 BCE in historical counting style.

retrograde	-9332 Dec 26 j 22:40	18° $\overline{029}$ '57		evening set	-9325 Sep 14 j 20:53	0° $\Omega$ 53'41	
min. Earth dist.	-9331 Mar 15 j 06:57	17° $\overline{011}$ '18	29.80378 AU				
opposition	-9331 Mar 17 j 00:02	17° $\overline{008}$ '35	10°04'11	conjunction	-9325 Sep 28 j 22:14	1° $\Omega$ 23'56	5°44'10
direct	-9331 Jun 04 j 09:19	15° $\overline{047}$ '35		minimum elong	-9325 Sep 28 j 22:28	1° $\Omega$ 23'57	5°44'41
evening set	-9331 Sep 03 j 13:54	17° $\overline{048}$ '58		max. Earth dist.	-9325 Oct 01 j 08:41	1° $\Omega$ 29'13	32.93768 AU
				morning rise	-9325 Oct 13 j 01:32	1° $\Omega$ 54'20	
conjunction	-9331 Sep 15 j 15:11	18° $\overline{016}$ '17	9°09'51	retrograde	-9324 Jan 11 j 19:33	3° $\Omega$ 47'11	
minimum elong	-9331 Sep 15 j 15:32	18° $\overline{016}$ '20	9°10'25	min. Earth dist.	-9324 Mar 30 j 07:18	2° $\Omega$ 31'49	31.04955 AU
max. Earth dist.	-9331 Sep 17 j 09:04	18° $\overline{020}$ '16	31.85273 AU	opposition	-9324 Apr 01 j 19:27	2° $\Omega$ 27'58	5°47'34
morning rise	-9331 Sep 27 j 17:59	18° $\overline{043}$ '44		direct	-9324 Jun 20 j 07:52	1° $\Omega$ 09'49	
retrograde	-9331 Dec 29 j 12:04	20° $\overline{046}$ '51		evening set	-9324 Sep 15 j 22:08	2° $\Omega$ 58'16	
min. Earth dist.	-9330 Mar 17 j 19:31	19° $\overline{028}$ '39	29.95751 AU				
opposition	-9330 Mar 19 j 15:28	19° $\overline{025}$ '45	9°28'32	conjunction	-9324 Sep 30 j 04:53	3° $\Omega$ 28'44	5°09'20
direct	-9330 Jun 06 j 23:35	18° $\overline{005}$ '07		minimum elong	-9324 Sep 30 j 05:07	3° $\Omega$ 28'45	5°09'52
evening set	-9330 Sep 05 j 14:55	20° $\overline{004}$ '24		max. Earth dist.	-9324 Oct 02 j 17:21	3° $\Omega$ 34'09	33.14445 AU
				morning rise	-9324 Oct 14 j 13:59	3° $\Omega$ 59'23	
conjunction	-9330 Sep 18 j 02:16	20° $\overline{032}$ '25	8°36'22	retrograde	-9323 Jan 13 j 02:23	5° $\Omega$ 50'49	
minimum elong	-9330 Sep 18 j 02:37	20° $\overline{032}$ '27	8°36'55	min. Earth dist.	-9323 Apr 01 j 15:42	4° $\Omega$ 35'52	31.25740 AU
max. Earth dist.	-9330 Sep 19 j 23:54	20° $\overline{036}$ '43	32.01358 AU	opposition	-9323 Apr 04 j 05:26	4° $\Omega$ 31'58	5°10'23
morning rise	-9330 Sep 30 j 14:57	21° $\overline{000}$ '35		direct	-9323 Jun 22 j 16:28	3° $\Omega$ 14'15	
retrograde	-9330 Dec 31 j 22:31	23° $\overline{001}$ '47		evening set	-9323 Sep 17 j 23:23	5° $\Omega$ 01'11	
min. Earth dist.	-9329 Mar 20 j 08:00	21° $\overline{043}$ '58	30.11907 AU				
opposition	-9329 Mar 22 j 06:13	21° $\overline{040}$ '57	8°52'23	conjunction	-9323 Oct 02 j 11:09	5° $\Omega$ 31'49	4°34'34
direct	-9329 Jun 09 j 15:34	20° $\overline{020}$ '42		minimum elong	-9323 Oct 02 j 11:21	5° $\Omega$ 31'50	4°35'03
evening set	-9329 Sep 07 j 16:04	22° $\overline{017}$ '57		max. Earth dist.	-9323 Oct 05 j 02:13	5° $\Omega$ 37'25	33.35690 AU
				morning rise	-9323 Oct 17 j 01:02	6° $\Omega$ 02'38	
conjunction	-9329 Sep 20 j 12:21	22° $\overline{046}$ '34	8°02'27	retrograde	-9322 Jan 15 j 08:02	7° $\Omega$ 52'42	
minimum elong	-9329 Sep 20 j 12:40	22° $\overline{046}$ '36	8°02'59	min. Earth dist.	-9322 Apr 03 j 22:43	6° $\Omega$ 38'14	31.47053 AU
max. Earth dist.	-9329 Sep 22 j 11:44	22° $\overline{050}$ '59	32.18235 AU	opposition	-9322 Apr 06 j 14:19	6° $\Omega$ 34'13	4°33'19
morning rise	-9329 Oct 03 j 10:21	23° $\overline{015}$ '20		direct	-9322 Jun 25 j 01:43	5° $\Omega$ 16'56	
retrograde	-9328 Jan 03 j 11:06	25° $\overline{014}$ '42		evening set	-9322 Sep 20 j 00:47	7° $\Omega$ 02'27	
min. Earth dist.	-9328 Mar 21 j 18:18	23° $\overline{057}$ '23	30.28898 AU				
opposition	-9328 Mar 23 j 20:10	23° $\overline{054}$ '09	8°15'51	conjunction	-9322 Oct 04 j 16:37	7° $\Omega$ 33'11	3°59'53
direct	-9328 Jun 11 j 06:29	22° $\overline{034}$ '16		minimum elong	-9322 Oct 04 j 16:47	7° $\Omega$ 33'12	4°00'23
evening set	-9328 Sep 08 j 17:13	24° $\overline{029}$ '35		max. Earth dist.	-9322 Oct 07 j 08:32	7° $\Omega$ 38'49	33.57404 AU
				morning rise	-9322 Oct 19 j 11:00	8° $\Omega$ 04'07	
conjunction	-9328 Sep 21 j 21:57	24° $\overline{058}$ '44	7°28'11	retrograde	-9321 Jan 17 j 15:21	9° $\Omega$ 52'52	
minimum elong	-9328 Sep 21 j 22:16	24° $\overline{058}$ '46	7°28'44	min. Earth dist.	-9321 Apr 06 j 05:03	8° $\Omega$ 38'52	31.68836 AU
max. Earth dist.	-9328 Sep 24 j 01:10	25° $\overline{003}$ '29	32.35926 AU	opposition	-9321 Apr 08 j 22:44	8° $\Omega$ 34'45	3°56'25
morning rise	-9328 Oct 05 j 04:19	25° $\overline{028}$ '02		direct	-9321 Jun 27 j 08:06	7° $\Omega$ 17'54	
retrograde	-9327 Jan 04 j 20:24	27° $\overline{025}$ '39		evening set	-9321 Sep 22 j 01:54	9° $\Omega$ 02'03	
min. Earth dist.	-9327 Mar 24 j 05:35	26° $\overline{008}$ '44	30.46725 AU				
opposition	-9327 Mar 26 j 09:12	26° $\overline{005}$ '23	7°39'01	conjunction	-9321 Oct 06 j 21:31	9° $\Omega$ 32'49	3°25'23
direct	-9327 Jun 13 j 20:24	24° $\overline{045}$ '55		minimum elong	-9321 Oct 06 j 21:39	9° $\Omega$ 32'50	3°25'51
evening set	-9327 Sep 10 j 18:30	26° $\overline{039}$ '24		max. Earth dist.	-9321 Oct 09 j 16:03	9° $\Omega$ 38'37	33.79517 AU
				morning rise	-9321 Oct 21 j 19:29	10° $\Omega$ 03'48	
conjunction	-9327 Sep 24 j 06:45	27° $\overline{008}$ '59	6°53'40	retrograde	-9320 Jan 19 j 19:49	11° $\Omega$ 51'19	
minimum elong	-9327 Sep 24 j 07:02	27° $\overline{009}$ '00	6°54'12	min. Earth dist.	-9320 Apr 07 j 11:57	10° $\Omega$ 37'41	31.90993 AU
max. Earth dist.	-9327 Sep 26 j 11:51	27° $\overline{013}$ '51	32.54443 AU	opposition	-9320 Apr 10 j 06:25	10° $\Omega$ 33'33	3°19'45
morning rise	-9327 Oct 07 j 20:51	27° $\overline{038}$ '44		direct	-9320 Jun 28 j 16:57	9° $\Omega$ 17'06	
retrograde	-9326 Jan 07 j 05:15	29° $\overline{034}$ '39		evening set	-9320 Sep 23 j 03:13	10° $\Omega$ 59'57	
min. Earth dist.	-9326 Mar 26 j 13:55	28° $\overline{018}$ '19	30.65377 AU				
opposition	-9326 Mar 28 j 21:21	28° $\overline{014}$ '44	7°01'58	conjunction	-9320 Oct 08 j 01:49	11° $\Omega$ 30'43	2°51'06
direct	-9326 Jun 16 j 09:11	26° $\overline{055}$ '41		minimum elong	-9320 Oct 08 j 01:56	11° $\Omega$ 30'43	2°51'35
evening set	-9326 Sep 12 j 19:40	28° $\overline{047}$ '24		max. Earth dist.	-9320 Oct 10 j 20:42	11° $\Omega$ 36'30	34.01966 AU
				morning rise	-9320 Oct 23 j 03:04	12° $\Omega$ 01'42	
conjunction	-9326 Sep 26 j 14:47	29° $\overline{017}$ '21	6°18'58	retrograde	-9319 Jan 21 j 01:57	13° $\Omega$ 48'01	
minimum elong	-9326 Sep 26 j 15:03	29° $\overline{017}$ '23	6°19'30	min. Earth dist.	-9319 Apr 09 j 16:23	12° $\Omega$ 34'50	32.13491 AU
max. Earth dist.	-9326 Sep 28 j 22:58	29° $\overline{022}$ '28	32.73734 AU	opposition	-9319 Apr 12 j 13:07	12° $\Omega$ 30'34	2°43'22
morning rise	-9326 Oct 10 j 11:53	29° $\overline{047}$ '28		direct	-9319 Jul 01 j 00:23	11° $\Omega$ 14'30	
	-9326 Oct 16 j 10:10	0° $\Omega$		evening set	-9319 Sep 25 j 04:18	12° $\Omega$ 56'07	
retrograde	-9325 Jan 09 j 12:12	1° $\Omega$ 41'50					
min. Earth dist.	-9325 Mar 28 j 23:50	0° $\Omega$ 25'54	30.84809 AU	conjunction	-9319 Oct 10 j 05:29	13° $\Omega$ 26'50	2°17'05
opposition	-9325 Mar 31 j 08:51	0° $\Omega$ 22'15	6°24'47	minimum elong	-9319 Oct 10 j 05:35	13° $\Omega$ 26'50	2°17'32
	-9325 Apr 15 j 00:11	30° $\overline{000}$ '		max. Earth dist.	-9319 Oct 13 j 02:37	13° $\Omega$ 32'45	34.24705 AU
direct	-9325 Jun 18 j 20:47	29° $\overline{003}$ '39		morning rise	-9319 Oct 25 j 09:19	13° $\Omega$ 57'46	
	-9325 Aug 18 j 10:40	0° $\Omega$			-9319 Nov 29 j 04:58	15° $\Omega$	

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 7

Attention, astronomical year style is used: The year -9318 in astronomical counting style is the year 9319 BCE in historical counting style.

retrograde	-9318 Jan 23 j 05:13	15° $\Omega$ 42'57		opposition	-9312 Apr 25 j 15:42	25° $\Omega$ 21'45	-1°19'42
	-9318 Mar 21 j 21:00	15° $\kappa$ $\Omega$		direct	-9312 Jul 14 j 03:52	24° $\Omega$ 08'20	
min. Earth dist.	-9318 Apr 11 j 22:15	14° $\Omega$ 30'04	32.36295 AU	evening set	-9312 Oct 07 j 07:36	25° $\Omega$ 43'01	
opposition	-9318 Apr 14 j 19:14	14° $\Omega$ 25'49	2°07'20				
direct	-9318 Jul 03 j 07:30	13° $\Omega$ 10'08		conjunction	-9312 Oct 22 j 12:37	26° $\Omega$ 12'17	-1°30'29
evening set	-9318 Sep 27 j 05:08	14° $\Omega$ 50'33		minimum elong	-9312 Oct 22 j 12:33	26° $\Omega$ 12'16	1°30'05
	-9318 Oct 01 j 22:31	15° $\Omega$		max. Earth dist.	-9312 Oct 25 j 19:36	26° $\Omega$ 18'39	35.93341 AU
				morning rise	-9312 Nov 06 j 20:37	26° $\Omega$ 41'46	
conjunction	-9318 Oct 12 j 08:19	15° $\Omega$ 21'10	1°43'22	retrograde	-9311 Feb 04 j 11:03	28° $\Omega$ 20'40	
minimum elong	-9318 Oct 12 j 08:24	15° $\Omega$ 21'10	1°43'49	min. Earth dist.	-9311 Apr 24 j 10:35	27° $\Omega$ 10'31	34.06082 AU
max. Earth dist.	-9318 Oct 15 j 06:20	15° $\Omega$ 27'07	34.47744 AU	opposition	-9311 Apr 27 j 16:43	27° $\Omega$ 05'52	-1°52'22
morning rise	-9318 Oct 27 j 14:11	15° $\Omega$ 52'00		direct	-9311 Jul 16 j 05:13	25° $\Omega$ 52'52	
retrograde	-9317 Jan 25 j 06:52	17° $\Omega$ 36'05		evening set	-9311 Oct 09 j 07:38	27° $\Omega$ 26'48	
min. Earth dist.	-9317 Apr 14 j 01:01	16° $\Omega$ 23'39	32.59421 AU				
opposition	-9317 Apr 17 j 00:25	16° $\Omega$ 19'16	1°31'40	conjunction	-9311 Oct 24 j 11:28	27° $\Omega$ 55'44	-2°01'07
direct	-9317 Jul 05 j 14:17	15° $\Omega$ 03'57		minimum elong	-9311 Oct 24 j 11:23	27° $\Omega$ 55'44	2°00'45
evening set	-9317 Sep 29 j 05:57	16° $\Omega$ 43'14		max. Earth dist.	-9311 Oct 27 j 18:48	28° $\Omega$ 02'06	36.18691 AU
				morning rise	-9311 Nov 08 j 18:15	28° $\Omega$ 24'55	
conjunction	-9317 Oct 14 j 10:31	17° $\Omega$ 13'42	1°10'00		-9310 Jan 22 j 07:45	0° $\eta$	
minimum elong	-9317 Oct 14 j 10:34	17° $\Omega$ 13'43	1°10'26	retrograde	-9310 Feb 06 j 09:28	0° $\eta$ 03'07	
max. Earth dist.	-9317 Oct 17 j 10:06	17° $\Omega$ 19'45	34.71096 AU		-9310 Feb 21 j 13:18	30° $\kappa$ $\Omega$	
morning rise	-9317 Oct 29 j 18:01	17° $\Omega$ 44'25		min. Earth dist.	-9310 Apr 26 j 09:12	28° $\Omega$ 53'25	34.31575 AU
retrograde	-9316 Jan 27 j 07:36	19° $\Omega$ 27'29		opposition	-9310 Apr 29 j 17:06	28° $\Omega$ 48'41	-2°24'28
min. Earth dist.	-9316 Apr 15 j 04:55	18° $\Omega$ 15'22	32.82921 AU	direct	-9310 Jul 18 j 07:46	27° $\Omega$ 36'05	
opposition	-9316 Apr 18 j 05:01	18° $\Omega$ 10'58	0°56'25	evening set	-9310 Oct 11 j 07:33	29° $\Omega$ 09'19	
direct	-9316 Jul 06 j 19:03	16° $\Omega$ 56'01					
evening set	-9316 Sep 30 j 06:27	18° $\Omega$ 34'14		conjunction	-9310 Oct 26 j 09:39	29° $\Omega$ 37'55	-2°31'13
				minimum elong	-9310 Oct 26 j 09:33	29° $\Omega$ 37'54	2°30'51
conjunction	-9316 Oct 15 j 12:10	19° $\Omega$ 04'32	0°37'01	max. Earth dist.	-9310 Oct 29 j 18:01	29° $\Omega$ 44'19	36.44172 AU
minimum elong	-9316 Oct 15 j 12:11	19° $\Omega$ 04'32	0°37'27		-9310 Nov 07 j 00:36	0° $\eta$	
max. Earth dist.	-9316 Oct 18 j 13:35	19° $\Omega$ 10'40	34.94820 AU	morning rise	-9310 Nov 10 j 14:55	0° $\eta$ 06'44	
morning rise	-9316 Oct 30 j 20:35	19° $\Omega$ 35'03		retrograde	-9309 Feb 08 j 07:07	1° $\eta$ 44'20	
retrograde	-9315 Jan 28 j 07:38	21° $\Omega$ 17'10		min. Earth dist.	-9309 Apr 28 j 09:17	0° $\eta$ 34'56	34.57195 AU
min. Earth dist.	-9315 Apr 17 j 06:51	20° $\Omega$ 05'28	33.06802 AU	opposition	-9309 May 01 j 17:08	0° $\eta$ 30'14	-2°55'58
opposition	-9315 Apr 20 j 08:41	20° $\Omega$ 00'58	0°21'38		-9309 May 23 j 18:53	30° $\kappa$ $\Omega$	
direct	-9315 Jul 08 j 23:26	18° $\Omega$ 46'24		direct	-9309 Jul 20 j 08:26	29° $\Omega$ 18'01	
evening set	-9315 Oct 02 j 07:03	20° $\Omega$ 23'37			-9309 Sep 13 j 02:50	0° $\eta$	
				evening set	-9309 Oct 13 j 07:22	0° $\eta$ 50'36	
conjunction	-9315 Oct 17 j 13:05	20° $\Omega$ 53'42	0°04'31				
minimum elong	-9315 Oct 17 j 13:05	20° $\Omega$ 53'42	0°04'55	conjunction	-9309 Oct 28 j 07:40	1° $\eta$ 18'49	-3°00'46
behind sun begin	-9315 Oct 17 j 06:52	20° $\Omega$ 53'13		minimum elong	-9309 Oct 28 j 07:33	1° $\eta$ 18'48	3°00'27
behind sun end	-9315 Oct 17 j 19:19	20° $\Omega$ 54'11		max. Earth dist.	-9309 Oct 31 j 16:53	1° $\eta$ 25'14	36.69736 AU
max. Earth dist.	-9315 Oct 20 j 15:16	20° $\Omega$ 59'51	35.18911 AU	morning rise	-9309 Nov 12 j 10:48	1° $\eta$ 47'15	
morning rise	-9315 Nov 01 j 22:12	21° $\Omega$ 24'01		retrograde	-9308 Feb 10 j 03:12	3° $\eta$ 24'16	
desc. node	-9315 Dec 07 j 03:49	22° $\Omega$ 24'39		min. Earth dist.	-9308 Apr 29 j 07:49	2° $\eta$ 15'14	34.82856 AU
retrograde	-9314 Jan 30 j 09:23	23° $\Omega$ 05'14		opposition	-9308 May 02 j 16:22	2° $\eta$ 10'30	-3°26'52
min. Earth dist.	-9314 Apr 19 j 08:15	21° $\Omega$ 53'56	33.31095 AU	direct	-9308 Jul 21 j 09:09	0° $\eta$ 58'38	
opposition	-9314 Apr 22 j 11:37	21° $\Omega$ 49'22	-0°12'40	evening set	-9308 Oct 14 j 07:14	2° $\eta$ 30'37	
direct	-9314 Jul 11 j 01:10	20° $\Omega$ 35'11					
evening set	-9314 Oct 04 j 07:20	22° $\Omega$ 11'30		conjunction	-9308 Oct 29 j 05:04	2° $\eta$ 58'25	-3°29'47
				minimum elong	-9308 Oct 29 j 04:56	2° $\eta$ 58'25	3°29'27
conjunction	-9314 Oct 19 j 13:34	22° $\Omega$ 41'20	-0°27'42	max. Earth dist.	-9308 Nov 01 j 13:56	3° $\eta$ 04'46	36.95293 AU
minimum elong	-9314 Oct 19 j 13:33	22° $\Omega$ 41'20	0°27'17	morning rise	-9308 Nov 13 j 06:02	3° $\eta$ 26'28	
max. Earth dist.	-9314 Oct 22 j 18:11	22° $\Omega$ 47'37	35.43390 AU	retrograde	-9307 Feb 11 j 00:51	5° $\eta$ 02'55	
morning rise	-9314 Nov 03 j 22:36	23° $\Omega$ 11'24		min. Earth dist.	-9307 May 01 j 06:12	3° $\eta$ 54'12	35.08515 AU
retrograde	-9313 Feb 01 j 09:52	24° $\Omega$ 51'47		opposition	-9307 May 04 j 15:12	3° $\eta$ 49'28	-3°57'08
min. Earth dist.	-9313 Apr 21 j 09:46	23° $\Omega$ 40'51	33.55765 AU	direct	-9307 Jul 23 j 06:46	2° $\eta$ 37'56	
opposition	-9313 Apr 24 j 13:58	23° $\Omega$ 36'16	-0°46'27	evening set	-9307 Oct 16 j 06:50	4° $\eta$ 09'19	
direct	-9313 Jul 13 j 03:39	22° $\Omega$ 22'28					
evening set	-9313 Oct 06 j 07:28	23° $\Omega$ 57'56		conjunction	-9307 Oct 31 j 02:08	4° $\eta$ 36'43	-3°58'14
				minimum elong	-9307 Oct 31 j 02:00	4° $\eta$ 36'43	3°57'56
conjunction	-9313 Oct 21 j 13:14	24° $\Omega$ 27'29	-0°59'20	max. Earth dist.	-9307 Nov 03 j 12:22	4° $\eta$ 43'07	37.20811 AU
minimum elong	-9313 Oct 21 j 13:11	24° $\Omega$ 27'29	0°58'57	morning rise	-9307 Nov 15 j 00:15	5° $\eta$ 04'21	
max. Earth dist.	-9313 Oct 24 j 18:07	24° $\Omega$ 33'45	35.68220 AU	retrograde	-9306 Feb 12 j 21:15	6° $\eta$ 40'15	
morning rise	-9313 Nov 05 j 22:03	24° $\Omega$ 57'17		min. Earth dist.	-9306 May 03 j 04:40	5° $\eta$ 31'47	35.34123 AU
retrograde	-9312 Feb 03 j 12:20	26° $\Omega$ 36'54		opposition	-9306 May 06 j 13:17	5° $\eta$ 27'06	-4°26'48
min. Earth dist.	-9312 Apr 22 j 09:23	25° $\Omega$ 26'25	33.80787 AU	direct	-9306 Jul 25 j 04:46	4° $\eta$ 15'53	

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Attention, astronomical year style is used: The year -9306 in astronomical counting style is the year 9307 BCE in historical counting style.

evening set	-9306 Oct 18 j 06:19	5° $\mathring{M}$ 46'43		min. Earth dist.	-9299 May 13 j 22:05	16° $\mathring{M}$ 19'29	37.14444 AU
				opposition	-9299 May 17 j 09:13	16° $\mathring{M}$ 14'48	-7°36'20
conjunction	-9306 Nov 01 j 22:32	6° $\mathring{M}$ 13'40	-4°26'06	direct	-9299 Aug 05 j 02:56	15° $\mathring{M}$ 05'43	
minimum elong	-9306 Nov 01 j 22:23	6° $\mathring{M}$ 13'40	4°25'48	evening set	-9299 Oct 29 j 21:48	16° $\mathring{M}$ 33'48	
max. Earth dist.	-9306 Nov 05 j 08:06	6° $\mathring{M}$ 19'58	37.46285 AU				
morning rise	-9306 Nov 16 j 17:43	6° $\mathring{M}$ 40'51		conjunction	-9299 Nov 12 j 08:44	16° $\mathring{M}$ 57'20	-7°24'34
retrograde	-9305 Feb 14 j 19:01	8° $\mathring{M}$ 16'14		minimum elong	-9299 Nov 12 j 08:31	16° $\mathring{M}$ 57'19	7°24'23
min. Earth dist.	-9305 May 05 j 00:56	7° $\mathring{M}$ 08'06	35.59718 AU	max. Earth dist.	-9299 Nov 15 j 21:45	17° $\mathring{M}$ 03'34	39.25624 AU
opposition	-9305 May 08 j 10:53	7° $\mathring{M}$ 03'22	-4°55'50	morning rise	-9299 Nov 25 j 22:09	17° $\mathring{M}$ 21'03	
direct	-9305 Jul 27 j 01:03	5° $\mathring{M}$ 52'26		retrograde	-9298 Feb 25 j 02:47	18° $\mathring{M}$ 53'56	
evening set	-9305 Oct 20 j 05:28	7° $\mathring{M}$ 22'45		min. Earth dist.	-9298 May 15 j 14:57	17° $\mathring{M}$ 47'48	37.40338 AU
				opposition	-9298 May 19 j 03:10	17° $\mathring{M}$ 43'06	-8°00'47
conjunction	-9305 Nov 03 j 18:23	7° $\mathring{M}$ 49'16	-4°53'24	direct	-9298 Aug 06 j 20:03	16° $\mathring{M}$ 34'20	
minimum elong	-9305 Nov 03 j 18:13	7° $\mathring{M}$ 49'15	4°53'08	evening set	-9298 Oct 31 j 20:09	18° $\mathring{M}$ 02'12	
max. Earth dist.	-9305 Nov 07 j 05:19	7° $\mathring{M}$ 55'36	37.71739 AU				
morning rise	-9305 Nov 18 j 10:14	8° $\mathring{M}$ 15'59		conjunction	-9298 Nov 14 j 01:48	18° $\mathring{M}$ 25'12	-7°47'40
retrograde	-9304 Feb 16 j 14:16	9° $\mathring{M}$ 50'53		minimum elong	-9298 Nov 14 j 01:35	18° $\mathring{M}$ 25'11	7°47'30
min. Earth dist.	-9304 May 05 j 22:47	8° $\mathring{M}$ 42'57	35.85326 AU	max. Earth dist.	-9298 Nov 17 j 15:29	18° $\mathring{M}$ 31'27	39.51279 AU
opposition	-9304 May 09 j 08:00	8° $\mathring{M}$ 38'17	-5°24'13	morning rise	-9298 Nov 27 j 09:56	18° $\mathring{M}$ 48'23	
direct	-9304 Jul 27 j 23:41	7° $\mathring{M}$ 27'38		retrograde	-9297 Feb 26 j 19:44	20° $\mathring{M}$ 21'03	
evening set	-9304 Oct 21 j 04:35	8° $\mathring{M}$ 57'28		min. Earth dist.	-9297 May 17 j 09:49	19° $\mathring{M}$ 15'10	37.66125 AU
				opposition	-9297 May 20 j 20:56	19° $\mathring{M}$ 10'32	-8°24'38
conjunction	-9304 Nov 04 j 13:56	9° $\mathring{M}$ 23'31	-5°20'06	direct	-9297 Aug 08 j 14:45	18° $\mathring{M}$ 02'05	
minimum elong	-9304 Nov 04 j 13:46	9° $\mathring{M}$ 23'30	5°19'50	evening set	-9297 Nov 02 j 18:24	19° $\mathring{M}$ 29'45	
max. Earth dist.	-9304 Nov 08 j 00:54	9° $\mathring{M}$ 29'49	37.97227 AU				
morning rise	-9304 Nov 19 j 02:02	9° $\mathring{M}$ 49'46		conjunction	-9297 Nov 15 j 18:39	19° $\mathring{M}$ 52'13	-8°10'11
retrograde	-9303 Feb 17 j 09:10	11° $\mathring{M}$ 24'12		minimum elong	-9297 Nov 15 j 18:25	19° $\mathring{M}$ 52'12	8°10'02
min. Earth dist.	-9303 May 07 j 17:45	10° $\mathring{M}$ 16'35	36.10989 AU	max. Earth dist.	-9297 Nov 19 j 08:04	19° $\mathring{M}$ 58'25	39.76793 AU
opposition	-9303 May 11 j 04:15	10° $\mathring{M}$ 11'52	-5°51'57	morning rise	-9297 Nov 28 j 21:05	20° $\mathring{M}$ 14'52	
direct	-9303 Jul 29 j 21:56	9° $\mathring{M}$ 01'31		retrograde	-9296 Feb 28 j 11:09	21° $\mathring{M}$ 47'20	
evening set	-9303 Oct 23 j 03:35	10° $\mathring{M}$ 30'55		min. Earth dist.	-9296 May 18 j 02:48	20° $\mathring{M}$ 41'45	37.91720 AU
				opposition	-9296 May 21 j 14:10	20° $\mathring{M}$ 37'08	-8°47'50
conjunction	-9303 Nov 06 j 08:53	10° $\mathring{M}$ 56'29	-5°46'12	direct	-9296 Aug 09 j 10:04	19° $\mathring{M}$ 28'59	
minimum elong	-9303 Nov 06 j 08:42	10° $\mathring{M}$ 56'28	5°45'58	evening set	-9296 Nov 03 j 16:49	20° $\mathring{M}$ 56'28	
max. Earth dist.	-9303 Nov 09 j 20:26	11° $\mathring{M}$ 02'47	38.22770 AU				
morning rise	-9303 Nov 20 j 17:08	11° $\mathring{M}$ 22'15		conjunction	-9296 Nov 16 j 11:11	21° $\mathring{M}$ 18'24	-8°32'08
retrograde	-9302 Feb 19 j 03:11	12° $\mathring{M}$ 56'17		minimum elong	-9296 Nov 16 j 10:58	21° $\mathring{M}$ 18'23	8°31'59
min. Earth dist.	-9302 May 09 j 13:50	11° $\mathring{M}$ 48'56	36.36747 AU	max. Earth dist.	-9296 Nov 19 j 23:49	21° $\mathring{M}$ 24'29	40.02070 AU
opposition	-9302 May 13 j 00:16	11° $\mathring{M}$ 44'14	-6°19'02	morning rise	-9296 Nov 29 j 07:57	21° $\mathring{M}$ 40'29	
direct	-9302 Jul 31 j 18:26	10° $\mathring{M}$ 34'11		retrograde	-9295 Mar 01 j 03:02	23° $\mathring{M}$ 12'48	
evening set	-9302 Oct 25 j 02:10	12° $\mathring{M}$ 03'11		min. Earth dist.	-9295 May 19 j 20:20	22° $\mathring{M}$ 07'26	38.17077 AU
				opposition	-9295 May 23 j 07:01	22° $\mathring{M}$ 02'52	-9°10'27
conjunction	-9302 Nov 08 j 03:24	12° $\mathring{M}$ 28'15	-6°11'42	direct	-9295 Aug 11 j 02:57	20° $\mathring{M}$ 55'00	
minimum elong	-9302 Nov 08 j 03:13	12° $\mathring{M}$ 28'14	6°11'28	evening set	-9295 Nov 05 j 14:57	22° $\mathring{M}$ 22'20	
max. Earth dist.	-9302 Nov 11 j 16:06	12° $\mathring{M}$ 34'36	38.48409 AU				
morning rise	-9302 Nov 22 j 07:12	12° $\mathring{M}$ 53'31		conjunction	-9295 Nov 18 j 03:31	22° $\mathring{M}$ 43'42	-8°53'31
retrograde	-9301 Feb 20 j 19:03	14° $\mathring{M}$ 27'13		minimum elong	-9295 Nov 18 j 03:16	22° $\mathring{M}$ 43'41	8°53'22
min. Earth dist.	-9301 May 11 j 08:38	13° $\mathring{M}$ 20'10	36.62586 AU	max. Earth dist.	-9295 Nov 21 j 16:36	22° $\mathring{M}$ 49'47	40.27086 AU
opposition	-9301 May 14 j 19:42	13° $\mathring{M}$ 15'27	-6°45'27	morning rise	-9295 Nov 30 j 18:03	23° $\mathring{M}$ 05'13	
direct	-9301 Aug 02 j 15:37	12° $\mathring{M}$ 05'42		retrograde	-9294 Mar 02 j 17:05	24° $\mathring{M}$ 37'23	
evening set	-9301 Oct 27 j 00:52	13° $\mathring{M}$ 34'21		min. Earth dist.	-9294 May 21 j 13:36	23° $\mathring{M}$ 32'14	38.42144 AU
				opposition	-9294 May 24 j 23:30	23° $\mathring{M}$ 27'43	-9°32'27
conjunction	-9301 Nov 09 j 21:29	13° $\mathring{M}$ 58'55	-6°36'36	direct	-9294 Aug 12 j 20:52	22° $\mathring{M}$ 20'07	
minimum elong	-9301 Nov 09 j 21:17	13° $\mathring{M}$ 58'54	6°36'22	evening set	-9294 Nov 07 j 12:56	23° $\mathring{M}$ 47'18	
max. Earth dist.	-9301 Nov 13 j 09:44	14° $\mathring{M}$ 05'12	38.74122 AU				
morning rise	-9301 Nov 23 j 20:54	14° $\mathring{M}$ 23'41		conjunction	-9294 Nov 19 j 19:10	24° $\mathring{M}$ 08'05	-9°14'21
retrograde	-9300 Feb 22 j 14:14	15° $\mathring{M}$ 57'04		minimum elong	-9294 Nov 19 j 18:56	24° $\mathring{M}$ 08'04	9°14'13
min. Earth dist.	-9300 May 12 j 02:51	14° $\mathring{M}$ 50'20	36.88510 AU	max. Earth dist.	-9294 Nov 23 j 06:47	24° $\mathring{M}$ 14'02	40.51819 AU
opposition	-9300 May 15 j 14:40	14° $\mathring{M}$ 45'37	-7°11'13	morning rise	-9294 Dec 02 j 03:29	24° $\mathring{M}$ 29'02	
direct	-9300 Aug 03 j 08:53	13° $\mathring{M}$ 36'11		retrograde	-9293 Mar 04 j 10:44	26° $\mathring{M}$ 01'04	
evening set	-9300 Oct 27 j 23:19	15° $\mathring{M}$ 04'32		min. Earth dist.	-9293 May 23 j 05:24	24° $\mathring{M}$ 56'09	38.66950 AU
				opposition	-9293 May 26 j 15:39	24° $\mathring{M}$ 51'39	-9°53'51
conjunction	-9300 Nov 10 j 15:20	15° $\mathring{M}$ 28'36	-7°00'53	direct	-9293 Aug 14 j 10:47	23° $\mathring{M}$ 44'17	
minimum elong	-9300 Nov 10 j 15:08	15° $\mathring{M}$ 28'35	7°00'40	evening set	-9293 Nov 09 j 10:47	25° $\mathring{M}$ 11'19	
max. Earth dist.	-9300 Nov 14 j 05:04	15° $\mathring{M}$ 34'56	38.99882 AU				
morning rise	-9300 Nov 24 j 09:51	15° $\mathring{M}$ 52'51		conjunction	-9293 Nov 21 j 10:40	25° $\mathring{M}$ 31'33	-9°34'37
retrograde	-9299 Feb 23 j 07:54	17° $\mathring{M}$ 25'57		minimum elong	-9293 Nov 21 j 10:25	25° $\mathring{M}$ 31'32	9°34'29



## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 9

Attention, astronomical year style is used: The year -9293 in astronomical counting style is the year 9294 BCE in historical counting style.

max. Earth dist.	-9293 Nov 24 j 22:58	25° $\overline{10}$ 37'30	40.76296 AU	retrograde	-9286 Mar 13 j 13:12	5° $\underline{0}$ 22'17	
morning rise	-9293 Dec 03 j 12:28	25° $\overline{10}$ 51'55		min. Earth dist.	-9286 Jun 01 j 13:12	4° $\underline{0}$ 18'48	40.35976 AU
retrograde	-9292 Mar 05 j 02:07	27° $\overline{10}$ 23'49		opposition	-9286 Jun 04 j 21:23	4° $\underline{0}$ 14'31	-12°06'59
min. Earth dist.	-9292 May 23 j 22:32	26° $\overline{10}$ 19'01	38.91524 AU	direct	-9286 Aug 23 j 18:45	3° $\underline{0}$ 08'48	
opposition	-9292 May 27 j 07:18	26° $\overline{10}$ 14'37	-10°14'40	evening set	-9286 Nov 20 j 17:15	4° $\underline{0}$ 35'42	
direct	-9292 Aug 15 j 02:00	25° $\overline{10}$ 07'29					
evening set	-9292 Nov 10 j 08:37	26° $\overline{10}$ 34'25		conjunction	-9286 Nov 30 j 13:50	4° $\underline{0}$ 51'41	-11°40'50
				minimum elong	-9286 Nov 30 j 13:35	4° $\underline{0}$ 51'40	11°40'49
conjunction	-9292 Nov 22 j 01:50	26° $\overline{10}$ 54'04	-9°54'19	max. Earth dist.	-9286 Dec 04 j 00:25	4° $\underline{0}$ 57'17	42.43350 AU
minimum elong	-9292 Nov 22 j 01:36	26° $\overline{10}$ 54'03	9°54'13	morning rise	-9286 Dec 10 j 11:40	5° $\underline{0}$ 07'46	
max. Earth dist.	-9292 Nov 25 j 13:23	26° $\overline{10}$ 59'55	41.00576 AU	retrograde	-9285 Mar 15 j 02:24	6° $\underline{0}$ 39'31	
morning rise	-9292 Dec 03 j 20:48	27° $\overline{10}$ 13'50		min. Earth dist.	-9285 Jun 03 j 04:14	5° $\underline{0}$ 36'10	40.59434 AU
retrograde	-9291 Mar 06 j 16:55	28° $\overline{10}$ 45'37		opposition	-9285 Jun 06 j 10:46	5° $\underline{0}$ 32'00	-12°23'42
min. Earth dist.	-9291 May 25 j 13:01	27° $\overline{10}$ 41'05	39.15918 AU	direct	-9285 Aug 25 j 08:10	4° $\underline{0}$ 26'31	
opposition	-9291 May 28 j 22:29	27° $\overline{10}$ 36'39	-10°34'52	evening set	-9285 Nov 22 j 14:46	5° $\underline{0}$ 53'30	
direct	-9291 Aug 16 j 18:37	26° $\overline{10}$ 29'44					
evening set	-9291 Nov 12 j 06:16	27° $\overline{10}$ 56'36		conjunction	-9285 Dec 02 j 03:09	6° $\underline{0}$ 08'52	-11°56'43
				minimum elong	-9285 Dec 02 j 02:55	6° $\underline{0}$ 08'51	11°56'42
conjunction	-9291 Nov 23 j 16:30	28° $\overline{10}$ 15'39	-10°13'27	max. Earth dist.	-9285 Dec 05 j 13:15	6° $\underline{0}$ 14'24	42.66463 AU
minimum elong	-9291 Nov 23 j 16:15	28° $\overline{10}$ 15'38	10°13'22	morning rise	-9285 Dec 11 j 16:28	6° $\underline{0}$ 24'18	
max. Earth dist.	-9291 Nov 27 j 03:56	28° $\overline{10}$ 21'28	41.24685 AU	retrograde	-9284 Mar 15 j 13:40	7° $\underline{0}$ 56'07	
morning rise	-9291 Dec 05 j 04:34	28° $\overline{10}$ 34'49		min. Earth dist.	-9284 Jun 03 j 17:18	6° $\underline{0}$ 53'00	40.82571 AU
	-9290 Feb 13 j 03:07	0° $\underline{0}$		opposition	-9284 Jun 06 j 23:35	6° $\underline{0}$ 48'51	-12°39'53
retrograde	-9290 Mar 08 j 06:38	0° $\underline{0}$ 06'31		direct	-9284 Aug 25 j 23:34	5° $\underline{0}$ 43'35	
	-9290 Mar 31 j 13:12	30° $\overline{08}$		evening set	-9284 Nov 23 j 12:21	7° $\underline{0}$ 10'42	
min. Earth dist.	-9290 May 27 j 04:44	29° $\overline{10}$ 02'09	39.40182 AU				
opposition	-9290 May 30 j 13:23	28° $\overline{10}$ 57'47	-10°54'29	conjunction	-9284 Dec 02 j 16:08	7° $\underline{0}$ 25'24	-12°12'07
direct	-9290 Aug 18 j 10:47	27° $\overline{10}$ 51'06		minimum elong	-9284 Dec 02 j 15:53	7° $\underline{0}$ 25'23	12°12'07
evening set	-9290 Nov 14 j 03:44	29° $\overline{10}$ 17'55		max. Earth dist.	-9284 Dec 06 j 00:42	7° $\underline{0}$ 30'49	42.89219 AU
				morning rise	-9284 Dec 11 j 20:57	7° $\underline{0}$ 40'11	
conjunction	-9290 Nov 25 j 07:00	29° $\overline{10}$ 36'22	-10°32'02	retrograde	-9283 Mar 17 j 01:45	9° $\underline{0}$ 12'06	
minimum elong	-9290 Nov 25 j 06:46	29° $\overline{10}$ 36'21	10°31'58	min. Earth dist.	-9283 Jun 05 j 07:02	8° $\underline{0}$ 09'08	41.05340 AU
max. Earth dist.	-9290 Nov 28 j 18:52	29° $\overline{10}$ 42'11	41.48691 AU	opposition	-9283 Jun 08 j 12:21	8° $\underline{0}$ 05'03	-12°55'34
morning rise	-9290 Dec 06 j 11:44	29° $\overline{10}$ 54'55		direct	-9283 Aug 27 j 13:09	7° $\underline{0}$ 00'01	
	-9290 Dec 09 j 14:21	0° $\underline{0}$		evening set	-9283 Nov 25 j 09:50	8° $\underline{0}$ 27'15	
retrograde	-9289 Mar 09 j 18:09	1° $\underline{0}$ 26'35					
min. Earth dist.	-9289 May 28 j 19:12	0° $\underline{0}$ 22'26	39.64331 AU	conjunction	-9283 Dec 04 j 04:55	8° $\underline{0}$ 41'18	-12°27'02
opposition	-9289 Jun 01 j 03:50	0° $\underline{0}$ 18'05	-11°13'29	minimum elong	-9283 Dec 04 j 04:42	8° $\underline{0}$ 41'17	12°27'03
	-9289 Jun 15 j 06:38	30° $\overline{08}$		max. Earth dist.	-9283 Dec 07 j 13:32	8° $\underline{0}$ 46'41	43.11583 AU
direct	-9289 Aug 20 j 03:49	29° $\overline{10}$ 11'38		morning rise	-9283 Dec 13 j 00:46	8° $\underline{0}$ 55'24	
	-9289 Oct 22 j 01:18	0° $\underline{0}$		retrograde	-9282 Mar 18 j 12:01	10° $\underline{0}$ 27'27	
evening set	-9289 Nov 16 j 01:13	0° $\underline{0}$ 38'25		min. Earth dist.	-9282 Jun 06 j 20:50	9° $\underline{0}$ 24'36	41.27686 AU
				opposition	-9282 Jun 10 j 00:44	9° $\underline{0}$ 20'36	-13°10'45
conjunction	-9289 Nov 26 j 21:02	0° $\underline{0}$ 56'16	-10°50'02	direct	-9282 Aug 29 j 03:30	8° $\underline{0}$ 15'45	
minimum elong	-9289 Nov 26 j 20:47	0° $\underline{0}$ 56'15	10°49'58	evening set	-9282 Nov 27 j 07:31	9° $\underline{0}$ 43'07	
max. Earth dist.	-9289 Nov 30 j 07:53	1° $\underline{0}$ 01'59	41.72585 AU				
morning rise	-9289 Dec 07 j 18:27	1° $\underline{0}$ 14'13		conjunction	-9282 Dec 05 j 17:25	9° $\underline{0}$ 56'30	-12°41'28
retrograde	-9288 Mar 10 j 07:52	2° $\underline{0}$ 45'52		minimum elong	-9282 Dec 05 j 17:10	9° $\underline{0}$ 56'29	12°41'30
min. Earth dist.	-9288 May 29 j 09:20	1° $\underline{0}$ 41'57	39.88377 AU	max. Earth dist.	-9282 Dec 09 j 00:05	10° $\underline{0}$ 01'43	43.33544 AU
opposition	-9288 Jun 01 j 18:06	1° $\underline{0}$ 37'36	-11°31'53	morning rise	-9282 Dec 14 j 04:02	10° $\underline{0}$ 09'56	
direct	-9288 Aug 20 j 17:44	0° $\underline{0}$ 31'24		retrograde	-9281 Mar 20 j 01:30	11° $\underline{0}$ 42'06	
evening set	-9288 Nov 16 j 22:35	1° $\underline{0}$ 58'11		min. Earth dist.	-9281 Jun 08 j 09:00	10° $\underline{0}$ 39'25	41.49644 AU
				opposition	-9281 Jun 11 j 12:49	10° $\underline{0}$ 35'27	-13°25'25
conjunction	-9288 Nov 27 j 11:01	2° $\underline{0}$ 15'25	-11°07'30	direct	-9281 Aug 30 j 14:27	9° $\underline{0}$ 30'46	
minimum elong	-9288 Nov 27 j 10:46	2° $\underline{0}$ 15'24	11°07'28	evening set	-9281 Nov 29 j 05:04	10° $\underline{0}$ 58'18	
max. Earth dist.	-9288 Nov 30 j 22:47	2° $\underline{0}$ 21'10	41.96355 AU				
morning rise	-9288 Dec 08 j 00:45	2° $\underline{0}$ 32'45		conjunction	-9281 Dec 07 j 05:37	11° $\underline{0}$ 11'00	-12°55'27
retrograde	-9287 Mar 11 j 21:21	4° $\underline{0}$ 04'24		minimum elong	-9281 Dec 07 j 05:24	11° $\underline{0}$ 10'59	12°55'30
min. Earth dist.	-9287 May 31 j 00:15	3° $\underline{0}$ 00'40	40.12268 AU	max. Earth dist.	-9281 Dec 10 j 12:19	11° $\underline{0}$ 16'11	43.55122 AU
opposition	-9287 Jun 03 j 07:51	2° $\underline{0}$ 56'24	-11°49'43	morning rise	-9281 Dec 15 j 06:49	11° $\underline{0}$ 23'44	
direct	-9287 Aug 22 j 07:30	1° $\underline{0}$ 50'26		retrograde	-9280 Mar 20 j 14:33	12° $\underline{0}$ 56'02	
evening set	-9287 Nov 18 j 20:04	3° $\underline{0}$ 17'16		min. Earth dist.	-9280 Jun 08 j 22:42	11° $\underline{0}$ 53'26	41.71237 AU
				opposition	-9280 Jun 12 j 00:42	11° $\underline{0}$ 49'34	-13°39'36
conjunction	-9287 Nov 29 j 00:37	3° $\underline{0}$ 33'53	-11°24'26	direct	-9280 Aug 31 j 01:36	10° $\underline{0}$ 45'04	
minimum elong	-9287 Nov 29 j 00:23	3° $\underline{0}$ 33'52	11°24'23	evening set	-9280 Nov 30 j 02:57	12° $\underline{0}$ 12'47	
max. Earth dist.	-9287 Dec 02 j 11:07	3° $\underline{0}$ 39'30	42.19966 AU				
morning rise	-9287 Dec 09 j 06:26	3° $\underline{0}$ 50'35		conjunction	-9280 Dec 07 j 17:41	12° $\underline{0}$ 24'47	-13°08'57

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 10

Attention, astronomical year style is used: The year -9280 in astronomical counting style is the year 9281 BCE in historical counting style.

minimum elong	-9280 Dec 07 j 17:27	12° <u>♁</u> 24'46	13°09'01	evening set	-9273 Dec 12 j 21:28	20° <u>♁</u> 38'54	
max. Earth dist.	-9280 Dec 10 j 23:21	12° <u>♁</u> 29'53	43.76376 AU				
morning rise	-9280 Dec 15 j 08:51	12° <u>♁</u> 36'48		conjunction	-9273 Dec 16 j 22:59	20° <u>♁</u> 45'07	-14°30'13
retrograde	-9279 Mar 22 j 01:48	14° <u>♁</u> 09'16		minimum elong	-9273 Dec 16 j 22:48	20° <u>♁</u> 45'06	14°30'22
min. Earth dist.	-9279 Jun 10 j 09:52	13° <u>♁</u> 06'51	41.92525 AU	max. Earth dist.	-9273 Dec 20 j 00:54	20° <u>♁</u> 49'50	45.18759 AU
opposition	-9279 Jun 13 j 11:58	13° <u>♁</u> 02'59	-13°53'17	morning rise	-9273 Dec 21 j 00:22	20° <u>♁</u> 51'19	
direct	-9279 Sep 01 j 13:30	11° <u>♁</u> 58'38		retrograde	-9272 Mar 30 j 01:33	22° <u>♁</u> 26'24	
evening set	-9279 Dec 02 j 00:49	13° <u>♁</u> 26'36		min. Earth dist.	-9272 Jun 18 j 16:38	21° <u>♁</u> 25'03	43.35201 AU
				opposition	-9272 Jun 21 j 13:24	21° <u>♁</u> 21'32	-15°15'14
conjunction	-9279 Dec 09 j 05:18	13° <u>♁</u> 37'52	-13°21'58	direct	-9272 Sep 09 j 19:27	20° <u>♁</u> 18'30	
minimum elong	-9279 Dec 09 j 05:05	13° <u>♁</u> 37'51	13°22'02	evening set	-9272 Dec 14 j 01:25	21° <u>♁</u> 49'44	
max. Earth dist.	-9279 Dec 12 j 10:05	13° <u>♁</u> 42'54	43.97352 AU				
morning rise	-9279 Dec 16 j 10:18	13° <u>♁</u> 49'10		conjunction	-9272 Dec 17 j 09:25	21° <u>♁</u> 54'49	-14°40'03
retrograde	-9278 Mar 23 j 11:32	15° <u>♁</u> 21'51		minimum elong	-9272 Dec 17 j 09:14	21° <u>♁</u> 54'48	14°40'12
min. Earth dist.	-9278 Jun 11 j 22:12	14° <u>♁</u> 19'33	42.13580 AU	morning rise	-9272 Dec 20 j 17:16	21° <u>♁</u> 59'54	
opposition	-9278 Jun 14 j 23:16	14° <u>♁</u> 15'45	-14°06'27	max. Earth dist.	-9272 Dec 20 j 09:10	21° <u>♁</u> 59'23	45.37956 AU
direct	-9278 Sep 03 j 02:22	13° <u>♁</u> 11'35		retrograde	-9271 Mar 31 j 10:17	23° <u>♁</u> 35'42	
evening set	-9278 Dec 03 j 22:44	14° <u>♁</u> 39'48		min. Earth dist.	-9271 Jun 20 j 03:04	22° <u>♁</u> 34'29	43.54339 AU
				opposition	-9271 Jun 22 j 23:00	22° <u>♁</u> 31'01	-15°25'08
conjunction	-9278 Dec 10 j 16:41	14° <u>♁</u> 50'20	-13°34'30	direct	-9271 Sep 11 j 06:16	21° <u>♁</u> 28'09	
minimum elong	-9278 Dec 10 j 16:27	14° <u>♁</u> 50'19	13°34'35	evening set	-9271 Dec 16 j 09:40	23° <u>♁</u> 00'25	
max. Earth dist.	-9278 Dec 13 j 21:55	14° <u>♁</u> 55'22	44.18122 AU				
morning rise	-9278 Dec 17 j 10:52	15° <u>♁</u> 00'53		conjunction	-9271 Dec 18 j 19:46	23° <u>♁</u> 04'05	-14°49'30
retrograde	-9277 Mar 24 j 19:18	16° <u>♁</u> 33'49		minimum elong	-9271 Dec 18 j 19:35	23° <u>♁</u> 04'05	14°49'40
min. Earth dist.	-9277 Jun 13 j 09:45	15° <u>♁</u> 31'40	42.34420 AU	morning rise	-9271 Dec 21 j 05:37	23° <u>♁</u> 07'45	
opposition	-9277 Jun 16 j 10:13	15° <u>♁</u> 27'54	-14°19'08	max. Earth dist.	-9271 Dec 21 j 19:25	23° <u>♁</u> 08'37	45.56714 AU
direct	-9277 Sep 04 j 16:29	14° <u>♁</u> 23'55		retrograde	-9270 Apr 01 j 19:42	24° <u>♁</u> 44'33	
evening set	-9277 Dec 05 j 21:13	15° <u>♁</u> 52'27		min. Earth dist.	-9270 Jun 21 j 14:36	23° <u>♁</u> 43'25	43.73007 AU
				opposition	-9270 Jun 24 j 08:32	23° <u>♁</u> 40'03	-15°34'37
conjunction	-9277 Dec 12 j 03:53	16° <u>♁</u> 02'13	-13°46'34	direct	-9270 Sep 12 j 16:30	22° <u>♁</u> 37'20	
minimum elong	-9277 Dec 12 j 03:41	16° <u>♁</u> 02'12	13°46'39	evening set	-9270 Dec 19 j 09:09	24° <u>♁</u> 11'35	
max. Earth dist.	-9277 Dec 15 j 07:34	16° <u>♁</u> 07'07	44.38699 AU				
morning rise	-9277 Dec 18 j 10:51	16° <u>♁</u> 12'00		conjunction	-9270 Dec 20 j 05:45	24° <u>♁</u> 12'53	-14°58'34
retrograde	-9276 Mar 25 j 07:06	17° <u>♁</u> 45'14		minimum elong	-9270 Dec 20 j 05:35	24° <u>♁</u> 12'52	14°58'43
min. Earth dist.	-9276 Jun 13 j 20:16	16° <u>♁</u> 43'17	42.55079 AU	morning rise	-9270 Dec 21 j 02:03	24° <u>♁</u> 14'09	
opposition	-9276 Jun 16 j 20:50	16° <u>♁</u> 39'31	-14°31'18	max. Earth dist.	-9270 Dec 23 j 03:25	24° <u>♁</u> 17'16	45.75016 AU
direct	-9276 Sep 05 j 02:16	15° <u>♁</u> 35'43		retrograde	-9269 Apr 03 j 07:12	25° <u>♁</u> 52'55	
evening set	-9276 Dec 06 j 20:00	17° <u>♁</u> 04'38		min. Earth dist.	-9269 Jun 22 j 23:59	24° <u>♁</u> 51'55	43.91214 AU
				opposition	-9269 Jun 25 j 17:48	24° <u>♁</u> 48'34	-15°43'42
conjunction	-9276 Dec 12 j 14:59	17° <u>♁</u> 13'35	-13°58'09	direct	-9269 Sep 14 j 00:10	23° <u>♁</u> 45'59	
minimum elong	-9276 Dec 12 j 14:46	17° <u>♁</u> 13'34	13°58'14				
max. Earth dist.	-9276 Dec 15 j 19:01	17° <u>♁</u> 18'29	44.59084 AU	conjunction	-9269 Dec 21 j 15:39	25° <u>♁</u> 21'08	-15°07'14
morning rise	-9276 Dec 18 j 10:06	17° <u>♁</u> 22'33		minimum elong	-9269 Dec 21 j 15:28	25° <u>♁</u> 21'08	15°07'25
retrograde	-9275 Mar 26 j 18:21	18° <u>♁</u> 56'10		max. Earth dist.	-9269 Dec 24 j 12:19	25° <u>♁</u> 25'26	45.92860 AU
min. Earth dist.	-9275 Jun 15 j 08:23	17° <u>♁</u> 54'19	42.75524 AU	retrograde	-9268 Apr 03 j 16:55	27° <u>♁</u> 00'45	
opposition	-9275 Jun 18 j 07:22	17° <u>♁</u> 50'39	-14°42'59	min. Earth dist.	-9268 Jun 23 j 11:06	25° <u>♁</u> 59'46	44.08990 AU
direct	-9275 Sep 06 j 12:23	16° <u>♁</u> 47'03		opposition	-9268 Jun 26 j 02:48	25° <u>♁</u> 56'32	-15°52'23
evening set	-9275 Dec 08 j 19:28	18° <u>♁</u> 16'24		direct	-9268 Sep 14 j 09:19	24° <u>♁</u> 54'04	
conjunction	-9275 Dec 14 j 01:45	18° <u>♁</u> 24'30	-14°09'17	conjunction	-9268 Dec 22 j 01:28	26° <u>♁</u> 28'50	-15°15'32
minimum elong	-9275 Dec 14 j 01:33	18° <u>♁</u> 24'30	14°09'24	minimum elong	-9268 Dec 22 j 01:19	26° <u>♁</u> 28'50	15°15'43
max. Earth dist.	-9275 Dec 17 j 04:44	18° <u>♁</u> 29'19	44.79257 AU	max. Earth dist.	-9268 Dec 24 j 21:36	26° <u>♁</u> 33'06	46.10313 AU
morning rise	-9275 Dec 19 j 08:05	18° <u>♁</u> 32'37		retrograde	-9267 Apr 04 j 23:59	28° <u>♁</u> 08'00	
retrograde	-9274 Mar 28 j 06:34	20° <u>♁</u> 06'38		min. Earth dist.	-9267 Jun 24 j 20:21	27° <u>♁</u> 07'08	44.26383 AU
min. Earth dist.	-9274 Jun 16 j 18:18	19° <u>♁</u> 05'01	42.95728 AU	opposition	-9267 Jun 27 j 11:32	27° <u>♁</u> 03'56	-16°00'40
opposition	-9274 Jun 19 j 17:31	19° <u>♁</u> 01'21	-14°54'11	direct	-9267 Sep 15 j 20:39	26° <u>♁</u> 01'34	
direct	-9274 Sep 07 j 21:23	17° <u>♁</u> 57'56					
evening set	-9274 Dec 10 j 19:40	19° <u>♁</u> 27'48		conjunction	-9267 Dec 23 j 10:45	27° <u>♁</u> 35'59	-15°23'25
				minimum elong	-9267 Dec 23 j 10:35	27° <u>♁</u> 35'58	15°23'38
conjunction	-9274 Dec 15 j 12:21	19° <u>♁</u> 35'01	-14°19'58	max. Earth dist.	-9267 Dec 26 j 05:06	27° <u>♁</u> 40'07	46.27414 AU
minimum elong	-9274 Dec 15 j 12:09	19° <u>♁</u> 35'00	14°20'05	retrograde	-9266 Apr 06 j 08:04	29° <u>♁</u> 14'45	
max. Earth dist.	-9274 Dec 18 j 14:33	19° <u>♁</u> 39'45	44.99162 AU	min. Earth dist.	-9266 Jun 26 j 05:38	28° <u>♁</u> 13'57	44.43469 AU
morning rise	-9274 Dec 20 j 05:02	19° <u>♁</u> 42'13		opposition	-9266 Jun 28 j 20:08	28° <u>♁</u> 10'48	-16°08'32
retrograde	-9274 Mar 29 j 18:07	21° <u>♁</u> 16'43		direct	-9266 Sep 17 j 06:27	27° <u>♁</u> 08'33	
min. Earth dist.	-9273 Jun 18 j 05:56	20° <u>♁</u> 15'13	43.15649 AU				
opposition	-9273 Jun 21 j 03:37	20° <u>♁</u> 11'38	-15°04'56	conjunction	-9266 Dec 24 j 20:06	28° <u>♁</u> 42'36	-15°30'55
direct	-9273 Sep 09 j 06:50	19° <u>♁</u> 08'25		minimum elong	-9266 Dec 24 j 19:58	28° <u>♁</u> 42'35	15°31'08

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 11

Attention, astronomical year style is used: The year -9265 in astronomical counting style is the year 9266 BCE in historical counting style.

max. Earth dist.	-9266 Dec 27 j 14:43	28° <u>♂</u> 46'44	46.44234 AU	conjunction	-9257 Jan 02 j 18:11	7° <u>♂</u> 23'09	-16°17'20
	-9265 Feb 22 j 16:59	0° <u>♂</u>		minimum elong	-9257 Jan 02 j 18:05	7° <u>♂</u> 23'09	16°17'37
retrograde	-9265 Apr 07 j 14:28	0° <u>♂</u> 20'59		max. Earth dist.	-9257 Jan 05 j 03:42	7° <u>♂</u> 26'37	47.67812 AU
	-9265 May 22 j 05:18	30° <u>♂</u> ♂		retrograde	-9257 Apr 16 j 11:04	8° <u>♂</u> 58'56	
min. Earth dist.	-9265 Jun 27 j 15:26	29° <u>♂</u> 20'15	44.60276 AU	min. Earth dist.	-9257 Jul 06 j 13:22	7° <u>♂</u> 59'03	45.83068 AU
opposition	-9265 Jun 30 j 04:29	29° <u>♂</u> 17'10	-16°15'59	opposition	-9257 Jul 08 j 18:03	7° <u>♂</u> 56'27	-17°01'44
direct	-9265 Sep 18 j 17:03	28° <u>♂</u> 15'03		direct	-9257 Sep 27 j 07:08	6° <u>♂</u> 55'24	
conjunction	-9265 Dec 26 j 05:16	29° <u>♂</u> ♂48'45	-15°38'00	conjunction	-9256 Jan 04 j 02:25	8° <u>♂</u> 26'56	-16°21'37
minimum elong	-9265 Dec 26 j 05:06	29° <u>♂</u> ♂48'45	15°38'14	minimum elong	-9256 Jan 04 j 02:20	8° <u>♂</u> 26'56	16°21'55
max. Earth dist.	-9265 Dec 28 j 22:14	29° <u>♂</u> ♂52'46	46.60809 AU	max. Earth dist.	-9256 Jan 06 j 09:43	8° <u>♂</u> 30'16	47.81281 AU
	-9264 Jan 02 j 19:34	0° <u>♂</u>		retrograde	-9256 Apr 16 j 18:27	10° <u>♂</u> 02'24	
retrograde	-9264 Apr 08 j 00:33	1° <u>♂</u> 26'45		min. Earth dist.	-9256 Jul 06 j 22:06	9° <u>♂</u> 02'33	45.96372 AU
min. Earth dist.	-9264 Jun 27 j 23:29	0° <u>♂</u> 26'11	44.76836 AU	opposition	-9256 Jul 09 j 01:11	9° <u>♂</u> 00'02	-17°05'55
opposition	-9264 Jun 30 j 12:40	0° <u>♂</u> 23'07	-16°23'01	direct	-9256 Sep 27 j 15:13	7° <u>♂</u> 59'04	
	-9264 Jul 20 j 03:42	30° <u>♂</u> ♂♂					
direct	-9264 Sep 19 j 00:18	29° <u>♂</u> ♂21'07		conjunction	-9255 Jan 04 j 10:38	9° <u>♂</u> 30'20	-16°25'36
	-9264 Nov 17 j 06:20	0° <u>♂</u>		minimum elong	-9255 Jan 04 j 10:32	9° <u>♂</u> 30'20	16°25'55
conjunction	-9264 Dec 26 j 14:17	0° <u>♂</u> 54'31	-15°44'43	max. Earth dist.	-9255 Jan 06 j 17:37	9° <u>♂</u> 33'38	47.94285 AU
minimum elong	-9264 Dec 26 j 14:09	0° <u>♂</u> 54'30	15°44'57	retrograde	-9255 Apr 17 j 22:28	11° <u>♂</u> 05'30	
max. Earth dist.	-9264 Dec 29 j 06:49	0° <u>♂</u> 58'29	46.77125 AU	min. Earth dist.	-9255 Jul 08 j 06:26	10° <u>♂</u> 05'40	46.09223 AU
retrograde	-9263 Apr 09 j 11:18	2° <u>♂</u> 32'09		opposition	-9255 Jul 10 j 07:58	10° <u>♂</u> 03'13	-17°09'46
min. Earth dist.	-9263 Jun 29 j 09:16	1° <u>♂</u> 31'39	44.93136 AU	direct	-9255 Sep 29 j 01:18	9° <u>♂</u> 02'21	
opposition	-9263 Jul 01 j 20:43	1° <u>♂</u> 28'41	-16°29'39				
direct	-9263 Sep 20 j 06:30	0° <u>♂</u> 26'50		conjunction	-9254 Jan 05 j 18:31	10° <u>♂</u> 33'21	-16°29'15
conjunction	-9263 Dec 27 j 23:12	1° <u>♂</u> 59'56	-15°51'01	minimum elong	-9254 Jan 05 j 18:27	10° <u>♂</u> 33'21	16°29'34
minimum elong	-9263 Dec 27 j 23:04	1° <u>♂</u> 59'55	15°51'16	max. Earth dist.	-9254 Jan 07 j 23:24	10° <u>♂</u> 36'31	48.06888 AU
max. Earth dist.	-9263 Dec 30 j 15:06	2° <u>♂</u> 03'51	46.93194 AU	retrograde	-9254 Apr 19 j 05:20	12° <u>♂</u> 08'12	
retrograde	-9262 Apr 10 j 18:43	3° <u>♂</u> 37'14		min. Earth dist.	-9254 Jul 09 j 13:26	11° <u>♂</u> 08'28	46.21710 AU
min. Earth dist.	-9262 Jun 30 j 17:20	2° <u>♂</u> 36'53	45.09152 AU	opposition	-9254 Jul 11 j 14:41	11° <u>♂</u> 06'02	-17°13'17
opposition	-9262 Jul 03 j 04:34	2° <u>♂</u> 33'56	-16°35'53	direct	-9254 Sep 30 j 09:00	10° <u>♂</u> 05'14	
direct	-9262 Sep 21 j 15:21	1° <u>♂</u> 32'14		conjunction	-9253 Jan 07 j 02:12	11° <u>♂</u> 35'59	-16°32'34
conjunction	-9262 Dec 29 j 07:46	3° <u>♂</u> 05'03	-15°56'58	minimum elong	-9253 Jan 07 j 02:07	11° <u>♂</u> 35'59	16°32'54
minimum elong	-9262 Dec 29 j 07:39	3° <u>♂</u> 05'03	15°57'13	max. Earth dist.	-9253 Jan 09 j 06:42	11° <u>♂</u> 39'07	48.19142 AU
max. Earth dist.	-9262 Dec 31 j 21:59	3° <u>♂</u> 08'52	47.08957 AU	retrograde	-9253 Apr 20 j 14:25	13° <u>♂</u> 10'33	
retrograde	-9261 Apr 12 j 02:07	4° <u>♂</u> 42'03		min. Earth dist.	-9253 Jul 10 j 22:03	12° <u>♂</u> 10'48	46.33865 AU
min. Earth dist.	-9261 Jul 02 j 02:26	3° <u>♂</u> 41'49	45.24845 AU	opposition	-9253 Jul 12 j 21:22	12° <u>♂</u> 08'29	-17°16'27
opposition	-9261 Jul 04 j 12:25	3° <u>♂</u> 38'56	-16°41'44	direct	-9253 Oct 01 j 14:28	11° <u>♂</u> 07'46	
direct	-9261 Sep 23 j 00:20	2° <u>♂</u> 37'23		conjunction	-9252 Jan 08 j 09:59	12° <u>♂</u> 38'16	-16°35'33
conjunction	-9261 Dec 30 j 16:36	4° <u>♂</u> 09'57	-16°02'33	minimum elong	-9252 Jan 08 j 09:56	12° <u>♂</u> 38'16	16°35'53
minimum elong	-9261 Dec 30 j 16:28	4° <u>♂</u> 09'56	16°02'48	max. Earth dist.	-9252 Jan 10 j 13:26	12° <u>♂</u> 41'20	48.31102 AU
max. Earth dist.	-9260 Jan 02 j 06:45	4° <u>♂</u> 13'44	47.24363 AU	retrograde	-9252 Apr 20 j 22:34	14° <u>♂</u> 12'33	
retrograde	-9260 Apr 12 j 08:01	5° <u>♂</u> 46'39		min. Earth dist.	-9252 Jul 11 j 04:25	13° <u>♂</u> 12'55	46.45721 AU
min. Earth dist.	-9260 Jul 02 j 11:41	4° <u>♂</u> 46'30	45.40131 AU	opposition	-9252 Jul 13 j 03:40	13° <u>♂</u> 10'36	-17°19'16
opposition	-9260 Jul 04 j 19:56	4° <u>♂</u> 43'42	-16°47'14	direct	-9252 Oct 01 j 19:33	12° <u>♂</u> 09'57	
direct	-9260 Sep 23 j 10:37	3° <u>♂</u> 42'18		conjunction	-9251 Jan 08 j 17:30	13° <u>♂</u> 40'15	-16°38'12
conjunction	-9260 Dec 31 j 01:16	5° <u>♂</u> 14'36	-16°07'48	minimum elong	-9251 Jan 08 j 17:25	13° <u>♂</u> 40'14	16°38'32
minimum elong	-9260 Dec 31 j 01:10	5° <u>♂</u> 14'36	16°08'04	max. Earth dist.	-9251 Jan 10 j 19:19	13° <u>♂</u> 43'12	48.42770 AU
max. Earth dist.	-9259 Jan 02 j 13:05	5° <u>♂</u> 18'15	47.39343 AU		-9251 Mar 16 j 11:55	15° <u>♂</u>	
retrograde	-9259 Apr 13 j 17:36	6° <u>♂</u> 51'01		retrograde	-9251 Apr 22 j 05:18	15° <u>♂</u> 14'15	
min. Earth dist.	-9259 Jul 03 j 19:40	5° <u>♂</u> 51'00	45.54960 AU		-9251 May 29 j 00:42	15° <u>♂</u> ♂♂	
opposition	-9259 Jul 06 j 03:25	5° <u>♂</u> 48'14	-16°52'23	min. Earth dist.	-9251 Jul 12 j 12:15	14° <u>♂</u> 14'39	46.57300 AU
direct	-9259 Sep 24 j 17:07	4° <u>♂</u> 46'59		opposition	-9251 Jul 14 j 10:06	14° <u>♂</u> 12'25	-17°21'44
				direct	-9251 Oct 03 j 02:42	13° <u>♂</u> 11'52	
conjunction	-9258 Jan 01 j 09:41	6° <u>♂</u> 19'01	-16°12'43	conjunction	-9250 Jan 10 j 00:52	14° <u>♂</u> 41'57	-16°40'31
minimum elong	-9258 Jan 01 j 09:35	6° <u>♂</u> 19'01	16°12'59	minimum elong	-9250 Jan 10 j 00:50	14° <u>♂</u> 41'57	16°40'52
max. Earth dist.	-9258 Jan 03 j 20:31	6° <u>♂</u> 22'35	47.53828 AU	max. Earth dist.	-9250 Jan 12 j 02:50	14° <u>♂</u> 44'54	48.54159 AU
retrograde	-9258 Apr 15 j 02:51	7° <u>♂</u> 55'08			-9250 Jan 22 j 19:41	15° <u>♂</u>	
min. Earth dist.	-9258 Jul 05 j 05:32	6° <u>♂</u> 55'09	45.69275 AU	retrograde	-9250 Apr 23 j 08:24	16° <u>♂</u> 15'42	
opposition	-9258 Jul 07 j 10:55	6° <u>♂</u> 52'30	-16°57'13	min. Earth dist.	-9250 Jul 13 j 19:33	15° <u>♂</u> 16'11	46.68566 AU
direct	-9258 Sep 25 j 23:31	5° <u>♂</u> 51'22		opposition	-9250 Jul 15 j 16:19	15° <u>♂</u> 13'59	-17°23'53
					-9250 Jul 27 j 17:00	15° <u>♂</u> ♂♂	
				direct	-9250 Oct 04 j 12:39	14° <u>♂</u> 13'33	

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 12

Attention, astronomical year style is used: The year -9250 in astronomical counting style is the year 9251 BCE in historical counting style.

	-9250 Dec 10 j 09:26	15° <b>ℓ</b>		minimum elong	-9241 Jan 19 j 16:58	23° <b>ℓ</b> 47'16	16°48'35
				max. Earth dist.	-9241 Jan 21 j 05:30	23° <b>ℓ</b> 49'23	49.37842 AU
conjunction	-9249 Jan 11 j 08:13	15° <b>ℓ</b> 43'25	-16°42'30	retrograde	-9241 May 02 j 19:54	25° <b>ℓ</b> 18'58	
minimum elong	-9249 Jan 11 j 08:09	15° <b>ℓ</b> 43'25	16°42'52	min. Earth dist.	-9241 Jul 23 j 10:48	24° <b>ℓ</b> 19'44	47.50422 AU
max. Earth dist.	-9249 Jan 13 j 07:59	15° <b>ℓ</b> 46'15	48.65240 AU	opposition	-9241 Jul 24 j 19:45	24° <b>ℓ</b> 18'08	-17°29'46
retrograde	-9249 Apr 24 j 15:05	17° <b>ℓ</b> 16'56		direct	-9241 Oct 13 j 19:11	23° <b>ℓ</b> 18'16	
min. Earth dist.	-9249 Jul 15 j 02:03	16° <b>ℓ</b> 17'31	46.79507 AU				
opposition	-9249 Jul 16 j 22:20	16° <b>ℓ</b> 15'21	-17°25'41	conjunction	-9240 Jan 20 j 23:44	24° <b>ℓ</b> 46'36	-16°47'36
direct	-9249 Oct 05 j 19:23	15° <b>ℓ</b> 15'01		minimum elong	-9240 Jan 20 j 23:44	24° <b>ℓ</b> 46'36	16°48'02
				max. Earth dist.	-9240 Jan 22 j 12:09	24° <b>ℓ</b> 48'42	49.45071 AU
conjunction	-9248 Jan 12 j 15:38	16° <b>ℓ</b> 44'42	-16°44'12	retrograde	-9240 May 02 j 22:50	26° <b>ℓ</b> 18'06	
minimum elong	-9248 Jan 12 j 15:36	16° <b>ℓ</b> 44'42	16°44'35	min. Earth dist.	-9240 Jul 23 j 16:52	25° <b>ℓ</b> 18'54	47.57487 AU
max. Earth dist.	-9248 Jan 14 j 14:49	16° <b>ℓ</b> 47'29	48.75955 AU	opposition	-9240 Jul 25 j 00:57	25° <b>ℓ</b> 17'21	-17°28'57
retrograde	-9248 Apr 24 j 22:13	18° <b>ℓ</b> 18'00		direct	-9240 Oct 14 j 03:39	24° <b>ℓ</b> 17'33	
min. Earth dist.	-9248 Jul 15 j 10:28	17° <b>ℓ</b> 18'35	46.90043 AU				
opposition	-9248 Jul 17 j 04:25	17° <b>ℓ</b> 16'33	-17°27'12	conjunction	-9239 Jan 21 j 06:13	25° <b>ℓ</b> 45'45	-16°46'44
direct	-9248 Oct 06 j 01:49	16° <b>ℓ</b> 16'18		minimum elong	-9239 Jan 21 j 06:15	25° <b>ℓ</b> 45'45	16°47'10
				max. Earth dist.	-9239 Jan 22 j 16:28	25° <b>ℓ</b> 47'44	49.52015 AU
conjunction	-9247 Jan 12 j 23:01	17° <b>ℓ</b> 45'48	-16°45'35	retrograde	-9239 May 04 j 03:54	27° <b>ℓ</b> 17'05	
minimum elong	-9247 Jan 12 j 22:59	17° <b>ℓ</b> 45'48	16°45'58	min. Earth dist.	-9239 Jul 24 j 22:22	26° <b>ℓ</b> 17'57	47.64278 AU
max. Earth dist.	-9247 Jan 14 j 20:42	17° <b>ℓ</b> 48'29	48.86248 AU	opposition	-9239 Jul 26 j 06:03	26° <b>ℓ</b> 16'26	-17°27'50
retrograde	-9247 Apr 26 j 06:25	19° <b>ℓ</b> 18'52		direct	-9239 Oct 15 j 10:06	25° <b>ℓ</b> 16'41	
min. Earth dist.	-9247 Jul 16 j 16:49	18° <b>ℓ</b> 19'33	47.00116 AU				
opposition	-9247 Jul 18 j 10:14	18° <b>ℓ</b> 17'32	-17°28'24	conjunction	-9238 Jan 22 j 12:43	26° <b>ℓ</b> 44'46	-16°45'35
direct	-9247 Oct 07 j 06:45	17° <b>ℓ</b> 17'22		minimum elong	-9238 Jan 22 j 12:44	26° <b>ℓ</b> 44'47	16°46'01
				max. Earth dist.	-9238 Jan 23 j 22:40	26° <b>ℓ</b> 46'44	49.58680 AU
conjunction	-9246 Jan 14 j 06:13	18° <b>ℓ</b> 46'43	-16°46'42	retrograde	-9238 May 05 j 09:21	28° <b>ℓ</b> 15'57	
minimum elong	-9246 Jan 14 j 06:12	18° <b>ℓ</b> 46'43	16°47'06	min. Earth dist.	-9238 Jul 26 j 05:25	27° <b>ℓ</b> 16'51	47.70775 AU
max. Earth dist.	-9246 Jan 16 j 01:45	18° <b>ℓ</b> 49'16	48.96049 AU	opposition	-9238 Jul 27 j 11:10	27° <b>ℓ</b> 15'25	-17°26'25
retrograde	-9246 Apr 27 j 14:42	20° <b>ℓ</b> 19'32		direct	-9238 Oct 16 j 16:15	26° <b>ℓ</b> 15'44	
min. Earth dist.	-9246 Jul 18 j 00:45	19° <b>ℓ</b> 20'13	47.09689 AU				
opposition	-9246 Jul 19 j 16:11	19° <b>ℓ</b> 18'19	-17°29'20	conjunction	-9237 Jan 23 j 19:07	27° <b>ℓ</b> 43'43	-16°44'07
direct	-9246 Oct 08 j 11:34	18° <b>ℓ</b> 18'13		minimum elong	-9237 Jan 23 j 19:10	27° <b>ℓ</b> 43'43	16°44'34
				max. Earth dist.	-9237 Jan 25 j 03:51	27° <b>ℓ</b> 45'36	49.65057 AU
conjunction	-9245 Jan 15 j 13:26	19° <b>ℓ</b> 47'23	-16°47'33	retrograde	-9237 May 06 j 17:05	29° <b>ℓ</b> 14'45	
minimum elong	-9245 Jan 15 j 13:25	19° <b>ℓ</b> 47'23	16°47'56	min. Earth dist.	-9237 Jul 27 j 10:35	28° <b>ℓ</b> 15'45	47.76945 AU
max. Earth dist.	-9245 Jan 17 j 08:18	19° <b>ℓ</b> 49'53	49.05345 AU	opposition	-9237 Jul 28 j 16:08	28° <b>ℓ</b> 14'19	-17°24'42
retrograde	-9245 Apr 28 j 18:37	21° <b>ℓ</b> 19'58		direct	-9237 Oct 17 j 19:49	27° <b>ℓ</b> 14'44	
min. Earth dist.	-9245 Jul 19 j 08:01	20° <b>ℓ</b> 20'41	47.18724 AU				
opposition	-9245 Jul 20 j 21:58	20° <b>ℓ</b> 18'50	-17°30'00	conjunction	-9236 Jan 25 j 01:34	28° <b>ℓ</b> 42'38	-16°42'24
direct	-9245 Oct 09 j 20:19	19° <b>ℓ</b> 18'48		minimum elong	-9236 Jan 25 j 01:35	28° <b>ℓ</b> 42'38	16°42'51
				max. Earth dist.	-9236 Jan 26 j 08:25	28° <b>ℓ</b> 44'24	49.71068 AU
conjunction	-9244 Jan 16 j 20:33	20° <b>ℓ</b> 47'47	-16°48'07		-9236 Mar 31 j 22:22	0° <b>♂</b>	
minimum elong	-9244 Jan 16 j 20:32	20° <b>ℓ</b> 47'46	16°48'32	retrograde	-9236 May 07 j 02:01	0° <b>♂</b> 13'31	
max. Earth dist.	-9244 Jan 18 j 12:49	20° <b>ℓ</b> 50'08	49.14123 AU		-9236 Jun 12 j 04:10	30° <b>♂</b> <b>ℓ</b>	
retrograde	-9244 Apr 28 j 23:29	22° <b>ℓ</b> 20'08		opposition	-9236 Jul 28 j 21:03	29° <b>ℓ</b> 13'11	-17°22'43
min. Earth dist.	-9244 Jul 19 j 14:32	21° <b>ℓ</b> 20'52	47.27266 AU	min. Earth dist.	-9236 Jul 27 j 17:32	29° <b>ℓ</b> 14'31	47.82731 AU
opposition	-9244 Jul 21 j 03:31	21° <b>ℓ</b> 19'05	-17°30'22	direct	-9236 Oct 17 j 22:13	28° <b>ℓ</b> 13'40	
direct	-9244 Oct 10 j 03:42	20° <b>ℓ</b> 19'05					
				conjunction	-9235 Jan 25 j 08:09	29° <b>ℓ</b> 41'30	-16°40'24
conjunction	-9243 Jan 17 j 03:35	21° <b>ℓ</b> 47'53	-16°48'26	minimum elong	-9235 Jan 25 j 08:12	29° <b>ℓ</b> 41'30	16°40'52
minimum elong	-9243 Jan 17 j 03:34	21° <b>ℓ</b> 47'53	16°48'49	max. Earth dist.	-9235 Jan 26 j 14:28	29° <b>ℓ</b> 43'14	49.76670 AU
max. Earth dist.	-9243 Jan 18 j 19:08	21° <b>ℓ</b> 50'11	49.22421 AU		-9235 Feb 07 j 20:27	0° <b>♂</b>	
retrograde	-9243 Apr 30 j 05:40	23° <b>ℓ</b> 20'01		retrograde	-9235 May 08 j 06:25	1° <b>♂</b> 12'14	
min. Earth dist.	-9243 Jul 20 j 22:15	22° <b>ℓ</b> 20'44	47.35351 AU	min. Earth dist.	-9235 Jul 28 j 23:45	0° <b>♂</b> 13'16	47.88055 AU
opposition	-9243 Jul 22 j 09:07	22° <b>ℓ</b> 19'02	-17°30'28	opposition	-9235 Jul 30 j 01:59	0° <b>♂</b> 12'01	-17°20'28
direct	-9243 Oct 11 j 10:06	21° <b>ℓ</b> 19'05			-9235 Aug 09 j 14:13	30° <b>♂</b> <b>ℓ</b>	
				direct	-9235 Oct 19 j 05:04	29° <b>ℓ</b> 12'33	
conjunction	-9242 Jan 18 j 10:17	22° <b>ℓ</b> 47'43	-16°48'27		-9235 Dec 27 j 05:07	0° <b>♂</b>	
minimum elong	-9242 Jan 18 j 10:16	22° <b>ℓ</b> 47'42	16°48'52				
max. Earth dist.	-9242 Jan 20 j 00:27	22° <b>ℓ</b> 49'56	49.30312 AU	conjunction	-9234 Jan 26 j 14:23	0° <b>♂</b> 40'17	-16°38'10
retrograde	-9242 May 01 j 13:23	24° <b>ℓ</b> 19'37		minimum elong	-9234 Jan 26 j 14:25	0° <b>♂</b> 40'18	16°38'37
min. Earth dist.	-9242 Jul 22 j 03:46	23° <b>ℓ</b> 20'23	47.43049 AU	max. Earth dist.	-9234 Jan 27 j 18:05	0° <b>♂</b> 41'53	49.81789 AU
opposition	-9242 Jul 23 j 14:27	23° <b>ℓ</b> 18'43	-17°30'16	retrograde	-9234 May 09 j 10:17	2° <b>♂</b> 10'54	
direct	-9242 Oct 12 j 14:00	22° <b>ℓ</b> 18'48		min. Earth dist.	-9234 Jul 30 j 05:46	1° <b>♂</b> 11'58	47.92880 AU
				opposition	-9234 Jul 31 j 06:54	1° <b>♂</b> 10'45	-17°17'58
conjunction	-9241 Jan 19 j 16:57	23° <b>ℓ</b> 47'16	-16°48'10	direct	-9234 Oct 20 j 11:46	0° <b>♂</b> 11'20	

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 13

Attention, astronomical year style is used: The year -9233 in astronomical counting style is the year 9234 BCE in historical counting style.

conjunction	-9233 Jan 27 j 20:52	1°♂38'59	-16°35'41	retrograde	-9225 May 18 j 10:23	10°♂51'32	
minimum elong	-9233 Jan 27 j 20:56	1°♂38'59	16°36'09	opposition	-9225 Aug 08 j 23:58	9°♂51'49	-16°43'53
max. Earth dist.	-9233 Jan 28 j 23:38	1°♂40'31	49.86383 AU	min. Earth dist.	-9225 Aug 08 j 10:19	9°♂52'28	48.16476 AU
retrograde	-9233 May 10 j 14:08	3°♂09'28		direct	-9225 Oct 29 j 10:36	8°♂52'31	
opposition	-9233 Aug 01 j 11:44	2°♂09'22	-17°15'14				
min. Earth dist.	-9233 Jul 31 j 12:59	2°♂10'28	47.97162 AU	conjunction	-9224 Feb 06 j 04:01	10°♂19'34	-16°01'56
direct	-9233 Oct 21 j 19:23	1°♂09'59		minimum elong	-9224 Feb 06 j 04:08	10°♂19'34	16°02'27
				max. Earth dist.	-9224 Feb 06 j 17:55	10°♂20'21	50.08843 AU
conjunction	-9232 Jan 29 j 03:21	2°♂37'31	-16°32'58	retrograde	-9224 May 18 j 15:23	11°♂48'56	
minimum elong	-9232 Jan 29 j 03:24	2°♂37'32	16°33'26	opposition	-9224 Aug 09 j 04:22	10°♂49'19	-16°38'45
max. Earth dist.	-9232 Jan 30 j 04:07	2°♂38'57	49.90460 AU	min. Earth dist.	-9224 Aug 08 j 15:51	10°♂49'54	48.17321 AU
retrograde	-9232 May 10 j 21:32	4°♂07'50		direct	-9224 Oct 29 j 15:38	9°♂50'03	
opposition	-9232 Aug 01 j 16:27	3°♂07'48	-17°12'15				
min. Earth dist.	-9232 Jul 31 j 18:13	3°♂08'52	48.00925 AU	conjunction	-9223 Feb 06 j 10:05	11°♂17'05	-15°56'54
direct	-9232 Oct 21 j 23:11	2°♂08'25		minimum elong	-9223 Feb 06 j 10:10	11°♂17'06	15°57'24
				max. Earth dist.	-9223 Feb 06 j 23:11	11°♂17'50	50.09538 AU
conjunction	-9231 Jan 29 j 09:34	3°♂35'52	-16°30'00	retrograde	-9223 May 19 j 18:23	12°♂46'25	
minimum elong	-9231 Jan 29 j 09:37	3°♂35'52	16°30'30	opposition	-9223 Aug 10 j 08:48	11°♂46'51	-16°33'23
max. Earth dist.	-9231 Jan 30 j 08:22	3°♂37'10	49.94024 AU	min. Earth dist.	-9223 Aug 09 j 22:27	11°♂47'21	48.17693 AU
retrograde	-9231 May 12 j 04:22	5°♂06'01		direct	-9223 Oct 30 j 22:58	10°♂47'37	
opposition	-9231 Aug 02 j 21:09	4°♂06'01	-17°09'00				
min. Earth dist.	-9231 Aug 02 j 01:08	4°♂06'59	48.04214 AU	conjunction	-9222 Feb 07 j 16:09	12°♂14'40	-15°51'37
direct	-9231 Oct 23 j 02:34	3°♂06'38		minimum elong	-9222 Feb 07 j 16:17	12°♂14'40	15°52'08
				max. Earth dist.	-9222 Feb 08 j 03:21	12°♂15'18	50.09754 AU
conjunction	-9230 Jan 30 j 15:50	4°♂33'59	-16°26'47	retrograde	-9222 May 21 j 01:18	13°♂43'56	
minimum elong	-9230 Jan 30 j 15:55	4°♂33'59	16°27'16	opposition	-9222 Aug 11 j 13:06	12°♂44'26	-16°27'46
max. Earth dist.	-9230 Jan 31 j 14:11	4°♂35'15	49.97157 AU	min. Earth dist.	-9222 Aug 11 j 03:24	12°♂44'53	48.17553 AU
retrograde	-9230 May 13 j 08:09	6°♂03'58		direct	-9222 Nov 01 j 02:28	11°♂45'12	
min. Earth dist.	-9230 Aug 03 j 06:33	5°♂04'55	48.07084 AU				
opposition	-9230 Aug 04 j 01:41	5°♂04'01	-17°05'30	conjunction	-9221 Feb 08 j 22:11	13°♂12'15	-15°46'07
direct	-9230 Oct 24 j 09:28	4°♂04'37		minimum elong	-9221 Feb 08 j 22:18	13°♂12'15	15°46'37
				max. Earth dist.	-9221 Feb 09 j 07:09	13°♂12'45	50.09428 AU
conjunction	-9229 Jan 31 j 21:51	5°♂31'53	-16°23'19	retrograde	-9221 May 22 j 08:58	14°♂41'28	
minimum elong	-9229 Jan 31 j 21:55	5°♂31'53	16°23'49	opposition	-9221 Aug 12 j 17:35	13°♂42'00	-16°21'56
max. Earth dist.	-9229 Feb 01 j 17:48	5°♂33'01	49.99906 AU	min. Earth dist.	-9221 Aug 12 j 10:19	13°♂42'21	48.16863 AU
retrograde	-9229 May 14 j 12:13	7°♂01'43		direct	-9221 Nov 02 j 04:30	12°♂42'47	
min. Earth dist.	-9229 Aug 04 j 11:56	6°♂02'40	48.09600 AU				
opposition	-9229 Aug 05 j 06:13	6°♂01'48	-17°01'44	conjunction	-9220 Feb 10 j 04:24	14°♂09'49	-15°40'23
direct	-9229 Oct 25 j 15:51	5°♂02'24		minimum elong	-9220 Feb 10 j 04:31	14°♂09'49	15°40'55
				max. Earth dist.	-9220 Feb 10 j 12:27	14°♂10'16	50.08559 AU
conjunction	-9228 Feb 02 j 04:03	6°♂29'35	-16°19'35	retrograde	-9220 May 22 j 13:07	15°♂38'57	
minimum elong	-9228 Feb 02 j 04:09	6°♂29'36	16°20'04	opposition	-9220 Aug 12 j 21:50	14°♂39'31	-16°15'53
max. Earth dist.	-9228 Feb 02 j 23:37	6°♂30'42	50.02310 AU	min. Earth dist.	-9220 Aug 12 j 15:42	14°♂39'48	48.15625 AU
retrograde	-9228 May 14 j 15:39	7°♂59'19		direct	-9220 Nov 02 j 11:00	13°♂40'16	
opposition	-9228 Aug 05 j 10:42	6°♂59'25	-16°57'41				
min. Earth dist.	-9228 Aug 04 j 18:18	7°♂00'12	48.11782 AU	conjunction	-9219 Feb 10 j 10:21	15°♂07'18	-15°34'26
direct	-9228 Oct 25 j 22:36	6°♂00'02		minimum elong	-9219 Feb 10 j 10:29	15°♂07'19	15°34'57
				max. Earth dist.	-9219 Feb 10 j 15:40	15°♂07'36	50.07175 AU
conjunction	-9227 Feb 02 j 10:07	7°♂27'09	-16°15'34	retrograde	-9219 May 23 j 16:56	16°♂36'22	
minimum elong	-9227 Feb 02 j 10:11	7°♂27'09	16°16'04	opposition	-9219 Aug 14 j 02:07	15°♂36'56	-16°09'35
max. Earth dist.	-9227 Feb 03 j 04:18	7°♂28'11	50.04418 AU	min. Earth dist.	-9219 Aug 13 j 21:11	15°♂37'11	48.13906 AU
retrograde	-9227 May 15 j 21:35	8°♂56'46		direct	-9219 Nov 03 j 17:13	14°♂37'40	
opposition	-9227 Aug 06 j 15:08	7°♂56'56	-16°53'22				
min. Earth dist.	-9227 Aug 05 j 22:46	7°♂57'43	48.13666 AU	conjunction	-9218 Feb 11 j 16:12	16°♂04'42	-15°28'14
direct	-9227 Oct 27 j 02:56	6°♂57'34		minimum elong	-9218 Feb 11 j 16:19	16°♂04'42	15°28'47
				max. Earth dist.	-9218 Feb 11 j 20:56	16°♂04'58	50.05326 AU
conjunction	-9226 Feb 03 j 15:54	8°♂24'38	-16°11'17	retrograde	-9218 May 24 j 19:35	17°♂33'43	
minimum elong	-9226 Feb 03 j 16:00	8°♂24'38	16°11'47	opposition	-9218 Aug 15 j 06:26	16°♂34'16	-16°03'02
max. Earth dist.	-9226 Feb 04 j 08:30	8°♂25'34	50.06219 AU	min. Earth dist.	-9218 Aug 15 j 03:32	16°♂34'25	48.11747 AU
retrograde	-9226 May 17 j 05:37	9°♂54'09		direct	-9218 Nov 05 j 00:26	15°♂34'58	
opposition	-9226 Aug 07 j 19:41	8°♂54'23	-16°48'45				
min. Earth dist.	-9226 Aug 07 j 05:05	8°♂55'04	48.15245 AU	conjunction	-9217 Feb 12 j 22:08	17°♂01'59	-15°21'48
direct	-9226 Oct 28 j 05:14	7°♂55'03		minimum elong	-9217 Feb 12 j 22:16	17°♂02'00	15°22'20
				max. Earth dist.	-9217 Feb 13 j 01:19	17°♂02'10	50.03088 AU
conjunction	-9225 Feb 04 j 22:00	9°♂22'05	-16°06'44	retrograde	-9217 May 26 j 00:43	18°♂30'57	
minimum elong	-9225 Feb 04 j 22:05	9°♂22'06	16°07'15	opposition	-9217 Aug 16 j 10:28	17°♂31'31	-15°56'13
max. Earth dist.	-9225 Feb 05 j 14:18	9°♂23'01	50.07713 AU	min. Earth dist.	-9217 Aug 16 j 07:46	17°♂31'39	48.09222 AU

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 14

Attention, astronomical year style is used: The year -9217 in astronomical counting style is the year 9218 BCE in historical counting style.

direct	-9217 Nov 06 j 05:16	16°♂32'10		conjunction	-9209 Feb 20 j 21:41	24°♂40'07	-14°21'05
				minimum elong	-9209 Feb 20 j 21:51	24°♂40'07	14°21'39
conjunction	-9216 Feb 14 j 04:03	17°♂59'11	-15°15'06	max. Earth dist.	-9209 Feb 20 j 13:18	24°♂39'38	49.73195 AU
minimum elong	-9216 Feb 14 j 04:10	17°♂59'12	15°15'39	morning rise	-9209 Feb 25 j 15:19	24°♂46'32	
max. Earth dist.	-9216 Feb 14 j 05:27	17°♂59'16	50.00496 AU	retrograde	-9209 Jun 02 j 20:50	26°♂09'01	
retrograde	-9216 May 26 j 08:36	19°♂28'06		opposition	-9209 Aug 23 j 20:18	25°♂09'41	-14°52'17
opposition	-9216 Aug 16 j 14:45	18°♂28'41	-15°49'09	min. Earth dist.	-9209 Aug 24 j 03:55	25°♂09'19	47.76852 AU
min. Earth dist.	-9216 Aug 16 j 13:58	18°♂28'43	48.06373 AU	direct	-9209 Nov 13 j 16:44	24°♂10'08	
direct	-9216 Nov 06 j 07:26	17°♂29'18		evening set	-9208 Feb 16 j 22:54	25°♂30'33	
conjunction	-9215 Feb 14 j 09:55	18°♂56'21	-15°08'09	conjunction	-9208 Feb 22 j 03:59	25°♂37'38	-14°12'25
minimum elong	-9215 Feb 14 j 10:04	18°♂56'21	15°08'41	minimum elong	-9208 Feb 22 j 04:09	25°♂37'39	14°12'58
max. Earth dist.	-9215 Feb 14 j 11:11	18°♂56'25	49.97606 AU	max. Earth dist.	-9208 Feb 21 j 18:39	25°♂37'06	49.67512 AU
retrograde	-9215 May 27 j 14:16	20°♂25'13		morning rise	-9208 Feb 27 j 09:28	25°♂44'43	
opposition	-9215 Aug 17 j 18:55	19°♂25'48	-15°41'48	retrograde	-9208 Jun 02 j 23:48	27°♂06'32	
min. Earth dist.	-9215 Aug 17 j 18:40	19°♂25'49	48.03222 AU	opposition	-9208 Aug 24 j 00:44	26°♂07'12	-14°43'12
direct	-9215 Nov 07 j 11:23	18°♂26'24		min. Earth dist.	-9208 Aug 24 j 10:29	26°♂06'44	47.70777 AU
				direct	-9208 Nov 14 j 00:08	25°♂07'35	
conjunction	-9214 Feb 15 j 15:40	19°♂53'29	-15°00'56	evening set	-9207 Feb 16 j 18:04	26°♂27'27	
minimum elong	-9214 Feb 15 j 15:48	19°♂53'29	15°01'29				
max. Earth dist.	-9214 Feb 15 j 14:44	19°♂53'26	49.94434 AU	conjunction	-9207 Feb 22 j 10:00	26°♂35'09	-14°03'32
retrograde	-9214 May 28 j 19:44	21°♂22'20		minimum elong	-9207 Feb 22 j 10:10	26°♂35'09	14°04'06
opposition	-9214 Aug 18 j 23:04	20°♂22'56	-15°34'11	max. Earth dist.	-9207 Feb 21 j 22:48	26°♂34'31	49.61331 AU
min. Earth dist.	-9214 Aug 18 j 23:42	20°♂22'54	47.99798 AU	morning rise	-9207 Feb 28 j 02:22	26°♂42'52	
direct	-9214 Nov 08 j 15:37	19°♂23'31		retrograde	-9207 Jun 04 j 04:19	28°♂04'04	
evening set	-9213 Feb 15 j 00:32	20°♂48'06		opposition	-9207 Aug 25 j 04:59	27°♂04'42	-14°33'52
				min. Earth dist.	-9207 Aug 25 j 15:10	27°♂04'13	47.64224 AU
conjunction	-9213 Feb 16 j 21:37	20°♂50'39	-14°53'27	direct	-9207 Nov 15 j 05:39	26°♂05'01	
minimum elong	-9213 Feb 16 j 21:47	20°♂50'39	14°54'01	evening set	-9206 Feb 17 j 13:47	27°♂24'23	
max. Earth dist.	-9213 Feb 16 j 20:15	20°♂50'34	49.90971 AU				
morning rise	-9213 Feb 18 j 19:03	20°♂53'13		conjunction	-9206 Feb 23 j 16:05	27°♂32'39	-13°54'24
retrograde	-9213 May 29 j 21:00	22°♂19'30		minimum elong	-9206 Feb 23 j 16:15	27°♂32'40	13°54'57
opposition	-9213 Aug 20 j 03:20	21°♂20'07	-15°26'18	max. Earth dist.	-9206 Feb 23 j 02:56	27°♂31'54	49.54687 AU
min. Earth dist.	-9213 Aug 20 j 05:44	21°♂20'00	47.96051 AU	morning rise	-9206 Mar 01 j 18:52	27°♂40'58	
direct	-9213 Nov 09 j 23:51	20°♂20'41		retrograde	-9206 Jun 05 j 11:12	29°♂01'36	
evening set	-9212 Feb 15 j 07:28	21°♂44'01		opposition	-9206 Aug 26 j 09:18	28°♂02'12	-14°24'17
				min. Earth dist.	-9206 Aug 26 j 21:39	28°♂01'36	47.57248 AU
conjunction	-9212 Feb 18 j 03:36	21°♂47'53	-14°45'43	direct	-9206 Nov 16 j 08:53	27°♂02'26	
minimum elong	-9212 Feb 18 j 03:44	21°♂47'53	14°46'16	evening set	-9205 Feb 18 j 10:11	28°♂21'20	
max. Earth dist.	-9212 Feb 18 j 00:40	21°♂47'43	49.87181 AU				
morning rise	-9212 Feb 21 j 00:03	21°♂51'45		conjunction	-9205 Feb 24 j 22:16	28°♂30'10	-13°45'01
retrograde	-9212 May 30 j 02:10	23°♂16'44		minimum elong	-9205 Feb 24 j 22:26	28°♂30'10	13°45'36
opposition	-9212 Aug 20 j 07:24	22°♂17'23	-15°18'10	max. Earth dist.	-9205 Feb 24 j 08:44	28°♂29'24	49.47658 AU
min. Earth dist.	-9212 Aug 20 j 10:13	22°♂17'15	47.91946 AU	morning rise	-9205 Mar 03 j 10:43	28°♂39'02	
direct	-9212 Nov 10 j 04:49	21°♂17'56		retrograde	-9205 Jun 06 j 17:19	29°♂59'08	
evening set	-9211 Feb 14 j 20:04	22°♂40'22		opposition	-9205 Aug 27 j 13:37	28°♂59'42	-14°14'27
				min. Earth dist.	-9205 Aug 28 j 02:39	28°♂59'04	47.49895 AU
conjunction	-9211 Feb 18 j 09:36	22°♂45'12	-14°37'45	direct	-9205 Nov 17 j 13:04	27°♂59'52	
minimum elong	-9211 Feb 18 j 09:46	22°♂45'13	14°38'18	evening set	-9204 Feb 19 j 07:00	29°♂18'20	
max. Earth dist.	-9211 Feb 18 j 04:48	22°♂44'56	49.82988 AU				
morning rise	-9211 Feb 21 j 23:31	22°♂50'04		conjunction	-9204 Feb 26 j 04:19	29°♂27'42	-13°35'23
retrograde	-9211 May 31 j 10:11	24°♂14'05		minimum elong	-9204 Feb 26 j 04:30	29°♂27'43	13°35'56
opposition	-9211 Aug 21 j 11:45	23°♂14'45	-15°09'46	max. Earth dist.	-9204 Feb 25 j 12:28	29°♂26'48	49.40279 AU
min. Earth dist.	-9211 Aug 21 j 16:52	23°♂14'31	47.87418 AU	morning rise	-9204 Mar 04 j 02:10	29°♂37'05	
direct	-9211 Nov 11 j 06:29	22°♂15'17			-9204 Mar 21 j 09:57	0°♂	
evening set	-9210 Feb 15 j 11:22	23°♂36'58		retrograde	-9204 Jun 06 j 23:43	0°♂56'43	
					-9204 Aug 25 j 08:20	30°♂	
conjunction	-9210 Feb 19 j 15:36	23°♂42'37	-14°29'32	opposition	-9204 Aug 27 j 17:54	29°♂57'15	-14°04'21
minimum elong	-9210 Feb 19 j 15:45	23°♂42'38	14°30'04	min. Earth dist.	-9204 Aug 28 j 07:56	29°♂56'34	47.42231 AU
max. Earth dist.	-9210 Feb 19 j 10:03	23°♂42'19	49.78348 AU	direct	-9204 Nov 17 j 17:05	28°♂57'21	
morning rise	-9210 Feb 23 j 20:10	23°♂48'19			-9203 Feb 07 j 14:42	0°♂	
retrograde	-9210 Jun 01 j 15:18	25°♂11'31		evening set	-9203 Feb 19 j 04:08	0°♂15'25	
opposition	-9210 Aug 22 j 16:03	24°♂12'12	-15°01'09				
min. Earth dist.	-9210 Aug 22 j 22:07	24°♂11'54	47.82393 AU	conjunction	-9203 Feb 26 j 10:31	0°♂25'19	-13°25'29
direct	-9210 Nov 12 j 11:51	23°♂12'42		minimum elong	-9203 Feb 26 j 10:41	0°♂25'19	13°26'03
evening set	-9209 Feb 16 j 04:31	24°♂33'43		max. Earth dist.	-9203 Feb 25 j 18:16	0°♂24'23	49.32602 AU
				morning rise	-9203 Mar 05 j 17:17	0°♂35'13	

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 15

Attention, astronomical year style is used: The year -9203 in astronomical counting style is the year 9204 BCE in historical counting style.

retrograde	-9203 Jun 08 j 01:37	1° $\overline{3}$ 54'23		max. Earth dist.	-9196 Mar 04 j 04:31	7° $\overline{3}$ 12'32	48.69353 AU
opposition	-9203 Aug 28 j 22:25	0° $\overline{3}$ 54'54	-13°53'58				
min. Earth dist.	-9203 Aug 29 j 13:56	0° $\overline{3}$ 54'09	47.34275 AU	conjunction	-9196 Mar 05 j 07:37	7° $\overline{3}$ 14'06	-12°09'02
	-9203 Oct 28 j 08:00	30° $\overline{R}$ 27		minimum elong	-9196 Mar 05 j 07:49	7° $\overline{3}$ 14'06	12°09'37
direct	-9203 Nov 19 j 00:50	29° $\overline{R}$ 54'57		morning rise	-9196 Mar 14 j 21:16	7° $\overline{3}$ 27'13	
	-9203 Dec 10 j 14:37	0° $\overline{3}$		retrograde	-9196 Jun 14 j 18:42	8° $\overline{3}$ 43'58	
evening set	-9202 Feb 20 j 01:37	1° $\overline{3}$ 12'40		opposition	-9196 Sep 04 j 06:57	7° $\overline{3}$ 44'20	-12°33'54
				min. Earth dist.	-9196 Sep 05 j 07:54	7° $\overline{3}$ 43'08	46.68535 AU
conjunction	-9202 Feb 27 j 16:31	1° $\overline{3}$ 23'02	-13°15'20	direct	-9196 Nov 25 j 12:06	6° $\overline{3}$ 43'57	
minimum elong	-9202 Feb 27 j 16:42	1° $\overline{3}$ 23'03	13°15'53	evening set	-9195 Feb 24 j 18:15	7° $\overline{3}$ 59'45	
max. Earth dist.	-9202 Feb 26 j 23:02	1° $\overline{3}$ 22'03	49.24663 AU	max. Earth dist.	-9195 Mar 05 j 10:40	8° $\overline{3}$ 11'40	48.58439 AU
morning rise	-9202 Mar 07 j 07:52	1° $\overline{3}$ 33'27					
retrograde	-9202 Jun 09 j 06:21	2° $\overline{3}$ 52'13		conjunction	-9195 Mar 06 j 14:29	8° $\overline{3}$ 13'16	-11°57'08
opposition	-9202 Aug 30 j 02:49	1° $\overline{3}$ 52'43	-13°43'18	minimum elong	-9195 Mar 06 j 14:40	8° $\overline{3}$ 13'17	11°57'42
min. Earth dist.	-9202 Aug 30 j 18:26	1° $\overline{3}$ 51'58	47.26051 AU	morning rise	-9195 Mar 16 j 10:55	8° $\overline{3}$ 26'49	
direct	-9202 Nov 20 j 06:33	0° $\overline{3}$ 52'43		retrograde	-9195 Jun 16 j 02:18	9° $\overline{3}$ 43'15	
evening set	-9201 Feb 20 j 23:28	2° $\overline{3}$ 10'06		opposition	-9195 Sep 05 j 11:52	8° $\overline{3}$ 43'33	-12°21'27
				min. Earth dist.	-9195 Sep 06 j 13:34	8° $\overline{3}$ 42'18	46.57219 AU
conjunction	-9201 Feb 28 j 22:46	2° $\overline{3}$ 20'57	-13°04'54	direct	-9195 Nov 26 j 16:08	7° $\overline{3}$ 43'03	
minimum elong	-9201 Feb 28 j 22:57	2° $\overline{3}$ 20'58	13°05'28	evening set	-9194 Feb 25 j 18:10	8° $\overline{3}$ 58'37	
max. Earth dist.	-9201 Feb 28 j 03:38	2° $\overline{3}$ 19'52	49.16435 AU				
morning rise	-9201 Mar 08 j 22:32	2° $\overline{3}$ 31'51		conjunction	-9194 Mar 07 j 21:06	9° $\overline{3}$ 12'32	-11°45'00
retrograde	-9201 Jun 10 j 14:49	3° $\overline{3}$ 50'14		minimum elong	-9194 Mar 07 j 21:17	9° $\overline{3}$ 12'33	11°45'35
opposition	-9201 Aug 31 j 07:18	2° $\overline{3}$ 50'44	-13°32'23	max. Earth dist.	-9194 Mar 06 j 14:37	9° $\overline{3}$ 10'47	48.47050 AU
min. Earth dist.	-9201 Sep 01 j 00:58	2° $\overline{3}$ 49'53	47.17532 AU	morning rise	-9194 Mar 18 j 00:27	9° $\overline{3}$ 26'30	
direct	-9201 Nov 21 j 08:13	1° $\overline{3}$ 50'42		retrograde	-9194 Jun 17 j 10:33	10° $\overline{3}$ 42'37	
evening set	-9200 Feb 21 j 21:54	3° $\overline{3}$ 07'47		opposition	-9194 Sep 06 j 16:49	9° $\overline{3}$ 42'50	-12°08'45
max. Earth dist.	-9200 Feb 29 j 09:43	3° $\overline{3}$ 17'59	49.07900 AU	min. Earth dist.	-9194 Sep 07 j 20:00	9° $\overline{3}$ 41'31	46.45463 AU
				direct	-9194 Nov 27 j 19:50	8° $\overline{3}$ 42'12	
conjunction	-9200 Mar 01 j 05:15	3° $\overline{3}$ 19'06	-12°54'13	evening set	-9193 Feb 26 j 18:24	9° $\overline{3}$ 57'34	
minimum elong	-9200 Mar 01 j 05:27	3° $\overline{3}$ 19'07	12°54'48	max. Earth dist.	-9193 Mar 07 j 21:02	10° $\overline{3}$ 10'06	48.35235 AU
morning rise	-9200 Mar 09 j 12:58	3° $\overline{3}$ 30'28					
retrograde	-9200 Jun 10 j 20:51	4° $\overline{3}$ 48'29		conjunction	-9193 Mar 09 j 04:05	10° $\overline{3}$ 11'53	-11°32'37
opposition	-9200 Aug 31 j 11:51	3° $\overline{3}$ 48'59	-13°21'11	minimum elong	-9193 Mar 09 j 04:17	10° $\overline{3}$ 11'54	11°33'10
min. Earth dist.	-9200 Sep 01 j 06:09	3° $\overline{3}$ 48'07	47.08662 AU	morning rise	-9193 Mar 19 j 13:56	10° $\overline{3}$ 26'14	
direct	-9200 Nov 21 j 12:47	2° $\overline{3}$ 48'55		retrograde	-9193 Jun 18 j 13:55	11° $\overline{3}$ 42'05	
evening set	-9199 Feb 21 j 20:26	4° $\overline{3}$ 05'43		opposition	-9193 Sep 07 j 21:49	10° $\overline{3}$ 42'13	-11°55'47
				min. Earth dist.	-9193 Sep 09 j 02:38	10° $\overline{3}$ 40'49	46.33305 AU
conjunction	-9199 Mar 02 j 11:31	4° $\overline{3}$ 17'30	-12°43'17	direct	-9193 Nov 29 j 03:42	9° $\overline{3}$ 41'27	
minimum elong	-9199 Mar 02 j 11:41	4° $\overline{3}$ 17'31	12°43'51	evening set	-9192 Feb 27 j 18:59	10° $\overline{3}$ 56'37	
max. Earth dist.	-9199 Mar 01 j 13:31	4° $\overline{3}$ 16'15	48.98984 AU	max. Earth dist.	-9192 Mar 08 j 02:24	11° $\overline{3}$ 09'26	48.23065 AU
morning rise	-9199 Mar 11 j 03:06	4° $\overline{3}$ 29'20					
retrograde	-9199 Jun 12 j 03:50	5° $\overline{3}$ 47'01		conjunction	-9192 Mar 09 j 11:01	11° $\overline{3}$ 11'20	-11°19'58
opposition	-9199 Sep 01 j 16:30	4° $\overline{3}$ 47'30	-13°09'44	minimum elong	-9192 Mar 09 j 11:12	11° $\overline{3}$ 11'20	11°20'32
min. Earth dist.	-9199 Sep 02 j 12:15	4° $\overline{3}$ 46'33	46.99390 AU	morning rise	-9192 Mar 20 j 03:18	11° $\overline{3}$ 26'04	
direct	-9199 Nov 22 j 17:09	3° $\overline{3}$ 47'22		retrograde	-9192 Jun 18 j 17:40	12° $\overline{3}$ 41'39	
evening set	-9198 Feb 22 j 19:22	5° $\overline{3}$ 03'55		opposition	-9192 Sep 08 j 02:53	11° $\overline{3}$ 41'41	-11°42'32
				min. Earth dist.	-9192 Sep 09 j 08:00	11° $\overline{3}$ 40'16	46.20821 AU
conjunction	-9198 Mar 03 j 18:09	5° $\overline{3}$ 16'10	-12°32'06	direct	-9192 Nov 29 j 11:38	10° $\overline{3}$ 40'48	
minimum elong	-9198 Mar 03 j 18:21	5° $\overline{3}$ 16'11	12°32'41	evening set	-9191 Feb 27 j 19:29	11° $\overline{3}$ 55'47	
max. Earth dist.	-9198 Mar 02 j 19:24	5° $\overline{3}$ 14'52	48.89619 AU	max. Earth dist.	-9191 Mar 09 j 07:45	12° $\overline{3}$ 08'55	48.10571 AU
morning rise	-9198 Mar 12 j 17:16	5° $\overline{3}$ 28'26					
retrograde	-9198 Jun 13 j 07:13	6° $\overline{3}$ 45'48		conjunction	-9191 Mar 10 j 17:51	12° $\overline{3}$ 10'53	-11°07'02
opposition	-9198 Sep 02 j 21:14	5° $\overline{3}$ 46'16	-12°58'02	minimum elong	-9191 Mar 10 j 18:03	12° $\overline{3}$ 10'54	11°07'36
min. Earth dist.	-9198 Sep 03 j 19:03	5° $\overline{3}$ 45'13	46.89631 AU	morning rise	-9191 Mar 21 j 16:26	12° $\overline{3}$ 26'00	
direct	-9198 Nov 24 j 01:09	4° $\overline{3}$ 46'04		retrograde	-9191 Jun 20 j 00:27	13° $\overline{3}$ 41'22	
evening set	-9197 Feb 23 j 18:48	6° $\overline{3}$ 02'22		opposition	-9191 Sep 09 j 08:11	12° $\overline{3}$ 41'19	-11°29'01
max. Earth dist.	-9197 Mar 03 j 23:56	6° $\overline{3}$ 13'37	48.79759 AU	min. Earth dist.	-9191 Sep 10 j 15:09	12° $\overline{3}$ 39'49	46.08041 AU
				direct	-9191 Nov 30 j 16:25	11° $\overline{3}$ 40'18	
conjunction	-9197 Mar 05 j 00:50	6° $\overline{3}$ 15'03	-12°20'41	evening set	-9190 Feb 28 j 20:22	12° $\overline{3}$ 55'08	
minimum elong	-9197 Mar 05 j 01:01	6° $\overline{3}$ 15'03	12°21'15	max. Earth dist.	-9190 Mar 10 j 14:33	13° $\overline{3}$ 08'37	47.97811 AU
morning rise	-9197 Mar 14 j 07:16	6° $\overline{3}$ 27'45					
retrograde	-9197 Jun 14 j 11:58	7° $\overline{3}$ 44'47		conjunction	-9190 Mar 12 j 00:55	13° $\overline{3}$ 10'37	-10°53'51
opposition	-9197 Sep 04 j 02:01	6° $\overline{3}$ 45'13	-12°46'05	minimum elong	-9190 Mar 12 j 01:07	13° $\overline{3}$ 10'37	10°54'25
min. Earth dist.	-9197 Sep 05 j 00:27	6° $\overline{3}$ 44'08	46.79350 AU	morning rise	-9190 Mar 23 j 05:30	13° $\overline{3}$ 26'07	
direct	-9197 Nov 25 j 07:36	5° $\overline{3}$ 44'57		retrograde	-9190 Jun 21 j 07:06	14° $\overline{3}$ 41'17	
evening set	-9196 Feb 24 j 18:22	7° $\overline{3}$ 01'00		opposition	-9190 Sep 10 j 13:21	13° $\overline{3}$ 41'09	-11°15'11

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 16

Attention, astronomical year style is used: The year -9190 in astronomical counting style is the year 9191 BCE in historical counting style.

min. Earth dist.	-9190 Sep 11 j 20:33	13° $\overline{3}$ 39'38	45.94988 AU	morning rise	-9183 Apr 01 j 01:12	20° $\overline{3}$ 35'43	
direct	-9190 Dec 01 j 21:16	12° $\overline{3}$ 40'02		retrograde	-9183 Jun 28 j 10:41	21° $\overline{3}$ 49'57	
evening set	-9189 Mar 01 j 21:33	13° $\overline{3}$ 54'43		opposition	-9183 Sep 17 j 05:42	20° $\overline{3}$ 49'16	-9°30'35
max. Earth dist.	-9189 Mar 11 j 19:27	14° $\overline{3}$ 08'28	47.84777 AU	min. Earth dist.	-9183 Sep 18 j 22:47	20° $\overline{3}$ 47'15	44.93029 AU
				direct	-9183 Dec 08 j 14:21	19° $\overline{3}$ 47'17	
conjunction	-9189 Mar 13 j 08:02	14° $\overline{3}$ 10'35	-10°40'22	evening set	-9182 Mar 07 j 13:24	21° $\overline{3}$ 01'36	
minimum elong	-9189 Mar 13 j 08:14	14° $\overline{3}$ 10'36	10°40'57	max. Earth dist.	-9182 Mar 18 j 15:15	21° $\overline{3}$ 17'13	46.82369 AU
morning rise	-9189 Mar 24 j 18:45	14° $\overline{3}$ 26'29					
retrograde	-9189 Jun 22 j 15:52	15° $\overline{3}$ 41'27		conjunction	-9182 Mar 20 j 13:58	21° $\overline{3}$ 19'59	-8°58'36
opposition	-9189 Sep 11 j 18:44	14° $\overline{3}$ 41'15	-11°01'05	minimum elong	-9182 Mar 20 j 14:09	21° $\overline{3}$ 20'00	8°59'09
min. Earth dist.	-9189 Sep 13 j 03:17	14° $\overline{3}$ 39'40	45.81658 AU	morning rise	-9182 Apr 02 j 14:17	21° $\overline{3}$ 38'23	
direct	-9189 Dec 03 j 01:18	13° $\overline{3}$ 40'02		retrograde	-9182 Jun 29 j 15:35	22° $\overline{3}$ 52'30	
evening set	-9188 Mar 01 j 22:54	14° $\overline{3}$ 54'37		opposition	-9182 Sep 18 j 11:44	21° $\overline{3}$ 51'42	-9°14'32
max. Earth dist.	-9188 Mar 12 j 02:28	15° $\overline{3}$ 08'43	47.71437 AU	min. Earth dist.	-9182 Sep 20 j 05:27	21° $\overline{3}$ 49'38	44.76652 AU
				direct	-9182 Dec 09 j 23:35	20° $\overline{3}$ 49'32	
conjunction	-9188 Mar 13 j 15:24	15° $\overline{3}$ 10'52	-10°26'38	evening set	-9181 Mar 08 j 16:41	22° $\overline{3}$ 03'50	
minimum elong	-9188 Mar 13 j 15:35	15° $\overline{3}$ 10'53	10°27'12	max. Earth dist.	-9181 Mar 19 j 21:52	22° $\overline{3}$ 19'41	46.65939 AU
morning rise	-9188 Mar 25 j 07:47	15° $\overline{3}$ 27'08					
retrograde	-9188 Jun 22 j 21:03	16° $\overline{3}$ 41'56		conjunction	-9181 Mar 21 j 22:13	22° $\overline{3}$ 22'34	-8°43'00
opposition	-9188 Sep 12 j 00:16	15° $\overline{3}$ 41'41	-10°46'41	minimum elong	-9181 Mar 21 j 22:24	22° $\overline{3}$ 22'35	8°43'34
min. Earth dist.	-9188 Sep 13 j 10:20	15° $\overline{3}$ 40'01	45.67993 AU	morning rise	-9181 Apr 04 j 03:20	22° $\overline{3}$ 41'18	
direct	-9188 Dec 03 j 09:08	14° $\overline{3}$ 40'22		retrograde	-9181 Jun 30 j 21:55	23° $\overline{3}$ 55'21	
evening set	-9187 Mar 03 j 00:41	15° $\overline{3}$ 54'54		opposition	-9181 Sep 19 j 18:09	22° $\overline{3}$ 54'24	-8°58'11
max. Earth dist.	-9187 Mar 13 j 08:04	16° $\overline{3}$ 09'15	47.57754 AU	min. Earth dist.	-9181 Sep 21 j 13:58	22° $\overline{3}$ 52'14	44.59905 AU
				direct	-9181 Dec 11 j 07:07	21° $\overline{3}$ 52'03	
conjunction	-9187 Mar 14 j 22:46	16° $\overline{3}$ 11'31	-10°12'37	evening set	-9180 Mar 08 j 20:14	23° $\overline{3}$ 06'21	
minimum elong	-9187 Mar 14 j 22:58	16° $\overline{3}$ 11'31	10°13'11	max. Earth dist.	-9180 Mar 20 j 05:46	23° $\overline{3}$ 22'31	46.49179 AU
morning rise	-9187 Mar 26 j 20:53	16° $\overline{3}$ 28'08					
retrograde	-9187 Jun 24 j 03:11	17° $\overline{3}$ 42'48		conjunction	-9180 Mar 22 j 06:31	23° $\overline{3}$ 25'25	-8°27'07
opposition	-9187 Sep 13 j 05:48	16° $\overline{3}$ 42'30	-10°32'01	minimum elong	-9180 Mar 22 j 06:42	23° $\overline{3}$ 25'26	8°27'39
min. Earth dist.	-9187 Sep 14 j 16:20	16° $\overline{3}$ 40'49	45.53958 AU	morning rise	-9180 Apr 04 j 16:11	23° $\overline{3}$ 44'28	
direct	-9187 Dec 04 j 15:50	15° $\overline{3}$ 41'04		retrograde	-9180 Jul 01 j 05:36	24° $\overline{3}$ 58'28	
evening set	-9186 Mar 04 j 02:30	16° $\overline{3}$ 55'32		opposition	-9180 Sep 20 j 00:33	23° $\overline{3}$ 57'24	-8°41'32
max. Earth dist.	-9186 Mar 14 j 13:46	17° $\overline{3}$ 10'09	47.43644 AU	min. Earth dist.	-9180 Sep 21 j 20:27	23° $\overline{3}$ 55'13	44.42853 AU
				direct	-9180 Dec 11 j 13:04	22° $\overline{3}$ 54'52	
conjunction	-9186 Mar 16 j 06:15	17° $\overline{3}$ 12'31	-9°58'20	evening set	-9179 Mar 10 j 00:03	24° $\overline{3}$ 09'10	
minimum elong	-9186 Mar 16 j 06:26	17° $\overline{3}$ 12'32	9°58'53	max. Earth dist.	-9179 Mar 21 j 11:59	24° $\overline{3}$ 25'32	46.32139 AU
morning rise	-9186 Mar 28 j 09:56	17° $\overline{3}$ 29'31					
retrograde	-9186 Jun 25 j 10:00	18° $\overline{3}$ 44'04		conjunction	-9179 Mar 23 j 14:49	24° $\overline{3}$ 28'34	-8°10'56
opposition	-9186 Sep 14 j 11:39	17° $\overline{3}$ 43'42	-10°17'04	minimum elong	-9179 Mar 23 j 14:59	24° $\overline{3}$ 28'35	8°11'30
min. Earth dist.	-9186 Sep 16 j 00:38	17° $\overline{3}$ 41'53	45.39468 AU	morning rise	-9179 Apr 06 j 05:09	24° $\overline{3}$ 47'57	
direct	-9186 Dec 05 j 21:38	16° $\overline{3}$ 42'09		retrograde	-9179 Jul 02 j 15:52	26° $\overline{3}$ 01'55	
evening set	-9185 Mar 05 j 04:54	17° $\overline{3}$ 56'34		opposition	-9179 Sep 21 j 07:11	25° $\overline{3}$ 00'42	-8°24'35
max. Earth dist.	-9185 Mar 15 j 20:47	18° $\overline{3}$ 11'28	47.29063 AU	min. Earth dist.	-9179 Sep 23 j 04:29	24° $\overline{3}$ 58'27	44.25560 AU
				direct	-9179 Dec 12 j 17:36	23° $\overline{3}$ 57'59	
conjunction	-9185 Mar 17 j 14:07	18° $\overline{3}$ 13'54	-9°43'47	evening set	-9178 Mar 11 j 03:55	25° $\overline{3}$ 12'20	
minimum elong	-9185 Mar 17 j 14:19	18° $\overline{3}$ 13'55	9°44'21	max. Earth dist.	-9178 Mar 22 j 20:30	25° $\overline{3}$ 29'02	46.14864 AU
morning rise	-9185 Mar 29 j 23:04	18° $\overline{3}$ 31'15					
retrograde	-9185 Jun 26 j 18:12	19° $\overline{3}$ 45'42		conjunction	-9178 Mar 24 j 23:20	25° $\overline{3}$ 32'04	-7°54'29
opposition	-9185 Sep 15 j 17:27	18° $\overline{3}$ 45'15	-10°01'51	minimum elong	-9178 Mar 24 j 23:31	25° $\overline{3}$ 32'05	7°55'01
min. Earth dist.	-9185 Sep 17 j 07:12	18° $\overline{3}$ 43'23	45.24478 AU	morning rise	-9178 Apr 07 j 17:53	25° $\overline{3}$ 51'47	
direct	-9185 Dec 07 j 02:52	17° $\overline{3}$ 43'34		retrograde	-9178 Jul 03 j 23:57	27° $\overline{3}$ 05'43	
evening set	-9184 Mar 05 j 07:37	18° $\overline{3}$ 57'56		opposition	-9178 Sep 22 j 14:01	26° $\overline{3}$ 04'22	-8°07'19
max. Earth dist.	-9184 Mar 16 j 01:47	19° $\overline{3}$ 13'02	47.13975 AU	min. Earth dist.	-9178 Sep 24 j 12:15	26° $\overline{3}$ 02'04	44.08029 AU
				direct	-9178 Dec 14 j 01:31	25° $\overline{3}$ 01'29	
conjunction	-9184 Mar 17 j 21:59	19° $\overline{3}$ 15'38	-9°28'59	evening set	-9177 Mar 12 j 08:26	26° $\overline{3}$ 15'55	
minimum elong	-9184 Mar 17 j 22:11	19° $\overline{3}$ 15'39	9°29'32	max. Earth dist.	-9177 Mar 24 j 03:30	26° $\overline{3}$ 32'49	45.97369 AU
morning rise	-9184 Mar 30 j 12:19	19° $\overline{3}$ 33'20					
retrograde	-9184 Jun 27 j 04:35	20° $\overline{3}$ 47'40		conjunction	-9177 Mar 26 j 08:00	26° $\overline{3}$ 35'58	-7°37'43
opposition	-9184 Sep 15 j 23:31	19° $\overline{3}$ 47'07	-9°46'21	minimum elong	-9177 Mar 26 j 08:10	26° $\overline{3}$ 35'59	7°38'15
min. Earth dist.	-9184 Sep 17 j 15:01	19° $\overline{3}$ 45'10	45.08995 AU	morning rise	-9177 Apr 09 j 06:55	26° $\overline{3}$ 56'00	
direct	-9184 Dec 07 j 06:32	18° $\overline{3}$ 45'17		retrograde	-9177 Jul 05 j 08:38	28° $\overline{3}$ 09'57	
evening set	-9183 Mar 06 j 10:15	19° $\overline{3}$ 59'37		opposition	-9177 Sep 23 j 20:49	27° $\overline{3}$ 08'28	-7°49'44
max. Earth dist.	-9183 Mar 17 j 09:07	20° $\overline{3}$ 15'02	46.98393 AU	min. Earth dist.	-9177 Sep 25 j 19:21	27° $\overline{3}$ 06'08	43.90280 AU
				direct	-9177 Dec 15 j 09:21	26° $\overline{3}$ 05'25	
conjunction	-9183 Mar 19 j 05:57	20° $\overline{3}$ 17'40	-9°13'56	evening set	-9176 Mar 12 j 13:10	27° $\overline{3}$ 19'57	
minimum elong	-9183 Mar 19 j 06:08	20° $\overline{3}$ 17'41	9°14'30	max. Earth dist.	-9176 Mar 24 j 11:24	27° $\overline{3}$ 37'06	45.79623 AU



## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 17

Attention, astronomical year style is used: The year -9176 in astronomical counting style is the year 9177 BCE in historical counting style.

conjunction	-9176 Mar 26 j 16:59	27°340'20	-7°20'40	morning rise	-9170 Apr 18 j 02:54	4°39'18	
minimum elong	-9176 Mar 26 j 17:09	27°340'21	7°21'12	retrograde	-9170 Jul 12 j 21:08	5°53'48	
morning rise	-9176 Apr 09 j 19:54	28°300'41		opposition	-9170 Oct 01 j 03:05	4°51'15	-5°38'04
retrograde	-9176 Jul 05 j 14:45	29°314'40		min. Earth dist.	-9170 Oct 03 j 10:22	4°48'25	42.56017 AU
opposition	-9176 Sep 24 j 04:04	28°313'04	-7°31'51	direct	-9170 Dec 22 j 18:54	3°46'47	
min. Earth dist.	-9176 Sep 26 j 04:35	28°310'38	43.72267 AU	evening set	-9169 Mar 20 j 08:30	5°02'26	
direct	-9176 Dec 15 j 17:58	27°309'51		max. Earth dist.	-9169 Apr 01 j 21:20	5°20'58	44.44846 AU
evening set	-9175 Mar 13 j 18:07	28°324'30					
max. Earth dist.	-9175 Mar 25 j 19:54	28°341'54	45.61597 AU	conjunction	-9169 Apr 04 j 13:06	5°24'56	-5°13'12
				minimum elong	-9169 Apr 04 j 13:14	5°24'57	5°13'41
conjunction	-9175 Mar 28 j 01:57	28°345'11	-7°03'19	morning rise	-9169 Apr 19 j 16:16	5°47'23	
minimum elong	-9175 Mar 28 j 02:07	28°345'12	7°03'51	retrograde	-9169 Jul 14 j 08:06	7°02'02	
morning rise	-9175 Apr 11 j 08:47	29°305'52		opposition	-9169 Oct 02 j 11:35	5°59'17	-5°18'01
	-9175 May 25 j 22:05	0°		min. Earth dist.	-9169 Oct 04 j 20:48	5°56'20	42.35268 AU
retrograde	-9175 Jul 06 j 22:26	0°19'54		direct	-9169 Dec 24 j 01:48	4°54'34	
	-9175 Aug 18 j 10:32	30°8'3		evening set	-9168 Mar 20 j 16:06	6°10'27	
opposition	-9175 Sep 25 j 11:20	29°318'11	-7°13'39	max. Earth dist.	-9168 Apr 02 j 07:58	6°29'15	44.24053 AU
min. Earth dist.	-9175 Sep 27 j 12:08	29°315'43	43.53936 AU				
direct	-9175 Dec 17 j 01:55	28°314'47		conjunction	-9168 Apr 04 j 23:45	6°33'14	-4°53'50
evening set	-9174 Mar 14 j 23:38	29°329'34		minimum elong	-9168 Apr 04 j 23:52	6°33'15	4°54'20
max. Earth dist.	-9174 Mar 27 j 02:43	29°347'08	45.43210 AU	morning rise	-9168 Apr 20 j 05:33	6°55'57	
				retrograde	-9168 Jul 14 j 18:59	8°10'46	
conjunction	-9174 Mar 29 j 11:14	29°350'35	-6°45'41	opposition	-9168 Oct 02 j 20:27	7°07'49	-4°57'39
minimum elong	-9174 Mar 29 j 11:24	29°350'35	6°46'13	min. Earth dist.	-9168 Oct 05 j 06:16	7°04'50	42.14242 AU
	-9174 Apr 04 j 21:58	0°		direct	-9168 Dec 24 j 10:22	6°02'52	
morning rise	-9174 Apr 12 j 21:57	0°11'33		evening set	-9167 Mar 22 j 00:02	7°19'00	
retrograde	-9174 Jul 08 j 10:20	1°25'40		max. Earth dist.	-9167 Apr 03 j 16:39	7°37'57	44.03019 AU
opposition	-9174 Sep 26 j 18:47	0°23'49	-6°55'08				
min. Earth dist.	-9174 Sep 28 j 21:32	0°21'15	43.35227 AU	conjunction	-9167 Apr 06 j 10:13	7°42'04	-4°34'09
	-9174 Oct 16 j 20:49	30°8'3		minimum elong	-9167 Apr 06 j 10:21	7°42'04	4°34'38
direct	-9174 Dec 18 j 06:00	29°320'14		morning rise	-9167 Apr 21 j 18:49	8°05'03	
	-9173 Feb 17 j 18:34	0°		retrograde	-9167 Jul 16 j 07:36	9°20'04	
evening set	-9173 Mar 16 j 05:29	0°35'10		opposition	-9167 Oct 04 j 05:26	8°16'55	-4°36'57
max. Earth dist.	-9173 Mar 28 j 11:56	0°53'00	45.24406 AU	min. Earth dist.	-9167 Oct 06 j 15:45	8°13'54	41.93011 AU
				direct	-9167 Dec 25 j 18:40	7°11'42	
conjunction	-9173 Mar 30 j 20:58	0°56'29	-6°27'46	evening set	-9166 Mar 23 j 08:24	8°28'09	
minimum elong	-9173 Mar 30 j 21:07	0°56'30	6°28'17	max. Earth dist.	-9166 Apr 05 j 03:09	8°47'19	43.81774 AU
morning rise	-9173 Apr 14 j 11:08	1°17'46					
retrograde	-9173 Jul 09 j 19:34	2°31'58		conjunction	-9166 Apr 07 j 21:16	8°51'30	-4°14'10
opposition	-9173 Sep 28 j 02:39	1°29'58	-6°36'20	minimum elong	-9166 Apr 07 j 21:22	8°51'30	4°14'40
min. Earth dist.	-9173 Sep 30 j 06:40	1°27'19	43.16071 AU	morning rise	-9166 Apr 23 j 08:08	9°14'45	
direct	-9173 Dec 19 j 14:01	0°26'11		retrograde	-9166 Jul 17 j 16:37	10°29'59	
evening set	-9172 Mar 16 j 11:47	1°41'17		opposition	-9166 Oct 05 j 14:42	9°26'38	-4°15'55
max. Earth dist.	-9172 Mar 28 j 19:24	1°59'16	45.05152 AU	min. Earth dist.	-9166 Oct 08 j 02:35	9°23'32	41.71588 AU
				direct	-9166 Dec 27 j 05:15	8°21'12	
conjunction	-9172 Mar 31 j 06:39	2°02'54	-6°09'33	evening set	-9165 Mar 24 j 17:21	9°37'58	
minimum elong	-9172 Mar 31 j 06:48	2°02'55	6°10'05	max. Earth dist.	-9165 Apr 06 j 13:48	9°57'20	43.60361 AU
morning rise	-9172 Apr 15 j 00:25	2°24'29					
retrograde	-9172 Jul 10 j 05:19	3°38'46		conjunction	-9165 Apr 09 j 08:31	10°01'35	-3°53'53
opposition	-9172 Sep 28 j 10:33	2°36'36	-6°17'13	minimum elong	-9165 Apr 09 j 08:38	10°01'35	3°54'22
min. Earth dist.	-9172 Sep 30 j 15:30	2°33'54	42.96472 AU	morning rise	-9165 Apr 24 j 21:44	10°25'06	
direct	-9172 Dec 19 j 22:58	1°32'36		retrograde	-9165 Jul 19 j 01:29	11°40'36	
evening set	-9171 Mar 17 j 18:18	2°47'52		opposition	-9165 Oct 07 j 00:13	10°37'05	-3°54'34
max. Earth dist.	-9171 Mar 30 j 03:59	3°06'03	44.85444 AU	min. Earth dist.	-9165 Oct 09 j 11:59	10°33'57	41.49993 AU
				direct	-9165 Dec 28 j 16:38	9°31'24	
conjunction	-9171 Apr 01 j 16:41	3°09'48	-5°51'04	evening set	-9164 Mar 25 j 02:42	10°48'32	
minimum elong	-9171 Apr 01 j 16:49	3°09'48	5°51'34	max. Earth dist.	-9164 Apr 06 j 23:28	11°08'02	43.38746 AU
morning rise	-9171 Apr 16 j 13:38	3°31'40					
retrograde	-9171 Jul 11 j 12:56	4°46'03		conjunction	-9164 Apr 09 j 19:59	11°12'25	-3°33'18
opposition	-9171 Sep 29 j 18:48	3°43'41	-5°57'48	minimum elong	-9164 Apr 09 j 20:05	11°12'25	3°33'47
min. Earth dist.	-9171 Oct 02 j 01:51	3°40'53	42.76438 AU	morning rise	-9164 Apr 25 j 11:14	11°36'11	
direct	-9171 Dec 21 j 09:24	2°39'28		retrograde	-9164 Jul 19 j 13:28	12°51'59	
evening set	-9170 Mar 19 j 01:08	3°54'55		opposition	-9164 Oct 07 j 10:06	11°48'17	-3°32'54
max. Earth dist.	-9170 Mar 31 j 13:11	4°13'19	44.65334 AU	min. Earth dist.	-9164 Oct 09 j 23:38	11°45'03	41.28198 AU
				direct	-9164 Dec 29 j 00:13	10°42'24	
conjunction	-9170 Apr 03 j 02:45	4°17'08	-5°32'17	evening set	-9163 Mar 26 j 12:29	11°59'54	
minimum elong	-9170 Apr 03 j 02:54	4°17'09	5°32'48	max. Earth dist.	-9163 Apr 08 j 11:25	12°19'39	43.16908 AU

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 18

Attention, astronomical year style is used: The year -9163 in astronomical counting style is the year 9164 BCE in historical counting style.

conjunction	-9163 Apr 11 j 07:50	12°24'03	-3°12'24	morning rise	-9157 May 05 j 13:23	20°16'13	
minimum elong	-9163 Apr 11 j 07:56	12°24'03	3°12'53	retrograde	-9157 Jul 29 j 07:23	21°34'42	
morning rise	-9163 Apr 27 j 00:52	12°48'04		opposition	-9157 Oct 16 j 15:50	20°29'20	-0°52'04
retrograde	-9163 Jul 21 j 01:13	14°04'12		min. Earth dist.	-9157 Oct 19 j 13:06	20°25'35	39.66479 AU
opposition	-9163 Oct 08 j 20:12	13°00'19	-3°10'53	direct	-9156 Jan 07 j 03:41	19°21'25	
min. Earth dist.	-9163 Oct 11 j 10:13	12°57'03	41.06147 AU	evening set	-9156 Apr 04 j 00:21	20°42'16	
direct	-9163 Dec 30 j 09:08	11°54'12		max. Earth dist.	-9156 Apr 16 j 22:18	21°02'48	41.54352 AU
evening set	-9162 Mar 27 j 22:53	13°12'08					
max. Earth dist.	-9162 Apr 09 j 21:16	13°31'57	42.94779 AU	conjunction	-9156 Apr 20 j 03:29	21°07'58	-0°37'51
				minimum elong	-9156 Apr 20 j 03:30	21°07'58	0°38'15
conjunction	-9162 Apr 12 j 19:52	13°36'31	-2°51'13	morning rise	-9156 May 06 j 03:31	21°33'31	
minimum elong	-9162 Apr 12 j 19:57	13°36'31	2°51'40	retrograde	-9156 Jul 29 j 20:59	22°52'28	
morning rise	-9162 Apr 28 j 14:44	14°00'48		opposition	-9156 Oct 17 j 04:22	21°46'48	-0°27'49
	-9162 Jun 14 j 19:03	15°		min. Earth dist.	-9156 Oct 20 j 02:31	21°42'59	39.42167 AU
retrograde	-9162 Jul 22 j 16:07	15°17'16		direct	-9155 Jan 07 j 16:11	20°38'32	
	-9162 Aug 29 j 18:45	15°8'		evening set	-9155 Apr 05 j 14:31	21°59'59	
opposition	-9162 Oct 10 j 06:37	14°13'11	-2°48'33	max. Earth dist.	-9155 Apr 18 j 11:23	22°20'34	41.29985 AU
min. Earth dist.	-9162 Oct 12 j 21:56	14°09'51	40.83785 AU				
direct	-9162 Dec 31 j 17:45	13°06'49		conjunction	-9155 Apr 21 j 17:40	22°25'51	-0°14'37
evening set	-9161 Mar 29 j 09:48	14°25'12		minimum elong	-9155 Apr 21 j 17:41	22°25'51	0°15'01
max. Earth dist.	-9161 Apr 11 j 09:07	14°45'12	42.72283 AU	behind sun begin	-9155 Apr 21 j 15:36	22°25'43	
				behind sun end	-9155 Apr 21 j 19:45	22°25'59	
conjunction	-9161 Apr 14 j 08:29	14°49'50	-2°29'43	morning rise	-9155 May 07 j 17:57	22°51'34	
minimum elong	-9161 Apr 14 j 08:34	14°49'50	2°30'10	retrograde	-9155 Jul 31 j 12:15	24°11'02	
	-9161 Apr 20 j 21:01	15°		opposition	-9155 Oct 18 j 17:01	23°05'03	-0°03'15
morning rise	-9161 Apr 30 j 04:36	15°14'20		min. Earth dist.	-9155 Oct 21 j 15:13	23°01'14	39.17734 AU
retrograde	-9161 Jul 24 j 04:38	16°31'11		asc. node	-9155 Dec 05 j 13:59	22°10'46	
opposition	-9161 Oct 11 j 17:29	15°26'53	-2°25'54	direct	-9154 Jan 09 j 06:05	21°56'27	
min. Earth dist.	-9161 Oct 14 j 10:34	15°23'26	40.61039 AU	evening set	-9154 Apr 07 j 05:10	23°18'31	
	-9161 Nov 02 j 11:06	15°8'		max. Earth dist.	-9154 Apr 20 j 01:09	23°39'12	41.05491 AU
direct	-9160 Jan 02 j 06:18	14°20'15					
	-9160 Mar 01 j 23:21	15°		conjunction	-9154 Apr 23 j 08:19	23°44'34	0°09'00
evening set	-9160 Mar 29 j 21:23	15°39'05		minimum elong	-9154 Apr 23 j 08:19	23°44'34	0°08'37
max. Earth dist.	-9160 Apr 11 j 20:27	15°59'12	42.49408 AU	behind sun begin	-9154 Apr 23 j 02:40	23°44'12	
				behind sun end	-9154 Apr 23 j 13:57	23°44'56	
conjunction	-9160 Apr 14 j 21:18	16°03'57	-2°07'56	morning rise	-9154 May 09 j 08:19	24°10'27	
minimum elong	-9160 Apr 14 j 21:22	16°03'57	2°08'22	retrograde	-9154 Aug 02 j 02:20	25°30'28	
morning rise	-9160 Apr 30 j 18:46	16°28'41		opposition	-9154 Oct 20 j 06:18	24°24'12	0°21'38
retrograde	-9160 Jul 24 j 17:25	17°45'54		min. Earth dist.	-9154 Oct 23 j 05:59	24°20'16	38.93205 AU
opposition	-9160 Oct 12 j 04:37	16°41'22	-2°02'55	direct	-9153 Jan 10 j 20:19	23°15'14	
min. Earth dist.	-9160 Oct 14 j 21:59	16°37'53	40.37914 AU	evening set	-9153 Apr 08 j 20:35	24°37'59	
direct	-9159 Jan 02 j 18:59	15°34'26		max. Earth dist.	-9153 Apr 21 j 16:17	24°58'47	40.80926 AU
evening set	-9159 Mar 31 j 09:14	16°53'46					
max. Earth dist.	-9159 Apr 13 j 07:37	17°13'56	42.26130 AU	conjunction	-9153 Apr 24 j 23:21	25°04'12	0°32'46
				minimum elong	-9153 Apr 24 j 23:20	25°04'12	0°32'23
conjunction	-9159 Apr 16 j 10:18	17°18'51	-1°45'51	morning rise	-9153 May 10 j 22:55	25°30'13	
minimum elong	-9159 Apr 16 j 10:21	17°18'51	1°46'17	retrograde	-9153 Aug 03 j 15:44	26°50'50	
morning rise	-9159 May 02 j 08:45	17°43'48		opposition	-9153 Oct 21 j 19:49	25°44'18	0°46'49
retrograde	-9159 Jul 26 j 04:07	19°01'25		min. Earth dist.	-9153 Oct 24 j 19:03	25°40'22	38.68616 AU
opposition	-9159 Oct 13 j 16:09	17°56'37	-1°39'38	direct	-9152 Jan 12 j 10:50	24°35'00	
min. Earth dist.	-9159 Oct 16 j 11:43	17°53'00	40.14412 AU	evening set	-9152 Apr 09 j 12:44	25°58'28	
direct	-9158 Jan 04 j 06:43	16°49'23		max. Earth dist.	-9152 Apr 22 j 06:08	26°19'16	40.56288 AU
evening set	-9158 Apr 01 j 21:44	18°09'11					
max. Earth dist.	-9158 Apr 14 j 20:50	18°29'31	42.02499 AU	conjunction	-9152 Apr 25 j 14:46	26°24'50	0°56'51
				minimum elong	-9152 Apr 25 j 14:44	26°24'50	0°56'29
conjunction	-9158 Apr 17 j 23:47	18°34'29	-1°23'28	morning rise	-9152 May 11 j 13:38	26°51'01	
minimum elong	-9158 Apr 17 j 23:49	18°34'30	1°23'54	retrograde	-9152 Aug 04 j 07:39	28°12'17	
morning rise	-9158 May 03 j 23:00	18°59'39		opposition	-9152 Oct 22 j 09:54	27°05'27	1°12'18
retrograde	-9158 Jul 27 j 15:44	20°17'41		min. Earth dist.	-9152 Oct 25 j 10:27	27°01'26	38.43971 AU
opposition	-9158 Oct 15 j 03:46	19°12'37	-1°16'00	direct	-9151 Jan 12 j 22:27	25°55'51	
min. Earth dist.	-9158 Oct 17 j 23:42	19°08'57	39.90577 AU	evening set	-9151 Apr 11 j 05:19	27°20'05	
direct	-9157 Jan 05 j 18:50	18°05'02		max. Earth dist.	-9151 Apr 23 j 22:27	27°41'01	40.31563 AU
evening set	-9157 Apr 03 j 10:54	19°25'21					
max. Earth dist.	-9157 Apr 16 j 08:15	19°45'43	41.78552 AU	conjunction	-9151 Apr 27 j 06:33	27°46'34	1°21'11
				minimum elong	-9151 Apr 27 j 06:31	27°46'34	1°20'49
conjunction	-9157 Apr 19 j 13:29	19°50'52	-1°00'48	morning rise	-9151 May 13 j 04:18	28°12'53	
minimum elong	-9157 Apr 19 j 13:31	19°50'52	1°01'14	retrograde	-9151 Aug 06 j 00:01	29°34'52	

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 19

Attention, astronomical year style is used: The year -9151 in astronomical counting style is the year 9152 BCE in historical counting style.

opposition	-9151 Oct 24 j 00:24	28° <del>27</del> 45	1°38'04	max. Earth dist.	-9144 May 03 j 21:04	7° <del>46</del> 23	38.53172 AU
min. Earth dist.	-9151 Oct 27 j 01:26	28° <del>23</del> 41	38.19213 AU				
direct	-9150 Jan 14 j 11:37	27° <del>17</del> 50		conjunction	-9144 May 07 j 10:55	7° <del>52</del> 41	4°18'22
evening set	-9150 Apr 12 j 22:59	28° <del>42</del> 53		minimum elong	-9144 May 07 j 10:45	7° <del>52</del> 40	4°18'06
max. Earth dist.	-9150 Apr 25 j 13:02	29° <del>03</del> 46	40.06700 AU	morning rise	-9144 May 22 j 16:38	8° <del>19</del> 23	
				retrograde	-9144 Aug 16 j 07:35	9° <del>47</del> 24	
conjunction	-9150 Apr 28 j 22:50	29° <del>09</del> 30	1°45'47	opposition	-9144 Nov 02 j 19:35	8° <del>37</del> 56	4°45'59
minimum elong	-9150 Apr 28 j 22:46	29° <del>09</del> 30	1°45'27	min. Earth dist.	-9144 Nov 06 j 02:12	8° <del>33</del> 24	36.40821 AU
morning rise	-9150 May 14 j 19:26	29° <del>35</del> 55		direct	-9143 Jan 24 j 01:51	7° <del>25</del> 20	
	-9150 May 30 j 02:12	0° <del>58</del> 39		evening set	-9143 Apr 24 j 00:32	8° <del>57</del> 17	
retrograde	-9150 Aug 07 j 18:57	30° <del>17</del> 44		max. Earth dist.	-9143 May 05 j 15:45	9° <del>17</del> 45	38.27167 AU
	-9150 Oct 19 j 02:23	30° <del>17</del> 44					
opposition	-9150 Oct 25 j 15:09	29° <del>51</del> 15	2°04'08	conjunction	-9143 May 09 j 06:17	9° <del>24</del> 10	4°44'30
min. Earth dist.	-9150 Oct 28 j 16:49	29° <del>47</del> 08	37.94308 AU	minimum elong	-9143 May 09 j 06:07	9° <del>24</del> 09	4°44'14
direct	-9149 Jan 16 j 00:09	28° <del>41</del> 00		morning rise	-9143 May 24 j 08:29	9° <del>50</del> 50	
	-9149 Apr 10 j 11:24	0° <del>06</del> 56		retrograde	-9143 Aug 18 j 05:11	11° <del>19</del> 53	
evening set	-9149 Apr 14 j 17:23	0° <del>06</del> 56		opposition	-9143 Nov 04 j 14:02	10° <del>10</del> 03	5°13'44
max. Earth dist.	-9149 Apr 27 j 05:26	0° <del>27</del> 50	39.81630 AU	min. Earth dist.	-9143 Nov 07 j 20:15	10° <del>05</del> 30	36.14969 AU
				direct	-9142 Jan 25 j 19:28	8° <del>57</del> 00	
conjunction	-9149 Apr 30 j 15:48	0° <del>33</del> 39	2°10'38	evening set	-9142 Apr 26 j 00:40	10° <del>30</del> 08	
minimum elong	-9149 Apr 30 j 15:44	0° <del>33</del> 38	2°10'18	max. Earth dist.	-9142 May 07 j 11:36	10° <del>50</del> 29	38.01202 AU
morning rise	-9149 May 16 j 10:37	1° <del>00</del> 10					
retrograde	-9149 Aug 09 j 11:53	2° <del>23</del> 41		conjunction	-9142 May 11 j 02:26	10° <del>56</del> 58	5°10'46
opposition	-9149 Oct 27 j 06:46	1° <del>15</del> 59	2°30'28	minimum elong	-9142 May 11 j 02:15	10° <del>56</del> 57	5°10'31
min. Earth dist.	-9149 Oct 30 j 10:01	1° <del>11</del> 45	37.69187 AU	morning rise	-9142 May 26 j 00:25	11° <del>23</del> 34	
direct	-9148 Jan 17 j 16:17	0° <del>05</del> 23		retrograde	-9142 Aug 20 j 01:26	12° <del>53</del> 43	
evening set	-9148 Apr 15 j 12:34	1° <del>32</del> 13		opposition	-9142 Nov 06 j 09:08	11° <del>43</del> 30	5°41'39
max. Earth dist.	-9148 Apr 27 j 21:58	1° <del>53</del> 07	39.56338 AU	min. Earth dist.	-9142 Nov 09 j 16:25	11° <del>38</del> 51	35.89207 AU
				direct	-9141 Jan 27 j 15:41	10° <del>30</del> 02	
conjunction	-9148 May 01 j 08:59	1° <del>59</del> 01	2°35'44	evening set	-9141 Apr 28 j 01:54	12° <del>04</del> 25	
minimum elong	-9148 May 01 j 08:54	1° <del>59</del> 01	2°35'25	max. Earth dist.	-9141 May 09 j 08:55	12° <del>24</del> 39	37.75358 AU
morning rise	-9148 May 17 j 01:57	2° <del>25</del> 37					
retrograde	-9148 Aug 10 j 05:07	3° <del>49</del> 57		conjunction	-9141 May 12 j 23:07	12° <del>31</del> 09	5°37'10
opposition	-9148 Oct 27 j 22:43	2° <del>41</del> 57	2°57'04	minimum elong	-9141 May 12 j 22:54	12° <del>31</del> 08	5°36'55
min. Earth dist.	-9148 Oct 31 j 01:55	2° <del>37</del> 42	37.43845 AU	morning rise	-9141 May 27 j 16:38	12° <del>57</del> 40	
direct	-9147 Jan 18 j 10:02	1° <del>30</del> 59		retrograde	-9141 Aug 21 j 22:25	14° <del>28</del> 58	
evening set	-9147 Apr 17 j 08:34	2° <del>58</del> 45		opposition	-9141 Nov 08 j 04:55	13° <del>18</del> 23	6°09'42
max. Earth dist.	-9147 Apr 29 j 14:04	3° <del>19</del> 33	39.30804 AU	min. Earth dist.	-9141 Nov 11 j 11:14	13° <del>13</del> 45	35.63589 AU
				direct	-9140 Jan 29 j 12:47	12° <del>04</del> 30	
conjunction	-9147 May 03 j 02:47	3° <del>25</del> 38	3°01'05	evening set	-9140 Apr 29 j 03:59	13° <del>40</del> 12	
minimum elong	-9147 May 03 j 02:40	3° <del>25</del> 37	3°00'45	max. Earth dist.	-9140 May 10 j 05:07	14° <del>00</del> 11	37.49649 AU
morning rise	-9147 May 18 j 17:27	3° <del>52</del> 17					
retrograde	-9147 Aug 11 j 22:33	5° <del>17</del> 28		conjunction	-9140 May 13 j 20:13	14° <del>06</del> 50	6°03'40
opposition	-9147 Oct 29 j 15:08	4° <del>09</del> 08	3°23'57	minimum elong	-9140 May 13 j 19:58	14° <del>06</del> 48	6°03'26
min. Earth dist.	-9147 Nov 01 j 20:11	4° <del>04</del> 45	37.18294 AU	morning rise	-9140 May 28 j 08:50	14° <del>33</del> 13	
direct	-9146 Jan 20 j 01:21	2° <del>57</del> 46		retrograde	-9140 Aug 22 j 20:03	16° <del>05</del> 46	
evening set	-9146 Apr 19 j 05:16	4° <del>26</del> 31		opposition	-9140 Nov 09 j 01:20	14° <del>54</del> 48	6°37'51
max. Earth dist.	-9146 May 01 j 08:30	4° <del>47</del> 19	39.05070 AU	min. Earth dist.	-9140 Nov 12 j 08:33	14° <del>50</del> 06	35.38133 AU
				direct	-9139 Jan 30 j 06:53	13° <del>40</del> 32	
conjunction	-9146 May 04 j 21:03	4° <del>53</del> 26	3°26'38	evening set	-9139 May 01 j 07:08	15° <del>17</del> 37	
minimum elong	-9146 May 04 j 20:56	4° <del>53</del> 25	3°26'20	max. Earth dist.	-9139 May 12 j 04:06	15° <del>37</del> 28	37.24082 AU
morning rise	-9146 May 20 j 09:06	5° <del>20</del> 08					
retrograde	-9146 Aug 13 j 15:25	6° <del>46</del> 12		conjunction	-9139 May 15 j 18:05	15° <del>44</del> 05	6°30'14
opposition	-9146 Oct 31 j 08:05	5° <del>37</del> 31	3°51'04	minimum elong	-9139 May 15 j 17:51	15° <del>44</del> 04	6°30'01
min. Earth dist.	-9146 Nov 03 j 13:07	5° <del>33</del> 06	36.92557 AU	morning rise	-9139 May 30 j 01:14	16° <del>10</del> 19	
direct	-9145 Jan 21 j 18:39	4° <del>25</del> 45		retrograde	-9139 Aug 24 j 16:47	17° <del>44</del> 10	
evening set	-9145 Apr 21 j 02:59	5° <del>55</del> 31		opposition	-9139 Nov 10 j 22:19	16° <del>32</del> 51	7°06'07
max. Earth dist.	-9145 May 03 j 01:23	6° <del>16</del> 09	38.79170 AU	min. Earth dist.	-9139 Nov 14 j 05:11	16° <del>28</del> 09	35.12807 AU
				direct	-9138 Feb 01 j 03:06	15° <del>18</del> 11	
conjunction	-9145 May 06 j 15:41	6° <del>22</del> 27	3°52'25	evening set	-9138 May 03 j 11:34	16° <del>56</del> 43	
minimum elong	-9145 May 06 j 15:33	6° <del>22</del> 26	3°52'07	max. Earth dist.	-9138 May 14 j 01:24	17° <del>16</del> 14	36.98621 AU
morning rise	-9145 May 22 j 00:53	6° <del>49</del> 10					
retrograde	-9145 Aug 15 j 11:44	8° <del>16</del> 11		conjunction	-9138 May 17 j 16:31	17° <del>23</del> 00	6°56'51
opposition	-9145 Nov 02 j 01:28	7° <del>07</del> 07	4°18'25	minimum elong	-9138 May 17 j 16:14	17° <del>22</del> 59	6°56'40
min. Earth dist.	-9145 Nov 05 j 07:28	7° <del>02</del> 38	36.66714 AU	morning rise	-9138 May 31 j 18:01	17° <del>49</del> 02	
direct	-9144 Jan 23 j 09:03	5° <del>54</del> 56		retrograde	-9138 Aug 26 j 17:46	19° <del>24</del> 17	
evening set	-9144 Apr 22 j 01:20	7° <del>25</del> 45		opposition	-9138 Nov 12 j 20:01	18° <del>12</del> 35	7°34'26

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 20

Attention, astronomical year style is used: The year -9138 in astronomical counting style is the year 9139 BCE in historical counting style.

min. Earth dist.	-9138 Nov 16 j 03:09	18° $\text{H}$ 07'51	34.87581 AU	conjunction	-9131 May 30 j 00:43	29° $\text{H}$ 43'50	10°02'22
direct	-9137 Feb 02 j 21:13	16° $\text{H}$ 57'31		minimum elong	-9131 May 30 j 00:20	29° $\text{H}$ 43'48	10°02'18
evening set	-9137 May 05 j 17:01	18° $\text{H}$ 37'35			-9131 Jun 07 j 03:36	0° $\text{Y}$	
max. Earth dist.	-9137 May 16 j 01:13	18° $\text{H}$ 56'51	36.73203 AU	morning rise	-9131 Jun 10 j 18:39	0° $\text{Y}$ 07'10	
				retrograde	-9131 Sep 08 j 09:38	1° $\text{Y}$ 53'59	
conjunction	-9137 May 19 j 15:45	19° $\text{H}$ 03'38	7°23'31	opposition	-9131 Nov 25 j 01:25	0° $\text{Y}$ 39'19	10°51'56
minimum elong	-9137 May 19 j 15:28	19° $\text{H}$ 03'37	7°23'21	min. Earth dist.	-9131 Nov 28 j 08:55	0° $\text{Y}$ 34'20	33.12890 AU
morning rise	-9137 Jun 02 j 10:45	19° $\text{H}$ 29'26			-9131 Dec 22 j 10:01	30° $\text{R}$ $\text{H}$	
retrograde	-9137 Aug 28 j 17:34	21° $\text{H}$ 06'08		direct	-9130 Feb 14 j 18:43	29° $\text{H}$ 21'03	
opposition	-9137 Nov 14 j 18:39	19° $\text{H}$ 54'04	8°02'48		-9130 Apr 08 j 15:24	0° $\text{Y}$	
min. Earth dist.	-9137 Nov 18 j 02:34	19° $\text{H}$ 49'15	34.62391 AU	evening set	-9130 May 20 j 18:11	1° $\text{Y}$ 13'46	
direct	-9136 Feb 04 j 17:35	18° $\text{H}$ 38'34		max. Earth dist.	-9130 May 28 j 15:13	1° $\text{Y}$ 29'32	34.97211 AU
evening set	-9136 May 06 j 23:52	20° $\text{H}$ 20'14					
max. Earth dist.	-9136 May 17 j 00:36	20° $\text{H}$ 39'07	36.47820 AU	conjunction	-9130 Jun 01 j 04:40	1° $\text{Y}$ 36'42	10°28'15
				minimum elong	-9130 Jun 01 j 04:15	1° $\text{Y}$ 36'40	10°28'11
conjunction	-9136 May 20 j 15:33	20° $\text{H}$ 46'00	7°50'11	morning rise	-9130 Jun 12 j 12:05	1° $\text{Y}$ 59'26	
minimum elong	-9136 May 20 j 15:15	20° $\text{H}$ 45'58	7°50'01	retrograde	-9130 Sep 10 j 13:59	3° $\text{Y}$ 48'14	
morning rise	-9136 Jun 03 j 03:52	21° $\text{H}$ 11'31		opposition	-9130 Nov 27 j 05:25	2° $\text{Y}$ 33'07	11°19'28
retrograde	-9136 Aug 29 j 20:19	22° $\text{H}$ 49'44		min. Earth dist.	-9130 Nov 30 j 12:40	2° $\text{Y}$ 28'07	32.88765 AU
opposition	-9136 Nov 15 j 17:54	21° $\text{H}$ 37'16	8°31'11	direct	-9129 Feb 16 j 21:07	1° $\text{Y}$ 14'23	
min. Earth dist.	-9136 Nov 19 j 01:15	21° $\text{H}$ 32'27	34.37242 AU	evening set	-9129 May 23 j 10:00	3° $\text{Y}$ 09'15	
direct	-9135 Feb 05 j 16:55	20° $\text{H}$ 21'20		max. Earth dist.	-9129 May 30 j 20:15	3° $\text{Y}$ 24'17	34.73002 AU
evening set	-9135 May 09 j 07:37	22° $\text{H}$ 04'40					
max. Earth dist.	-9135 May 19 j 00:35	22° $\text{H}$ 23'07	36.22442 AU	conjunction	-9129 Jun 03 j 09:05	3° $\text{Y}$ 31'29	10°53'48
				minimum elong	-9129 Jun 03 j 08:41	3° $\text{Y}$ 31'27	10°53'46
conjunction	-9135 May 22 j 16:02	22° $\text{H}$ 30'06	8°16'49	morning rise	-9129 Jun 14 j 05:33	3° $\text{Y}$ 53'31	
minimum elong	-9135 May 22 j 15:44	22° $\text{H}$ 30'04	8°16'41	retrograde	-9129 Sep 12 j 21:56	5° $\text{Y}$ 44'24	
morning rise	-9135 Jun 04 j 20:58	22° $\text{H}$ 55'18		opposition	-9129 Nov 29 j 10:08	4° $\text{Y}$ 28'51	11°46'39
retrograde	-9135 Aug 31 j 22:44	24° $\text{H}$ 35'05		min. Earth dist.	-9129 Dec 02 j 15:49	4° $\text{Y}$ 23'55	32.65070 AU
opposition	-9135 Nov 17 j 17:59	23° $\text{H}$ 22'12	8°59'33	direct	-9128 Feb 19 j 01:13	3° $\text{Y}$ 09'41	
min. Earth dist.	-9135 Nov 21 j 02:34	23° $\text{H}$ 17'16	34.12117 AU	evening set	-9128 May 25 j 03:10	5° $\text{Y}$ 06'49	
direct	-9134 Feb 07 j 16:40	22° $\text{H}$ 05'49		max. Earth dist.	-9128 Jun 01 j 02:35	5° $\text{Y}$ 21'05	34.49225 AU
evening set	-9134 May 11 j 16:53	23° $\text{H}$ 50'52					
max. Earth dist.	-9134 May 21 j 02:24	24° $\text{H}$ 08'55	35.97103 AU	conjunction	-9128 Jun 04 j 14:28	5° $\text{Y}$ 28'16	11°18'58
				minimum elong	-9128 Jun 04 j 14:03	5° $\text{Y}$ 28'13	11°18'56
conjunction	-9134 May 24 j 17:16	24° $\text{H}$ 15'55	8°43'24	morning rise	-9128 Jun 14 j 23:03	5° $\text{Y}$ 49'31	
minimum elong	-9134 May 24 j 16:56	24° $\text{H}$ 15'54	8°43'17	retrograde	-9128 Sep 14 j 05:28	7° $\text{Y}$ 42'37	
morning rise	-9134 Jun 06 j 14:18	24° $\text{H}$ 40'45		opposition	-9128 Nov 30 j 15:49	6° $\text{Y}$ 26'38	12°13'25
retrograde	-9134 Sep 03 j 00:35	26° $\text{H}$ 22'10		min. Earth dist.	-9128 Dec 03 j 21:36	6° $\text{Y}$ 21'40	32.41838 AU
opposition	-9134 Nov 19 j 18:37	25° $\text{H}$ 08'51	9°27'52	direct	-9127 Feb 20 j 04:54	5° $\text{Y}$ 07'03	
min. Earth dist.	-9134 Nov 23 j 02:20	25° $\text{H}$ 03'57	33.87052 AU	evening set	-9127 May 27 j 21:59	7° $\text{Y}$ 06'33	
direct	-9133 Feb 09 j 18:15	23° $\text{H}$ 52'01		max. Earth dist.	-9127 Jun 03 j 10:07	7° $\text{Y}$ 20'00	34.25929 AU
evening set	-9133 May 14 j 03:20	25° $\text{H}$ 38'51					
max. Earth dist.	-9133 May 23 j 03:23	25° $\text{H}$ 56'19	35.71834 AU	conjunction	-9127 Jun 06 j 20:25	7° $\text{Y}$ 27'08	11°43'42
				minimum elong	-9127 Jun 06 j 19:59	7° $\text{Y}$ 27'06	11°43'42
conjunction	-9133 May 26 j 19:11	26° $\text{H}$ 03'29	9°09'54	morning rise	-9127 Jun 16 j 16:24	7° $\text{Y}$ 47'32	
minimum elong	-9133 May 26 j 18:50	26° $\text{H}$ 03'27	9°09'47	retrograde	-9127 Sep 16 j 13:28	9° $\text{Y}$ 42'56	
morning rise	-9133 Jun 08 j 07:50	26° $\text{H}$ 27'52		opposition	-9127 Dec 02 j 22:15	8° $\text{Y}$ 26'34	12°39'42
retrograde	-9133 Sep 05 j 02:47	28° $\text{H}$ 11'00		min. Earth dist.	-9127 Dec 06 j 02:09	8° $\text{Y}$ 21'41	32.19073 AU
opposition	-9133 Nov 21 j 20:12	26° $\text{H}$ 57'15	9°56'04	direct	-9126 Feb 22 j 11:11	7° $\text{Y}$ 06'34	
min. Earth dist.	-9133 Nov 25 j 04:45	26° $\text{H}$ 52'16	33.62112 AU	evening set	-9126 May 30 j 18:29	9° $\text{Y}$ 08'34	
direct	-9132 Feb 11 j 17:37	25° $\text{H}$ 39'56		max. Earth dist.	-9126 Jun 05 j 17:11	9° $\text{Y}$ 21'00	34.03074 AU
evening set	-9132 May 15 j 14:54	27° $\text{H}$ 28'39					
max. Earth dist.	-9132 May 24 j 07:19	27° $\text{H}$ 45'39	35.46710 AU	conjunction	-9126 Jun 09 j 03:18	9° $\text{Y}$ 28'11	12°07'55
				minimum elong	-9126 Jun 09 j 02:51	9° $\text{Y}$ 28'08	12°07'57
conjunction	-9132 May 27 j 21:38	27° $\text{H}$ 52'46	9°36'14	morning rise	-9126 Jun 18 j 09:50	9° $\text{Y}$ 47'37	
minimum elong	-9132 May 27 j 21:15	27° $\text{H}$ 52'44	9°36'08	retrograde	-9126 Sep 18 j 22:58	11° $\text{Y}$ 45'26	
morning rise	-9132 Jun 09 j 01:05	28° $\text{H}$ 16'40		opposition	-9126 Dec 05 j 05:37	10° $\text{Y}$ 28'41	13°05'26
	-9132 Aug 27 j 02:01	0° $\text{Y}$		min. Earth dist.	-9126 Dec 08 j 09:37	10° $\text{Y}$ 23'46	31.96757 AU
retrograde	-9132 Sep 06 j 04:24	0° $\text{Y}$ 01'36		direct	-9125 Feb 24 j 16:36	9° $\text{Y}$ 08'18	
	-9132 Sep 16 j 11:17	30° $\text{R}$ $\text{H}$		evening set	-9125 Jun 02 j 16:56	11° $\text{Y}$ 12'54	
opposition	-9132 Nov 22 j 22:32	28° $\text{H}$ 47'23	10°24'07	max. Earth dist.	-9125 Jun 08 j 03:05	11° $\text{Y}$ 24'22	33.80656 AU
min. Earth dist.	-9132 Nov 26 j 06:25	28° $\text{H}$ 42'24	33.37357 AU				
direct	-9131 Feb 12 j 19:06	27° $\text{H}$ 29'36		conjunction	-9125 Jun 11 j 11:01	11° $\text{Y}$ 31'26	12°31'36
evening set	-9131 May 18 j 03:54	29° $\text{H}$ 20'16		minimum elong	-9125 Jun 11 j 10:35	11° $\text{Y}$ 31'24	12°31'39
max. Earth dist.	-9131 May 26 j 09:51	29° $\text{H}$ 36'36	35.21811 AU	morning rise	-9125 Jun 20 j 02:56	11° $\text{Y}$ 49'47	
				retrograde	-9125 Sep 21 j 08:00	13° $\text{Y}$ 50'10	

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 21

Attention, astronomical year style is used: The year -9125 in astronomical counting style is the year 9126 BCE in historical counting style.

opposition	-9125 Dec 07 j 14:06	12°♊33'02	13°30'35	minimum elong	-9118 Jun 26 j 13:58	26°♊52'57	14°56'27
min. Earth dist.	-9125 Dec 10 j 16:37	12°♊28'11	31.74856 AU	morning rise	-9118 Jun 27 j 23:31	26°♊56'07	
direct	-9124 Feb 27 j 00:13	11°♊12'15		retrograde	-9118 Oct 07 j 00:15	29°♊21'41	
evening set	-9124 Jun 04 j 17:05	13°♊19'35		opposition	-9118 Dec 23 j 02:45	28°♊01'31	16°03'28
max. Earth dist.	-9124 Jun 09 j 11:27	13°♊29'45	33.58644 AU	min. Earth dist.	-9118 Dec 25 j 19:51	27°♊57'08	30.34636 AU
				direct	-9117 Mar 13 j 24:00	26°♊37'54	
				max. Earth dist.	-9117 Jun 26 j 07:48	29°♊05'52	32.18297 AU
conjunction	-9124 Jun 12 j 19:20	13°♊36'54	12°54'40				
minimum elong	-9124 Jun 12 j 18:53	13°♊36'51	12°54'44	conjunction	-9117 Jun 29 j 03:59	29°♊12'21	15°12'54
morning rise	-9124 Jun 20 j 19:44	13°♊54'02		minimum elong	-9117 Jun 29 j 03:36	29°♊12'19	15°13'07
retrograde	-9124 Sep 22 j 18:21	15°♊57'07			-9117 Jul 20 j 07:44	0°♋	
opposition	-9124 Dec 08 j 23:29	14°♊39'34	13°55'04	retrograde	-9117 Oct 09 j 17:17	1°♋42'22	
min. Earth dist.	-9124 Dec 12 j 01:28	14°♊34'44	31.53370 AU	opposition	-9117 Dec 25 j 18:32	0°♋21'49	16°20'52
direct	-9123 Feb 28 j 06:35	13°♊18'24		min. Earth dist.	-9117 Dec 28 j 10:11	0°♋17'30	30.17215 AU
evening set	-9123 Jun 07 j 19:38	15°♊28'35			-9116 Jan 08 j 07:19	30°♌	
max. Earth dist.	-9123 Jun 11 j 22:57	15°♊37'30	33.37033 AU	direct	-9116 Mar 15 j 13:50	28°♊57'51	
					-9116 May 18 j 02:16	0°♋	
conjunction	-9123 Jun 15 j 04:45	15°♊44'32	13°17'04	max. Earth dist.	-9116 Jun 28 j 01:40	1°♋27'22	32.01053 AU
minimum elong	-9123 Jun 15 j 04:19	15°♊44'29	13°17'09				
morning rise	-9123 Jun 22 j 12:03	16°♊00'19		conjunction	-9116 Jun 30 j 18:12	1°♋33'34	15°28'16
retrograde	-9123 Sep 25 j 03:27	18°♊06'13		minimum elong	-9116 Jun 30 j 17:48	1°♋33'31	15°28'29
opposition	-9123 Dec 11 j 09:42	16°♊48'15	14°18'49	retrograde	-9116 Oct 11 j 09:17	4°♋04'53	
min. Earth dist.	-9123 Dec 14 j 10:54	16°♊43'26	31.32279 AU	opposition	-9116 Dec 27 j 11:05	2°♋43'58	16°36'51
direct	-9122 Mar 02 j 14:45	15°♊26'40		min. Earth dist.	-9116 Dec 29 j 23:40	2°♋39'50	30.00664 AU
evening set	-9122 Jun 11 j 00:37	17°♊39'52		direct	-9115 Mar 18 j 06:02	1°♋19'41	
max. Earth dist.	-9122 Jun 14 j 09:20	17°♊47'12	33.15849 AU	max. Earth dist.	-9115 Jun 30 j 18:13	3°♋50'33	31.84723 AU
conjunction	-9122 Jun 17 j 14:50	17°♊54'16	13°38'43	conjunction	-9115 Jul 03 j 09:07	3°♋56'38	15°42'15
minimum elong	-9122 Jun 17 j 14:22	17°♊54'14	13°38'49	minimum elong	-9115 Jul 03 j 08:46	3°♋56'36	15°42'31
morning rise	-9122 Jun 24 j 03:30	18°♊08'31		retrograde	-9115 Oct 14 j 02:51	6°♋29'15	
retrograde	-9122 Sep 27 j 16:35	20°♊17'24		opposition	-9115 Dec 30 j 04:16	5°♋07'59	16°51'20
opposition	-9122 Dec 13 j 20:54	18°♊59'00	14°41'45	min. Earth dist.	-9114 Jan 01 j 14:48	5°♋03'59	29.85028 AU
min. Earth dist.	-9122 Dec 16 j 20:31	18°♊54'16	31.11631 AU	direct	-9114 Mar 20 j 20:20	3°♋43'27	
direct	-9121 Mar 04 j 22:44	17°♊37'00		max. Earth dist.	-9114 Jul 03 j 13:48	6°♋15'50	31.69323 AU
evening set	-9121 Jun 14 j 08:34	19°♊53'27					
max. Earth dist.	-9121 Jun 16 j 22:08	19°♊59'06	32.95114 AU	conjunction	-9114 Jul 06 j 00:50	6°♋21'35	15°54'48
				minimum elong	-9114 Jul 06 j 00:30	6°♋21'33	15°55'05
conjunction	-9121 Jun 20 j 01:44	20°♊06'03	13°59'33	retrograde	-9114 Oct 16 j 19:42	8°♋55'26	
minimum elong	-9121 Jun 20 j 01:17	20°♊06'01	13°59'41	opposition	-9113 Jan 01 j 22:34	7°♋33'53	17°04'14
morning rise	-9121 Jun 25 j 17:28	20°♊18'32		min. Earth dist.	-9113 Jan 04 j 06:36	7°♋30'02	29.70286 AU
retrograde	-9121 Sep 30 j 04:08	22°♊30'37		direct	-9113 Mar 23 j 12:54	6°♋09'08	
opposition	-9121 Dec 16 j 09:10	21°♊11'47	15°03'47	max. Earth dist.	-9113 Jul 06 j 07:45	8°♋42'46	31.54844 AU
min. Earth dist.	-9121 Dec 19 j 08:19	21°♊07'03	30.91458 AU				
direct	-9120 Mar 06 j 08:49	19°♊49'22		conjunction	-9113 Jul 08 j 16:56	8°♋48'23	16°05'51
evening set	-9120 Jun 16 j 20:30	22°♊09'21		minimum elong	-9113 Jul 08 j 16:38	8°♋48'21	16°06'09
max. Earth dist.	-9120 Jun 18 j 11:10	22°♊12'56	32.74918 AU	retrograde	-9113 Oct 19 j 15:48	11°♋23'26	
				opposition	-9112 Jan 04 j 17:36	10°♋01'37	17°15'29
conjunction	-9120 Jun 21 j 13:15	22°♊19'48	14°19'29	min. Earth dist.	-9112 Jan 06 j 22:42	9°♋57'57	29.56442 AU
minimum elong	-9120 Jun 21 j 12:48	22°♊19'46	14°19'37	direct	-9112 Mar 25 j 04:49	8°♋36'39	
morning rise	-9120 Jun 26 j 04:49	22°♊30'10		max. Earth dist.	-9112 Jul 08 j 04:18	11°♋11'39	31.41262 AU
retrograde	-9120 Oct 01 j 18:49	24°♊45'46					
opposition	-9120 Dec 17 j 22:05	23°♊26'29	15°24'49	conjunction	-9112 Jul 10 j 09:53	11°♋16'57	16°15'20
min. Earth dist.	-9120 Dec 20 j 18:50	23°♊21'53	30.71853 AU	minimum elong	-9112 Jul 10 j 09:36	11°♋16'56	16°15'39
direct	-9119 Mar 08 j 21:35	22°♊03'39		retrograde	-9112 Oct 21 j 09:16	13°♋53'08	
evening set	-9119 Jun 20 j 14:54	24°♊27'44		opposition	-9111 Jan 06 j 13:26	12°♋31'04	17°25'02
max. Earth dist.	-9119 Jun 21 j 01:04	24°♊28'41	32.55317 AU	min. Earth dist.	-9111 Jan 08 j 16:38	12°♋27'31	29.43458 AU
				direct	-9111 Mar 27 j 22:21	11°♋05'56	
conjunction	-9119 Jun 24 j 01:30	24°♊35'28	14°38'25	max. Earth dist.	-9111 Jul 10 j 23:53	13°♋42'04	31.28573 AU
minimum elong	-9119 Jun 24 j 01:05	24°♊35'26	14°38'36				
morning rise	-9119 Jun 27 j 11:06	24°♊43'07		conjunction	-9111 Jul 13 j 03:16	13°♋47'12	16°23'11
retrograde	-9119 Oct 04 j 08:57	27°♊02'49		minimum elong	-9111 Jul 13 j 03:02	13°♋47'10	16°23'31
opposition	-9119 Dec 20 j 12:03	25°♊43'05	15°44'44		-9111 Aug 13 j 17:33	15°♋	
min. Earth dist.	-9119 Dec 23 j 08:12	25°♊38'30	30.52882 AU	retrograde	-9111 Oct 24 j 05:54	16°♋24'26	
direct	-9118 Mar 11 j 09:15	24°♊19'50		opposition	-9110 Jan 09 j 09:53	15°♋02'06	17°32'48
max. Earth dist.	-9118 Jun 23 j 16:39	26°♊46'24	32.36417 AU		-9110 Jan 10 j 16:14	15°♌	
evening set	-9118 Jun 25 j 04:23	26°♊49'47		min. Earth dist.	-9110 Jan 11 j 09:40	14°♋58'48	29.31329 AU
				direct	-9110 Mar 30 j 16:51	13°♋36'48	
conjunction	-9118 Jun 26 j 14:23	26°♊52'59	14°56'15				

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 22

Attention, astronomical year style is used: The year -9110 in astronomical counting style is the year 9111 BCE in historical counting style.

	-9110 Jun	11 j 12:21	15° <b>8</b>		direct	-9102 Apr	20 j 21:27	4° <b>II</b> 20'05	
max. Earth dist.	-9110 Jul	13 j 21:04	16° <b>8</b> 14'06	31.16752 AU	max. Earth dist.	-9102 Aug	04 j 10:17	7° <b>II</b> 02'54	30.58862 AU
conjunction	-9110 Jul	15 j 21:16	16° <b>8</b> 18'56	16°29'21	conjunction	-9102 Aug	05 j 06:31	7° <b>II</b> 04'58	16°12'23
minimum elong	-9110 Jul	15 j 21:03	16° <b>8</b> 18'55	16°29'43	minimum elong	-9102 Aug	05 j 06:38	7° <b>II</b> 04'59	16°12'53
retrograde	-9110 Oct	27 j 01:16	18° <b>8</b> 57'09		retrograde	-9102 Nov	17 j 07:12	9° <b>II</b> 47'18	
opposition	-9109 Jan	12 j 07:12	17° <b>8</b> 34'34	17°38'45	opposition	-9101 Feb	02 j 23:54	8° <b>II</b> 23'27	17°13'54
min. Earth dist.	-9109 Jan	14 j 05:18	17° <b>8</b> 31'22	29.20051 AU	min. Earth dist.	-9101 Feb	03 j 17:20	8° <b>II</b> 22'13	28.66176 AU
direct	-9109 Apr	02 j 10:34	16° <b>8</b> 09'08		direct	-9101 Apr	23 j 19:51	6° <b>II</b> 57'41	
max. Earth dist.	-9109 Jul	16 j 18:29	18° <b>8</b> 47'27	31.05841 AU	max. Earth dist.	-9101 Aug	07 j 10:56	9° <b>II</b> 40'51	30.56942 AU
conjunction	-9109 Jul	18 j 15:41	18° <b>8</b> 52'00	16°33'47	conjunction	-9101 Aug	08 j 02:11	9° <b>II</b> 42'25	16°01'32
minimum elong	-9109 Jul	18 j 15:32	18° <b>8</b> 51'59	16°34'10	minimum elong	-9101 Aug	08 j 02:22	9° <b>II</b> 42'26	16°02'03
retrograde	-9109 Oct	29 j 22:43	21° <b>8</b> 31'05		retrograde	-9101 Nov	20 j 03:10	12° <b>II</b> 24'50	
opposition	-9108 Jan	15 j 05:00	20° <b>8</b> 08'17	17°42'48	opposition	-9100 Feb	05 j 24:00	11° <b>II</b> 00'59	17°01'21
min. Earth dist.	-9108 Jan	16 j 23:09	20° <b>8</b> 05'21	29.09658 AU	min. Earth dist.	-9100 Feb	06 j 14:17	10° <b>II</b> 59'59	28.64650 AU
direct	-9108 Apr	04 j 08:19	18° <b>8</b> 42'42		direct	-9100 Apr	25 j 18:46	9° <b>II</b> 35'22	
max. Earth dist.	-9108 Jul	18 j 16:00	21° <b>8</b> 21'55	30.95852 AU	conjunction	-9100 Aug	09 j 21:33	12° <b>II</b> 19'50	15°48'48
conjunction	-9108 Jul	20 j 10:23	21° <b>8</b> 26'12	16°36'27	minimum elong	-9100 Aug	09 j 21:44	12° <b>II</b> 19'51	15°49'20
minimum elong	-9108 Jul	20 j 10:14	21° <b>8</b> 26'11	16°36'51	max. Earth dist.	-9100 Aug	09 j 09:18	12° <b>II</b> 18'34	30.56218 AU
retrograde	-9108 Oct	31 j 19:40	24° <b>8</b> 06'03		retrograde	-9100 Nov	22 j 01:21	15° <b>II</b> 02'12	
opposition	-9107 Jan	17 j 03:22	22° <b>8</b> 43'01	17°44'53	opposition	-9099 Feb	07 j 23:55	13° <b>II</b> 38'23	16°46'47
min. Earth dist.	-9107 Jan	18 j 19:31	22° <b>8</b> 40'13	29.00187 AU	min. Earth dist.	-9099 Feb	08 j 09:42	13° <b>II</b> 37'42	28.64265 AU
direct	-9107 Apr	07 j 04:33	21° <b>8</b> 17'18		direct	-9099 Apr	28 j 17:19	12° <b>II</b> 12'56	
max. Earth dist.	-9107 Jul	21 j 14:51	23° <b>8</b> 57'24	30.86852 AU	conjunction	-9099 Aug	12 j 17:01	14° <b>II</b> 57'02	15°34'12
conjunction	-9107 Jul	23 j 05:27	24° <b>8</b> 01'19	16°37'15	minimum elong	-9099 Aug	12 j 17:16	14° <b>II</b> 57'03	15°34'44
minimum elong	-9107 Jul	23 j 05:23	24° <b>8</b> 01'19	16°37'40	max. Earth dist.	-9099 Aug	12 j 09:13	14° <b>II</b> 56'14	30.56620 AU
retrograde	-9107 Nov	03 j 16:50	26° <b>8</b> 41'50		retrograde	-9099 Nov	24 j 21:48	17° <b>II</b> 39'16	
opposition	-9106 Jan	20 j 01:55	25° <b>8</b> 18'35	17°44'59	opposition	-9098 Feb	10 j 23:49	16° <b>II</b> 15'30	16°30'14
min. Earth dist.	-9106 Jan	21 j 14:00	25° <b>8</b> 16'04	28.91688 AU	min. Earth dist.	-9098 Feb	11 j 07:02	16° <b>II</b> 15'00	28.64956 AU
direct	-9106 Apr	10 j 02:59	23° <b>8</b> 52'46		direct	-9098 May	01 j 15:09	14° <b>II</b> 50'14	
max. Earth dist.	-9106 Jul	24 j 12:51	26° <b>8</b> 33'32	30.78889 AU	conjunction	-9098 Aug	15 j 12:13	17° <b>II</b> 33'50	15°17'49
conjunction	-9106 Jul	26 j 00:40	26° <b>8</b> 37'11	16°36'11	minimum elong	-9098 Aug	15 j 12:29	17° <b>II</b> 33'52	15°18'22
minimum elong	-9106 Jul	26 j 00:36	26° <b>8</b> 37'11	16°36'37	max. Earth dist.	-9098 Aug	15 j 07:34	17° <b>II</b> 33'21	30.58120 AU
retrograde	-9106 Nov	06 j 15:02	29° <b>8</b> 18'16		retrograde	-9098 Nov	27 j 18:46	20° <b>II</b> 15'49	
opposition	-9105 Jan	23 j 01:07	27° <b>8</b> 54'49	17°43'00	opposition	-9097 Feb	13 j 23:35	18° <b>II</b> 52'07	16°11'46
min. Earth dist.	-9105 Jan	24 j 10:30	27° <b>8</b> 52'29	28.84249 AU	min. Earth dist.	-9097 Feb	14 j 02:07	18° <b>II</b> 51'56	28.66697 AU
direct	-9105 Apr	13 j 00:12	26° <b>8</b> 28'55		direct	-9097 May	04 j 14:31	17° <b>II</b> 27'03	
conjunction	-9105 Jul	28 j 19:59	29° <b>8</b> 13'36	16°33'11	conjunction	-9097 Aug	18 j 07:09	20° <b>II</b> 10'03	14°59'43
minimum elong	-9105 Jul	28 j 20:00	29° <b>8</b> 13'37	16°33'38	minimum elong	-9097 Aug	18 j 07:27	20° <b>II</b> 10'04	15°00'14
max. Earth dist.	-9105 Jul	27 j 12:57	29° <b>8</b> 10'26	30.72057 AU	max. Earth dist.	-9097 Aug	18 j 06:18	20° <b>II</b> 09'57	30.60663 AU
	-9105 Aug	17 j 00:12	0° <b>II</b>		retrograde	-9097 Nov	30 j 14:12	22° <b>II</b> 51'41	
retrograde	-9105 Nov	09 j 12:54	1° <b>II</b> 55'09		opposition	-9096 Feb	16 j 23:15	21° <b>II</b> 28'03	15°51'28
opposition	-9104 Jan	26 j 00:36	0° <b>II</b> 31'32	17°38'56	min. Earth dist.	-9096 Feb	16 j 23:15	21° <b>II</b> 28'03	28.69453 AU
min. Earth dist.	-9104 Jan	27 j 05:49	0° <b>II</b> 29'29	28.77926 AU	direct	-9096 May	06 j 12:14	20° <b>II</b> 03'12	
	-9104 Feb	14 j 05:38	30° <b>8</b>		evening set	-9096 Aug	16 j 21:37	22° <b>II</b> 37'42	
direct	-9104 Apr	15 j 00:30	29° <b>8</b> 05'36		conjunction	-9096 Aug	20 j 01:52	22° <b>II</b> 45'28	14°39'56
	-9104 Jun	11 j 04:50	0° <b>II</b>		minimum elong	-9096 Aug	20 j 02:11	22° <b>II</b> 45'30	14°40'29
max. Earth dist.	-9104 Jul	29 j 11:17	1° <b>II</b> 47'34	30.66412 AU	max. Earth dist.	-9096 Aug	20 j 04:31	22° <b>II</b> 45'44	30.64243 AU
conjunction	-9104 Jul	30 j 15:26	1° <b>II</b> 50'27	16°28'13	morning rise	-9096 Aug	23 j 06:44	22° <b>II</b> 53'17	
minimum elong	-9104 Jul	30 j 15:27	1° <b>II</b> 50'27	16°28'41	retrograde	-9096 Dec	02 j 10:22	25° <b>II</b> 26'38	
retrograde	-9104 Nov	11 j 10:39	4° <b>II</b> 32'22		opposition	-9095 Feb	18 j 22:12	24° <b>II</b> 03'05	15°29'25
opposition	-9103 Jan	28 j 00:08	3° <b>II</b> 08'36	17°32'43	min. Earth dist.	-9095 Feb	18 j 17:50	24° <b>II</b> 03'23	28.73206 AU
min. Earth dist.	-9103 Jan	29 j 01:44	3° <b>II</b> 06'49	28.72802 AU	direct	-9095 May	09 j 10:53	22° <b>II</b> 38'26	
direct	-9103 Apr	17 j 21:39	1° <b>II</b> 42'41		evening set	-9095 Aug	18 j 06:20	25° <b>II</b> 08'47	
max. Earth dist.	-9103 Aug	01 j 11:57	4° <b>II</b> 25'14	30.62012 AU	conjunction	-9095 Aug	22 j 20:06	25° <b>II</b> 19'54	14°18'34
conjunction	-9103 Aug	02 j 11:05	4° <b>II</b> 27'37	16°21'17	minimum elong	-9095 Aug	22 j 20:27	25° <b>II</b> 19'56	14°19'07
minimum elong	-9103 Aug	02 j 11:11	4° <b>II</b> 27'37	16°21'46	max. Earth dist.	-9095 Aug	23 j 01:54	25° <b>II</b> 20'29	30.68830 AU
retrograde	-9103 Nov	14 j 07:56	7° <b>II</b> 09'46		morning rise	-9095 Aug	27 j 10:33	25° <b>II</b> 31'05	
opposition	-9102 Jan	30 j 23:58	5° <b>II</b> 45'57	17°24'22	retrograde	-9095 Dec	05 j 05:40	28° <b>II</b> 00'30	
min. Earth dist.	-9102 Jan	31 j 21:45	5° <b>II</b> 44'25	28.68878 AU	opposition	-9094 Feb	21 j 21:01	26° <b>II</b> 37'02	15°05'41

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 23

Attention, astronomical year style is used: The year -9094 in astronomical counting style is the year 9095 BCE in historical counting style.

min. Earth dist.	-9094 Feb 21 j 13:55	26° $\Pi$ 37'31	28.77970 AU	conjunction	-9088 Sep 08 j 12:01	12° $\mathfrak{D}$ 42'48	11°10'45
direct	-9094 May 12 j 08:18	25° $\Pi$ 12'38		minimum elong	-9088 Sep 08 j 12:26	12° $\mathfrak{D}$ 42'51	11°11'19
evening set	-9094 Aug 19 j 21:43	27° $\Pi$ 39'27		max. Earth dist.	-9088 Sep 09 j 19:52	12° $\mathfrak{D}$ 45'55	31.31372 AU
				morning rise	-9088 Sep 18 j 17:09	13° $\mathfrak{D}$ 06'37	
conjunction	-9094 Aug 25 j 13:49	27° $\Pi$ 53'09	13°55'40	retrograde	-9088 Dec 22 j 06:09	15° $\mathfrak{D}$ 17'29	
minimum elong	-9094 Aug 25 j 14:11	27° $\Pi$ 53'12	13°56'15	min. Earth dist.	-9087 Mar 10 j 11:34	13° $\mathfrak{D}$ 57'31	29.41696 AU
max. Earth dist.	-9094 Aug 25 j 23:50	27° $\Pi$ 54'10	30.74459 AU	opposition	-9087 Mar 11 j 19:54	13° $\mathfrak{D}$ 55'21	11°39'32
morning rise	-9094 Aug 31 j 06:32	28° $\Pi$ 06'57		direct	-9087 May 30 j 07:41	12° $\mathfrak{D}$ 33'14	
	-9094 Oct 25 j 02:43	0° $\mathfrak{D}$		evening set	-9087 Aug 31 j 08:10	14° $\mathfrak{D}$ 40'54	
retrograde	-9094 Dec 08 j 00:33	0° $\mathfrak{D}$ 33'06					
	-9093 Jan 23 j 03:12	30° $\mathfrak{R}$ $\Pi$		conjunction	-9087 Sep 11 j 01:36	15° $\mathfrak{D}$ 05'44	10°39'34
opposition	-9093 Feb 24 j 19:17	29° $\Pi$ 09'44	14°40'20	minimum elong	-9087 Sep 11 j 02:00	15° $\mathfrak{D}$ 05'46	10°40'07
min. Earth dist.	-9093 Feb 24 j 08:02	29° $\Pi$ 10'30	28.83759 AU	max. Earth dist.	-9087 Sep 12 j 11:58	15° $\mathfrak{D}$ 09'04	31.44577 AU
direct	-9093 May 15 j 07:40	27° $\Pi$ 45'34		morning rise	-9087 Sep 21 j 20:07	15° $\mathfrak{D}$ 30'40	
	-9093 Aug 17 j 20:01	0° $\mathfrak{D}$		retrograde	-9087 Dec 24 j 21:09	17° $\mathfrak{D}$ 39'22	
evening set	-9093 Aug 21 j 16:11	0° $\mathfrak{D}$ 09'11		min. Earth dist.	-9086 Mar 13 j 01:02	16° $\mathfrak{D}$ 19'59	29.54984 AU
				opposition	-9086 Mar 14 j 13:36	16° $\mathfrak{D}$ 17'32	11°05'38
conjunction	-9093 Aug 28 j 06:56	0° $\mathfrak{D}$ 25'06	13°31'19	direct	-9086 Jun 02 j 01:32	14° $\mathfrak{D}$ 55'51	
minimum elong	-9093 Aug 28 j 07:19	0° $\mathfrak{D}$ 25'09	13°31'53	evening set	-9086 Sep 02 j 08:38	17° $\mathfrak{D}$ 01'12	
max. Earth dist.	-9093 Aug 28 j 19:52	0° $\mathfrak{D}$ 26'24	30.81147 AU				
morning rise	-9093 Sep 03 j 22:26	0° $\mathfrak{D}$ 41'06		conjunction	-9086 Sep 13 j 14:28	17° $\mathfrak{D}$ 27'02	10°07'37
retrograde	-9093 Dec 10 j 19:25	3° $\mathfrak{D}$ 04'19		minimum elong	-9086 Sep 13 j 14:52	17° $\mathfrak{D}$ 27'04	10°08'11
opposition	-9092 Feb 27 j 16:59	1° $\mathfrak{D}$ 41'04	14°13'27	max. Earth dist.	-9086 Sep 15 j 04:10	17° $\mathfrak{D}$ 30'39	31.58658 AU
min. Earth dist.	-9092 Feb 27 j 02:13	1° $\mathfrak{D}$ 42'05	28.90641 AU	morning rise	-9086 Sep 24 j 21:30	17° $\mathfrak{D}$ 52'59	
direct	-9092 May 17 j 03:47	0° $\mathfrak{D}$ 17'10		retrograde	-9086 Dec 27 j 09:00	19° $\mathfrak{D}$ 59'36	
evening set	-9092 Aug 22 j 12:35	2° $\mathfrak{D}$ 37'47		min. Earth dist.	-9085 Mar 15 j 16:19	18° $\mathfrak{D}$ 40'38	29.69135 AU
				opposition	-9085 Mar 17 j 06:49	18° $\mathfrak{D}$ 38'04	10°30'58
conjunction	-9092 Aug 29 j 23:35	2° $\mathfrak{D}$ 55'38	13°05'36	direct	-9085 Jun 04 j 17:34	17° $\mathfrak{D}$ 16'48	
minimum elong	-9092 Aug 29 j 23:59	2° $\mathfrak{D}$ 55'41	13°06'10	evening set	-9085 Sep 04 j 09:38	19° $\mathfrak{D}$ 19'54	
max. Earth dist.	-9092 Aug 30 j 17:10	2° $\mathfrak{D}$ 57'24	30.88950 AU				
morning rise	-9092 Sep 06 j 11:15	3° $\mathfrak{D}$ 13'34		conjunction	-9085 Sep 16 j 02:54	19° $\mathfrak{D}$ 46'38	9°35'00
retrograde	-9092 Dec 12 j 12:39	5° $\mathfrak{D}$ 34'02		minimum elong	-9085 Sep 16 j 03:16	19° $\mathfrak{D}$ 46'40	9°35'33
opposition	-9091 Mar 01 j 14:04	4° $\mathfrak{D}$ 10'57	13°45'08	max. Earth dist.	-9085 Sep 17 j 19:21	19° $\mathfrak{D}$ 50'30	31.73563 AU
min. Earth dist.	-9091 Feb 28 j 19:37	4° $\mathfrak{D}$ 12'12	28.98625 AU	morning rise	-9085 Sep 27 j 21:21	20° $\mathfrak{D}$ 13'28	
direct	-9091 May 20 j 01:53	2° $\mathfrak{D}$ 47'20		retrograde	-9085 Dec 29 j 21:27	22° $\mathfrak{D}$ 18'04	
evening set	-9091 Aug 24 j 10:16	5° $\mathfrak{D}$ 05'07		min. Earth dist.	-9084 Mar 17 j 05:00	20° $\mathfrak{D}$ 59'37	29.84069 AU
				opposition	-9084 Mar 18 j 22:58	20° $\mathfrak{D}$ 56'50	9°55'40
conjunction	-9091 Sep 01 j 15:31	5° $\mathfrak{D}$ 24'42	12°38'35	direct	-9084 Jun 06 j 09:38	19° $\mathfrak{D}$ 35'58	
minimum elong	-9091 Sep 01 j 15:55	5° $\mathfrak{D}$ 24'44	12°39'08	evening set	-9084 Sep 05 j 10:47	21° $\mathfrak{D}$ 36'56	
max. Earth dist.	-9091 Sep 02 j 11:44	5° $\mathfrak{D}$ 26'42	30.97881 AU				
morning rise	-9091 Sep 09 j 21:38	5° $\mathfrak{D}$ 44'20		conjunction	-9084 Sep 17 j 14:33	22° $\mathfrak{D}$ 04'26	9°01'49
retrograde	-9091 Dec 15 j 07:41	8° $\mathfrak{D}$ 02'14		minimum elong	-9084 Sep 17 j 14:55	22° $\mathfrak{D}$ 04'28	9°02'22
min. Earth dist.	-9090 Mar 03 j 11:47	6° $\mathfrak{D}$ 40'52	29.07755 AU	max. Earth dist.	-9084 Sep 19 j 09:16	22° $\mathfrak{D}$ 08'29	31.89198 AU
opposition	-9090 Mar 04 j 10:26	6° $\mathfrak{D}$ 39'19	13°15'28	morning rise	-9084 Sep 29 j 19:49	22° $\mathfrak{D}$ 32'03	
direct	-9090 May 22 j 22:16	5° $\mathfrak{D}$ 16'02		retrograde	-9084 Dec 31 j 09:47	24° $\mathfrak{D}$ 34'43	
evening set	-9090 Aug 26 j 08:49	7° $\mathfrak{D}$ 31'08		min. Earth dist.	-9083 Mar 19 j 18:30	23° $\mathfrak{D}$ 16'40	29.99736 AU
				opposition	-9083 Mar 21 j 14:32	23° $\mathfrak{D}$ 13'47	9°19'49
conjunction	-9090 Sep 04 j 07:02	7° $\mathfrak{D}$ 52'15	12°10'22	direct	-9083 Jun 08 j 23:27	21° $\mathfrak{D}$ 53'17	
minimum elong	-9090 Sep 04 j 07:27	7° $\mathfrak{D}$ 52'17	12°10'56	evening set	-9083 Sep 07 j 12:00	23° $\mathfrak{D}$ 52'10	
max. Earth dist.	-9090 Sep 05 j 08:00	7° $\mathfrak{D}$ 54'43	31.07956 AU				
morning rise	-9090 Sep 13 j 06:00	8° $\mathfrak{D}$ 13'26		conjunction	-9083 Sep 20 j 01:35	24° $\mathfrak{D}$ 20'21	8°28'09
retrograde	-9090 Dec 17 j 22:56	10° $\mathfrak{D}$ 28'53		minimum elong	-9083 Sep 20 j 01:56	24° $\mathfrak{D}$ 20'23	8°28'41
min. Earth dist.	-9089 Mar 06 j 04:44	9° $\mathfrak{D}$ 07'56	29.18005 AU	max. Earth dist.	-9083 Sep 21 j 23:24	24° $\mathfrak{D}$ 24'39	32.05528 AU
opposition	-9089 Mar 07 j 06:22	9° $\mathfrak{D}$ 06'12	12°44'34	morning rise	-9083 Oct 02 j 16:29	24° $\mathfrak{D}$ 48'40	
direct	-9089 May 25 j 18:21	7° $\mathfrak{D}$ 43'18		retrograde	-9082 Jan 02 j 20:23	26° $\mathfrak{D}$ 49'27	
evening set	-9089 Aug 28 j 08:04	9° $\mathfrak{D}$ 55'48		min. Earth dist.	-9082 Mar 22 j 06:23	25° $\mathfrak{D}$ 31'50	30.16079 AU
				opposition	-9082 Mar 24 j 05:07	25° $\mathfrak{D}$ 28'47	8°43'31
conjunction	-9089 Sep 06 j 21:44	10° $\mathfrak{D}$ 18'17	11°41'03	direct	-9082 Jun 11 j 15:42	24° $\mathfrak{D}$ 08'40	
minimum elong	-9089 Sep 06 j 22:08	10° $\mathfrak{D}$ 18'20	11°41'36	evening set	-9082 Sep 09 j 13:25	26° $\mathfrak{D}$ 05'32	
max. Earth dist.	-9089 Sep 08 j 01:20	10° $\mathfrak{D}$ 21'00	31.19144 AU				
morning rise	-9089 Sep 16 j 12:23	10° $\mathfrak{D}$ 40'52		conjunction	-9082 Sep 22 j 11:46	26° $\mathfrak{D}$ 34'18	7°54'06
retrograde	-9089 Dec 20 j 15:43	12° $\mathfrak{D}$ 53'58		minimum elong	-9082 Sep 22 j 12:05	26° $\mathfrak{D}$ 34'20	7°54'39
min. Earth dist.	-9088 Mar 07 j 19:24	11° $\mathfrak{D}$ 33'35	29.29346 AU	max. Earth dist.	-9082 Sep 24 j 11:07	26° $\mathfrak{D}$ 38'43	32.22520 AU
opposition	-9088 Mar 09 j 01:31	11° $\mathfrak{D}$ 31'33	12°12'33	morning rise	-9082 Oct 05 j 11:51	27° $\mathfrak{D}$ 03'13	
direct	-9088 May 27 j 13:16	10° $\mathfrak{D}$ 09'02		retrograde	-9081 Jan 05 j 08:33	29° $\mathfrak{D}$ 02'11	
evening set	-9088 Aug 29 j 07:49	12° $\mathfrak{D}$ 19'04		min. Earth dist.	-9081 Mar 24 j 17:32	27° $\mathfrak{D}$ 44'59	30.33120 AU
				opposition	-9081 Mar 26 j 19:01	27° $\mathfrak{D}$ 41'47	8°06'52

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 24

Attention, astronomical year style is used: The year -9081 in astronomical counting style is the year 9082 BCE in historical counting style.

direct	-9081 Jun 14 j 04:20	26° $\mathring{\text{O}}$ 22'02		minimum elong	-9075 Oct 06 j 14:40	11° $\mathring{\text{O}}$ 16'46	3°51'43
evening set	-9081 Sep 11 j 14:34	28° $\mathring{\text{O}}$ 16'58		max. Earth dist.	-9075 Oct 09 j 06:49	11° $\mathring{\text{O}}$ 22'24	33.61012 AU
				morning rise	-9075 Oct 21 j 09:46	11° $\mathring{\text{O}}$ 47'42	
conjunction	-9081 Sep 24 j 21:15	28° $\mathring{\text{O}}$ 46'14	7°19'45	retrograde	-9074 Jan 19 j 10:49	13° $\mathring{\text{O}}$ 36'05	
minimum elong	-9081 Sep 24 j 21:33	28° $\mathring{\text{O}}$ 46'16	7°20'16	min. Earth dist.	-9074 Apr 08 j 02:20	12° $\mathring{\text{O}}$ 22'04	31.72500 AU
max. Earth dist.	-9081 Sep 27 j 00:06	28° $\mathring{\text{O}}$ 50'56	32.40189 AU	opposition	-9074 Apr 10 j 20:03	12° $\mathring{\text{O}}$ 17'57	3°47'13
morning rise	-9081 Oct 08 j 05:28	29° $\mathring{\text{O}}$ 15'39		direct	-9074 Jun 29 j 07:52	11° $\mathring{\text{O}}$ 01'05	
	-9081 Oct 29 j 18:00	0° $\mathring{\text{O}}$		evening set	-9074 Sep 23 j 22:47	12° $\mathring{\text{O}}$ 44'55	
retrograde	-9080 Jan 07 j 16:57	1° $\mathring{\text{O}}$ 12'52					
	-9080 Mar 23 j 15:25	30° $\mathring{\text{R}}$ $\mathring{\text{O}}$		conjunction	-9074 Oct 08 j 19:11	13° $\mathring{\text{O}}$ 15'42	3°16'44
min. Earth dist.	-9080 Mar 26 j 04:38	29° $\mathring{\text{O}}$ 56'03	30.50851 AU	minimum elong	-9074 Oct 08 j 19:19	13° $\mathring{\text{O}}$ 15'43	3°17'13
opposition	-9080 Mar 28 j 07:59	29° $\mathring{\text{O}}$ 52'43	7°29'57	max. Earth dist.	-9074 Oct 11 j 14:08	13° $\mathring{\text{O}}$ 21'32	33.83344 AU
direct	-9080 Jun 15 j 18:16	28° $\mathring{\text{O}}$ 33'21		morning rise	-9074 Oct 23 j 17:53	13° $\mathring{\text{O}}$ 46'42	
	-9080 Aug 31 j 01:15	0° $\mathring{\text{O}}$			-9074 Dec 04 j 12:23	15° $\mathring{\text{O}}$	
evening set	-9080 Sep 12 j 15:58	0° $\mathring{\text{O}}$ 26'26		retrograde	-9073 Jan 21 j 15:13	15° $\mathring{\text{O}}$ 33'53	
					-9073 Mar 12 j 23:01	15° $\mathring{\text{R}}$ $\mathring{\text{O}}$	
conjunction	-9080 Sep 26 j 05:54	0° $\mathring{\text{O}}$ 56'07	6°45'09	min. Earth dist.	-9073 Apr 10 j 08:04	14° $\mathring{\text{O}}$ 20'19	31.94930 AU
minimum elong	-9080 Sep 26 j 06:11	0° $\mathring{\text{O}}$ 56'08	6°45'41	opposition	-9073 Apr 13 j 03:21	14° $\mathring{\text{O}}$ 16'08	3°10'33
max. Earth dist.	-9080 Sep 28 j 10:14	1° $\mathring{\text{O}}$ 00'54	32.58548 AU	direct	-9073 Jul 01 j 15:49	12° $\mathring{\text{O}}$ 59'43	
morning rise	-9080 Oct 09 j 21:46	1° $\mathring{\text{O}}$ 25'57		evening set	-9073 Sep 25 j 23:55	14° $\mathring{\text{O}}$ 42'18	
retrograde	-9079 Jan 09 j 03:23	3° $\mathring{\text{O}}$ 21'28			-9073 Oct 04 j 15:44	15° $\mathring{\text{O}}$	
min. Earth dist.	-9079 Mar 28 j 13:12	2° $\mathring{\text{O}}$ 05'08	30.69319 AU				
opposition	-9079 Mar 30 j 19:53	2° $\mathring{\text{O}}$ 01'37	6°52'51	conjunction	-9073 Oct 10 j 23:06	15° $\mathring{\text{O}}$ 13'04	2°42'28
direct	-9079 Jun 18 j 07:06	0° $\mathring{\text{O}}$ 42'36		minimum elong	-9073 Oct 10 j 23:12	15° $\mathring{\text{O}}$ 13'04	2°42'54
evening set	-9079 Sep 14 j 17:12	2° $\mathring{\text{O}}$ 33'56		max. Earth dist.	-9073 Oct 13 j 18:39	15° $\mathring{\text{O}}$ 18'54	34.06101 AU
				morning rise	-9073 Oct 26 j 00:59	15° $\mathring{\text{O}}$ 44'02	
conjunction	-9079 Sep 28 j 13:54	3° $\mathring{\text{O}}$ 03'58	6°10'25	retrograde	-9072 Jan 23 j 21:55	17° $\mathring{\text{O}}$ 30'06	
minimum elong	-9079 Sep 28 j 14:09	3° $\mathring{\text{O}}$ 04'00	6°10'55	min. Earth dist.	-9072 Apr 11 j 12:40	16° $\mathring{\text{O}}$ 17'00	32.17780 AU
max. Earth dist.	-9079 Sep 30 j 21:44	3° $\mathring{\text{O}}$ 09'02	32.77628 AU	opposition	-9072 Apr 14 j 09:59	16° $\mathring{\text{O}}$ 12'43	2°34'12
morning rise	-9079 Oct 12 j 12:29	3° $\mathring{\text{O}}$ 34'10			-9072 Jun 18 j 05:17	15° $\mathring{\text{R}}$ $\mathring{\text{O}}$	
retrograde	-9078 Jan 11 j 11:02	5° $\mathring{\text{O}}$ 28'05		direct	-9072 Jul 02 j 20:37	14° $\mathring{\text{O}}$ 56'43	
min. Earth dist.	-9078 Mar 30 j 22:55	4° $\mathring{\text{O}}$ 12'08	30.88538 AU		-9072 Jul 17 j 10:53	15° $\mathring{\text{O}}$	
opposition	-9078 Apr 02 j 07:11	4° $\mathring{\text{O}}$ 08'31	6°15'38	evening set	-9072 Sep 27 j 00:59	16° $\mathring{\text{O}}$ 38'07	
direct	-9078 Jun 20 j 19:42	2° $\mathring{\text{O}}$ 49'55					
evening set	-9078 Sep 16 j 18:20	4° $\mathring{\text{O}}$ 39'34		conjunction	-9072 Oct 12 j 02:39	17° $\mathring{\text{O}}$ 08'49	2°08'28
				minimum elong	-9072 Oct 12 j 02:44	17° $\mathring{\text{O}}$ 08'50	2°08'54
conjunction	-9078 Sep 30 j 20:59	5° $\mathring{\text{O}}$ 09'52	5°35'35	max. Earth dist.	-9072 Oct 15 j 00:36	17° $\mathring{\text{O}}$ 14'49	34.29202 AU
minimum elong	-9078 Sep 30 j 21:14	5° $\mathring{\text{O}}$ 09'53	5°36'05	morning rise	-9072 Oct 27 j 06:51	17° $\mathring{\text{O}}$ 39'45	
max. Earth dist.	-9078 Oct 03 j 06:39	5° $\mathring{\text{O}}$ 15'04	32.97454 AU	retrograde	-9071 Jan 25 j 00:41	19° $\mathring{\text{O}}$ 24'43	
morning rise	-9078 Oct 15 j 01:42	5° $\mathring{\text{O}}$ 40'20		min. Earth dist.	-9071 Apr 13 j 18:07	18° $\mathring{\text{O}}$ 11'59	32.40949 AU
retrograde	-9077 Jan 13 j 18:37	7° $\mathring{\text{O}}$ 32'45		opposition	-9071 Apr 16 j 15:45	18° $\mathring{\text{O}}$ 07'42	1°58'12
min. Earth dist.	-9077 Apr 02 j 05:41	6° $\mathring{\text{O}}$ 17'20	31.08513 AU	direct	-9071 Jul 05 j 02:38	16° $\mathring{\text{O}}$ 52'07	
opposition	-9077 Apr 04 j 17:34	6° $\mathring{\text{O}}$ 13'31	5°38'24	evening set	-9071 Sep 29 j 02:01	18° $\mathring{\text{O}}$ 32'23	
direct	-9077 Jun 23 j 06:49	4° $\mathring{\text{O}}$ 55'19					
evening set	-9077 Sep 18 j 19:34	6° $\mathring{\text{O}}$ 43'24		conjunction	-9071 Oct 14 j 05:28	19° $\mathring{\text{O}}$ 02'59	1°34'47
				minimum elong	-9071 Oct 14 j 05:32	19° $\mathring{\text{O}}$ 02'59	1°35'12
conjunction	-9077 Oct 03 j 03:33	7° $\mathring{\text{O}}$ 13'54	5°00'44	max. Earth dist.	-9071 Oct 17 j 03:43	19° $\mathring{\text{O}}$ 08'56	34.52587 AU
minimum elong	-9077 Oct 03 j 03:46	7° $\mathring{\text{O}}$ 13'55	5°01'13	morning rise	-9071 Oct 29 j 11:39	19° $\mathring{\text{O}}$ 33'48	
max. Earth dist.	-9077 Oct 05 j 15:56	7° $\mathring{\text{O}}$ 19'18	33.17990 AU	retrograde	-9070 Jan 27 j 04:45	21° $\mathring{\text{O}}$ 17'43	
morning rise	-9077 Oct 17 j 13:47	7° $\mathring{\text{O}}$ 44'36		min. Earth dist.	-9070 Apr 15 j 20:59	20° $\mathring{\text{O}}$ 05'27	32.64400 AU
retrograde	-9076 Jan 15 j 23:45	9° $\mathring{\text{O}}$ 35'35		opposition	-9070 Apr 18 j 20:55	20° $\mathring{\text{O}}$ 01'03	1°22'35
min. Earth dist.	-9076 Apr 03 j 13:55	8° $\mathring{\text{O}}$ 20'35	31.29212 AU	direct	-9070 Jul 07 j 09:02	18° $\mathring{\text{O}}$ 45'52	
opposition	-9076 Apr 06 j 03:10	8° $\mathring{\text{O}}$ 16'42	5°01'12	evening set	-9070 Oct 01 j 02:47	20° $\mathring{\text{O}}$ 25'02	
direct	-9076 Jun 24 j 16:19	6° $\mathring{\text{O}}$ 58'56					
evening set	-9076 Sep 19 j 20:39	8° $\mathring{\text{O}}$ 45'31		conjunction	-9070 Oct 16 j 07:35	20° $\mathring{\text{O}}$ 55'29	1°01'28
				minimum elong	-9070 Oct 16 j 07:38	20° $\mathring{\text{O}}$ 55'30	1°01'53
conjunction	-9076 Oct 04 j 09:28	9° $\mathring{\text{O}}$ 16'10	4°25'56	max. Earth dist.	-9070 Oct 19 j 07:48	21° $\mathring{\text{O}}$ 01'34	34.76203 AU
minimum elong	-9076 Oct 04 j 09:39	9° $\mathring{\text{O}}$ 16'12	4°26'26	morning rise	-9070 Oct 31 j 15:12	21° $\mathring{\text{O}}$ 26'10	
max. Earth dist.	-9076 Oct 07 j 00:04	9° $\mathring{\text{O}}$ 21'44	33.39209 AU	retrograde	-9069 Jan 29 j 06:36	23° $\mathring{\text{O}}$ 09'05	
morning rise	-9076 Oct 19 j 00:24	9° $\mathring{\text{O}}$ 47'01		min. Earth dist.	-9069 Apr 18 j 01:24	21° $\mathring{\text{O}}$ 57'08	32.88099 AU
retrograde	-9075 Jan 17 j 04:53	11° $\mathring{\text{O}}$ 36'40		opposition	-9069 Apr 21 j 01:30	21° $\mathring{\text{O}}$ 52'44	0°47'23
min. Earth dist.	-9075 Apr 05 j 19:53	10° $\mathring{\text{O}}$ 22'11	31.50561 AU	direct	-9069 Jul 09 j 15:06	20° $\mathring{\text{O}}$ 37'57	
opposition	-9075 Apr 08 j 11:53	10° $\mathring{\text{O}}$ 18'09	4°24'07	evening set	-9069 Oct 03 j 03:29	22° $\mathring{\text{O}}$ 16'03	
direct	-9075 Jun 27 j 01:31	9° $\mathring{\text{O}}$ 00'50					
evening set	-9075 Sep 21 j 21:46	10° $\mathring{\text{O}}$ 46'00		conjunction	-9069 Oct 18 j 09:14	22° $\mathring{\text{O}}$ 46'20	0°28'32
				minimum elong	-9069 Oct 18 j 09:15	22° $\mathring{\text{O}}$ 46'20	0°28'56
conjunction	-9075 Oct 06 j 14:30	11° $\mathring{\text{O}}$ 16'45	3°51'15	max. Earth dist.	-9069 Oct 21 j 10:17	22° $\mathring{\text{O}}$ 52'25	35.00058 AU



## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 25

Attention, astronomical year style is used: The year -9069 in astronomical counting style is the year 9070 BCE in historical counting style.

morning rise	-9069 Nov 02 j 17:43	23° $\Omega$ 16'49		max. Earth dist.	-9063 Oct 31 j 14:40	3° $\Upsilon$ 24'16	36.49082 AU
retrograde	-9068 Jan 31 j 06:58	24° $\Omega$ 58'47		morning rise	-9063 Nov 12 j 10:30	3° $\Upsilon$ 46'34	
min. Earth dist.	-9068 Apr 19 j 02:57	23° $\Omega$ 47'14	33.12050 AU	retrograde	-9062 Feb 10 j 03:41	5° $\Upsilon$ 23'59	
opposition	-9068 Apr 22 j 04:59	23° $\Omega$ 42'45	0°12'40	min. Earth dist.	-9062 Apr 30 j 04:52	4° $\Upsilon$ 14'35	34.62192 AU
direct	-9068 Jul 10 j 20:24	22° $\Omega$ 28'18		opposition	-9062 May 03 j 12:46	4° $\Upsilon$ 09'54	-3°04'21
desc. node	-9068 Sep 04 j 03:47	23° $\Omega$ 12'45		direct	-9062 Jul 22 j 02:54	2° $\Upsilon$ 57'40	
evening set	-9068 Oct 04 j 04:05	24° $\Omega$ 05'26		evening set	-9062 Oct 15 j 04:02	4° $\Upsilon$ 30'06	
conjunction	-9068 Oct 19 j 10:06	24° $\Omega$ 35'28	-0°04'03	conjunction	-9062 Oct 30 j 03:35	4° $\Upsilon$ 58'12	-3°08'39
minimum elong	-9068 Oct 19 j 10:05	24° $\Omega$ 35'28	0°03'39	minimum elong	-9062 Oct 30 j 03:28	4° $\Upsilon$ 58'12	3°08'20
behind sun begin	-9068 Oct 19 j 03:46	24° $\Omega$ 34'59		max. Earth dist.	-9062 Nov 02 j 12:53	5° $\Upsilon$ 04'37	36.74808 AU
behind sun end	-9068 Oct 19 j 16:25	24° $\Omega$ 35'58		morning rise	-9062 Nov 14 j 06:00	5° $\Upsilon$ 26'32	
max. Earth dist.	-9068 Oct 22 j 12:12	24° $\Omega$ 41'37	35.24149 AU	retrograde	-9061 Feb 11 j 23:50	7° $\Upsilon$ 03'22	
morning rise	-9068 Nov 03 j 19:08	25° $\Omega$ 05'45		min. Earth dist.	-9061 May 02 j 02:30	5° $\Upsilon$ 54'23	34.88066 AU
retrograde	-9067 Feb 01 j 06:09	26° $\Omega$ 46'49		opposition	-9061 May 05 j 11:54	5° $\Upsilon$ 49'38	-3°35'06
min. Earth dist.	-9067 Apr 21 j 05:19	25° $\Omega$ 35'35	33.36292 AU	direct	-9061 Jul 24 j 03:58	4° $\Upsilon$ 37'46	
opposition	-9067 Apr 24 j 08:00	25° $\Omega$ 31'05	-0°21'34	evening set	-9061 Oct 17 j 03:50	6° $\Upsilon$ 09'37	
direct	-9067 Jul 12 j 23:16	24° $\Omega$ 17'00		conjunction	-9061 Nov 01 j 00:49	6° $\Upsilon$ 37'19	-3°37'32
evening set	-9067 Oct 06 j 04:16	25° $\Omega$ 53'11		minimum elong	-9061 Nov 01 j 00:41	6° $\Upsilon$ 37'19	3°37'15
conjunction	-9067 Oct 21 j 10:21	26° $\Omega$ 22'58	-0°36'03	max. Earth dist.	-9061 Nov 04 j 10:31	6° $\Upsilon$ 43'43	37.00616 AU
minimum elong	-9067 Oct 21 j 10:20	26° $\Omega$ 22'58	0°35'41	morning rise	-9061 Nov 16 j 00:56	7° $\Upsilon$ 05'16	
max. Earth dist.	-9067 Oct 24 j 14:26	26° $\Omega$ 29'13	35.48531 AU	retrograde	-9060 Feb 13 j 20:11	8° $\Upsilon$ 41'33	
morning rise	-9067 Nov 05 j 19:11	26° $\Omega$ 52'59		min. Earth dist.	-9060 May 03 j 01:09	7° $\Upsilon$ 32'53	35.14016 AU
retrograde	-9066 Feb 03 j 04:34	28° $\Omega$ 33'13		opposition	-9060 May 06 j 10:27	7° $\Upsilon$ 28'09	-4°05'15
min. Earth dist.	-9066 Apr 23 j 06:13	27° $\Omega$ 22'21	33.60843 AU	direct	-9060 Jul 25 j 02:53	6° $\Upsilon$ 16'40	
opposition	-9066 Apr 26 j 10:13	27° $\Omega$ 17'47	-0°55'16	evening set	-9060 Oct 18 j 03:25	7° $\Upsilon$ 47'58	
direct	-9066 Jul 15 j 02:12	26° $\Omega$ 04'04		conjunction	-9060 Nov 01 j 21:48	8° $\Upsilon$ 15'15	-4°05'51
evening set	-9066 Oct 08 j 04:35	27° $\Omega$ 39'23		minimum elong	-9060 Nov 01 j 21:39	8° $\Upsilon$ 15'14	4°05'34
conjunction	-9066 Oct 23 j 09:59	28° $\Omega$ 08'52	-1°07'36	max. Earth dist.	-9060 Nov 05 j 08:30	8° $\Upsilon$ 21'41	37.26447 AU
minimum elong	-9066 Oct 23 j 09:57	28° $\Omega$ 08'52	1°07'14	morning rise	-9060 Nov 16 j 18:56	8° $\Upsilon$ 42'45	
max. Earth dist.	-9066 Oct 26 j 14:31	28° $\Omega$ 15'06	35.73222 AU	retrograde	-9059 Feb 14 j 15:22	10° $\Upsilon$ 18'33	
morning rise	-9066 Nov 07 j 18:31	28° $\Omega$ 38'36		min. Earth dist.	-9059 May 04 j 23:04	9° $\Upsilon$ 10'12	35.39944 AU
retrograde	-9066 Dec 31 j 05:10	0° $\Upsilon$		opposition	-9059 May 08 j 08:30	9° $\Upsilon$ 05'29	-4°34'45
min. Earth dist.	-9065 Feb 05 j 05:24	0° $\Upsilon$ 18'03		direct	-9059 Jul 27 j 01:57	7° $\Upsilon$ 54'21	
opposition	-9065 Mar 14 j 05:49	30° $\kappa$ $\Omega$		evening set	-9059 Oct 20 j 02:56	9° $\Upsilon$ 25'08	
direct	-9065 Apr 25 j 06:04	29° $\Omega$ 07'35	33.85746 AU	conjunction	-9059 Nov 03 j 18:02	9° $\Upsilon$ 51'59	-4°33'36
evening set	-9065 Apr 28 j 11:49	29° $\Omega$ 02'56	-1°28'25	minimum elong	-9059 Nov 03 j 17:53	9° $\Upsilon$ 51'58	4°33'20
conjunction	-9065 Oct 25 j 09:13	29° $\Omega$ 53'16	-1°38'40	max. Earth dist.	-9059 Nov 07 j 04:07	9° $\Upsilon$ 58'18	37.52214 AU
minimum elong	-9065 Oct 25 j 09:10	29° $\Omega$ 53'15	1°38'20	morning rise	-9059 Nov 18 j 12:11	10° $\Upsilon$ 19'03	
max. Earth dist.	-9065 Oct 28 j 20:45	0° $\Upsilon$		retrograde	-9058 Feb 16 j 12:56	11° $\Upsilon$ 54'22	
morning rise	-9065 Oct 28 j 16:02	29° $\Omega$ 59'37	35.98238 AU	min. Earth dist.	-9058 May 06 j 19:59	10° $\Upsilon$ 46'22	35.65810 AU
retrograde	-9064 Feb 07 j 04:23	2° $\Upsilon$ 01'24		opposition	-9058 May 10 j 06:10	10° $\Upsilon$ 41'38	-5°03'38
min. Earth dist.	-9064 Apr 26 j 06:42	0° $\Upsilon$ 51'15	34.10961 AU	direct	-9058 Jul 28 j 22:17	9° $\Upsilon$ 30'49	
opposition	-9064 Apr 29 j 12:46	0° $\Upsilon$ 46'37	-2°00'59	evening set	-9058 Oct 22 j 02:17	11° $\Upsilon$ 01'07	
direct	-9064 Jun 03 j 21:20	30° $\kappa$ $\Omega$		conjunction	-9058 Nov 05 j 14:07	11° $\Upsilon$ 27'31	-5°00'46
evening set	-9064 Jul 18 j 03:31	29° $\Omega$ 33'37		minimum elong	-9058 Nov 05 j 13:57	11° $\Upsilon$ 27'30	5°00'30
conjunction	-9064 Oct 11 j 04:36	1° $\Upsilon$ 07'23		max. Earth dist.	-9058 Nov 09 j 01:27	11° $\Upsilon$ 33'53	37.77884 AU
minimum elong	-9064 Oct 26 j 07:50	1° $\Upsilon$ 36'14	-2°09'12	morning rise	-9058 Nov 20 j 04:43	11° $\Upsilon$ 54'07	
max. Earth dist.	-9064 Oct 29 j 14:43	1° $\Upsilon$ 42'33	36.23541 AU	retrograde	-9057 Feb 18 j 08:55	13° $\Upsilon$ 29'00	
morning rise	-9064 Nov 10 j 14:05	2° $\Upsilon$ 05'18		min. Earth dist.	-9057 May 08 j 17:50	12° $\Upsilon$ 21'13	35.91566 AU
retrograde	-9063 Feb 08 j 05:13	3° $\Upsilon$ 43'20		opposition	-9057 May 12 j 03:13	12° $\Upsilon$ 16'33	-5°31'54
min. Earth dist.	-9063 Apr 28 j 04:51	2° $\Upsilon$ 33'38	34.36463 AU	direct	-9057 Jul 30 j 19:26	11° $\Upsilon$ 06'03	
opposition	-9063 May 01 j 12:56	2° $\Upsilon$ 28'54	-2°32'58	evening set	-9057 Oct 24 j 01:33	12° $\Upsilon$ 35'53	
direct	-9063 Jul 20 j 03:13	1° $\Upsilon$ 16'17		conjunction	-9057 Nov 07 j 09:39	13° $\Upsilon$ 01'49	-5°27'21
evening set	-9063 Oct 13 j 04:25	2° $\Upsilon$ 49'22		minimum elong	-9057 Nov 07 j 09:28	13° $\Upsilon$ 01'48	5°27'07
conjunction	-9063 Oct 28 j 05:57	3° $\Upsilon$ 17'52	-2°39'12	max. Earth dist.	-9057 Nov 10 j 20:09	13° $\Upsilon$ 08'05	38.03444 AU
minimum elong	-9063 Oct 28 j 05:51	3° $\Upsilon$ 17'51	2°38'54	morning rise	-9057 Nov 21 j 20:32	13° $\Upsilon$ 27'57	
				retrograde	-9056 Feb 20 j 06:14	15° $\Upsilon$ 02'24	
				min. Earth dist.	-9056 May 09 j 13:12	13° $\Upsilon$ 54'56	36.17224 AU
				opposition	-9056 May 12 j 23:40	13° $\Upsilon$ 50'14	-5°59'31
				direct	-9056 Jul 31 j 15:21	12° $\Upsilon$ 40'02	
				evening set	-9056 Oct 25 j 00:37	14° $\Upsilon$ 09'27	

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 26

Attention, astronomical year style is used: The year -9056 in astronomical counting style is the year 9057 BCE in historical counting style.

conjunction	-9056 Nov 08 j 04:39	14° $\mathring{M}$ 34'53	-5°53'21	direct	-9049 Aug 12 j 02:08	23° $\mathring{M}$ 06'41	
minimum elong	-9056 Nov 08 j 04:28	14° $\mathring{M}$ 34'52	5°53'08	evening set	-9049 Nov 06 j 13:42	24° $\mathring{M}$ 34'11	
max. Earth dist.	-9056 Nov 11 j 15:57	14° $\mathring{M}$ 41'10	38.28894 AU				
morning rise	-9056 Nov 22 j 11:30	15° $\mathring{M}$ 00'32		conjunction	-9049 Nov 19 j 06:12	24° $\mathring{M}$ 55'57	-8°38'34
retrograde	-9055 Feb 20 j 23:47	16° $\mathring{M}$ 34'35		minimum elong	-9049 Nov 19 j 05:58	24° $\mathring{M}$ 55'56	8°38'26
min. Earth dist.	-9055 May 11 j 10:00	15° $\mathring{M}$ 27'19	36.42815 AU	max. Earth dist.	-9049 Nov 22 j 19:12	25° $\mathring{M}$ 02'03	40.06740 AU
opposition	-9055 May 14 j 19:36	15° $\mathring{M}$ 22'41	-6°26'29	morning rise	-9049 Dec 02 j 01:01	25° $\mathring{M}$ 17'53	
direct	-9055 Aug 02 j 12:17	14° $\mathring{M}$ 12'47		retrograde	-9048 Mar 02 j 23:02	26° $\mathring{M}$ 50'12	
evening set	-9055 Oct 26 j 23:25	15° $\mathring{M}$ 41'48		min. Earth dist.	-9048 May 21 j 15:20	25° $\mathring{M}$ 44'51	38.21841 AU
				opposition	-9048 May 25 j 01:56	25° $\mathring{M}$ 40'18	-9°17'06
				direct	-9048 Aug 12 j 20:40	24° $\mathring{M}$ 32'29	
				evening set	-9048 Nov 07 j 11:45	25° $\mathring{M}$ 59'50	
conjunction	-9055 Nov 09 j 23:16	16° $\mathring{M}$ 06'44	-6°18'45				
minimum elong	-9055 Nov 09 j 23:03	16° $\mathring{M}$ 06'43	6°18'34				
max. Earth dist.	-9055 Nov 13 j 10:54	16° $\mathring{M}$ 13'00	38.54310 AU				
morning rise	-9055 Nov 24 j 01:37	16° $\mathring{M}$ 31'53		conjunction	-9048 Nov 19 j 22:19	26° $\mathring{M}$ 21'02	-8°59'48
retrograde	-9054 Feb 22 j 15:46	18° $\mathring{M}$ 05'35		minimum elong	-9048 Nov 19 j 22:05	26° $\mathring{M}$ 21'01	8°59'43
min. Earth dist.	-9054 May 13 j 04:24	16° $\mathring{M}$ 58'38	36.68387 AU	max. Earth dist.	-9048 Nov 23 j 11:31	26° $\mathring{M}$ 27'08	40.31849 AU
opposition	-9054 May 16 j 14:58	16° $\mathring{M}$ 53'57	-6°52'48	morning rise	-9048 Dec 02 j 10:47	26° $\mathring{M}$ 42'23	
direct	-9054 Aug 04 j 10:28	15° $\mathring{M}$ 44'19		retrograde	-9047 Mar 04 j 11:54	28° $\mathring{M}$ 14'35	
evening set	-9054 Oct 28 j 22:07	17° $\mathring{M}$ 13'00		min. Earth dist.	-9047 May 23 j 07:47	27° $\mathring{M}$ 09'30	38.47029 AU
				opposition	-9047 May 26 j 18:13	27° $\mathring{M}$ 04'58	-9°38'57
				direct	-9047 Aug 14 j 15:57	25° $\mathring{M}$ 57'25	
				evening set	-9047 Nov 09 j 09:54	27° $\mathring{M}$ 24'39	
conjunction	-9054 Nov 11 j 17:14	17° $\mathring{M}$ 37'26	-6°43'34				
minimum elong	-9054 Nov 11 j 17:02	17° $\mathring{M}$ 37'25	6°43'23				
max. Earth dist.	-9054 Nov 15 j 04:52	17° $\mathring{M}$ 43'39	38.79713 AU	conjunction	-9047 Nov 21 j 14:00	27° $\mathring{M}$ 45'17	-9°20'29
morning rise	-9054 Nov 25 j 15:09	18° $\mathring{M}$ 02'04		minimum elong	-9047 Nov 21 j 13:45	27° $\mathring{M}$ 45'16	9°20'23
retrograde	-9053 Feb 24 j 09:05	19° $\mathring{M}$ 35'27		max. Earth dist.	-9047 Nov 25 j 01:57	27° $\mathring{M}$ 51'15	40.56708 AU
min. Earth dist.	-9053 May 14 j 23:16	18° $\mathring{M}$ 28'45	36.93989 AU	morning rise	-9047 Dec 03 j 20:13	28° $\mathring{M}$ 06'03	
opposition	-9053 May 18 j 10:00	18° $\mathring{M}$ 24'05	-7°18'28	retrograde	-9046 Mar 06 j 03:49	29° $\mathring{M}$ 38'08	
direct	-9053 Aug 06 j 05:37	17° $\mathring{M}$ 14'45		min. Earth dist.	-9046 May 25 j 00:01	28° $\mathring{M}$ 33'17	38.71964 AU
evening set	-9053 Oct 30 j 20:39	18° $\mathring{M}$ 43'07		opposition	-9046 May 28 j 10:18	28° $\mathring{M}$ 28'47	-10°00'12
				direct	-9046 Aug 16 j 07:33	27° $\mathring{M}$ 21'29	
				evening set	-9046 Nov 11 j 07:44	28° $\mathring{M}$ 48'36	
conjunction	-9053 Nov 13 j 11:07	19° $\mathring{M}$ 07'02	-7°07'46				
minimum elong	-9053 Nov 13 j 10:54	19° $\mathring{M}$ 07'01	7°07'35				
max. Earth dist.	-9053 Nov 16 j 23:56	19° $\mathring{M}$ 13'18	39.05147 AU	conjunction	-9046 Nov 23 j 05:30	29° $\mathring{M}$ 08'39	-9°40'36
morning rise	-9053 Nov 27 j 03:57	19° $\mathring{M}$ 31'08		minimum elong	-9046 Nov 23 j 05:15	29° $\mathring{M}$ 08'38	9°40'32
retrograde	-9052 Feb 26 j 01:00	21° $\mathring{M}$ 04'15		max. Earth dist.	-9046 Nov 26 j 17:59	29° $\mathring{M}$ 14'37	40.81284 AU
min. Earth dist.	-9052 May 15 j 17:42	19° $\mathring{M}$ 57'49	37.19610 AU	morning rise	-9046 Dec 05 j 05:02	29° $\mathring{M}$ 28'51	
opposition	-9052 May 19 j 04:17	19° $\mathring{M}$ 53'10	-7°43'29		-9046 Dec 24 j 17:29	0° $\mathring{A}$	
direct	-9052 Aug 07 j 01:11	18° $\mathring{M}$ 44'09		retrograde	-9045 Mar 07 j 17:52	1° $\mathring{A}$ 00'49	
evening set	-9052 Oct 31 j 19:10	20° $\mathring{M}$ 12'14			-9045 May 23 j 17:30	30° $\mathring{R}$ $\mathring{M}$	
				min. Earth dist.	-9045 May 26 j 17:05	29° $\mathring{M}$ 56'07	38.96584 AU
conjunction	-9052 Nov 14 j 04:24	20° $\mathring{M}$ 35'37	-7°31'21	opposition	-9045 May 30 j 02:00	29° $\mathring{M}$ 51'42	-10°20'52
minimum elong	-9052 Nov 14 j 04:11	20° $\mathring{M}$ 35'36	7°31'12	direct	-9045 Aug 18 j 00:18	28° $\mathring{M}$ 44'39	
max. Earth dist.	-9052 Nov 17 j 16:31	20° $\mathring{M}$ 41'47	39.30599 AU		-9045 Nov 06 j 02:38	0° $\mathring{A}$	
morning rise	-9052 Nov 27 j 16:11	20° $\mathring{M}$ 59'12		evening set	-9045 Nov 13 j 05:46	0° $\mathring{A}$ 11'39	
retrograde	-9051 Feb 26 j 20:17	22° $\mathring{M}$ 32'04					
min. Earth dist.	-9051 May 17 j 10:43	21° $\mathring{M}$ 25'57	37.45257 AU	conjunction	-9045 Nov 24 j 20:42	0° $\mathring{A}$ 31'08	-10°00'11
opposition	-9051 May 20 j 22:19	21° $\mathring{M}$ 21'17	-8°07'51	minimum elong	-9045 Nov 24 j 20:27	0° $\mathring{A}$ 31'07	10°00'07
direct	-9051 Aug 08 j 17:04	20° $\mathring{M}$ 12'33		max. Earth dist.	-9045 Nov 28 j 07:38	0° $\mathring{A}$ 36'57	41.05554 AU
evening set	-9051 Nov 02 j 17:16	21° $\mathring{M}$ 40'25		morning rise	-9045 Dec 06 j 13:24	0° $\mathring{A}$ 50'43	
				retrograde	-9044 Mar 08 j 10:43	2° $\mathring{A}$ 22'35	
conjunction	-9051 Nov 15 j 21:14	22° $\mathring{M}$ 03'16	-7°54'21	min. Earth dist.	-9044 May 27 j 07:49	1° $\mathring{A}$ 18'06	39.20910 AU
minimum elong	-9051 Nov 15 j 21:00	22° $\mathring{M}$ 03'15	7°54'11	opposition	-9044 May 30 j 17:05	1° $\mathring{A}$ 13'42	-10°40'57
max. Earth dist.	-9051 Nov 19 j 10:43	22° $\mathring{M}$ 09'29	39.56047 AU	direct	-9044 Aug 18 j 13:57	0° $\mathring{A}$ 06'51	
morning rise	-9051 Nov 29 j 03:33	22° $\mathring{M}$ 26'18		evening set	-9044 Nov 14 j 03:28	1° $\mathring{A}$ 33'47	
retrograde	-9050 Feb 28 j 14:28	23° $\mathring{M}$ 58'58					
min. Earth dist.	-9050 May 19 j 05:15	22° $\mathring{M}$ 53'05	37.70880 AU	conjunction	-9044 Nov 25 j 11:27	1° $\mathring{A}$ 52'39	-10°19'13
opposition	-9050 May 22 j 16:01	22° $\mathring{M}$ 48'29	-8°31'34	minimum elong	-9044 Nov 25 j 11:13	1° $\mathring{A}$ 52'38	10°19'11
direct	-9050 Aug 10 j 09:44	21° $\mathring{M}$ 40'03		max. Earth dist.	-9044 Nov 28 j 22:40	1° $\mathring{A}$ 58'27	41.29532 AU
evening set	-9050 Nov 04 j 15:30	23° $\mathring{M}$ 07'43		morning rise	-9044 Dec 06 j 21:10	2° $\mathring{A}$ 11'39	
				retrograde	-9043 Mar 10 j 02:22	3° $\mathring{A}$ 43'26	
conjunction	-9050 Nov 17 j 13:54	23° $\mathring{M}$ 30'02	-8°16'45	min. Earth dist.	-9043 May 29 j 00:13	2° $\mathring{A}$ 39'03	39.44977 AU
minimum elong	-9050 Nov 17 j 13:41	23° $\mathring{M}$ 30'01	8°16'37	opposition	-9043 Jun 01 j 08:01	2° $\mathring{A}$ 34'44	-11°00'27
max. Earth dist.	-9050 Nov 21 j 02:51	23° $\mathring{M}$ 36'11	39.81454 AU	direct	-9043 Aug 20 j 04:07	1° $\mathring{A}$ 28'06	
morning rise	-9050 Nov 30 j 14:30	23° $\mathring{M}$ 52'31		evening set	-9043 Nov 16 j 00:57	2° $\mathring{A}$ 54'58	
retrograde	-9049 Mar 02 j 08:16	25° $\mathring{M}$ 25'00					
min. Earth dist.	-9049 May 20 j 21:25	24° $\mathring{M}$ 19'26	37.96430 AU	conjunction	-9043 Nov 27 j 01:47	3° $\mathring{A}$ 13'14	-10°37'42
opposition	-9049 May 24 j 09:05	24° $\mathring{M}$ 14'49	-8°54'38				

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 27

Attention, astronomical year style is used: The year -9043 in astronomical counting style is the year 9044 BCE in historical counting style.

minimum elong	-9043 Nov 27 j 01:32	3° <u>♁</u> 13'13	10°37'40	evening set	-9036 Nov 27 j 06:53	12° <u>♁</u> 01'48	
max. Earth dist.	-9043 Nov 30 j 12:40	3° <u>♁</u> 18'59	41.53290 AU				
morning rise	-9043 Dec 08 j 04:02	3° <u>♁</u> 31'36		conjunction	-9036 Dec 05 j 22:51	12° <u>♁</u> 15'38	-12°31'53
retrograde	-9042 Mar 11 j 14:25	5° <u>♁</u> 03'20		minimum elong	-9036 Dec 05 j 22:37	12° <u>♁</u> 15'37	12°31'56
min. Earth dist.	-9042 May 30 j 14:12	3° <u>♁</u> 59'10	39.68837 AU	max. Earth dist.	-9036 Dec 09 j 07:59	12° <u>♁</u> 21'03	43.15340 AU
opposition	-9042 Jun 02 j 22:28	3° <u>♁</u> 54'51	-11°19'22	morning rise	-9036 Dec 14 j 15:31	12° <u>♁</u> 29'32	
direct	-9042 Aug 21 j 20:50	2° <u>♁</u> 48'25		retrograde	-9035 Mar 20 j 05:59	14° <u>♁</u> 01'42	
evening set	-9042 Nov 17 j 22:31	4° <u>♁</u> 15'15		min. Earth dist.	-9035 Jun 08 j 13:43	12° <u>♁</u> 58'55	41.31638 AU
				opposition	-9035 Jun 11 j 18:32	12° <u>♁</u> 54'53	-13°15'42
conjunction	-9042 Nov 28 j 15:50	4° <u>♁</u> 32'54	-10°55'38	direct	-9035 Aug 30 j 21:04	11° <u>♁</u> 50'04	
minimum elong	-9042 Nov 28 j 15:35	4° <u>♁</u> 32'53	10°55'37	evening set	-9035 Nov 29 j 04:26	13° <u>♁</u> 17'36	
max. Earth dist.	-9042 Dec 02 j 02:01	4° <u>♁</u> 38'34	41.76862 AU				
morning rise	-9042 Dec 09 j 10:43	4° <u>♁</u> 50'39		conjunction	-9035 Dec 07 j 11:05	13° <u>♁</u> 30'45	-12°46'09
retrograde	-9041 Mar 13 j 02:43	6° <u>♁</u> 22'20		minimum elong	-9035 Dec 07 j 10:52	13° <u>♁</u> 30'44	12°46'13
min. Earth dist.	-9041 Jun 01 j 04:53	5° <u>♁</u> 18'21	39.92558 AU	max. Earth dist.	-9035 Dec 10 j 18:26	13° <u>♁</u> 36'02	43.37579 AU
opposition	-9041 Jun 04 j 12:34	5° <u>♁</u> 14'04	-11°37'41	morning rise	-9035 Dec 15 j 18:31	13° <u>♁</u> 43'58	
direct	-9041 Aug 23 j 12:23	4° <u>♁</u> 07'50		retrograde	-9034 Mar 21 j 18:14	15° <u>♁</u> 16'19	
evening set	-9041 Nov 19 j 19:57	5° <u>♁</u> 34'40		min. Earth dist.	-9034 Jun 10 j 02:22	14° <u>♁</u> 13'44	41.53885 AU
				opposition	-9034 Jun 13 j 06:42	14° <u>♁</u> 09'43	-13°30'11
conjunction	-9041 Nov 30 j 05:45	5° <u>♁</u> 51'43	-11°13'01	direct	-9034 Sep 01 j 09:13	13° <u>♁</u> 05'08	
minimum elong	-9041 Nov 30 j 05:31	5° <u>♁</u> 51'42	11°13'00	evening set	-9034 Dec 01 j 02:10	14° <u>♁</u> 32'52	
max. Earth dist.	-9041 Dec 03 j 16:44	5° <u>♁</u> 57'24	42.00312 AU				
morning rise	-9041 Dec 10 j 16:46	6° <u>♁</u> 08'51		conjunction	-9034 Dec 08 j 23:26	14° <u>♁</u> 45'20	-12°59'57
retrograde	-9040 Mar 13 j 13:51	7° <u>♁</u> 40'32		minimum elong	-9034 Dec 08 j 23:11	14° <u>♁</u> 45'19	13°00'01
min. Earth dist.	-9040 Jun 01 j 19:10	6° <u>♁</u> 36'43	40.16143 AU	max. Earth dist.	-9034 Dec 12 j 06:53	14° <u>♁</u> 50'35	43.59428 AU
opposition	-9040 Jun 05 j 02:18	6° <u>♁</u> 32'28	-11°55'25	morning rise	-9034 Dec 16 j 21:14	14° <u>♁</u> 57'52	
direct	-9040 Aug 24 j 04:13	5° <u>♁</u> 26'28		retrograde	-9033 Mar 23 j 06:10	16° <u>♁</u> 30'23	
evening set	-9040 Nov 20 j 17:21	6° <u>♁</u> 53'20		min. Earth dist.	-9033 Jun 11 j 16:04	15° <u>♁</u> 27'54	41.75712 AU
				opposition	-9033 Jun 14 j 18:29	15° <u>♁</u> 24'01	-13°44'11
conjunction	-9040 Nov 30 j 19:08	7° <u>♁</u> 09'45	-11°29'51	direct	-9033 Sep 02 j 20:53	14° <u>♁</u> 19'37	
minimum elong	-9040 Nov 30 j 18:53	7° <u>♁</u> 09'44	11°29'52	evening set	-9033 Dec 03 j 00:14	15° <u>♁</u> 47'34	
max. Earth dist.	-9040 Dec 04 j 04:55	7° <u>♁</u> 15'19	42.23640 AU				
morning rise	-9040 Dec 10 j 22:11	7° <u>♁</u> 26'15		conjunction	-9033 Dec 10 j 11:30	15° <u>♁</u> 59'20	-13°13'17
retrograde	-9039 Mar 15 j 04:11	8° <u>♁</u> 57'58		minimum elong	-9033 Dec 10 j 11:17	15° <u>♁</u> 59'19	13°13'23
min. Earth dist.	-9039 Jun 03 j 07:59	7° <u>♁</u> 54'24	40.39619 AU	max. Earth dist.	-9033 Dec 13 j 17:12	16° <u>♁</u> 04'26	43.80867 AU
opposition	-9039 Jun 06 j 15:43	7° <u>♁</u> 50'09	-12°12'35	morning rise	-9033 Dec 17 j 23:14	16° <u>♁</u> 11'08	
direct	-9039 Aug 25 j 16:26	6° <u>♁</u> 44'23		retrograde	-9032 Mar 23 j 19:24	17° <u>♁</u> 43'51	
evening set	-9039 Nov 22 j 14:36	8° <u>♁</u> 11'19		min. Earth dist.	-9032 Jun 12 j 03:31	16° <u>♁</u> 41'34	41.97123 AU
				opposition	-9032 Jun 15 j 06:00	16° <u>♁</u> 37'41	-13°57'43
conjunction	-9039 Dec 02 j 08:22	8° <u>♁</u> 27'06	-11°46'08	direct	-9032 Sep 03 j 07:10	15° <u>♁</u> 33'28	
minimum elong	-9039 Dec 02 j 08:08	8° <u>♁</u> 27'05	11°46'09	evening set	-9032 Dec 03 j 22:11	17° <u>♁</u> 01'38	
max. Earth dist.	-9039 Dec 05 j 18:51	8° <u>♁</u> 32'41	42.46848 AU				
morning rise	-9039 Dec 12 j 03:16	8° <u>♁</u> 42'58		conjunction	-9032 Dec 10 j 23:06	17° <u>♁</u> 12'41	-13°26'11
retrograde	-9038 Mar 16 j 17:52	10° <u>♁</u> 14'45		minimum elong	-9032 Dec 10 j 22:52	17° <u>♁</u> 12'40	13°26'16
min. Earth dist.	-9038 Jun 04 j 22:31	9° <u>♁</u> 11'21	40.62957 AU	max. Earth dist.	-9032 Dec 14 j 04:07	17° <u>♁</u> 17'43	44.01892 AU
opposition	-9038 Jun 08 j 04:55	9° <u>♁</u> 07'10	-12°29'10	morning rise	-9032 Dec 18 j 00:28	17° <u>♁</u> 23'45	
direct	-9038 Aug 27 j 04:59	8° <u>♁</u> 01'39		retrograde	-9031 Mar 25 j 07:09	18° <u>♁</u> 56'41	
evening set	-9038 Nov 24 j 11:56	9° <u>♁</u> 28'41		min. Earth dist.	-9031 Jun 13 j 16:33	17° <u>♁</u> 54'28	42.18150 AU
				opposition	-9031 Jun 16 j 17:18	17° <u>♁</u> 50'42	-14°10'46
conjunction	-9038 Dec 03 j 21:22	9° <u>♁</u> 43'50	-12°01'54	direct	-9031 Sep 04 j 18:50	16° <u>♁</u> 46'38	
minimum elong	-9038 Dec 03 j 21:07	9° <u>♁</u> 43'49	12°01'55	evening set	-9031 Dec 05 j 20:32	18° <u>♁</u> 15'06	
max. Earth dist.	-9038 Dec 07 j 07:03	9° <u>♁</u> 49'20	42.69914 AU				
morning rise	-9038 Dec 13 j 07:43	9° <u>♁</u> 59'03		conjunction	-9031 Dec 12 j 10:38	18° <u>♁</u> 25'23	-13°38'36
retrograde	-9037 Mar 18 j 08:01	11° <u>♁</u> 30'55		minimum elong	-9031 Dec 12 j 10:26	18° <u>♁</u> 25'22	13°38'44
min. Earth dist.	-9037 Jun 06 j 10:56	10° <u>♁</u> 27'47	40.86113 AU	max. Earth dist.	-9031 Dec 15 j 15:18	18° <u>♁</u> 30'23	44.22578 AU
opposition	-9037 Jun 09 j 17:43	10° <u>♁</u> 23'36	-12°45'13	morning rise	-9031 Dec 19 j 00:57	18° <u>♁</u> 35'41	
direct	-9037 Aug 28 j 17:23	9° <u>♁</u> 18'19		retrograde	-9030 Mar 26 j 15:59	20° <u>♁</u> 08'52	
evening set	-9037 Nov 26 j 09:24	10° <u>♁</u> 45'30		min. Earth dist.	-9030 Jun 15 j 03:48	19° <u>♁</u> 06'48	42.38847 AU
				opposition	-9030 Jun 18 j 04:09	19° <u>♁</u> 03'03	-14°23'20
conjunction	-9037 Dec 05 j 10:09	11° <u>♁</u> 00'00	-12°17'08	direct	-9030 Sep 06 j 08:19	17° <u>♁</u> 59'09	
minimum elong	-9037 Dec 05 j 09:56	10° <u>♁</u> 59'59	12°17'11	evening set	-9030 Dec 07 j 19:11	19° <u>♁</u> 27'55	
max. Earth dist.	-9037 Dec 08 j 19:19	11° <u>♁</u> 05'26	42.92758 AU				
morning rise	-9037 Dec 14 j 11:56	11° <u>♁</u> 14'33		conjunction	-9030 Dec 13 j 21:47	19° <u>♁</u> 37'25	-13°50'34
retrograde	-9036 Mar 18 j 20:42	12° <u>♁</u> 46'34		minimum elong	-9030 Dec 13 j 21:34	19° <u>♁</u> 37'24	13°50'42
min. Earth dist.	-9036 Jun 07 j 00:46	11° <u>♁</u> 43'35	41.09034 AU	max. Earth dist.	-9030 Dec 17 j 00:59	19° <u>♁</u> 42'18	44.42962 AU
opposition	-9036 Jun 10 j 06:16	11° <u>♁</u> 39'30	-13°00'43	morning rise	-9030 Dec 20 j 00:38	19° <u>♁</u> 46'56	
direct	-9036 Aug 29 j 06:02	10° <u>♁</u> 34'28		retrograde	-9029 Mar 28 j 02:12	21° <u>♁</u> 20'24	

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 28

Attention, astronomical year style is used: The year -9029 in astronomical counting style is the year 9030 BCE in historical counting style.

min. Earth dist.	-9029 Jun 16 j 15:05	20° <u>♁</u> 18'28	42.59283 AU	retrograde	-9022 Apr 04 j 22:27	29° <u>♁</u> 26'44	
opposition	-9029 Jun 19 j 14:54	20° <u>♁</u> 14'45	-14°35'25	min. Earth dist.	-9022 Jun 24 j 17:18	28° <u>♁</u> 25'46	43.95107 AU
direct	-9029 Sep 07 j 19:49	19° <u>♁</u> 11'01		opposition	-9022 Jun 27 j 11:27	28° <u>♁</u> 22'25	-15°46'57
evening set	-9029 Dec 09 j 18:22	20° <u>♁</u> 40'09		direct	-9022 Sep 15 j 20:00	27° <u>♁</u> 19'52	
conjunction	-9029 Dec 15 j 08:55	20° <u>♁</u> 48'49	-14°02'05	conjunction	-9022 Dec 23 j 09:09	28° <u>♁</u> 54'58	-15°10'18
minimum elong	-9029 Dec 15 j 08:42	20° <u>♁</u> 48'49	14°02'14	minimum elong	-9022 Dec 23 j 09:00	28° <u>♁</u> 54'57	15°10'31
max. Earth dist.	-9029 Dec 18 j 12:34	20° <u>♁</u> 53'42	44.63101 AU	max. Earth dist.	-9022 Dec 26 j 06:31	28° <u>♁</u> 59'19	45.96771 AU
morning rise	-9029 Dec 20 j 23:33	20° <u>♁</u> 57'31			-9021 Feb 08 j 11:15	0° <u>♁</u>	
retrograde	-9028 Mar 28 j 10:01	22° <u>♁</u> 31'20		retrograde	-9021 Apr 06 j 09:01	0° <u>♁</u> 34'33	
min. Earth dist.	-9028 Jun 17 j 02:39	21° <u>♁</u> 29'30	42.79473 AU		-9021 Jun 03 j 11:40	30° <u>♁</u>	
opposition	-9028 Jun 20 j 01:12	21° <u>♁</u> 25'51	-14°47'00	min. Earth dist.	-9021 Jun 26 j 04:45	29° <u>♁</u> 33'37	44.12998 AU
direct	-9028 Sep 08 j 08:41	20° <u>♁</u> 22'17		opposition	-9021 Jun 28 j 20:38	29° <u>♁</u> 30'24	-15°55'29
evening set	-9028 Dec 10 j 18:15	21° <u>♁</u> 51'51		direct	-9021 Sep 17 j 04:34	28° <u>♁</u> 28'00	
					-9021 Dec 22 j 23:10	0° <u>♁</u>	
conjunction	-9028 Dec 15 j 19:42	21° <u>♁</u> 59'39	-14°13'07	conjunction	-9021 Dec 24 j 19:03	0° <u>♁</u> 02'44	-15°18'28
minimum elong	-9028 Dec 15 j 19:30	21° <u>♁</u> 59'38	14°13'16	minimum elong	-9021 Dec 24 j 18:53	0° <u>♁</u> 02'44	15°18'41
max. Earth dist.	-9028 Dec 18 j 21:47	22° <u>♁</u> 04'25	44.83030 AU	max. Earth dist.	-9021 Dec 27 j 14:50	0° <u>♁</u> 06'58	46.14287 AU
morning rise	-9028 Dec 20 j 21:12	22° <u>♁</u> 07'28		retrograde	-9020 Apr 06 j 19:20	1° <u>♁</u> 41'54	
retrograde	-9027 Mar 29 j 22:25	23° <u>♁</u> 41'42		min. Earth dist.	-9020 Jun 26 j 13:58	0° <u>♁</u> 41'07	44.30387 AU
min. Earth dist.	-9027 Jun 18 j 12:29	22° <u>♁</u> 40'03	42.99458 AU	opposition	-9020 Jun 29 j 05:21	0° <u>♁</u> 37'55	-16°03'38
opposition	-9027 Jun 21 j 11:24	22° <u>♁</u> 36'24	-14°58'07		-9020 Aug 01 j 19:25	30° <u>♁</u>	
direct	-9027 Sep 09 j 17:10	21° <u>♁</u> 33'00		direct	-9020 Sep 17 j 12:58	29° <u>♁</u> 35'38	
evening set	-9027 Dec 12 j 18:50	23° <u>♁</u> 03'06			-9020 Nov 02 j 12:22	0° <u>♁</u>	
conjunction	-9027 Dec 17 j 06:09	23° <u>♁</u> 09'57	-14°23'43	conjunction	-9020 Dec 25 j 04:34	1° <u>♁</u> 10'02	-15°26'15
minimum elong	-9027 Dec 17 j 05:57	23° <u>♁</u> 09'56	14°23'53	minimum elong	-9020 Dec 25 j 04:25	1° <u>♁</u> 10'02	15°26'30
max. Earth dist.	-9027 Dec 20 j 08:18	23° <u>♁</u> 14'41	45.02742 AU	max. Earth dist.	-9020 Dec 27 j 22:42	1° <u>♁</u> 14'09	46.31312 AU
morning rise	-9027 Dec 21 j 17:26	23° <u>♁</u> 16'48		retrograde	-9019 Apr 08 j 04:09	2° <u>♁</u> 48'48	
retrograde	-9026 Mar 31 j 10:31	24° <u>♁</u> 51'33		min. Earth dist.	-9019 Jun 28 j 00:22	1° <u>♁</u> 48'04	44.47318 AU
min. Earth dist.	-9026 Jun 20 j 00:17	23° <u>♁</u> 50'00	43.19218 AU	opposition	-9019 Jun 30 j 14:07	1° <u>♁</u> 44'57	-16°11'25
opposition	-9026 Jun 22 j 21:32	23° <u>♁</u> 46'27	-15°08'46	direct	-9019 Sep 18 j 22:09	0° <u>♁</u> 42'48	
direct	-9026 Sep 11 j 01:15	22° <u>♁</u> 43'13					
evening set	-9026 Dec 14 j 21:19	24° <u>♁</u> 13'57		conjunction	-9019 Dec 26 j 13:54	2° <u>♁</u> 16'50	-15°33'41
conjunction	-9026 Dec 18 j 16:42	24° <u>♁</u> 19'47	-14°33'51	minimum elong	-9019 Dec 26 j 13:44	2° <u>♁</u> 16'50	15°33'55
minimum elong	-9026 Dec 18 j 16:31	24° <u>♁</u> 19'46	14°34'01	max. Earth dist.	-9019 Dec 29 j 07:51	2° <u>♁</u> 20'56	46.47911 AU
morning rise	-9026 Dec 22 j 11:57	24° <u>♁</u> 25'35		retrograde	-9018 Apr 09 j 09:08	3° <u>♁</u> 55'13	
max. Earth dist.	-9026 Dec 21 j 18:16	24° <u>♁</u> 24'27	45.22232 AU	min. Earth dist.	-9018 Jun 29 j 09:56	2° <u>♁</u> 54'33	44.63829 AU
retrograde	-9025 Apr 01 j 19:30	26° <u>♁</u> 00'56		opposition	-9018 Jul 01 j 22:33	2° <u>♁</u> 51'30	-16°18'48
min. Earth dist.	-9025 Jun 21 j 09:58	24° <u>♁</u> 59'35	43.38717 AU	direct	-9018 Sep 20 j 10:23	1° <u>♁</u> 49'28	
opposition	-9025 Jun 24 j 07:10	24° <u>♁</u> 56'02	-15°18'57				
direct	-9025 Sep 12 j 12:35	23° <u>♁</u> 52'59		conjunction	-9018 Dec 27 j 23:05	3° <u>♁</u> 23'09	-15°40'43
evening set	-9025 Dec 17 j 02:24	25° <u>♁</u> 24'33		minimum elong	-9018 Dec 27 j 22:57	3° <u>♁</u> 23'09	15°40'59
conjunction	-9025 Dec 20 j 02:58	25° <u>♁</u> 29'10	-14°43'34	max. Earth dist.	-9018 Dec 30 j 14:58	3° <u>♁</u> 27'06	46.64132 AU
minimum elong	-9025 Dec 20 j 02:47	25° <u>♁</u> 29'09	14°43'45	retrograde	-9017 Apr 10 j 17:42	5° <u>♁</u> 01'09	
morning rise	-9025 Dec 23 j 03:20	25° <u>♁</u> 33'46		min. Earth dist.	-9017 Jun 30 j 18:28	4° <u>♁</u> 00'36	44.80001 AU
max. Earth dist.	-9025 Dec 23 j 03:00	25° <u>♁</u> 33'44	45.41435 AU	opposition	-9017 Jul 03 j 06:40	3° <u>♁</u> 57'34	-16°25'48
retrograde	-9024 Apr 02 j 04:45	27° <u>♁</u> 09'55		direct	-9017 Sep 21 j 19:08	2° <u>♁</u> 55'38	
min. Earth dist.	-9024 Jun 21 j 20:49	26° <u>♁</u> 08'41	43.57913 AU	conjunction	-9017 Dec 29 j 08:09	4° <u>♁</u> 29'01	-15°47'23
opposition	-9024 Jun 24 j 16:51	26° <u>♁</u> 05'13	-15°28'42	minimum elong	-9017 Dec 29 j 08:01	4° <u>♁</u> 29'00	15°47'38
direct	-9024 Sep 12 j 23:14	25° <u>♁</u> 02'21		max. Earth dist.	-9016 Jan 01 j 00:00	4° <u>♁</u> 32'56	46.80032 AU
evening set	-9024 Dec 18 j 13:30	26° <u>♁</u> 35'09		retrograde	-9016 Apr 11 j 02:53	6° <u>♁</u> 06'39	
conjunction	-9024 Dec 20 j 13:08	26° <u>♁</u> 38'10	-14°52'52	min. Earth dist.	-9016 Jul 01 j 04:23	5° <u>♁</u> 06'08	44.95868 AU
minimum elong	-9024 Dec 20 j 12:58	26° <u>♁</u> 38'09	14°53'04	opposition	-9016 Jul 03 j 14:47	5° <u>♁</u> 03'12	-16°32'23
morning rise	-9024 Dec 22 j 12:32	26° <u>♁</u> 41'10		direct	-9016 Sep 22 j 02:51	4° <u>♁</u> 01'24	
max. Earth dist.	-9024 Dec 23 j 13:17	26° <u>♁</u> 42'43	45.60302 AU	conjunction	-9016 Dec 29 j 16:53	5° <u>♁</u> 34'27	-15°53'39
retrograde	-9023 Apr 03 j 12:01	28° <u>♁</u> 18'31		minimum elong	-9016 Dec 29 j 16:46	5° <u>♁</u> 34'27	15°53'56
min. Earth dist.	-9023 Jun 23 j 07:42	27° <u>♁</u> 17'24	43.76723 AU	max. Earth dist.	-9015 Jan 01 j 07:40	5° <u>♁</u> 38'18	46.95664 AU
opposition	-9023 Jun 26 j 02:14	27° <u>♁</u> 14'01	-15°38'01	retrograde	-9015 Apr 12 j 12:02	7° <u>♁</u> 11'45	
direct	-9023 Sep 14 j 11:15	26° <u>♁</u> 11'19		min. Earth dist.	-9015 Jul 02 j 11:58	6° <u>♁</u> 11'23	45.11467 AU
conjunction	-9023 Dec 21 j 23:10	27° <u>♁</u> 46'46	-15°01'47	opposition	-9015 Jul 04 j 22:36	6° <u>♁</u> 08'27	-16°38'35
minimum elong	-9023 Dec 21 j 22:59	27° <u>♁</u> 46'45	15°01'59	direct	-9015 Sep 23 j 09:49	5° <u>♁</u> 06'46	
max. Earth dist.	-9023 Dec 24 j 21:09	27° <u>♁</u> 51'10	45.78769 AU	conjunction	-9015 Dec 31 j 01:29	6° <u>♁</u> 39'32	-15°59'33

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 29

Attention, astronomical year style is used: The year -9014 in astronomical counting style is the year 9015 BCE in historical counting style.

minimum elong	-9015 Dec 31 j 01:22	6° <del>ℳ</del> 39'31	15°59'49	minimum elong	-9006 Jan 08 j 19:26	15° <del>ℳ</del> 09'49	16°34'34
max. Earth dist.	-9014 Jan 02 j 15:04	6° <del>ℳ</del> 43'17	47.11035 AU	max. Earth dist.	-9006 Jan 10 j 23:56	15° <del>ℳ</del> 12'57	48.20964 AU
retrograde	-9014 Apr 13 j 21:03	8° <del>ℳ</del> 16'29		retrograde	-9006 Apr 22 j 04:50	16° <del>ℳ</del> 44'21	
min. Earth dist.	-9014 Jul 03 j 21:09	7° <del>ℳ</del> 16'12	45.26814 AU	min. Earth dist.	-9006 Jul 12 j 16:03	15° <del>ℳ</del> 44'36	46.35618 AU
opposition	-9014 Jul 06 j 06:21	7° <del>ℳ</del> 13'21	-16°44'23	opposition	-9006 Jul 14 j 14:59	15° <del>ℳ</del> 42'18	-17°18'06
direct	-9014 Sep 24 j 17:16	6° <del>ℳ</del> 11'48			-9006 Aug 23 j 06:40	15° <del>ℳ</del>	
				direct	-9006 Oct 03 j 10:38	14° <del>ℳ</del> 41'35	
					-9006 Nov 12 j 23:16	15° <del>ℳ</del>	
conjunction	-9013 Jan 01 j 10:09	7° <del>ℳ</del> 44'18	-16°05'04	conjunction	-9005 Jan 10 j 03:13	16° <del>ℳ</del> 12'02	-16°37'07
minimum elong	-9013 Jan 01 j 10:02	7° <del>ℳ</del> 44'17	16°05'22	minimum elong	-9005 Jan 10 j 03:09	16° <del>ℳ</del> 12'02	16°37'29
max. Earth dist.	-9013 Jan 03 j 23:45	7° <del>ℳ</del> 48'03	47.26156 AU	max. Earth dist.	-9005 Jan 12 j 05:54	16° <del>ℳ</del> 15'03	48.32715 AU
retrograde	-9013 Apr 15 j 02:22	9° <del>ℳ</del> 20'56		retrograde	-9005 Apr 23 j 12:48	17° <del>ℳ</del> 46'17	
min. Earth dist.	-9013 Jul 05 j 05:35	8° <del>ℳ</del> 20'45	45.41868 AU	min. Earth dist.	-9005 Jul 13 j 22:30	16° <del>ℳ</del> 46'37	46.47232 AU
opposition	-9013 Jul 07 j 13:52	8° <del>ℳ</del> 17'57	-16°49'47	opposition	-9005 Jul 15 j 21:22	16° <del>ℳ</del> 44'19	-17°20'51
direct	-9013 Sep 26 j 03:49	7° <del>ℳ</del> 16'32		direct	-9005 Oct 04 j 16:43	15° <del>ℳ</del> 43'40	
conjunction	-9012 Jan 02 j 18:34	8° <del>ℳ</del> 48'46	-16°10'13	conjunction	-9004 Jan 11 j 10:44	17° <del>ℳ</del> 13'53	-16°39'42
minimum elong	-9012 Jan 02 j 18:28	8° <del>ℳ</del> 48'46	16°10'30	minimum elong	-9004 Jan 11 j 10:41	17° <del>ℳ</del> 13'53	16°40'05
max. Earth dist.	-9012 Jan 05 j 06:08	8° <del>ℳ</del> 52'24	47.40975 AU	max. Earth dist.	-9004 Jan 13 j 12:15	17° <del>ℳ</del> 16'49	48.44109 AU
retrograde	-9012 Apr 15 j 09:59	10° <del>ℳ</del> 25'07		retrograde	-9004 Apr 23 j 21:19	18° <del>ℳ</del> 47'50	
min. Earth dist.	-9012 Jul 05 j 13:27	9° <del>ℳ</del> 25'04	45.56609 AU	min. Earth dist.	-9004 Jul 14 j 06:39	17° <del>ℳ</del> 48'10	46.58524 AU
opposition	-9012 Jul 07 j 21:12	9° <del>ℳ</del> 22'18	-16°54'50	opposition	-9004 Jul 16 j 03:41	17° <del>ℳ</del> 45'57	-17°23'15
direct	-9012 Sep 26 j 11:37	8° <del>ℳ</del> 21'02		direct	-9004 Oct 04 j 21:55	16° <del>ℳ</del> 45'23	
conjunction	-9011 Jan 03 j 02:59	9° <del>ℳ</del> 53'00	-16°15'01	conjunction	-9003 Jan 11 j 18:13	18° <del>ℳ</del> 15'22	-16°41'57
minimum elong	-9011 Jan 03 j 02:52	9° <del>ℳ</del> 53'00	16°15'20	minimum elong	-9003 Jan 11 j 18:10	18° <del>ℳ</del> 15'22	16°42'19
max. Earth dist.	-9011 Jan 05 j 14:20	9° <del>ℳ</del> 56'36	47.55447 AU	max. Earth dist.	-9003 Jan 13 j 19:27	18° <del>ℳ</del> 18'17	48.55221 AU
retrograde	-9011 Apr 16 j 17:13	11° <del>ℳ</del> 29'04		retrograde	-9003 Apr 25 j 02:56	19° <del>ℳ</del> 49'03	
min. Earth dist.	-9011 Jul 06 j 22:50	10° <del>ℳ</del> 29'05	45.70965 AU	min. Earth dist.	-9003 Jul 15 j 13:15	18° <del>ℳ</del> 49'28	46.69527 AU
opposition	-9011 Jul 09 j 04:31	10° <del>ℳ</del> 26'25	-16°59'31	opposition	-9003 Jul 17 j 09:50	18° <del>ℳ</del> 47'17	-17°25'19
direct	-9011 Sep 27 j 20:10	9° <del>ℳ</del> 25'17		direct	-9003 Oct 06 j 05:23	17° <del>ℳ</del> 46'47	
conjunction	-9010 Jan 04 j 11:14	10° <del>ℳ</del> 57'00	-16°19'28	conjunction	-9002 Jan 13 j 01:22	19° <del>ℳ</del> 16'35	-16°43'52
minimum elong	-9010 Jan 04 j 11:09	10° <del>ℳ</del> 57'00	16°19'47	minimum elong	-9002 Jan 13 j 01:20	19° <del>ℳ</del> 16'34	16°44'15
max. Earth dist.	-9010 Jan 06 j 20:50	11° <del>ℳ</del> 00'29	47.69523 AU	max. Earth dist.	-9002 Jan 15 j 00:42	19° <del>ℳ</del> 19'22	48.66060 AU
retrograde	-9010 Apr 18 j 03:46	12° <del>ℳ</del> 32'46		retrograde	-9002 Apr 26 j 09:30	20° <del>ℳ</del> 50'00	
min. Earth dist.	-9010 Jul 08 j 06:22	11° <del>ℳ</del> 32'54	45.84880 AU	min. Earth dist.	-9002 Jul 16 j 20:09	19° <del>ℳ</del> 50'30	46.80266 AU
opposition	-9010 Jul 10 j 11:39	11° <del>ℳ</del> 30'16	-17°03'52	opposition	-9002 Jul 18 j 15:59	19° <del>ℳ</del> 48'21	-17°27'03
direct	-9010 Sep 29 j 01:17	10° <del>ℳ</del> 29'15		direct	-9002 Oct 07 j 12:01	18° <del>ℳ</del> 47'57	
conjunction	-9009 Jan 05 j 19:31	12° <del>ℳ</del> 00'44	-16°23'37	conjunction	-9001 Jan 14 j 08:43	20° <del>ℳ</del> 17'33	-16°45'28
minimum elong	-9009 Jan 05 j 19:25	12° <del>ℳ</del> 00'44	16°23'57	minimum elong	-9001 Jan 14 j 08:41	20° <del>ℳ</del> 17'33	16°45'50
max. Earth dist.	-9009 Jan 08 j 03:30	12° <del>ℳ</del> 04'06	47.83119 AU	max. Earth dist.	-9001 Jan 16 j 07:59	20° <del>ℳ</del> 20'20	48.76626 AU
retrograde	-9009 Apr 19 j 13:15	13° <del>ℳ</del> 36'12		retrograde	-9001 Apr 27 j 13:39	21° <del>ℳ</del> 50'46	
min. Earth dist.	-9009 Jul 09 j 15:40	12° <del>ℳ</del> 36'21	45.98304 AU	min. Earth dist.	-9001 Jul 18 j 03:43	20° <del>ℳ</del> 51'18	46.90706 AU
opposition	-9009 Jul 11 j 18:43	12° <del>ℳ</del> 33'50	-17°07'54	opposition	-9001 Jul 19 j 21:54	20° <del>ℳ</del> 49'14	-17°28'27
direct	-9009 Sep 30 j 06:30	11° <del>ℳ</del> 32'54		direct	-9001 Oct 08 j 20:42	19° <del>ℳ</del> 48'56	
conjunction	-9008 Jan 07 j 03:48	13° <del>ℳ</del> 04'08	-16°27'28	conjunction	-9000 Jan 15 j 15:55	21° <del>ℳ</del> 18'22	-16°46'44
minimum elong	-9008 Jan 07 j 03:44	13° <del>ℳ</del> 04'08	16°27'47	minimum elong	-9000 Jan 15 j 15:54	21° <del>ℳ</del> 18'22	16°47'08
max. Earth dist.	-9008 Jan 09 j 11:00	13° <del>ℳ</del> 07'27	47.96223 AU	max. Earth dist.	-9000 Jan 17 j 13:29	21° <del>ℳ</del> 21'03	48.86899 AU
retrograde	-9008 Apr 19 j 17:59	14° <del>ℳ</del> 39'17		retrograde	-9000 Apr 27 j 22:00	22° <del>ℳ</del> 51'22	
min. Earth dist.	-9008 Jul 09 j 23:37	13° <del>ℳ</del> 39'30	46.11206 AU	min. Earth dist.	-9000 Jul 18 j 09:48	21° <del>ℳ</del> 52'02	47.00826 AU
opposition	-9008 Jul 12 j 01:37	13° <del>ℳ</del> 37'03	-17°11'37	opposition	-9000 Jul 20 j 03:46	21° <del>ℳ</del> 49'59	-17°29'31
direct	-9008 Sep 30 j 16:49	12° <del>ℳ</del> 36'12		direct	-9000 Oct 09 j 01:26	20° <del>ℳ</del> 49'47	
conjunction	-9007 Jan 07 j 11:35	14° <del>ℳ</del> 07'11	-16°31'00	conjunction	-8999 Jan 15 j 22:51	22° <del>ℳ</del> 19'04	-16°47'43
minimum elong	-9007 Jan 07 j 11:30	14° <del>ℳ</del> 07'10	16°31'20	minimum elong	-8999 Jan 15 j 22:50	22° <del>ℳ</del> 19'04	16°48'06
max. Earth dist.	-9007 Jan 09 j 16:16	14° <del>ℳ</del> 10'20	48.08822 AU	max. Earth dist.	-8999 Jan 17 j 19:19	22° <del>ℳ</del> 21'40	48.96812 AU
	-9007 Feb 15 j 11:20	15° <del>ℳ</del>		retrograde	-8999 Apr 29 j 07:21	23° <del>ℳ</del> 51'52	
retrograde	-9007 Apr 20 j 23:24	15° <del>ℳ</del> 42'01		min. Earth dist.	-8999 Jul 19 j 17:49	22° <del>ℳ</del> 52'34	47.10563 AU
	-9007 Jun 25 j 23:20	15° <del>ℳ</del>		opposition	-8999 Jul 21 j 09:39	22° <del>ℳ</del> 50'38	-17°30'17
min. Earth dist.	-9007 Jul 11 j 07:26	14° <del>ℳ</del> 42'17	46.23632 AU	direct	-8999 Oct 10 j 04:28	21° <del>ℳ</del> 50'32	
opposition	-9007 Jul 13 j 08:25	14° <del>ℳ</del> 39'52	-17°15'02				
direct	-9007 Oct 02 j 01:47	13° <del>ℳ</del> 39'06		conjunction	-8998 Jan 17 j 06:03	23° <del>ℳ</del> 19'41	-16°48'24
	-9006 Jan 01 j 22:32	15° <del>ℳ</del>		minimum elong	-8998 Jan 17 j 06:02	23° <del>ℳ</del> 19'41	16°48'49
conjunction	-9006 Jan 08 j 19:29	15° <del>ℳ</del> 09'49	-16°34'13				

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 30

Attention, astronomical year style is used: The year -8998 in astronomical counting style is the year 8999 BCE in historical counting style.

max. Earth dist.	-8998 Jan 19 j 01:41	23° <b>ℳ</b> 22'14	49.06325 AU	conjunction	-8990 Jan 25 j 12:16	1° <b>♂</b> 17'47	-16°44'11
retrograde	-8998 Apr 30 j 12:37	24° <b>ℳ</b> 52'17		minimum elong	-8990 Jan 25 j 12:18	1° <b>♂</b> 17'47	16°44'38
min. Earth dist.	-8998 Jul 21 j 00:20	23° <b>ℳ</b> 53'03	47.19845 AU	max. Earth dist.	-8990 Jan 26 j 20:00	1° <b>♂</b> 19'37	49.65394 AU
opposition	-8998 Jul 22 j 15:15	23° <b>ℳ</b> 51'10	-17°30'47	retrograde	-8990 May 08 j 08:32	2° <b>♂</b> 48'48	
direct	-8998 Oct 11 j 11:58	22° <b>ℳ</b> 51'10		min. Earth dist.	-8990 Jul 29 j 04:45	1° <b>♂</b> 49'44	47.77133 AU
				opposition	-8990 Jul 30 j 09:49	1° <b>♂</b> 48'20	-17°24'44
				direct	-8990 Oct 19 j 15:17	0° <b>♂</b> 48'43	
conjunction	-8997 Jan 18 j 13:09	24° <b>ℳ</b> 20'11	-16°48'48				
minimum elong	-8997 Jan 18 j 13:09	24° <b>ℳ</b> 20'11	16°49'13				
max. Earth dist.	-8997 Jan 20 j 06:07	24° <b>ℳ</b> 22'34	49.15353 AU	conjunction	-8989 Jan 26 j 18:44	2° <b>♂</b> 16'34	-16°42'24
retrograde	-8997 May 01 j 18:00	25° <b>ℳ</b> 52'35		minimum elong	-8989 Jan 26 j 18:47	2° <b>♂</b> 16'34	16°42'52
min. Earth dist.	-8997 Jul 22 j 07:32	24° <b>ℳ</b> 53'24	47.28626 AU	max. Earth dist.	-8989 Jan 28 j 01:27	2° <b>♂</b> 18'20	49.71116 AU
opposition	-8997 Jul 23 j 21:00	24° <b>ℳ</b> 51'35	-17°30'59	retrograde	-8989 May 09 j 16:59	3° <b>♂</b> 47'25	
direct	-8997 Oct 12 j 19:14	23° <b>ℳ</b> 51'40		min. Earth dist.	-8989 Jul 30 j 11:51	2° <b>♂</b> 48'21	47.82669 AU
				opposition	-8989 Jul 31 j 14:54	2° <b>♂</b> 47'03	-17°22'41
				direct	-8989 Oct 20 j 18:18	1° <b>♂</b> 47'29	
conjunction	-8996 Jan 19 j 20:15	25° <b>ℳ</b> 20'32	-16°48'57				
minimum elong	-8996 Jan 19 j 20:14	25° <b>ℳ</b> 20'32	16°49'23				
max. Earth dist.	-8996 Jan 21 j 12:37	25° <b>ℳ</b> 22'53	49.23856 AU	conjunction	-8988 Jan 28 j 01:08	3° <b>♂</b> 15'14	-16°40'19
retrograde	-8996 May 01 j 21:48	26° <b>ℳ</b> 52'44		minimum elong	-8988 Jan 28 j 01:11	3° <b>♂</b> 15'14	16°40'47
min. Earth dist.	-8996 Jul 22 j 15:16	25° <b>ℳ</b> 53'33	47.36860 AU	max. Earth dist.	-8988 Jan 29 j 07:09	3° <b>♂</b> 16'57	49.76526 AU
opposition	-8996 Jul 24 j 02:34	25° <b>ℳ</b> 51'51	-17°30'56	retrograde	-8988 May 09 j 22:35	4° <b>♂</b> 45'56	
direct	-8996 Oct 13 j 03:56	24° <b>ℳ</b> 52'00		opposition	-8988 Jul 31 j 19:41	3° <b>♂</b> 45'39	-17°20'20
				min. Earth dist.	-8988 Jul 30 j 17:04	3° <b>♂</b> 46'55	47.87856 AU
				direct	-8988 Oct 20 j 23:19	2° <b>♂</b> 46'08	
conjunction	-8995 Jan 20 j 03:10	26° <b>ℳ</b> 20'41	-16°48'51				
minimum elong	-8995 Jan 20 j 03:12	26° <b>ℳ</b> 20'41	16°49'17				
max. Earth dist.	-8995 Jan 21 j 17:15	26° <b>ℳ</b> 22'54	49.31843 AU	conjunction	-8987 Jan 28 j 07:24	4° <b>♂</b> 13'48	-16°37'59
retrograde	-8995 May 03 j 04:40	27° <b>ℳ</b> 52'42		minimum elong	-8987 Jan 28 j 07:27	4° <b>♂</b> 13'48	16°38'29
min. Earth dist.	-8995 Jul 23 j 21:08	26° <b>ℳ</b> 53'34	47.44586 AU	max. Earth dist.	-8987 Jan 29 j 11:08	4° <b>♂</b> 15'23	49.81571 AU
opposition	-8995 Jul 25 j 08:00	26° <b>ℳ</b> 51'53	-17°30'37	retrograde	-8987 May 11 j 04:44	5° <b>♂</b> 44'22	
direct	-8995 Oct 14 j 09:30	25° <b>ℳ</b> 52'05		min. Earth dist.	-8987 Jul 31 j 23:28	4° <b>♂</b> 45'22	47.92664 AU
				opposition	-8987 Aug 02 j 00:33	4° <b>♂</b> 44'10	-17°17'43
				direct	-8987 Oct 22 j 04:16	3° <b>♂</b> 44'42	
conjunction	-8994 Jan 21 j 09:55	27° <b>ℳ</b> 20'37	-16°48'28				
minimum elong	-8994 Jan 21 j 09:54	27° <b>ℳ</b> 20'37	16°48'55				
max. Earth dist.	-8994 Jan 22 j 22:31	27° <b>ℳ</b> 22'44	49.39329 AU	conjunction	-8986 Jan 29 j 13:48	5° <b>♂</b> 12'18	-16°35'23
retrograde	-8994 May 04 j 12:42	28° <b>ℳ</b> 52'25		minimum elong	-8986 Jan 29 j 13:52	5° <b>♂</b> 12'18	16°35'52
min. Earth dist.	-8994 Jul 25 j 04:55	27° <b>ℳ</b> 53'14	47.51836 AU	max. Earth dist.	-8986 Jan 30 j 17:10	5° <b>♂</b> 13'52	49.86198 AU
opposition	-8994 Jul 26 j 13:27	27° <b>ℳ</b> 51'40	-17°30'01	retrograde	-8986 May 12 j 07:36	6° <b>♂</b> 42'44	
direct	-8994 Oct 15 j 13:38	26° <b>ℳ</b> 51'54		min. Earth dist.	-8986 Aug 02 j 06:14	5° <b>♂</b> 43'44	47.97000 AU
				opposition	-8986 Aug 03 j 05:25	5° <b>♂</b> 42'37	-17°14'51
				direct	-8986 Oct 23 j 12:28	4° <b>♂</b> 43'13	
conjunction	-8993 Jan 22 j 16:47	28° <b>ℳ</b> 20'17	-16°47'49				
minimum elong	-8993 Jan 22 j 16:50	28° <b>ℳ</b> 20'17	16°48'16				
max. Earth dist.	-8993 Jan 24 j 04:39	28° <b>ℳ</b> 22'21	49.46380 AU	conjunction	-8985 Jan 30 j 20:14	6° <b>♂</b> 10'44	-16°32'32
retrograde	-8993 May 05 j 19:18	29° <b>ℳ</b> 51'51		minimum elong	-8985 Jan 30 j 20:17	6° <b>♂</b> 10'44	16°33'02
min. Earth dist.	-8993 Jul 26 j 10:42	28° <b>ℳ</b> 52'43	47.58664 AU	max. Earth dist.	-8985 Jan 31 j 21:05	6° <b>♂</b> 12'09	49.90338 AU
opposition	-8993 Jul 27 j 18:33	28° <b>ℳ</b> 51'11	-17°29'08	retrograde	-8985 May 13 j 13:01	7° <b>♂</b> 41'02	
direct	-8993 Oct 16 j 18:41	27° <b>ℳ</b> 51'27		min. Earth dist.	-8985 Aug 03 j 11:38	6° <b>♂</b> 42'04	48.00825 AU
				opposition	-8985 Aug 04 j 10:05	6° <b>♂</b> 40'59	-17°11'44
				direct	-8985 Oct 24 j 18:00	5° <b>♂</b> 41'37	
conjunction	-8992 Jan 23 j 23:22	29° <b>ℳ</b> 19'41	-16°46'54				
minimum elong	-8992 Jan 23 j 23:23	29° <b>ℳ</b> 19'41	16°47'21				
max. Earth dist.	-8992 Jan 25 j 08:59	29° <b>ℳ</b> 21'38	49.53039 AU	conjunction	-8984 Feb 01 j 02:37	7° <b>♂</b> 09'03	-16°29'27
	-8992 Feb 23 j 01:11	0° <b>♂</b>		minimum elong	-8984 Feb 01 j 02:42	7° <b>♂</b> 09'03	16°29'56
retrograde	-8992 May 06 j 01:28	0° <b>♂</b> 51'03		max. Earth dist.	-8984 Feb 02 j 01:50	7° <b>♂</b> 10'23	49.93938 AU
	-8992 Jul 19 j 16:33	30° <b>♂</b> ℳ		retrograde	-8984 May 13 j 19:41	8° <b>♂</b> 39'14	
opposition	-8992 Jul 27 j 23:46	29° <b>ℳ</b> 50'27	-17°27'58	opposition	-8984 Aug 04 j 14:58	7° <b>♂</b> 39'15	-17°08'23
min. Earth dist.	-8992 Jul 26 j 17:03	29° <b>ℳ</b> 51'55	47.65140 AU	min. Earth dist.	-8984 Aug 03 j 19:00	7° <b>♂</b> 40'12	48.04104 AU
direct	-8992 Oct 17 j 00:14	28° <b>ℳ</b> 50'45		direct	-8984 Oct 24 j 22:26	6° <b>♂</b> 39'53	
	-8991 Jan 10 j 12:38	0° <b>♂</b>					
				conjunction	-8983 Feb 01 j 08:48	8° <b>♂</b> 07'15	-16°26'08
conjunction	-8991 Jan 24 j 05:49	0° <b>♂</b> 18'50	-16°45'41	minimum elong	-8983 Feb 01 j 08:52	8° <b>♂</b> 07'15	16°26'38
minimum elong	-8991 Jan 24 j 05:52	0° <b>♂</b> 18'50	16°46'09	max. Earth dist.	-8983 Feb 02 j 06:55	8° <b>♂</b> 08'30	49.97011 AU
max. Earth dist.	-8991 Jan 25 j 15:22	0° <b>♂</b> 20'46	49.59364 AU	retrograde	-8983 May 15 j 02:08	9° <b>♂</b> 37'17	
retrograde	-8991 May 07 j 03:00	1° <b>♂</b> 50'01		opposition	-8983 Aug 05 j 19:38	8° <b>♂</b> 37'21	-17°04'47
min. Earth dist.	-8991 Jul 27 j 23:39	0° <b>♂</b> 50'54	47.71284 AU	min. Earth dist.	-8983 Aug 05 j 00:27	8° <b>♂</b> 38'16	48.06847 AU
opposition	-8991 Jul 29 j 04:55	0° <b>♂</b> 49'29	-17°26'30	direct	-8983 Oct 26 j 02:48	7° <b>♂</b> 37'59	
	-8991 Sep 17 j 17:15	30° <b>♂</b> ℳ					
direct	-8991 Oct 18 j 09:13	29° <b>ℳ</b> 49'49		conjunction	-8982 Feb 02 j 14:57	9° <b>♂</b> 05'16	-16°22'35
	-8991 Nov 17 j 18:57	0° <b>♂</b>		minimum elong	-8982 Feb 02 j 15:03	9° <b>♂</b> 05'17	16°23'05
				max. Earth dist.	-8982 Feb 03 j 10:31	9° <b>♂</b> 06'23	49.99569 AU

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 31

Attention, astronomical year style is used: The year -8982 in astronomical counting style is the year 8983 BCE in historical counting style.

retrograde	-8982 May 16 j 08:27	10°♂35'10		direct	-8974 Nov 04 j 01:49	16°♂16'04	
min. Earth dist.	-8982 Aug 06 j 06:37	9°♂36'06	48.09113 AU				
opposition	-8982 Aug 07 j 00:09	9°♂35'16	-17°00'57	conjunction	-8973 Feb 11 j 21:04	17°♂43'07	-15°38'55
direct	-8982 Oct 27 j 07:12	8°♂35'55		minimum elong	-8973 Feb 11 j 21:12	17°♂43'07	15°39'27
				max. Earth dist.	-8973 Feb 12 j 05:49	17°♂43'36	50.06414 AU
conjunction	-8981 Feb 03 j 21:14	10°♂03'07	-16°18'47	retrograde	-8973 May 25 j 05:46	19°♂12'18	
minimum elong	-8981 Feb 03 j 21:19	10°♂03'08	16°19'18	opposition	-8973 Aug 15 j 15:25	18°♂12'51	-16°14'18
max. Earth dist.	-8981 Feb 04 j 16:18	10°♂04'12	50.01674 AU	min. Earth dist.	-8973 Aug 15 j 08:27	18°♂13'11	48.13555 AU
retrograde	-8981 May 17 j 10:28	11°♂32'53		direct	-8973 Nov 05 j 05:02	17°♂13'37	
opposition	-8981 Aug 08 j 04:41	10°♂33'01	-16°56'51				
min. Earth dist.	-8981 Aug 07 j 12:46	10°♂33'47	48.10941 AU	conjunction	-8972 Feb 13 j 02:59	18°♂40'40	-15°32'49
direct	-8981 Oct 28 j 15:04	9°♂33'40		minimum elong	-8972 Feb 13 j 03:06	18°♂40'41	15°33'22
				max. Earth dist.	-8972 Feb 13 j 08:57	18°♂41'00	50.05213 AU
conjunction	-8980 Feb 05 j 03:13	11°♂00'48	-16°14'44	retrograde	-8972 May 25 j 13:26	20°♂09'48	
minimum elong	-8980 Feb 05 j 03:20	11°♂00'48	16°15'15	opposition	-8972 Aug 15 j 19:48	19°♂10'22	-16°07'51
max. Earth dist.	-8980 Feb 05 j 20:20	11°♂01'47	50.03388 AU	min. Earth dist.	-8972 Aug 15 j 14:41	19°♂10'37	48.11997 AU
retrograde	-8980 May 17 j 14:35	12°♂30'27		direct	-8972 Nov 05 j 07:39	18°♂11'07	
opposition	-8980 Aug 08 j 09:03	11°♂30'37	-16°52'29				
min. Earth dist.	-8980 Aug 07 j 17:30	11°♂31'22	48.12409 AU	conjunction	-8971 Feb 13 j 09:06	19°♂38'11	-15°26'29
direct	-8980 Oct 28 j 21:19	10°♂31'16		minimum elong	-8971 Feb 13 j 09:15	19°♂38'11	15°27'02
				max. Earth dist.	-8971 Feb 13 j 14:24	19°♂38'29	50.03490 AU
conjunction	-8979 Feb 05 j 09:12	11°♂58'21	-16°10'24	retrograde	-8971 May 26 j 16:18	21°♂07'15	
minimum elong	-8979 Feb 05 j 09:17	11°♂58'21	16°10'55	opposition	-8971 Aug 17 j 00:05	20°♂07'50	-16°01'10
max. Earth dist.	-8979 Feb 06 j 01:15	11°♂59'16	50.04759 AU	min. Earth dist.	-8971 Aug 16 j 20:42	20°♂07'59	48.09906 AU
retrograde	-8979 May 18 j 21:51	13°♂27'54		direct	-8971 Nov 06 j 14:36	19°♂08'32	
opposition	-8979 Aug 09 j 13:30	12°♂28'07	-16°47'50				
min. Earth dist.	-8979 Aug 08 j 23:54	12°♂28'46	48.13561 AU	conjunction	-8970 Feb 14 j 15:02	20°♂35'36	-15°19'56
direct	-8979 Oct 30 j 00:29	11°♂28'46		minimum elong	-8970 Feb 14 j 15:10	20°♂35'36	15°20'29
				max. Earth dist.	-8970 Feb 14 j 17:58	20°♂35'46	50.01268 AU
conjunction	-8978 Feb 06 j 15:10	12°♂55'48	-16°05'49	retrograde	-8970 May 27 j 18:50	22°♂04'36	
minimum elong	-8978 Feb 06 j 15:17	12°♂55'49	16°06'20	opposition	-8970 Aug 18 j 04:19	21°♂05'11	-15°54'15
max. Earth dist.	-8978 Feb 07 j 06:36	12°♂56'41	50.05847 AU	min. Earth dist.	-8970 Aug 18 j 01:41	21°♂05'18	48.07335 AU
retrograde	-8978 May 20 j 03:50	14°♂25'16		direct	-8970 Nov 07 j 21:51	20°♂05'51	
opposition	-8978 Aug 10 j 17:51	13°♂25'32	-16°42'54				
min. Earth dist.	-8978 Aug 10 j 04:26	13°♂26'10	48.14415 AU	conjunction	-8969 Feb 15 j 21:04	21°♂32'54	-15°13'09
direct	-8978 Oct 31 j 03:55	12°♂26'11		minimum elong	-8969 Feb 15 j 21:13	21°♂32'55	15°13'42
				max. Earth dist.	-8969 Feb 15 j 22:37	21°♂32'59	49.98572 AU
conjunction	-8977 Feb 07 j 21:06	13°♂53'13	-16°00'57	retrograde	-8969 May 28 j 23:55	23°♂01'51	
minimum elong	-8977 Feb 07 j 21:12	13°♂53'13	16°01'28	opposition	-8969 Aug 19 j 08:32	22°♂02'25	-15°47'05
max. Earth dist.	-8977 Feb 08 j 10:24	13°♂53'58	50.06641 AU	min. Earth dist.	-8969 Aug 19 j 08:09	22°♂02'26	48.04325 AU
retrograde	-8977 May 21 j 09:51	15°♂22'36		direct	-8969 Nov 09 j 03:04	21°♂03'02	
opposition	-8977 Aug 11 j 22:10	14°♂22'55	-16°37'42				
min. Earth dist.	-8977 Aug 11 j 10:08	14°♂23'29	48.14987 AU	conjunction	-8968 Feb 17 j 03:02	22°♂30'05	-15°06'06
direct	-8977 Nov 01 j 08:09	13°♂23'36		minimum elong	-8968 Feb 17 j 03:10	22°♂30'06	15°06'39
				max. Earth dist.	-8968 Feb 17 j 03:43	22°♂30'08	49.95488 AU
conjunction	-8976 Feb 09 j 03:07	14°♂50'38	-15°55'49	retrograde	-8968 May 29 j 06:01	23°♂59'00	
minimum elong	-8976 Feb 09 j 03:14	14°♂50'38	15°56'21	opposition	-8968 Aug 19 j 12:43	22°♂59'33	-15°39'39
max. Earth dist.	-8976 Feb 09 j 16:22	14°♂51'23	50.07143 AU	min. Earth dist.	-8968 Aug 19 j 12:35	22°♂59'33	48.00942 AU
retrograde	-8976 May 21 j 11:50	16°♂19'57		direct	-8968 Nov 09 j 06:24	22°♂00'07	
opposition	-8976 Aug 12 j 02:33	15°♂20'19	-16°32'14	evening set	-8967 Feb 16 j 18:11	23°♂26'22	
min. Earth dist.	-8976 Aug 11 j 15:55	15°♂20'50	48.15236 AU				
direct	-8976 Nov 01 j 16:02	14°♂21'02		conjunction	-8967 Feb 17 j 08:40	23°♂27'11	-14°58'49
				minimum elong	-8967 Feb 17 j 08:50	23°♂27'12	14°59'22
conjunction	-8975 Feb 09 j 08:51	15°♂48'04	-15°50'26	evening rise	-8967 Feb 17 j 23:30	23°♂28'01	
minimum elong	-8975 Feb 09 j 08:58	15°♂48'05	15°50'57	max. Earth dist.	-8967 Feb 17 j 07:18	23°♂27'07	49.92052 AU
max. Earth dist.	-8975 Feb 09 j 20:03	15°♂48'43	50.07319 AU	retrograde	-8967 May 30 j 12:27	24°♂56'03	
retrograde	-8975 May 22 j 16:27	17°♂17'21		opposition	-8967 Aug 20 j 16:58	23°♂56'36	-15°31'58
opposition	-8975 Aug 13 j 06:49	16°♂17'47	-16°26'30	min. Earth dist.	-8967 Aug 20 j 18:21	23°♂56'32	47.97243 AU
min. Earth dist.	-8975 Aug 12 j 20:37	16°♂18'16	48.15130 AU	direct	-8967 Nov 10 j 09:52	22°♂57'08	
direct	-8975 Nov 02 j 21:27	15°♂18'32		evening set	-8966 Feb 16 j 09:57	24°♂21'16	
conjunction	-8974 Feb 10 j 14:53	16°♂45'34	-15°44'48	conjunction	-8966 Feb 18 j 14:39	24°♂24'14	-14°51'16
minimum elong	-8974 Feb 10 j 15:00	16°♂45'34	15°45'20	minimum elong	-8966 Feb 18 j 14:48	24°♂24'15	14°51'49
max. Earth dist.	-8974 Feb 11 j 00:46	16°♂46'08	50.07092 AU	max. Earth dist.	-8966 Feb 18 j 13:09	24°♂24'09	49.88315 AU
retrograde	-8974 May 23 j 22:32	18°♂14'49		morning rise	-8966 Feb 20 j 19:41	24°♂27'14	
opposition	-8974 Aug 14 j 11:07	17°♂15'19	-16°20'31	retrograde	-8966 May 31 j 15:13	25°♂53'05	
min. Earth dist.	-8974 Aug 14 j 03:26	17°♂15'41	48.14591 AU	opposition	-8966 Aug 21 j 21:08	24°♂53'38	-15°24'00

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 32

Attention, astronomical year style is used: The year -8966 in astronomical counting style is the year 8967 BCE in historical counting style.

min. Earth dist.	-8966 Aug 21 j 23:40	24° $\nearrow$ 53'30	47.93238 AU	evening set	-8959 Feb 19 j 03:34	0° $\searrow$ 57'55	
direct	-8966 Nov 11 j 16:50	23° $\nearrow$ 54'08					
evening set	-8965 Feb 16 j 19:07	25° $\nearrow$ 17'08		conjunction	-8959 Feb 25 j 09:06	1° $\searrow$ 06'23	-13°51'23
				minimum elong	-8959 Feb 25 j 09:16	1° $\searrow$ 06'24	13°51'57
conjunction	-8965 Feb 19 j 20:34	25° $\nearrow$ 21'18	-14°43'27	max. Earth dist.	-8959 Feb 24 j 20:33	1° $\searrow$ 05'40	49.52257 AU
minimum elong	-8965 Feb 19 j 20:44	25° $\nearrow$ 21'18	14°44'01	morning rise	-8959 Mar 03 j 15:06	1° $\searrow$ 14'53	
max. Earth dist.	-8965 Feb 19 j 17:05	25° $\nearrow$ 21'06	49.84298 AU	retrograde	-8959 Jun 07 j 04:16	2° $\searrow$ 35'29	
morning rise	-8965 Feb 22 j 22:25	25° $\nearrow$ 25'28		opposition	-8959 Aug 28 j 03:28	1° $\searrow$ 36'09	-14°21'07
retrograde	-8965 Jun 01 j 19:36	26° $\nearrow$ 50'08		min. Earth dist.	-8959 Aug 28 j 15:46	1° $\searrow$ 35'33	47.54766 AU
opposition	-8965 Aug 23 j 01:20	25° $\nearrow$ 50'42	-15°15'47	direct	-8959 Nov 18 j 03:17	0° $\searrow$ 36'29	
min. Earth dist.	-8965 Aug 23 j 04:12	25° $\nearrow$ 50'34	47.88954 AU	evening set	-8958 Feb 20 j 00:21	1° $\searrow$ 55'19	
direct	-8965 Nov 12 j 22:22	24° $\nearrow$ 51'11					
evening set	-8964 Feb 17 j 08:25	26° $\nearrow$ 13'20		conjunction	-8958 Feb 26 j 15:27	2° $\searrow$ 04'20	-13°41'54
				minimum elong	-8958 Feb 26 j 15:39	2° $\searrow$ 04'21	13°42'27
conjunction	-8964 Feb 21 j 02:26	26° $\nearrow$ 18'25	-14°35'23	max. Earth dist.	-8958 Feb 26 j 01:41	2° $\searrow$ 03'33	49.45180 AU
minimum elong	-8964 Feb 21 j 02:35	26° $\nearrow$ 18'26	14°35'56	morning rise	-8958 Mar 05 j 07:00	2° $\searrow$ 13'23	
max. Earth dist.	-8964 Feb 20 j 21:59	26° $\nearrow$ 18'10	49.79979 AU	retrograde	-8958 Jun 08 j 11:22	3° $\searrow$ 33'28	
morning rise	-8964 Feb 24 j 20:50	26° $\nearrow$ 23'32		opposition	-8958 Aug 29 j 07:44	2° $\searrow$ 34'06	-14°11'10
retrograde	-8964 Jun 02 j 00:46	27° $\nearrow$ 47'18		min. Earth dist.	-8958 Aug 29 j 20:41	2° $\searrow$ 33'29	47.47291 AU
opposition	-8964 Aug 23 j 05:39	26° $\nearrow$ 47'53	-15°07'17	direct	-8958 Nov 19 j 06:20	1° $\searrow$ 34'21	
min. Earth dist.	-8964 Aug 23 j 10:34	26° $\nearrow$ 47'39	47.84355 AU	evening set	-8957 Feb 20 j 21:26	2° $\searrow$ 52'46	
direct	-8964 Nov 13 j 03:07	25° $\nearrow$ 48'22					
evening set	-8963 Feb 17 j 00:19	27° $\nearrow$ 09'48		conjunction	-8957 Feb 27 j 21:44	3° $\searrow$ 02'19	-13°32'10
				minimum elong	-8957 Feb 27 j 21:54	3° $\searrow$ 02'19	13°32'45
conjunction	-8963 Feb 21 j 08:27	27° $\nearrow$ 15'41	-14°27'03	max. Earth dist.	-8957 Feb 27 j 05:24	3° $\searrow$ 01'23	49.37608 AU
minimum elong	-8963 Feb 21 j 08:37	27° $\nearrow$ 15'42	14°27'38	morning rise	-8957 Mar 06 j 22:33	3° $\searrow$ 11'53	
max. Earth dist.	-8963 Feb 21 j 03:13	27° $\nearrow$ 15'23	49.75345 AU	retrograde	-8957 Jun 09 j 18:34	4° $\searrow$ 31'29	
morning rise	-8963 Feb 25 j 16:58	27° $\nearrow$ 21'36		opposition	-8957 Aug 30 j 12:15	3° $\searrow$ 32'05	-14°00'59
retrograde	-8963 Jun 03 j 07:19	28° $\nearrow$ 44'36		min. Earth dist.	-8957 Aug 31 j 03:07	3° $\searrow$ 31'22	47.39364 AU
opposition	-8963 Aug 24 j 09:47	27° $\nearrow$ 45'13	-14°58'32	direct	-8957 Nov 20 j 09:27	2° $\searrow$ 32'15	
min. Earth dist.	-8963 Aug 24 j 15:10	27° $\nearrow$ 44'58	47.79402 AU	evening set	-8956 Feb 21 j 18:48	3° $\searrow$ 50'16	
direct	-8963 Nov 14 j 06:33	26° $\nearrow$ 45'41		max. Earth dist.	-8956 Feb 28 j 11:19	3° $\searrow$ 59'22	49.29609 AU
evening set	-8962 Feb 17 j 17:37	28° $\nearrow$ 06'31					
				conjunction	-8956 Feb 29 j 03:58	4° $\searrow$ 00'19	-13°22'13
conjunction	-8962 Feb 22 j 14:28	28° $\nearrow$ 13'07	-14°18'29	minimum elong	-8956 Feb 29 j 04:09	4° $\searrow$ 00'19	13°22'47
minimum elong	-8962 Feb 22 j 14:38	28° $\nearrow$ 13'08	14°19'03	morning rise	-8956 Mar 07 j 13:32	4° $\searrow$ 10'24	
max. Earth dist.	-8962 Feb 22 j 06:43	28° $\nearrow$ 12'41	49.70317 AU	retrograde	-8956 Jun 09 j 22:11	5° $\searrow$ 29'31	
morning rise	-8962 Feb 27 j 11:48	28° $\nearrow$ 19'45		opposition	-8956 Aug 30 j 16:43	4° $\searrow$ 30'04	-13°50'32
retrograde	-8962 Jun 04 j 15:41	29° $\nearrow$ 42'04		min. Earth dist.	-8956 Aug 31 j 08:46	4° $\searrow$ 29'18	47.31029 AU
opposition	-8962 Aug 25 j 14:08	28° $\nearrow$ 42'44	-14°49'31	direct	-8956 Nov 20 j 16:35	3° $\searrow$ 30'09	
min. Earth dist.	-8962 Aug 25 j 21:22	28° $\nearrow$ 42'23	47.74025 AU	evening set	-8955 Feb 21 j 16:35	4° $\searrow$ 47'47	
direct	-8962 Nov 15 j 08:36	27° $\nearrow$ 43'11					
evening set	-8961 Feb 18 j 12:15	29° $\nearrow$ 03'28		conjunction	-8955 Mar 01 j 10:08	4° $\searrow$ 58'20	-13°12'00
				minimum elong	-8955 Mar 01 j 10:19	4° $\searrow$ 58'21	13°12'33
conjunction	-8961 Feb 23 j 20:47	29° $\nearrow$ 10'44	-14°09'41	max. Earth dist.	-8955 Feb 28 j 15:25	4° $\searrow$ 57'16	49.21250 AU
minimum elong	-8961 Feb 23 j 20:57	29° $\nearrow$ 10'45	14°10'15	morning rise	-8955 Mar 09 j 04:13	5° $\searrow$ 08'54	
max. Earth dist.	-8961 Feb 23 j 12:24	29° $\nearrow$ 10'16	49.64823 AU	retrograde	-8955 Jun 11 j 02:04	6° $\searrow$ 27'35	
morning rise	-8961 Mar 01 j 05:42	29° $\nearrow$ 18'02		opposition	-8955 Aug 31 j 21:05	5° $\searrow$ 28'05	-13°39'50
	-8961 Apr 03 j 04:02	0° $\searrow$		min. Earth dist.	-8955 Sep 01 j 13:37	5° $\searrow$ 27'18	47.22366 AU
retrograde	-8961 Jun 05 j 20:02	0° $\searrow$ 39'44		direct	-8955 Nov 21 j 23:18	4° $\searrow$ 28'05	
	-8961 Aug 09 j 07:39	30° $\nearrow$ 8'27		evening set	-8954 Feb 22 j 14:34	5° $\searrow$ 45'23	
opposition	-8961 Aug 26 j 18:29	29° $\nearrow$ 40'25	-14°40'17				
min. Earth dist.	-8961 Aug 27 j 03:28	29° $\nearrow$ 39'59	47.68140 AU	conjunction	-8954 Mar 02 j 16:29	5° $\searrow$ 56'24	-13°01'31
direct	-8961 Nov 16 j 14:47	28° $\nearrow$ 40'51		minimum elong	-8954 Mar 02 j 16:40	5° $\searrow$ 56'24	13°02'05
	-8960 Feb 18 j 20:49	0° $\searrow$		max. Earth dist.	-8954 Mar 01 j 20:46	5° $\searrow$ 55'16	49.12566 AU
evening set	-8960 Feb 19 j 07:43	0° $\searrow$ 00'37		morning rise	-8954 Mar 10 j 18:50	6° $\searrow$ 07'26	
				retrograde	-8954 Jun 12 j 06:13	7° $\searrow$ 25'44	
conjunction	-8960 Feb 25 j 02:58	0° $\searrow$ 08'30	-14°00'38	opposition	-8954 Sep 02 j 01:44	6° $\searrow$ 26'11	-13°28'51
minimum elong	-8960 Feb 25 j 03:09	0° $\searrow$ 08'31	14°01'12	min. Earth dist.	-8954 Sep 02 j 20:16	6° $\searrow$ 25'17	47.13393 AU
max. Earth dist.	-8960 Feb 24 j 16:05	0° $\searrow$ 07'53	49.58815 AU	direct	-8954 Nov 23 j 05:36	5° $\searrow$ 26'06	
morning rise	-8960 Mar 01 j 22:43	0° $\searrow$ 16'25		evening set	-8953 Feb 23 j 13:03	6° $\searrow$ 43'04	
retrograde	-8960 Jun 05 j 23:30	1° $\searrow$ 37'33					
opposition	-8960 Aug 26 j 22:55	0° $\searrow$ 38'14	-14°30'49	conjunction	-8953 Mar 03 j 22:52	6° $\searrow$ 54'32	-12°50'46
min. Earth dist.	-8960 Aug 27 j 08:46	0° $\searrow$ 37'46	47.61728 AU	minimum elong	-8953 Mar 03 j 23:03	6° $\searrow$ 54'33	12°51'20
	-8960 Oct 02 j 04:28	30° $\nearrow$ 8'27		max. Earth dist.	-8953 Mar 03 j 02:26	6° $\searrow$ 53'22	49.03600 AU
direct	-8960 Nov 16 j 21:19	29° $\nearrow$ 38'37		morning rise	-8953 Mar 12 j 09:03	7° $\searrow$ 06'03	
	-8959 Jan 01 j 05:20	0° $\searrow$		retrograde	-8953 Jun 13 j 12:06	8° $\searrow$ 23'57	



## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 33

Attention, astronomical year style is used: The year -8953 in astronomical counting style is the year 8954 BCE in historical counting style.

opposition	-8953 Sep 03 j 06:13	7° $\overline{3}$ 24'23	-13°17'35	max. Earth dist.	-8946 Mar 09 j 14:44	13° $\overline{3}$ 44'53	48.30411 AU
min. Earth dist.	-8953 Sep 04 j 00:49	7° $\overline{3}$ 23'29	47.04132 AU	morning rise	-8946 Mar 21 j 09:38	14° $\overline{3}$ 01'09	
direct	-8953 Nov 24 j 10:17	6° $\overline{3}$ 24'13		retrograde	-8946 Jun 20 j 08:20	15° $\overline{3}$ 16'58	
evening set	-8952 Feb 24 j 11:39	7° $\overline{3}$ 40'53		opposition	-8946 Sep 09 j 16:22	14° $\overline{3}$ 17'03	-11°51'22
max. Earth dist.	-8952 Mar 03 j 06:35	7° $\overline{3}$ 51'31	48.94345 AU	min. Earth dist.	-8946 Sep 10 j 21:02	14° $\overline{3}$ 15'40	46.28359 AU
				direct	-8946 Nov 30 j 21:25	13° $\overline{3}$ 16'16	
conjunction	-8952 Mar 04 j 05:10	7° $\overline{3}$ 52'48	-12°39'46	evening set	-8945 Mar 01 j 10:30	14° $\overline{3}$ 31'23	
minimum elong	-8952 Mar 04 j 05:22	7° $\overline{3}$ 52'49	12°40'21	max. Earth dist.	-8945 Mar 10 j 19:21	14° $\overline{3}$ 44'19	48.18075 AU
morning rise	-8952 Mar 12 j 23:14	8° $\overline{3}$ 04'47					
retrograde	-8952 Jun 13 j 21:22	9° $\overline{3}$ 22'20		conjunction	-8945 Mar 12 j 04:36	14° $\overline{3}$ 46'14	-11°15'38
opposition	-8952 Sep 03 j 10:55	8° $\overline{3}$ 22'43	-13°06'03	minimum elong	-8945 Mar 12 j 04:48	14° $\overline{3}$ 46'15	11°16'12
min. Earth dist.	-8952 Sep 04 j 07:06	8° $\overline{3}$ 21'45	46.94587 AU	morning rise	-8945 Mar 22 j 23:03	15° $\overline{3}$ 01'07	
direct	-8952 Nov 24 j 11:46	7° $\overline{3}$ 22'30		retrograde	-8945 Jun 21 j 13:50	16° $\overline{3}$ 16'40	
evening set	-8951 Feb 24 j 10:25	8° $\overline{3}$ 38'53		opposition	-8945 Sep 10 j 21:25	15° $\overline{3}$ 16'41	-11°38'01
				min. Earth dist.	-8945 Sep 12 j 02:57	15° $\overline{3}$ 15'15	46.15658 AU
conjunction	-8951 Mar 05 j 11:35	8° $\overline{3}$ 51'16	-12°28'29	direct	-8945 Dec 02 j 04:15	14° $\overline{3}$ 15'46	
minimum elong	-8951 Mar 05 j 11:46	8° $\overline{3}$ 51'17	12°29'03	evening set	-8944 Mar 01 j 11:12	15° $\overline{3}$ 30'43	
max. Earth dist.	-8951 Mar 04 j 12:56	8° $\overline{3}$ 49'58	48.84785 AU	max. Earth dist.	-8944 Mar 11 j 01:22	15° $\overline{3}$ 43'58	48.05323 AU
morning rise	-8951 Mar 14 j 13:03	9° $\overline{3}$ 03'41					
retrograde	-8951 Jun 15 j 03:14	10° $\overline{3}$ 20'54		conjunction	-8944 Mar 12 j 11:42	15° $\overline{3}$ 45'57	-11°02'38
opposition	-8951 Sep 04 j 15:40	9° $\overline{3}$ 21'16	-12°54'15	minimum elong	-8944 Mar 12 j 11:53	15° $\overline{3}$ 45'58	11°03'12
min. Earth dist.	-8951 Sep 05 j 13:03	9° $\overline{3}$ 20'14	46.84696 AU	morning rise	-8944 Mar 23 j 12:21	16° $\overline{3}$ 01'13	
direct	-8951 Nov 25 j 17:15	8° $\overline{3}$ 20'58		retrograde	-8944 Jun 21 j 18:21	17° $\overline{3}$ 16'33	
evening set	-8950 Feb 25 j 09:47	9° $\overline{3}$ 37'07		opposition	-8944 Sep 11 j 02:42	16° $\overline{3}$ 16'28	-11°24'24
				min. Earth dist.	-8944 Sep 12 j 10:16	16° $\overline{3}$ 14'56	46.02578 AU
conjunction	-8950 Mar 06 j 18:08	9° $\overline{3}$ 49'56	-12°16'58	direct	-8944 Dec 02 j 11:25	15° $\overline{3}$ 15'25	
minimum elong	-8950 Mar 06 j 18:20	9° $\overline{3}$ 49'57	12°17'32	evening set	-8943 Mar 02 j 12:06	16° $\overline{3}$ 30'13	
max. Earth dist.	-8950 Mar 05 j 17:15	9° $\overline{3}$ 48'31	48.74863 AU	max. Earth dist.	-8943 Mar 12 j 07:33	16° $\overline{3}$ 43'47	47.92236 AU
morning rise	-8950 Mar 16 j 02:57	10° $\overline{3}$ 02'46					
retrograde	-8950 Jun 16 j 08:13	11° $\overline{3}$ 19'42		conjunction	-8943 Mar 13 j 18:40	16° $\overline{3}$ 45'49	-10°49'21
opposition	-8950 Sep 05 j 20:17	10° $\overline{3}$ 20'02	-12°42'10	minimum elong	-8943 Mar 13 j 18:53	16° $\overline{3}$ 45'50	10°49'54
min. Earth dist.	-8950 Sep 06 j 18:36	10° $\overline{3}$ 18'57	46.74415 AU	morning rise	-8943 Mar 25 j 01:20	17° $\overline{3}$ 01'28	
direct	-8950 Nov 26 j 23:05	9° $\overline{3}$ 19'40		retrograde	-8943 Jun 23 j 00:13	18° $\overline{3}$ 16'36	
evening set	-8949 Feb 26 j 09:23	10° $\overline{3}$ 35'36		opposition	-8943 Sep 12 j 07:56	17° $\overline{3}$ 16'26	-11°10'30
max. Earth dist.	-8949 Mar 06 j 22:37	10° $\overline{3}$ 47'19	48.64496 AU	min. Earth dist.	-8943 Sep 13 j 15:34	17° $\overline{3}$ 14'53	45.89179 AU
				direct	-8943 Dec 03 j 17:24	16° $\overline{3}$ 15'15	
conjunction	-8949 Mar 08 j 00:57	10° $\overline{3}$ 48'50	-12°05'11	evening set	-8942 Mar 03 j 13:21	17° $\overline{3}$ 29'54	
minimum elong	-8949 Mar 08 j 01:09	10° $\overline{3}$ 48'51	12°05'45	max. Earth dist.	-8942 Mar 13 j 12:36	17° $\overline{3}$ 43'44	47.78843 AU
morning rise	-8949 Mar 17 j 16:53	11° $\overline{3}$ 02'06					
retrograde	-8949 Jun 17 j 12:02	12° $\overline{3}$ 18'44		conjunction	-8942 Mar 15 j 01:50	17° $\overline{3}$ 45'54	-10°35'48
opposition	-8949 Sep 07 j 01:18	11° $\overline{3}$ 19'01	-12°29'51	minimum elong	-8942 Mar 15 j 02:01	17° $\overline{3}$ 45'54	10°36'20
min. Earth dist.	-8949 Sep 08 j 01:55	11° $\overline{3}$ 17'50	46.63662 AU	morning rise	-8942 Mar 26 j 14:33	18° $\overline{3}$ 01'55	
direct	-8949 Nov 28 j 06:37	10° $\overline{3}$ 18'35		retrograde	-8942 Jun 24 j 09:38	19° $\overline{3}$ 16'51	
evening set	-8948 Feb 27 j 09:14	11° $\overline{3}$ 34'17		opposition	-8942 Sep 13 j 13:17	18° $\overline{3}$ 16'36	-10°56'18
max. Earth dist.	-8948 Mar 07 j 04:08	11° $\overline{3}$ 46'21	48.53649 AU	min. Earth dist.	-8942 Sep 14 j 22:35	18° $\overline{3}$ 14'58	45.75507 AU
				direct	-8942 Dec 04 j 20:07	17° $\overline{3}$ 15'18	
conjunction	-8948 Mar 08 j 07:41	11° $\overline{3}$ 47'56	-11°53'10	evening set	-8941 Mar 04 j 14:48	18° $\overline{3}$ 29'51	
minimum elong	-8948 Mar 08 j 07:52	11° $\overline{3}$ 47'57	11°53'44	max. Earth dist.	-8941 Mar 14 j 20:04	18° $\overline{3}$ 44'03	47.65193 AU
morning rise	-8948 Mar 18 j 06:24	12° $\overline{3}$ 01'37					
retrograde	-8948 Jun 17 j 18:26	13° $\overline{3}$ 17'58		conjunction	-8941 Mar 16 j 09:14	18° $\overline{3}$ 46'13	-10°21'58
opposition	-8948 Sep 07 j 06:14	12° $\overline{3}$ 18'13	-12°17'17	minimum elong	-8941 Mar 16 j 09:26	18° $\overline{3}$ 46'14	10°22'31
min. Earth dist.	-8948 Sep 08 j 07:27	12° $\overline{3}$ 16'59	46.52400 AU	morning rise	-8941 Mar 28 j 03:33	19° $\overline{3}$ 02'36	
direct	-8948 Nov 28 j 11:37	11° $\overline{3}$ 17'40		retrograde	-8941 Jun 25 j 17:06	20° $\overline{3}$ 17'23	
evening set	-8947 Feb 27 j 09:23	12° $\overline{3}$ 33'10		opposition	-8941 Sep 14 j 18:51	19° $\overline{3}$ 17'03	-10°41'49
max. Earth dist.	-8947 Mar 08 j 08:20	12° $\overline{3}$ 45'29	48.42281 AU	min. Earth dist.	-8941 Sep 16 j 04:54	19° $\overline{3}$ 15'23	45.61576 AU
				direct	-8941 Dec 06 j 01:34	18° $\overline{3}$ 15'38	
conjunction	-8947 Mar 09 j 14:32	12° $\overline{3}$ 47'13	-11°40'54	evening set	-8940 Mar 04 j 16:27	19° $\overline{3}$ 30'06	
minimum elong	-8947 Mar 09 j 14:44	12° $\overline{3}$ 47'14	11°41'28	max. Earth dist.	-8940 Mar 15 j 01:19	19° $\overline{3}$ 44'34	47.51298 AU
morning rise	-8947 Mar 19 j 20:07	13° $\overline{3}$ 01'18					
retrograde	-8947 Jun 19 j 02:40	14° $\overline{3}$ 17'24		conjunction	-8940 Mar 16 j 16:23	19° $\overline{3}$ 46'51	-10°07'51
opposition	-8947 Sep 08 j 11:15	13° $\overline{3}$ 17'34	-12°04'27	minimum elong	-8940 Mar 16 j 16:35	19° $\overline{3}$ 46'52	10°08'24
min. Earth dist.	-8947 Sep 09 j 14:37	13° $\overline{3}$ 16'14	46.40631 AU	morning rise	-8940 Mar 28 j 16:28	20° $\overline{3}$ 03'36	
direct	-8947 Nov 29 j 14:31	12° $\overline{3}$ 16'54		retrograde	-8940 Jun 26 j 00:24	21° $\overline{3}$ 18'14	
evening set	-8946 Feb 28 j 09:47	13° $\overline{3}$ 32'12		opposition	-8940 Sep 15 j 00:26	20° $\overline{3}$ 17'50	-10°27'02
				min. Earth dist.	-8940 Sep 16 j 11:01	20° $\overline{3}$ 16'08	45.47401 AU
conjunction	-8946 Mar 10 j 21:38	13° $\overline{3}$ 46'40	-11°28'24	direct	-8940 Dec 06 j 07:01	19° $\overline{3}$ 16'19	
minimum elong	-8946 Mar 10 j 21:49	13° $\overline{3}$ 46'40	11°28'58	evening set	-8939 Mar 05 j 18:18	20° $\overline{3}$ 30'44	

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 34

Attention, astronomical year style is used: The year -8939 in astronomical counting style is the year 8940 BCE in historical counting style.

max. Earth dist.	-8939 Mar 16 j 08:01	20° $\overline{3}$ 45'30	47.37128 AU	min. Earth dist.	-8933 Sep 24 j 15:19	27° $\overline{3}$ 31'45	44.37129 AU
				direct	-8933 Dec 14 j 08:23	26° $\overline{3}$ 31'23	
conjunction	-8939 Mar 17 j 23:57	20° $\overline{3}$ 47'50	-9°53'27	evening set	-8932 Mar 11 j 16:26	27° $\overline{3}$ 45'43	
minimum elong	-8939 Mar 18 j 00:09	20° $\overline{3}$ 47'51	9°54'01	max. Earth dist.	-8932 Mar 23 j 05:51	28° $\overline{3}$ 02'11	46.26388 AU
morning rise	-8939 Mar 30 j 05:28	21° $\overline{3}$ 04'57					
retrograde	-8939 Jun 27 j 04:03	22° $\overline{3}$ 19'28		conjunction	-8932 Mar 25 j 08:51	28° $\overline{3}$ 05'15	-8°05'08
opposition	-8939 Sep 16 j 06:08	21° $\overline{3}$ 19'01	-10°11'57	minimum elong	-8932 Mar 25 j 09:03	28° $\overline{3}$ 05'15	8°05'40
min. Earth dist.	-8939 Sep 17 j 18:39	21° $\overline{3}$ 17'13	45.32928 AU	morning rise	-8932 Apr 08 j 00:48	28° $\overline{3}$ 24'45	
direct	-8939 Dec 07 j 16:02	20° $\overline{3}$ 17'23		retrograde	-8932 Jul 04 j 09:11	29° $\overline{3}$ 38'45	
evening set	-8938 Mar 06 j 20:40	21° $\overline{3}$ 31'46		opposition	-8932 Sep 23 j 02:14	28° $\overline{3}$ 37'29	-8°18'29
max. Earth dist.	-8938 Mar 17 j 14:47	21° $\overline{3}$ 46'49	47.22648 AU	min. Earth dist.	-8932 Sep 25 j 00:03	28° $\overline{3}$ 35'12	44.19648 AU
				direct	-8932 Dec 14 j 14:10	27° $\overline{3}$ 34'45	
conjunction	-8938 Mar 19 j 07:41	21° $\overline{3}$ 49'14	-9°38'47	evening set	-8931 Mar 12 j 20:37	28° $\overline{3}$ 49'06	
minimum elong	-8938 Mar 19 j 07:52	21° $\overline{3}$ 49'14	9°39'20	max. Earth dist.	-8931 Mar 24 j 14:30	29° $\overline{3}$ 05'52	46.08881 AU
morning rise	-8938 Mar 31 j 18:32	22° $\overline{3}$ 06'42					
retrograde	-8938 Jun 28 j 10:36	23° $\overline{3}$ 21'07		conjunction	-8931 Mar 26 j 17:35	29° $\overline{3}$ 08'57	-7°48'34
opposition	-8938 Sep 17 j 11:56	22° $\overline{3}$ 20'36	-9°56'35	minimum elong	-8931 Mar 26 j 17:45	29° $\overline{3}$ 08'57	7°49'06
min. Earth dist.	-8938 Sep 19 j 00:49	22° $\overline{3}$ 18'47	45.18103 AU	morning rise	-8931 Apr 09 j 13:44	29° $\overline{3}$ 28'46	
direct	-8938 Dec 08 j 22:39	21° $\overline{3}$ 18'51			-8931 May 03 j 01:21	0° $\approx$	
evening set	-8937 Mar 07 j 23:17	22° $\overline{3}$ 33'12		retrograde	-8931 Jul 05 j 18:11	0° $\approx$ 42'44	
max. Earth dist.	-8937 Mar 18 j 20:15	22° $\overline{3}$ 48'29	47.07763 AU		-8931 Sep 08 j 13:51	30° $\overline{R}$ $\overline{3}$	
				opposition	-8931 Sep 24 j 08:59	29° $\overline{3}$ 41'19	-8°01'07
conjunction	-8937 Mar 20 j 15:30	22° $\overline{3}$ 51'02	-9°23'51	min. Earth dist.	-8931 Sep 26 j 07:26	29° $\overline{3}$ 39'00	44.01848 AU
minimum elong	-8937 Mar 20 j 15:42	22° $\overline{3}$ 51'02	9°24'24	direct	-8931 Dec 15 j 20:13	28° $\overline{3}$ 38'22	
morning rise	-8937 Apr 02 j 07:39	23° $\overline{3}$ 08'51		evening set	-8930 Mar 14 j 01:17	29° $\overline{3}$ 52'47	
retrograde	-8937 Jun 29 j 20:17	24° $\overline{3}$ 23'12			-8930 Mar 19 j 02:49	0° $\approx$	
opposition	-8937 Sep 18 j 17:59	23° $\overline{3}$ 22'35	-9°40'56	max. Earth dist.	-8930 Mar 25 j 21:07	0° $\approx$ 09'45	45.91084 AU
min. Earth dist.	-8937 Sep 20 j 09:05	23° $\overline{3}$ 20'40	45.02858 AU				
direct	-8937 Dec 10 j 01:32	22° $\overline{3}$ 20'44		conjunction	-8930 Mar 28 j 02:21	0° $\approx$ 12'57	-7°31'43
evening set	-8936 Mar 08 j 02:09	23° $\overline{3}$ 35'03		minimum elong	-8930 Mar 28 j 02:32	0° $\approx$ 12'58	7°32'14
max. Earth dist.	-8936 Mar 19 j 03:47	23° $\overline{3}$ 50'38	46.92431 AU	morning rise	-8930 Apr 11 j 02:51	0° $\approx$ 33'06	
				retrograde	-8930 Jul 07 j 04:21	1° $\approx$ 47'03	
conjunction	-8936 Mar 20 j 23:37	23° $\overline{3}$ 53'14	-9°08'38	opposition	-8930 Sep 25 j 15:59	0° $\approx$ 45'29	-7°43'26
minimum elong	-8936 Mar 20 j 23:48	23° $\overline{3}$ 53'14	9°09'10	min. Earth dist.	-8930 Sep 27 j 15:17	0° $\approx$ 43'07	43.83790 AU
morning rise	-8936 Apr 02 j 20:38	24° $\overline{3}$ 11'24			-8930 Nov 06 j 19:01	30° $\overline{R}$ $\overline{3}$	
retrograde	-8936 Jun 30 j 04:16	25° $\overline{3}$ 25'40		direct	-8930 Dec 17 j 01:52	29° $\overline{3}$ 42'21	
opposition	-8936 Sep 19 j 00:12	24° $\overline{3}$ 24'58	-9°25'01		-8929 Jan 26 j 08:23	0° $\approx$	
min. Earth dist.	-8936 Sep 20 j 16:20	24° $\overline{3}$ 22'59	44.87135 AU	evening set	-8929 Mar 15 j 06:03	0° $\approx$ 56'51	
direct	-8936 Dec 10 j 08:15	23° $\overline{3}$ 22'57		max. Earth dist.	-8929 Mar 27 j 05:36	1° $\approx$ 14'05	45.73025 AU
evening set	-8935 Mar 09 j 05:18	24° $\overline{3}$ 37'16					
max. Earth dist.	-8935 Mar 20 j 09:12	24° $\overline{3}$ 53'03	46.76620 AU	conjunction	-8929 Mar 29 j 11:22	1° $\approx$ 17'20	-7°14'34
				minimum elong	-8929 Mar 29 j 11:32	1° $\approx$ 17'21	7°15'04
conjunction	-8935 Mar 22 j 07:36	24° $\overline{3}$ 55'47	-8°53'10	morning rise	-8929 Apr 12 j 15:43	1° $\approx$ 37'48	
minimum elong	-8935 Mar 22 j 07:47	24° $\overline{3}$ 55'48	8°53'42	retrograde	-8929 Jul 08 j 10:43	2° $\approx$ 51'46	
morning rise	-8935 Apr 04 j 09:44	25° $\overline{3}$ 14'19		opposition	-8929 Sep 26 j 23:16	1° $\approx$ 50'03	-7°25'26
retrograde	-8935 Jul 01 j 13:04	26° $\overline{3}$ 28'29		min. Earth dist.	-8929 Sep 29 j 00:00	1° $\approx$ 47'36	43.65484 AU
opposition	-8935 Sep 20 j 06:29	25° $\overline{3}$ 27'40	-9°08'49	direct	-8929 Dec 18 j 11:42	0° $\approx$ 46'44	
min. Earth dist.	-8935 Sep 21 j 23:50	25° $\overline{3}$ 25'37	44.70930 AU	evening set	-8928 Mar 15 j 11:15	2° $\approx$ 01'21	
direct	-8935 Dec 11 j 14:53	24° $\overline{3}$ 25'29		max. Earth dist.	-8928 Mar 27 j 13:49	2° $\approx$ 18'50	45.54748 AU
evening set	-8934 Mar 10 j 08:45	25° $\overline{3}$ 39'49					
max. Earth dist.	-8934 Mar 21 j 16:26	25° $\overline{3}$ 55'51	46.60310 AU	conjunction	-8928 Mar 29 j 20:27	2° $\approx$ 22'09	-6°57'07
				minimum elong	-8928 Mar 29 j 20:38	2° $\approx$ 22'10	6°57'38
conjunction	-8934 Mar 23 j 16:02	25° $\overline{3}$ 58'40	-8°37'26	morning rise	-8928 Apr 13 j 04:46	2° $\approx$ 42'55	
minimum elong	-8934 Mar 23 j 16:14	25° $\overline{3}$ 58'41	8°37'57	retrograde	-8928 Jul 08 j 17:52	3° $\approx$ 56'56	
morning rise	-8934 Apr 05 j 22:48	26° $\overline{3}$ 17'31		opposition	-8928 Sep 27 j 06:34	2° $\approx$ 55'06	-7°07'07
retrograde	-8934 Jul 02 j 19:09	27° $\overline{3}$ 31'37		min. Earth dist.	-8928 Sep 29 j 07:19	2° $\approx$ 52'38	43.46957 AU
opposition	-8934 Sep 21 j 12:57	26° $\overline{3}$ 30'40	-8°52'20	direct	-8928 Dec 18 j 20:46	1° $\approx$ 51'36	
min. Earth dist.	-8934 Sep 23 j 08:29	26° $\overline{3}$ 28'30	44.54240 AU	evening set	-8927 Mar 16 j 16:40	3° $\approx$ 06'21	
direct	-8934 Dec 12 j 23:45	25° $\overline{3}$ 28'19		max. Earth dist.	-8927 Mar 28 j 21:19	3° $\approx$ 24'02	45.36220 AU
evening set	-8933 Mar 11 j 12:35	26° $\overline{3}$ 42'38					
max. Earth dist.	-8933 Mar 22 j 23:34	26° $\overline{3}$ 58'54	46.43556 AU	conjunction	-8927 Mar 31 j 05:43	3° $\approx$ 27'28	-6°39'22
				minimum elong	-8927 Mar 31 j 05:53	3° $\approx$ 27'29	6°39'52
conjunction	-8933 Mar 25 j 00:30	27° $\overline{3}$ 01'50	-8°21'25	morning rise	-8927 Apr 14 j 17:49	3° $\approx$ 48'33	
minimum elong	-8933 Mar 25 j 00:41	27° $\overline{3}$ 01'50	8°21'58	retrograde	-8927 Jul 10 j 03:29	5° $\approx$ 02'40	
morning rise	-8933 Apr 07 j 11:55	27° $\overline{3}$ 21'00		opposition	-8927 Sep 28 j 14:11	4° $\approx$ 00'42	-6°48'30
retrograde	-8933 Jul 04 j 00:41	28° $\overline{3}$ 35'02		min. Earth dist.	-8927 Sep 30 j 16:57	3° $\approx$ 58'07	43.28167 AU
opposition	-8933 Sep 22 j 19:29	27° $\overline{3}$ 33'56	-8°35'34	direct	-8927 Dec 20 j 02:42	2° $\approx$ 57'01	

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 35

Attention, astronomical year style is used: The year -8926 in astronomical counting style is the year 8927 BCE in historical counting style.

evening set	-8926 Mar 17 j 22:35	4° $\approx$ 11'57		opposition	-8920 Oct 06 j 01:24	11° $\approx$ 56'25	-4°29'22
max. Earth dist.	-8926 Mar 30 j 06:45	4° $\approx$ 29'54	45.17402 AU	min. Earth dist.	-8920 Oct 08 j 12:43	11° $\approx$ 53'21	41.85637 AU
				direct	-8920 Dec 27 j 11:59	10° $\approx$ 51'12	
conjunction	-8926 Apr 01 j 15:24	4° $\approx$ 33'22	-6°21'19	evening set	-8919 Mar 25 j 02:55	12° $\approx$ 07'46	
minimum elong	-8926 Apr 01 j 15:34	4° $\approx$ 33'23	6°21'50	max. Earth dist.	-8919 Apr 06 j 22:08	12° $\approx$ 27'00	43.74243 AU
morning rise	-8926 Apr 16 j 06:57	4° $\approx$ 54'45					
retrograde	-8926 Jul 11 j 12:51	6° $\approx$ 08'59		conjunction	-8919 Apr 09 j 16:47	12° $\approx$ 31'13	-4°06'52
opposition	-8926 Sep 29 j 21:53	5° $\approx$ 06'53	-6°29'33	minimum elong	-8919 Apr 09 j 16:54	12° $\approx$ 31'13	4°07'19
min. Earth dist.	-8926 Oct 02 j 01:15	5° $\approx$ 04'17	43.09050 AU	morning rise	-8919 Apr 25 j 04:38	12° $\approx$ 54'34	
direct	-8926 Dec 21 j 10:27	4° $\approx$ 03'02		retrograde	-8919 Jul 19 j 13:39	14° $\approx$ 09'58	
evening set	-8925 Mar 19 j 05:03	5° $\approx$ 18'10		opposition	-8919 Oct 07 j 10:50	13° $\approx$ 06'34	-4°08'14
max. Earth dist.	-8925 Mar 31 j 14:09	5° $\approx$ 36'16	44.98227 AU	min. Earth dist.	-8919 Oct 09 j 23:17	13° $\approx$ 03'25	41.63803 AU
				direct	-8919 Dec 28 j 22:47	12° $\approx$ 01'04	
conjunction	-8925 Apr 03 j 01:12	5° $\approx$ 39'53	-6°02'59	evening set	-8918 Mar 26 j 12:03	13° $\approx$ 17'57	
minimum elong	-8925 Apr 03 j 01:21	5° $\approx$ 39'54	6°03'28	max. Earth dist.	-8918 Apr 08 j 08:06	13° $\approx$ 37'20	43.52390 AU
morning rise	-8925 Apr 17 j 20:18	6° $\approx$ 01'35					
retrograde	-8925 Jul 13 j 01:19	7° $\approx$ 15'56		conjunction	-8918 Apr 11 j 04:04	13° $\approx$ 41'39	-3°46'28
opposition	-8925 Oct 01 j 05:57	6° $\approx$ 13'42	-6°10'18	minimum elong	-8918 Apr 11 j 04:10	13° $\approx$ 41'40	3°46'55
min. Earth dist.	-8925 Oct 03 j 10:42	6° $\approx$ 11'01	42.89560 AU	morning rise	-8918 Apr 26 j 18:13	14° $\approx$ 05'16	
direct	-8925 Dec 22 j 16:27	5° $\approx$ 09'40			-8918 Jun 08 j 21:15	15° $\approx$	
evening set	-8924 Mar 19 j 11:34	6° $\approx$ 25'00		retrograde	-8918 Jul 21 j 00:30	15° $\approx$ 20'54	
max. Earth dist.	-8924 Mar 31 j 23:26	6° $\approx$ 43'21	44.78629 AU		-8918 Sep 01 j 11:33	15° $\approx$	
				opposition	-8918 Oct 08 j 20:20	14° $\approx$ 17'16	-3°46'45
conjunction	-8924 Apr 03 j 11:13	6° $\approx$ 47'02	-5°44'22	min. Earth dist.	-8918 Oct 11 j 08:56	14° $\approx$ 14'06	41.41766 AU
minimum elong	-8924 Apr 03 j 11:22	6° $\approx$ 47'03	5°44'52	direct	-8918 Dec 30 j 10:31	13° $\approx$ 11'30	
morning rise	-8924 Apr 18 j 09:24	7° $\approx$ 09'01		evening set	-8917 Mar 27 j 21:31	14° $\approx$ 28'44	
retrograde	-8924 Jul 13 j 11:04	8° $\approx$ 23'31		max. Earth dist.	-8917 Apr 09 j 18:37	14° $\approx$ 48'17	43.30332 AU
opposition	-8924 Oct 01 j 14:20	7° $\approx$ 21'07	-5°50'44				
min. Earth dist.	-8924 Oct 03 j 20:57	7° $\approx$ 18'20	42.69625 AU	conjunction	-8917 Apr 12 j 15:41	14° $\approx$ 52'42	-3°25'46
direct	-8924 Dec 23 j 02:09	6° $\approx$ 16'54		minimum elong	-8917 Apr 12 j 15:47	14° $\approx$ 52'42	3°26'13
evening set	-8923 Mar 20 j 18:46	7° $\approx$ 32'27			-8917 Apr 17 j 10:00	15° $\approx$	
max. Earth dist.	-8923 Apr 02 j 07:58	7° $\approx$ 50'58	44.58589 AU	morning rise	-8917 Apr 28 j 07:43	15° $\approx$ 16'34	
				retrograde	-8917 Jul 22 j 10:27	16° $\approx$ 32'27	
conjunction	-8923 Apr 04 j 21:30	7° $\approx$ 54'47	-5°25'27	opposition	-8917 Oct 10 j 06:23	15° $\approx$ 28'37	-3°24'58
minimum elong	-8923 Apr 04 j 21:39	7° $\approx$ 54'48	5°25'56	min. Earth dist.	-8917 Oct 12 j 20:40	15° $\approx$ 25'20	41.19559 AU
morning rise	-8923 Apr 19 j 22:52	8° $\approx$ 17'03			-8917 Nov 02 j 17:23	15° $\approx$	
retrograde	-8923 Jul 14 j 19:36	9° $\approx$ 31'41		direct	-8917 Dec 31 j 21:31	14° $\approx$ 22'34	
opposition	-8923 Oct 02 j 22:39	8° $\approx$ 29'08	-5°30'52		-8916 Feb 28 j 00:13	15° $\approx$	
min. Earth dist.	-8923 Oct 05 j 05:47	8° $\approx$ 26'19	42.49241 AU	evening set	-8916 Mar 28 j 07:16	15° $\approx$ 40'10	
direct	-8923 Dec 24 j 12:14	7° $\approx$ 24'41		max. Earth dist.	-8916 Apr 10 j 06:19	15° $\approx$ 59'56	43.08129 AU
evening set	-8922 Mar 22 j 02:21	8° $\approx$ 40'29					
max. Earth dist.	-8922 Apr 03 j 16:27	8° $\approx$ 59'07	44.38082 AU	conjunction	-8916 Apr 13 j 03:22	16° $\approx$ 04'23	-3°04'46
				minimum elong	-8916 Apr 13 j 03:27	16° $\approx$ 04'23	3°05'12
conjunction	-8922 Apr 06 j 08:07	9° $\approx$ 03'06	-5°06'15	morning rise	-8916 Apr 28 j 21:13	16° $\approx$ 28'30	
minimum elong	-8922 Apr 06 j 08:15	9° $\approx$ 03'06	5°06'44	retrograde	-8916 Jul 22 j 20:13	17° $\approx$ 44'42	
morning rise	-8922 Apr 21 j 12:22	9° $\approx$ 25'39		opposition	-8916 Oct 10 j 16:33	16° $\approx$ 40'38	-3°02'50
retrograde	-8922 Jul 16 j 04:06	10° $\approx$ 40'27		min. Earth dist.	-8916 Oct 13 j 06:35	16° $\approx$ 37'21	40.97203 AU
opposition	-8922 Oct 04 j 07:28	9° $\approx$ 37'43	-5°10'41	direct	-8915 Jan 01 j 08:29	15° $\approx$ 34'20	
min. Earth dist.	-8922 Oct 06 j 16:54	9° $\approx$ 34'45	42.28413 AU	evening set	-8915 Mar 29 j 17:46	16° $\approx$ 52'19	
direct	-8922 Dec 25 j 21:36	8° $\approx$ 33'01		max. Earth dist.	-8915 Apr 11 j 16:29	17° $\approx$ 12'12	42.85763 AU
evening set	-8921 Mar 23 j 10:11	9° $\approx$ 49'02					
max. Earth dist.	-8921 Apr 05 j 02:50	10° $\approx$ 07'56	44.17154 AU	conjunction	-8915 Apr 14 j 15:27	17° $\approx$ 16'47	-2°43'28
				minimum elong	-8915 Apr 14 j 15:32	17° $\approx$ 16'48	2°43'54
conjunction	-8921 Apr 07 j 18:51	10° $\approx$ 11'57	-4°46'45	morning rise	-8915 Apr 30 j 11:00	17° $\approx$ 41'09	
minimum elong	-8921 Apr 07 j 18:59	10° $\approx$ 11'57	4°47'13	retrograde	-8915 Jul 24 j 09:52	18° $\approx$ 57'42	
morning rise	-8921 Apr 23 j 01:45	10° $\approx$ 34'46		opposition	-8915 Oct 12 j 02:54	17° $\approx$ 53'25	-2°40'23
retrograde	-8921 Jul 17 j 14:21	11° $\approx$ 49'45		min. Earth dist.	-8915 Oct 14 j 18:25	17° $\approx$ 50'03	40.74691 AU
opposition	-8921 Oct 05 j 16:21	10° $\approx$ 46'48	-4°50'11	direct	-8914 Jan 02 j 16:00	16° $\approx$ 46'52	
min. Earth dist.	-8921 Oct 08 j 02:15	10° $\approx$ 43'49	42.07185 AU	evening set	-8914 Mar 31 j 04:44	18° $\approx$ 05'17	
direct	-8921 Dec 27 j 05:51	9° $\approx$ 41'51		max. Earth dist.	-8914 Apr 13 j 05:12	18° $\approx$ 25'23	42.63204 AU
evening set	-8920 Mar 23 j 18:29	10° $\approx$ 58'08					
max. Earth dist.	-8920 Apr 05 j 11:16	11° $\approx$ 17'08	43.95853 AU	conjunction	-8914 Apr 16 j 04:05	18° $\approx$ 30'00	-2°21'51
				minimum elong	-8914 Apr 16 j 04:09	18° $\approx$ 30'00	2°22'17
conjunction	-8920 Apr 08 j 05:41	11° $\approx$ 21'19	-4°26'57	morning rise	-8914 May 02 j 00:50	18° $\approx$ 54'35	
minimum elong	-8920 Apr 08 j 05:48	11° $\approx$ 21'19	4°27'26	retrograde	-8914 Jul 25 j 23:16	20° $\approx$ 11'31	
morning rise	-8920 Apr 23 j 15:17	11° $\approx$ 44'25		opposition	-8914 Oct 13 j 13:47	19° $\approx$ 07'01	-2°17'36
retrograde	-8920 Jul 18 j 02:59	12° $\approx$ 59'35		min. Earth dist.	-8914 Oct 16 j 06:15	19° $\approx$ 03'35	40.51956 AU

## Planetary Phenomena of Pluto from -9400 through -8898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 36

Attention, astronomical year style is used: The year -8913 in astronomical counting style is the year 8914 BCE in historical counting style.

direct	-8913 Jan 04 j 01:42	18°00'12		conjunction	-8907 Apr 25 j 04:55	27°26'06	0°17'40
evening set	-8913 Apr 01 j 16:20	19°19'06		minimum elong	-8907 Apr 25 j 04:54	27°26'06	0°17'18
max. Earth dist.	-8913 Apr 14 j 16:08	19°39'17	42.40399 AU	morning rise	-8907 May 11 j 04:54	27°52'02	
				retrograde	-8907 Aug 04 j 00:57	29°12'18	
conjunction	-8913 Apr 17 j 16:45	19°44'03	-1°59'57	opposition	-8907 Oct 22 j 03:17	28°05'55	0°30'51
minimum elong	-8913 Apr 17 j 16:49	19°44'03	2°00'22	min. Earth dist.	-8907 Oct 25 j 03:18	28°01'58	38.84404 AU
morning rise	-8913 May 03 j 14:49	20°08'51		direct	-8906 Jan 12 j 14:49	26°56'52	
retrograde	-8913 Jul 27 j 13:46	21°26'11		evening set	-8906 Apr 10 j 17:26	28°19'51	
opposition	-8913 Oct 15 j 00:53	20°21'28	-1°54'29	max. Earth dist.	-8906 Apr 23 j 12:20	28°40'39	40.72013 AU
min. Earth dist.	-8913 Oct 17 j 17:57	20°18'00	40.28961 AU				
direct	-8912 Jan 05 j 11:47	19°14'22		conjunction	-8906 Apr 26 j 20:06	28°46'07	0°41'35
evening set	-8912 Apr 02 j 04:26	20°33'47		minimum elong	-8906 Apr 26 j 20:04	28°46'07	0°41'14
max. Earth dist.	-8912 Apr 15 j 04:11	20°54'06	42.17279 AU	morning rise	-8906 May 12 j 19:39	29°12'12	
					-8906 Jun 15 j 02:00	0°	
conjunction	-8912 Apr 18 j 05:59	20°58'57	-1°37'45	retrograde	-8906 Aug 05 j 15:08	0°33'04	
minimum elong	-8912 Apr 18 j 06:02	20°58'57	1°38'09		-8906 Sep 27 j 02:43	30°	
morning rise	-8912 May 04 j 04:51	21°23'58		opposition	-8906 Oct 23 j 16:57	29°26'23	0°56'09
retrograde	-8912 Jul 28 j 01:32	22°41'44		min. Earth dist.	-8906 Oct 26 j 16:38	29°22'26	38.59586 AU
opposition	-8912 Oct 15 j 12:28	21°36'46	-1°31'03	direct	-8905 Jan 14 j 06:05	28°16'59	
min. Earth dist.	-8912 Oct 18 j 07:30	21°33'11	40.05641 AU	evening set	-8905 Apr 12 j 09:39	29°40'41	
direct	-8911 Jan 06 j 01:16	20°29'24			-8905 Apr 24 j 04:50	0°	
evening set	-8911 Apr 03 j 17:06	21°49'20		max. Earth dist.	-8905 Apr 25 j 02:35	0°01'30	40.47128 AU
max. Earth dist.	-8911 Apr 16 j 16:57	22°09'46	41.93827 AU				
				conjunction	-8905 Apr 28 j 11:33	0°07'06	1°05'46
conjunction	-8911 Apr 19 j 19:29	22°14'43	-1°15'15	minimum elong	-8905 Apr 28 j 11:31	0°07'06	1°05'25
minimum elong	-8911 Apr 19 j 19:31	22°14'43	1°15'39	morning rise	-8905 May 14 j 10:12	0°33'19	
morning rise	-8911 May 05 j 19:09	22°39'56		retrograde	-8905 Aug 07 j 05:18	1°54'51	
retrograde	-8911 Jul 29 j 13:22	23°58'08		opposition	-8905 Oct 25 j 07:10	0°47'52	1°21'45
opposition	-8911 Oct 17 j 00:18	22°52'56	-1°07'18	min. Earth dist.	-8905 Oct 28 j 08:13	0°43'48	38.34715 AU
min. Earth dist.	-8911 Oct 19 j 19:34	22°49'18	39.81972 AU		-8905 Dec 03 j 21:31	30°	
direct	-8910 Jan 07 j 14:53	21°45'14		direct	-8904 Jan 15 j 20:07	29°38'07	
evening set	-8910 Apr 05 j 06:31	23°05'43			-8904 Feb 27 j 04:40	0°	
max. Earth dist.	-8910 Apr 18 j 04:34	23°26'11	41.70007 AU	evening set	-8904 Apr 13 j 02:34	1°02'35	
				max. Earth dist.	-8904 Apr 25 j 19:09	1°23'32	40.22212 AU
conjunction	-8910 Apr 21 j 09:23	23°31'18	-0°52'27				
minimum elong	-8910 Apr 21 j 09:25	23°31'18	0°52'50	conjunction	-8904 Apr 29 j 03:30	1°29'08	1°30'13
morning rise	-8910 May 07 j 09:32	23°56'44		minimum elong	-8904 Apr 29 j 03:27	1°29'08	1°29'53
retrograde	-8910 Jul 31 j 03:17	25°15'24		morning rise	-8904 May 15 j 01:00	1°55'29	
opposition	-8910 Oct 18 j 12:31	24°09'55	-0°43'14	retrograde	-8904 Aug 07 j 20:05	3°17'42	
min. Earth dist.	-8910 Oct 21 j 09:48	24°06'10	39.57966 AU	opposition	-8904 Oct 25 j 21:41	2°10'26	1°47'38
direct	-8909 Jan 09 j 01:19	23°01'54		min. Earth dist.	-8904 Oct 28 j 22:25	2°06'22	38.09825 AU
evening set	-8909 Apr 06 j 20:21	24°22'57		direct	-8903 Jan 16 j 09:47	1°00'21	
max. Earth dist.	-8909 Apr 19 j 18:46	24°43'33	41.45863 AU	evening set	-8903 Apr 14 j 20:20	2°25'38	
				max. Earth dist.	-8903 Apr 27 j 09:52	2°46'33	39.97272 AU
conjunction	-8909 Apr 22 j 23:41	24°48'43	-0°29'23				
minimum elong	-8909 Apr 22 j 23:42	24°48'43	0°29'46	conjunction	-8903 Apr 30 j 19:48	2°52'18	1°54'54
morning rise	-8909 May 08 j 23:57	25°14'20		minimum elong	-8903 Apr 30 j 19:44	2°52'18	1°54'35
retrograde	-8909 Aug 01 j 16:47	26°33'30		morning rise	-8903 May 16 j 16:02	3°18'46	
opposition	-8909 Oct 20 j 01:10	25°27'44	-0°18'51	retrograde	-8903 Aug 09 j 14:22	4°41'45	
min. Earth dist.	-8909 Oct 22 j 22:57	25°23'56	39.33658 AU	opposition	-8903 Oct 27 j 12:40	3°34'11	2°13'48
direct	-8908 Jan 10 j 14:04	24°19'23		min. Earth dist.	-8903 Oct 30 j 14:19	3°30'03	37.84920 AU
evening set	-8908 Apr 07 j 10:43	25°41'02		direct	-8902 Jan 17 j 21:42	2°23'46	
max. Earth dist.	-8908 Apr 20 j 07:11	26°01'39	41.21444 AU	evening set	-8902 Apr 16 j 14:48	3°49'57	
				max. Earth dist.	-8902 Apr 29 j 03:06	4°10'56	39.72276 AU
conjunction	-8908 Apr 23 j 13:59	26°06'59	-0°06'04				
minimum elong	-8908 Apr 23 j 13:59	26°06'59	0°06'25	conjunction	-8902 May 02 j 12:45	4°16'42	2°19'51
behind sun begin	-8908 Apr 23 j 07:51	26°06'35		minimum elong	-8902 May 02 j 12:40	4°16'42	2°19'33
behind sun end	-8908 Apr 23 j 20:06	26°07'22		morning rise	-8902 May 18 j 07:04	4°43'15	
morning rise	-8908 May 09 j 14:24	26°32'46		retrograde	-8902 Aug 11 j 08:29	6°07'03	
asc. node	-8908 Jul 26 j 07:16	27°51'49		opposition	-8902 Oct 29 j 04:14	4°59'12	2°40'13
retrograde	-8908 Aug 02 j 09:44	27°52'28		min. Earth dist.	-8902 Nov 01 j 06:40	4°55'00	37.59943 AU
opposition	-8908 Oct 20 j 14:02	26°46'23	0°05'51	direct	-8901 Jan 19 j 12:35	3°48'27	
min. Earth dist.	-8908 Oct 23 j 12:36	26°42'32	39.09123 AU	evening set	-8901 Apr 18 j 10:16	5°15'34	
direct	-8907 Jan 11 j 01:15	25°37'41		max. Earth dist.	-8901 Apr 30 j 19:20	5°36'30	39.47194 AU
evening set	-8907 Apr 09 j 01:41	26°59'59					
max. Earth dist.	-8907 Apr 21 j 21:47	27°20'43	40.96798 AU	conjunction	-8901 May 04 j 06:03	5°42'24	2°45'02
				minimum elong	-8901 May 04 j 05:58	5°42'24	2°44'44

Attention, astronomical year style is used: The year -8901 in astronomical counting style is the year 8902 BCE in historical counting style.

morning rise	-8901 May 19 j 22:29	6° <del>✕</del> 09'02	
retrograde	-8901 Aug 13 j 05:10	7° <del>✕</del> 33'40	
opposition	-8901 Oct 30 j 20:16	6° <del>✕</del> 25'32	3°06'55
min. Earth dist.	-8901 Nov 02 j 22:45	6° <del>✕</del> 21'19	37.34871 AU
direct	-8900 Jan 21 j 04:10	5° <del>✕</del> 14'27	
evening set	-8900 Apr 19 j 06:18	6° <del>✕</del> 42'33	
max. Earth dist.	-8900 May 01 j 12:19	7° <del>✕</del> 03'26	39.21952 AU

conjunction	-8900 May 04 j 23:52	7° <del>✕</del> 09'26	3°10'26
minimum elong	-8900 May 04 j 23:45	7° <del>✕</del> 09'25	3°10'09
morning rise	-8900 May 20 j 13:48	7° <del>✕</del> 36'07	
retrograde	-8900 Aug 13 j 23:15	9° <del>✕</del> 01'39	
opposition	-8900 Oct 31 j 12:58	7° <del>✕</del> 53'12	3°33'52
min. Earth dist.	-8900 Nov 03 j 17:16	7° <del>✕</del> 48'51	37.09628 AU
direct	-8899 Jan 21 j 20:39	6° <del>✕</del> 41'45	
evening set	-8899 Apr 21 j 03:28	8° <del>✕</del> 10'52	
max. Earth dist.	-8899 May 03 j 06:31	8° <del>✕</del> 31'43	38.96526 AU

conjunction	-8899 May 06 j 18:19	8° <del>✕</del> 37'47	3°36'03
minimum elong	-8899 May 06 j 18:11	8° <del>✕</del> 37'47	3°35'47
morning rise	-8899 May 22 j 05:33	9° <del>✕</del> 04'30	
retrograde	-8899 Aug 15 j 16:05	10° <del>✕</del> 30'57	
opposition	-8899 Nov 02 j 06:00	9° <del>✕</del> 22'11	4°01'03
min. Earth dist.	-8899 Nov 05 j 10:12	9° <del>✕</del> 17'49	36.84193 AU