

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 1

Attention, astronomical year style is used: The year -1400 in astronomical counting style is the year 1401 BCE in historical counting style.

evening set	-1400 Feb 03 j 04:17	4° \approx 45'51		min. Earth dist.	-1393 Aug 17 j 15:54	13° \approx 38'04	44.14027 AU
				opposition	-1393 Aug 20 j 08:03	13° \approx 34'51	-16°31'16
conjunction	-1400 Feb 06 j 00:09	4° \approx 50'16	-14°45'16	direct	-1393 Nov 09 j 04:33	12° \approx 32'17	
minimum elong	-1400 Feb 06 j 00:01	4° \approx 50'16	14°45'18				
morning rise	-1400 Feb 08 j 19:54	4° \approx 54'41		conjunction	-1392 Feb 15 j 07:57	14° \approx 07'19	-15°52'12
max. Earth dist.	-1400 Feb 09 j 00:31	4° \approx 54'59	44.64670 AU	minimum elong	-1392 Feb 15 j 07:52	14° \approx 07'19	15°52'13
retrograde	-1400 May 19 j 12:56	6° \approx 32'48		max. Earth dist.	-1392 Feb 18 j 02:31	14° \approx 11'31	46.14646 AU
min. Earth dist.	-1400 Aug 08 j 11:18	5° \approx 30'59	42.81661 AU		-1392 Mar 23 j 01:05	15° \approx	
opposition	-1400 Aug 11 j 08:57	5° \approx 27'25	-15°31'29	retrograde	-1392 May 28 j 18:55	15° \approx 46'36	
direct	-1400 Oct 31 j 03:07	4° \approx 23'38			-1392 Aug 06 j 01:55	15° \approx	
evening set	-1399 Feb 04 j 19:26	5° \approx 58'54		min. Earth dist.	-1392 Aug 18 j 02:02	14° \approx 45'47	44.31178 AU
				opposition	-1392 Aug 20 j 17:21	14° \approx 42'36	-16°38'11
conjunction	-1399 Feb 06 j 10:35	6° \approx 01'27	-14°55'08	direct	-1392 Nov 09 j 14:41	13° \approx 40'09	
minimum elong	-1399 Feb 06 j 10:28	6° \approx 01'26	14°55'09		-1391 Feb 05 j 20:33	15° \approx	
morning rise	-1399 Feb 08 j 01:33	6° \approx 03'59					
max. Earth dist.	-1399 Feb 09 j 10:24	6° \approx 06'07	44.84563 AU	conjunction	-1391 Feb 15 j 16:59	15° \approx 14'48	-15°58'47
retrograde	-1399 May 20 j 21:10	7° \approx 43'33		minimum elong	-1391 Feb 15 j 16:56	15° \approx 14'48	15°58'48
min. Earth dist.	-1399 Aug 09 j 21:28	6° \approx 41'56	43.01587 AU	max. Earth dist.	-1391 Feb 18 j 09:39	15° \approx 18'52	46.31478 AU
opposition	-1399 Aug 12 j 19:39	6° \approx 38'21	-15°41'22	retrograde	-1391 May 30 j 06:32	16° \approx 53'40	
direct	-1399 Nov 01 j 16:18	5° \approx 34'45		min. Earth dist.	-1391 Aug 19 j 11:36	15° \approx 52'57	44.47930 AU
				opposition	-1391 Aug 22 j 02:29	15° \approx 49'48	-16°44'41
conjunction	-1398 Feb 07 j 20:49	7° \approx 12'09	-15°04'33		-1391 Oct 08 j 22:13	15° \approx	
minimum elong	-1398 Feb 07 j 20:42	7° \approx 12'09	15°04'34	direct	-1391 Nov 10 j 21:13	14° \approx 47'29	
max. Earth dist.	-1398 Feb 10 j 19:52	7° \approx 16'45	45.04223 AU		-1391 Dec 13 j 10:53	15° \approx	
retrograde	-1398 May 22 j 09:43	8° \approx 53'51					
min. Earth dist.	-1398 Aug 11 j 09:05	7° \approx 52'22	43.21278 AU	conjunction	-1390 Feb 17 j 02:03	16° \approx 21'45	-16°05'00
opposition	-1398 Aug 14 j 06:17	7° \approx 48'50	-15°50'45	minimum elong	-1390 Feb 17 j 01:58	16° \approx 21'45	16°05'01
direct	-1398 Nov 03 j 01:48	6° \approx 45'26		max. Earth dist.	-1390 Feb 19 j 18:58	16° \approx 25'49	46.47940 AU
				retrograde	-1390 May 31 j 14:40	18° \approx 00'14	
conjunction	-1397 Feb 09 j 07:03	8° \approx 22'26	-15°13'30	min. Earth dist.	-1390 Aug 20 j 22:10	16° \approx 59'33	44.64330 AU
minimum elong	-1397 Feb 09 j 06:56	8° \approx 22'25	15°13'31	opposition	-1390 Aug 23 j 11:23	16° \approx 56'30	-16°50'48
max. Earth dist.	-1397 Feb 12 j 06:24	8° \approx 27'01	45.23630 AU	direct	-1390 Nov 12 j 06:34	15° \approx 54'17	
retrograde	-1397 May 23 j 20:30	10° \approx 03'43					
min. Earth dist.	-1397 Aug 12 j 20:16	9° \approx 02'23	43.40659 AU	conjunction	-1389 Feb 18 j 10:56	17° \approx 28'12	-16°10'48
opposition	-1397 Aug 15 j 16:36	8° \approx 58'54	-15°59'42	minimum elong	-1389 Feb 18 j 10:53	17° \approx 28'12	16°10'50
direct	-1397 Nov 04 j 11:33	7° \approx 55'42		max. Earth dist.	-1389 Feb 21 j 02:37	17° \approx 32'11	46.64095 AU
				retrograde	-1389 Jun 01 j 20:57	19° \approx 06'19	
conjunction	-1396 Feb 10 j 17:04	9° \approx 32'17	-15°22'02	min. Earth dist.	-1389 Aug 22 j 06:29	18° \approx 05'46	44.80432 AU
minimum elong	-1396 Feb 10 j 16:57	9° \approx 32'17	15°22'04	opposition	-1389 Aug 24 j 20:02	18° \approx 02'42	-16°56'30
max. Earth dist.	-1396 Feb 13 j 14:41	9° \approx 36'45	45.42705 AU	direct	-1389 Nov 13 j 16:57	17° \approx 00'38	
retrograde	-1396 May 24 j 08:17	11° \approx 13'10					
min. Earth dist.	-1396 Aug 13 j 06:37	10° \approx 12'00	43.59687 AU	conjunction	-1388 Feb 19 j 19:35	18° \approx 34'13	-16°16'14
opposition	-1396 Aug 16 j 02:38	10° \approx 08'33	-16°08'12	minimum elong	-1388 Feb 19 j 19:32	18° \approx 34'12	16°16'14
direct	-1396 Nov 04 j 19:40	9° \approx 05'32		max. Earth dist.	-1388 Feb 22 j 10:36	18° \approx 38'08	46.79956 AU
				retrograde	-1388 Jun 02 j 04:37	20° \approx 11'59	
conjunction	-1395 Feb 11 j 03:01	10° \approx 41'45	-15°30'09	min. Earth dist.	-1388 Aug 22 j 16:26	19° \approx 11'30	44.96258 AU
minimum elong	-1395 Feb 11 j 02:56	10° \approx 41'44	15°30'10	opposition	-1388 Aug 25 j 04:31	19° \approx 08'30	-17°01'48
max. Earth dist.	-1395 Feb 14 j 00:41	10° \approx 46'11	45.61387 AU	direct	-1388 Nov 14 j 02:57	18° \approx 06'35	
retrograde	-1395 May 25 j 16:28	12° \approx 22'13					
min. Earth dist.	-1395 Aug 14 j 18:33	11° \approx 21'07	43.78282 AU	conjunction	-1387 Feb 20 j 04:11	19° \approx 39'50	-16°21'16
opposition	-1395 Aug 17 j 12:41	11° \approx 17'47	-16°16'17	minimum elong	-1387 Feb 20 j 04:10	19° \approx 39'50	16°21'17
direct	-1395 Nov 06 j 06:55	10° \approx 14'56		max. Earth dist.	-1387 Feb 22 j 19:09	19° \approx 43'44	46.95568 AU
				retrograde	-1387 Jun 03 j 12:58	21° \approx 17'16	
conjunction	-1394 Feb 12 j 12:45	11° \approx 50'45	-15°37'53	min. Earth dist.	-1387 Aug 24 j 01:00	20° \approx 16'56	45.11812 AU
minimum elong	-1394 Feb 12 j 12:39	11° \approx 50'45	15°37'54	opposition	-1387 Aug 26 j 12:50	20° \approx 13'58	-17°06'41
max. Earth dist.	-1394 Feb 15 j 08:52	11° \approx 55'05	45.79627 AU	direct	-1387 Nov 15 j 11:47	19° \approx 12'11	
retrograde	-1394 May 27 j 00:18	13° \approx 30'50					
min. Earth dist.	-1394 Aug 16 j 04:28	12° \approx 29'53	43.96399 AU	conjunction	-1386 Feb 21 j 12:23	20° \approx 45'08	-16°25'55
opposition	-1394 Aug 18 j 22:28	12° \approx 26'34	-16°23'58	minimum elong	-1386 Feb 21 j 12:21	20° \approx 45'07	16°25'55
direct	-1394 Nov 07 j 18:02	11° \approx 23'52		max. Earth dist.	-1386 Feb 24 j 01:48	20° \approx 48'55	47.10910 AU
				retrograde	-1386 Jun 04 j 23:55	22° \approx 22'16	
conjunction	-1393 Feb 13 j 22:23	12° \approx 59'18	-15°45'14	min. Earth dist.	-1386 Aug 25 j 09:50	21° \approx 22'03	45.27092 AU
minimum elong	-1393 Feb 13 j 22:19	12° \approx 59'17	15°45'14	opposition	-1386 Aug 27 j 21:06	21° \approx 19'07	-17°11'11
max. Earth dist.	-1393 Feb 16 j 17:18	13° \approx 03'32	45.97372 AU	direct	-1386 Nov 16 j 17:40	20° \approx 17'29	
retrograde	-1393 May 28 j 09:46	14° \approx 38'59					

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 2

Attention, astronomical year style is used: The year -1385 in astronomical counting style is the year 1386 BCE in historical counting style.

conjunction	-1385 Feb 22 j 20:46	21° \approx 50'09	-16°30'12	conjunction	-1377 Mar 03 j 11:17	0° \mathbb{H} 19'36	-16°52'31
minimum elong	-1385 Feb 22 j 20:45	21° \approx 50'09	16°30'13	minimum elong	-1377 Mar 03 j 11:18	0° \mathbb{H} 19'36	16°52'31
max. Earth dist.	-1385 Feb 25 j 10:31	21° \approx 53'56	47.25955 AU	max. Earth dist.	-1377 Mar 05 j 16:14	0° \mathbb{H} 22'46	48.30911 AU
retrograde	-1385 Jun 06 j 08:12	23° \approx 26'58		retrograde	-1377 Jun 14 j 15:47	1° \mathbb{H} 54'03	
min. Earth dist.	-1385 Aug 26 j 19:23	22° \approx 26'50	45.42038 AU	min. Earth dist.	-1377 Sep 04 j 14:16	0° \mathbb{H} 54'25	46.45656 AU
opposition	-1385 Aug 29 j 05:03	22° \approx 24'00	-17°15'19	opposition	-1377 Sep 06 j 15:58	0° \mathbb{H} 52'00	-17°36'13
direct	-1385 Nov 18 j 00:56	21° \approx 22'31			-1377 Oct 29 j 21:36	30° \mathbb{R} \approx	
				direct	-1377 Nov 26 j 17:39	29° \approx 51'21	
conjunction	-1384 Feb 24 j 04:59	22° \approx 54'55	-16°34'07		-1377 Dec 24 j 02:45	0° \mathbb{H}	
minimum elong	-1384 Feb 24 j 04:58	22° \approx 54'55	16°34'07				
max. Earth dist.	-1384 Feb 26 j 17:00	22° \approx 58'36	47.40661 AU	conjunction	-1376 Mar 03 j 18:25	1° \mathbb{H} 21'34	-16°53'51
retrograde	-1384 Jun 06 j 16:06	24° \approx 31'27		minimum elong	-1376 Mar 03 j 18:28	1° \mathbb{H} 21'34	16°53'52
min. Earth dist.	-1384 Aug 27 j 03:16	23° \approx 31'28	45.56610 AU	max. Earth dist.	-1376 Mar 05 j 21:48	1° \mathbb{H} 24'38	48.42246 AU
opposition	-1384 Aug 29 j 12:53	23° \approx 28'38	-17°19'05	retrograde	-1376 Jun 15 j 00:15	2° \mathbb{H} 55'45	
direct	-1384 Nov 18 j 08:15	22° \approx 27'19		min. Earth dist.	-1376 Sep 04 j 22:00	1° \mathbb{H} 56'10	46.56882 AU
				opposition	-1376 Sep 06 j 22:42	1° \mathbb{H} 53'48	-17°37'20
conjunction	-1383 Feb 24 j 12:58	23° \approx 59'27	-16°37'42	direct	-1376 Nov 26 j 23:41	0° \mathbb{H} 53'14	
minimum elong	-1383 Feb 24 j 12:57	23° \approx 59'27	16°37'43				
max. Earth dist.	-1383 Feb 27 j 00:10	24° \approx 03'04	47.54949 AU	conjunction	-1375 Mar 05 j 01:25	2° \mathbb{H} 23'12	-16°54'52
retrograde	-1383 Jun 07 j 22:19	25° \approx 35'42		minimum elong	-1375 Mar 05 j 01:27	2° \mathbb{H} 23'12	16°54'52
min. Earth dist.	-1383 Aug 28 j 13:19	24° \approx 35'46	45.70740 AU	max. Earth dist.	-1375 Mar 07 j 05:08	2° \mathbb{H} 26'17	48.53312 AU
opposition	-1383 Aug 30 j 20:46	24° \approx 33'02	-17°22'30	retrograde	-1375 Jun 16 j 08:03	3° \mathbb{H} 57'08	
direct	-1383 Nov 19 j 17:56	23° \approx 31'52		min. Earth dist.	-1375 Sep 06 j 05:38	2° \mathbb{H} 57'36	46.67825 AU
				opposition	-1375 Sep 08 j 05:19	2° \mathbb{H} 55'17	-17°38'07
conjunction	-1382 Feb 25 j 21:07	25° \approx 03'43	-16°40'57	direct	-1375 Nov 28 j 05:46	1° \mathbb{H} 54'50	
minimum elong	-1382 Feb 25 j 21:08	25° \approx 03'43	16°40'57				
max. Earth dist.	-1382 Feb 28 j 07:35	25° \approx 07'17	47.68784 AU	conjunction	-1374 Mar 06 j 08:24	3° \mathbb{H} 24'34	-16°55'32
retrograde	-1382 Jun 09 j 04:46	26° \approx 39'41		minimum elong	-1374 Mar 06 j 08:28	3° \mathbb{H} 24'34	16°55'33
min. Earth dist.	-1382 Aug 29 j 21:29	25° \approx 39'51	45.84372 AU	max. Earth dist.	-1374 Mar 08 j 10:27	3° \mathbb{H} 27'32	48.64116 AU
opposition	-1382 Sep 01 j 04:20	25° \approx 37'10	-17°25'36	retrograde	-1374 Jun 17 j 16:41	4° \mathbb{H} 58'14	
direct	-1382 Nov 21 j 03:54	24° \approx 36'06		min. Earth dist.	-1374 Sep 07 j 12:01	3° \mathbb{H} 58'50	46.78495 AU
				opposition	-1374 Sep 09 j 11:41	3° \mathbb{H} 56'31	-17°38'33
conjunction	-1381 Feb 27 j 05:02	26° \approx 07'41	-16°43'53	direct	-1374 Nov 29 j 09:53	2° \mathbb{H} 56'10	
minimum elong	-1381 Feb 27 j 05:01	26° \approx 07'41	16°43'55				
max. Earth dist.	-1381 Mar 01 j 13:12	26° \approx 11'06	47.82110 AU	conjunction	-1373 Mar 07 j 15:21	4° \mathbb{H} 25'43	-16°55'54
retrograde	-1381 Jun 10 j 15:51	27° \approx 43'21		minimum elong	-1373 Mar 07 j 15:24	4° \mathbb{H} 25'43	16°55'54
min. Earth dist.	-1381 Aug 31 j 06:21	26° \approx 43'34	45.97498 AU	max. Earth dist.	-1373 Mar 09 j 16:54	4° \mathbb{H} 28'39	48.74621 AU
opposition	-1381 Sep 02 j 11:54	26° \approx 40'57	-17°28'22	retrograde	-1373 Jun 18 j 22:15	5° \mathbb{H} 59'09	
direct	-1381 Nov 22 j 09:10	25° \approx 39'59		min. Earth dist.	-1373 Sep 08 j 20:26	4° \mathbb{H} 59'47	46.88841 AU
				opposition	-1373 Sep 10 j 18:07	4° \mathbb{H} 57'34	-17°38'39
conjunction	-1380 Feb 28 j 12:55	27° \approx 11'17	-16°46'32	direct	-1373 Nov 30 j 16:49	3° \mathbb{H} 57'19	
minimum elong	-1380 Feb 28 j 12:57	27° \approx 11'17	16°46'32				
max. Earth dist.	-1380 Mar 01 j 20:54	27° \approx 14'40	47.94933 AU	conjunction	-1372 Mar 07 j 22:18	5° \mathbb{H} 26'40	-16°55'57
retrograde	-1380 Jun 10 j 23:59	28° \approx 46'39		minimum elong	-1372 Mar 07 j 22:22	5° \mathbb{H} 26'41	16°55'58
min. Earth dist.	-1380 Aug 31 j 15:20	27° \approx 46'52	46.10121 AU	max. Earth dist.	-1372 Mar 09 j 23:08	5° \mathbb{H} 29'34	48.84791 AU
opposition	-1380 Sep 02 j 19:08	27° \approx 44'21	-17°30'50	retrograde	-1372 Jun 19 j 02:19	6° \mathbb{H} 59'55	
direct	-1380 Nov 22 j 16:12	26° \approx 43'28		min. Earth dist.	-1372 Sep 09 j 02:51	6° \mathbb{H} 00'39	46.98806 AU
				opposition	-1372 Sep 11 j 00:13	5° \mathbb{H} 58'27	-17°38'28
conjunction	-1379 Feb 28 j 20:30	28° \approx 14'29	-16°48'51	direct	-1372 Dec 01 j 01:40	4° \mathbb{H} 58'19	
minimum elong	-1379 Feb 28 j 20:30	28° \approx 14'29	16°48'52				
max. Earth dist.	-1379 Mar 03 j 02:37	28° \approx 17'44	48.07305 AU	conjunction	-1371 Mar 09 j 05:04	6° \mathbb{H} 27'30	-16°55'42
retrograde	-1379 Jun 12 j 06:36	29° \approx 49'31		minimum elong	-1371 Mar 09 j 05:08	6° \mathbb{H} 27'30	16°55'42
min. Earth dist.	-1379 Sep 01 j 22:34	28° \approx 49'50	46.22323 AU	max. Earth dist.	-1371 Mar 11 j 03:51	6° \mathbb{H} 30'16	48.94551 AU
opposition	-1379 Sep 04 j 02:15	28° \approx 47'19	-17°32'58	retrograde	-1371 Jun 20 j 10:49	8° \mathbb{H} 00'33	
direct	-1379 Nov 23 j 22:54	27° \approx 46'30		min. Earth dist.	-1371 Sep 10 j 10:38	7° \mathbb{H} 01'19	47.08342 AU
				opposition	-1371 Sep 12 j 06:27	6° \mathbb{H} 59'12	-17°37'58
conjunction	-1378 Mar 02 j 03:50	29° \approx 17'14	-16°50'51	direct	-1371 Dec 02 j 07:12	5° \mathbb{H} 59'11	
minimum elong	-1378 Mar 02 j 03:52	29° \approx 17'15	16°50'51				
max. Earth dist.	-1378 Mar 04 j 09:21	29° \approx 20'28	48.19272 AU	conjunction	-1370 Mar 10 j 11:55	7° \mathbb{H} 28'11	-16°55'11
	-1378 Apr 01 j 21:40	0° \mathbb{H}		minimum elong	-1370 Mar 10 j 12:00	7° \mathbb{H} 28'11	16°55'12
retrograde	-1378 Jun 13 j 11:08	0° \mathbb{H} 51'59		max. Earth dist.	-1370 Mar 12 j 10:28	7° \mathbb{H} 30'55	49.03846 AU
	-1378 Aug 27 j 16:26	30° \mathbb{R} \approx		retrograde	-1370 Jun 21 j 18:22	9° \mathbb{H} 01'02	
min. Earth dist.	-1378 Sep 03 j 07:29	29° \approx 52'17	46.34152 AU	min. Earth dist.	-1370 Sep 11 j 18:27	8° \mathbb{H} 01'50	47.17363 AU
opposition	-1378 Sep 05 j 09:20	29° \approx 49'51	-17°34'46	opposition	-1370 Sep 13 j 12:36	7° \mathbb{H} 59'49	-17°37'13
direct	-1378 Nov 25 j 08:17	28° \approx 49'08		direct	-1370 Dec 03 j 12:52	6° \mathbb{H} 59'53	
	-1377 Feb 17 j 17:58	0° \mathbb{H}					
				conjunction	-1369 Mar 11 j 18:45	8° \mathbb{H} 28'42	-16°54'24

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 3

Attention, astronomical year style is used: The year -1369 in astronomical counting style is the year 1370 BCE in historical counting style.

minimum elong	-1369 Mar 11 j 18:50	8° 1 28'43	16°54'24	min. Earth dist.	-1361 Sep 21 j 06:01	16° 1 56'59	47.79039 AU
max. Earth dist.	-1369 Mar 13 j 14:54	8° 1 31'18	49.12625 AU	opposition	-1361 Sep 22 j 14:41	16° 1 55'25	-17°17'48
retrograde	-1369 Jun 23 j 02:15	10° 1 01'20		direct	-1361 Dec 12 j 18:48	15° 1 56'04	
min. Earth dist.	-1369 Sep 13 j 00:59	9° 1 02'13	47.25860 AU				
opposition	-1369 Sep 14 j 18:29	9° 1 00'13	-17°36'11	conjunction	-1360 Mar 20 j 03:27	17° 1 23'32	-16°35'02
direct	-1369 Dec 04 j 17:02	8° 1 00'22		minimum elong	-1360 Mar 20 j 03:35	17° 1 23'32	16°35'02
				max. Earth dist.	-1360 Mar 21 j 14:46	17° 1 25'34	49.72938 AU
conjunction	-1368 Mar 12 j 01:27	9° 1 29'01	-16°53'21	retrograde	-1360 Jul 01 j 04:19	18° 1 54'34	
minimum elong	-1368 Mar 12 j 01:32	9° 1 29'01	16°53'22	opposition	-1360 Sep 22 j 19:53	17° 1 54'09	-17°14'12
max. Earth dist.	-1368 Mar 13 j 20:33	9° 1 31'33	49.20871 AU	min. Earth dist.	-1360 Sep 21 j 12:26	17° 1 55'39	47.84130 AU
retrograde	-1368 Jun 23 j 06:40	11° 1 01'27		direct	-1360 Dec 13 j 00:15	16° 1 54'53	
min. Earth dist.	-1368 Sep 13 j 09:15	10° 1 02'17	47.33834 AU				
opposition	-1368 Sep 15 j 00:29	10° 1 00'24	-17°34'53	conjunction	-1359 Mar 21 j 09:19	18° 1 22'13	-16°31'30
direct	-1368 Dec 05 j 00:37	9° 1 00'37		minimum elong	-1359 Mar 21 j 09:27	18° 1 22'14	16°31'31
				max. Earth dist.	-1359 Mar 22 j 18:28	18° 1 24'08	49.77879 AU
conjunction	-1367 Mar 13 j 07:55	10° 1 29'05	-16°52'03	retrograde	-1359 Jul 02 j 12:47	19° 1 53'08	
minimum elong	-1367 Mar 13 j 08:02	10° 1 29'06	16°52'03	min. Earth dist.	-1359 Sep 22 j 18:20	18° 1 54'16	47.88776 AU
max. Earth dist.	-1367 Mar 15 j 02:02	10° 1 31'33	49.28637 AU	opposition	-1359 Sep 24 j 01:02	18° 1 52'49	-17°10'22
retrograde	-1367 Jun 24 j 09:59	12° 1 01'18		direct	-1359 Dec 14 j 02:58	17° 1 53'36	
min. Earth dist.	-1367 Sep 14 j 15:16	11° 1 02'12	47.41339 AU				
opposition	-1367 Sep 16 j 06:13	11° 1 00'20	-17°33'19	conjunction	-1358 Mar 22 j 15:27	19° 1 20'51	-16°27'44
direct	-1367 Dec 06 j 09:01	10° 1 00'36		minimum elong	-1358 Mar 22 j 15:36	19° 1 20'51	16°27'43
				max. Earth dist.	-1358 Mar 23 j 23:33	19° 1 22'41	49.82329 AU
conjunction	-1366 Mar 14 j 14:18	11° 1 28'54	-16°50'28	retrograde	-1358 Jul 03 j 18:19	20° 1 51'36	
minimum elong	-1366 Mar 14 j 14:23	11° 1 28'54	16°50'29	min. Earth dist.	-1358 Sep 24 j 01:47	19° 1 52'42	47.92898 AU
max. Earth dist.	-1366 Mar 16 j 06:32	11° 1 31'15	49.35960 AU	opposition	-1358 Sep 25 j 06:08	19° 1 51'21	-17°06'16
retrograde	-1366 Jun 25 j 16:53	13° 1 00'55		direct	-1358 Dec 15 j 07:56	18° 1 52'11	
min. Earth dist.	-1366 Sep 15 j 22:32	12° 1 01'48	47.48446 AU				
opposition	-1366 Sep 17 j 11:52	12° 1 00'01	-17°31'28	conjunction	-1357 Mar 23 j 21:40	20° 1 19'20	-16°23'43
direct	-1366 Dec 07 j 14:59	11° 1 00'20		minimum elong	-1357 Mar 23 j 21:48	20° 1 19'20	16°23'44
				max. Earth dist.	-1357 Mar 25 j 04:18	20° 1 21'06	49.86254 AU
conjunction	-1365 Mar 15 j 20:47	12° 1 28'27	-16°48'37	retrograde	-1357 Jul 04 j 21:37	21° 1 49'57	
minimum elong	-1365 Mar 15 j 20:54	12° 1 28'27	16°48'38	min. Earth dist.	-1357 Sep 25 j 07:24	20° 1 51'04	47.96466 AU
max. Earth dist.	-1365 Mar 17 j 13:00	12° 1 30'47	49.42910 AU	opposition	-1357 Sep 26 j 11:09	20° 1 49'45	-17°01'57
retrograde	-1365 Jun 26 j 23:37	14° 1 00'17		direct	-1357 Dec 16 j 14:47	19° 1 50'36	
min. Earth dist.	-1365 Sep 17 j 05:06	13° 1 01'11	47.55183 AU				
opposition	-1365 Sep 18 j 17:24	12° 1 59'27	-17°29'19	conjunction	-1356 Mar 24 j 03:35	21° 1 17'39	-16°19'29
direct	-1365 Dec 08 j 20:51	11° 1 59'50		minimum elong	-1356 Mar 24 j 03:44	21° 1 17'39	16°19'28
				max. Earth dist.	-1356 Mar 25 j 07:55	21° 1 19'16	49.89618 AU
conjunction	-1364 Mar 16 j 02:58	13° 1 27'47	-16°46'28	retrograde	-1356 Jul 05 j 02:41	22° 1 48'07	
minimum elong	-1364 Mar 16 j 03:03	13° 1 27'47	16°46'28	opposition	-1356 Sep 26 j 16:09	21° 1 47'57	-16°57'24
max. Earth dist.	-1364 Mar 17 j 17:14	13° 1 30'00	49.49528 AU	min. Earth dist.	-1356 Sep 25 j 14:25	21° 1 49'11	47.99496 AU
retrograde	-1364 Jun 27 j 08:24	14° 1 59'25		direct	-1356 Dec 16 j 21:01	20° 1 48'49	
min. Earth dist.	-1364 Sep 17 j 10:41	14° 1 00'24	47.61609 AU				
opposition	-1364 Sep 18 j 22:46	13° 1 58'40	-17°26'53	conjunction	-1355 Mar 25 j 09:35	22° 1 15'45	-16°15'00
direct	-1364 Dec 08 j 23:04	12° 1 59'06		minimum elong	-1355 Mar 25 j 09:43	22° 1 15'45	16°15'01
				max. Earth dist.	-1355 Mar 26 j 13:29	22° 1 17'21	49.92474 AU
conjunction	-1363 Mar 17 j 09:08	14° 1 26'55	-16°44'02	retrograde	-1355 Jul 06 j 07:07	23° 1 46'05	
minimum elong	-1363 Mar 17 j 09:15	14° 1 26'56	16°44'03	opposition	-1355 Sep 27 j 21:00	22° 1 45'56	-16°52'36
max. Earth dist.	-1363 Mar 18 j 23:03	14° 1 29'07	49.55840 AU	min. Earth dist.	-1355 Sep 26 j 20:27	22° 1 47'07	48.02029 AU
retrograde	-1363 Jun 28 j 14:18	15° 1 58'23		direct	-1355 Dec 18 j 03:46	21° 1 46'49	
min. Earth dist.	-1363 Sep 18 j 17:59	14° 1 59'21	47.67733 AU				
opposition	-1363 Sep 20 j 04:14	14° 1 57'43	-17°24'09	conjunction	-1354 Mar 26 j 15:20	23° 1 13'37	-16°10'18
direct	-1363 Dec 10 j 03:38	13° 1 58'13		minimum elong	-1354 Mar 26 j 15:30	23° 1 13'38	16°10'18
				max. Earth dist.	-1354 Mar 27 j 17:03	23° 1 15'06	49.94874 AU
conjunction	-1362 Mar 18 j 15:14	15° 1 25'54	-16°41'19	retrograde	-1354 Jul 07 j 15:11	24° 1 43'49	
minimum elong	-1362 Mar 18 j 15:20	15° 1 25'54	16°41'18	min. Earth dist.	-1354 Sep 28 j 01:54	23° 1 44'50	48.04139 AU
max. Earth dist.	-1362 Mar 20 j 04:24	15° 1 28'03	49.61872 AU	opposition	-1354 Sep 29 j 01:46	23° 1 43'42	-16°47'33
retrograde	-1362 Jun 29 j 16:25	16° 1 57'12		direct	-1354 Dec 19 j 06:17	22° 1 44'35	
min. Earth dist.	-1362 Sep 19 j 23:12	15° 1 58'15	47.73552 AU				
opposition	-1362 Sep 21 j 09:30	15° 1 56'37	-17°21'07	conjunction	-1353 Mar 27 j 21:11	24° 1 11'18	-16°05'20
direct	-1362 Dec 11 j 12:12	14° 1 57'11		minimum elong	-1353 Mar 27 j 21:19	24° 1 11'18	16°05'20
				max. Earth dist.	-1353 Mar 28 j 22:13	24° 1 12'43	49.96864 AU
conjunction	-1361 Mar 19 j 21:17	16° 1 24'45	-16°38'19	retrograde	-1353 Jul 08 j 21:25	25° 1 41'21	
minimum elong	-1361 Mar 19 j 21:25	16° 1 24'46	16°38'19	min. Earth dist.	-1353 Sep 29 j 08:36	24° 1 42'18	48.05866 AU
max. Earth dist.	-1361 Mar 21 j 08:38	16° 1 26'48	49.67580 AU	opposition	-1353 Sep 30 j 06:27	24° 1 41'16	-16°42'14
retrograde	-1361 Jun 30 j 21:50	17° 1 55'55		direct	-1353 Dec 20 j 10:03	23° 1 42'09	

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 4

Attention, astronomical year style is used: The year -1352 in astronomical counting style is the year 1353 BCE in historical counting style.

conjunction	-1352 Mar 28 j 02:56	25° H 08'47	-16°00'07	direct	-1345 Dec 28 j 04:23	1° V 21'18	
minimum elong	-1352 Mar 28 j 03:07	25° H 08'48	16°00'06				
max. Earth dist.	-1352 Mar 29 j 03:05	25° H 10'10	49.98519 AU	conjunction	-1344 Apr 05 j 00:11	2° V 47'45	-15°09'08
retrograde	-1352 Jul 09 j 00:01	26° H 38'44		minimum elong	-1344 Apr 05 j 00:21	2° V 47'46	15°09'08
opposition	-1352 Sep 30 j 11:03	25° H 38'41	-16°36'40	max. Earth dist.	-1344 Apr 05 j 13:36	2° V 48'31	49.99384 AU
min. Earth dist.	-1352 Sep 29 j 13:06	25° H 39'43	48.07269 AU	retrograde	-1344 Jul 16 j 19:41	4° V 17'16	
direct	-1352 Dec 20 j 16:39	24° H 39'35		opposition	-1344 Oct 07 j 23:20	3° V 17'35	-15°42'38
				min. Earth dist.	-1344 Oct 07 j 11:05	3° V 18'10	48.05650 AU
conjunction	-1351 Mar 29 j 08:22	26° H 06'09	-15°54'37	direct	-1344 Dec 28 j 06:36	2° V 18'41	
minimum elong	-1351 Mar 29 j 08:31	26° H 06'09	15°54'37				
max. Earth dist.	-1351 Mar 30 j 06:48	26° H 07'26	49.99860 AU	conjunction	-1343 Apr 06 j 05:43	3° V 45'07	-15°01'43
retrograde	-1351 Jul 10 j 04:10	27° H 36'00		minimum elong	-1343 Apr 06 j 05:55	3° V 45'07	15°01'42
opposition	-1351 Oct 01 j 15:47	26° H 35'59	-16°30'48	max. Earth dist.	-1343 Apr 06 j 18:15	3° V 45'49	49.97420 AU
min. Earth dist.	-1351 Sep 30 j 19:22	26° H 36'58	48.08379 AU	retrograde	-1343 Jul 18 j 03:09	5° V 14'34	
direct	-1351 Dec 21 j 23:00	25° H 36'55		opposition	-1343 Oct 09 j 03:52	4° V 14'53	-15°34'49
				min. Earth dist.	-1343 Oct 08 j 17:44	4° V 15'22	48.03329 AU
conjunction	-1350 Mar 30 j 14:07	27° H 03'26	-15°48'52	direct	-1343 Dec 29 j 09:14	3° V 15'57	
minimum elong	-1350 Mar 30 j 14:17	27° H 03'27	15°48'52	evening set	-1342 Apr 05 j 15:07	4° V 39'51	
max. Earth dist.	-1350 Mar 31 j 12:42	27° H 04'44	50.00920 AU				
retrograde	-1350 Jul 11 j 09:29	28° H 33'14		conjunction	-1342 Apr 07 j 11:26	4° V 42'22	-14°54'04
opposition	-1350 Oct 02 j 20:17	27° H 33'16	-16°24'40	minimum elong	-1342 Apr 07 j 11:36	4° V 42'22	14°54'04
min. Earth dist.	-1350 Oct 02 j 00:42	27° H 34'12	48.09189 AU	max. Earth dist.	-1342 Apr 07 j 22:42	4° V 43'00	49.95008 AU
direct	-1350 Dec 23 j 04:24	26° H 34'14		morning rise	-1342 Apr 09 j 08:08	4° V 44'54	
				retrograde	-1342 Jul 19 j 06:39	6° V 11'45	
conjunction	-1349 Mar 31 j 19:43	28° H 00'43	-15°42'51	opposition	-1342 Oct 10 j 08:04	5° V 12'03	-15°26'46
minimum elong	-1349 Mar 31 j 19:53	28° H 00'44	15°42'51	min. Earth dist.	-1342 Oct 09 j 22:11	5° V 12'31	48.00582 AU
max. Earth dist.	-1349 Apr 01 j 16:17	28° H 01'53	50.01688 AU	direct	-1342 Dec 30 j 14:25	4° V 13'05	
retrograde	-1349 Jul 12 j 17:47	29° H 30'27		evening set	-1341 Apr 05 j 21:27	5° V 35'39	
min. Earth dist.	-1349 Oct 03 j 05:47	28° H 31'28	48.09696 AU				
opposition	-1349 Oct 04 j 00:51	28° H 30'33	-16°18'16	conjunction	-1341 Apr 08 j 17:01	5° V 39'29	-14°46'11
direct	-1349 Dec 24 j 06:16	27° H 31'34		minimum elong	-1341 Apr 08 j 17:13	5° V 39'30	14°46'11
				max. Earth dist.	-1341 Apr 09 j 02:20	5° V 40'01	49.92186 AU
conjunction	-1348 Apr 01 j 01:18	28° H 58'02	-15°36'35	morning rise	-1341 Apr 11 j 13:06	5° V 43'20	
minimum elong	-1348 Apr 01 j 01:29	28° H 58'03	15°36'35	retrograde	-1341 Jul 20 j 09:18	7° V 08'49	
max. Earth dist.	-1348 Apr 01 j 21:14	28° H 59'10	50.02115 AU	opposition	-1341 Oct 11 j 12:29	6° V 09'07	-15°18'27
	-1348 May 21 j 02:12	0° V		min. Earth dist.	-1341 Oct 11 j 04:27	6° V 09'29	47.97462 AU
retrograde	-1348 Jul 12 j 23:19	0° V 27'44		direct	-1341 Dec 31 j 21:27	5° V 10'06	
	-1348 Sep 04 j 08:22	30° R H		evening set	-1340 Apr 05 j 09:33	6° V 31'41	
opposition	-1348 Oct 04 j 05:25	29° H 27'54	-16°11'37				
min. Earth dist.	-1348 Oct 03 j 12:21	29° H 28'42	48.09833 AU	conjunction	-1340 Apr 08 j 22:36	6° V 36'30	-14°38'03
direct	-1348 Dec 24 j 10:05	28° H 28'57		minimum elong	-1340 Apr 08 j 22:47	6° V 36'31	14°38'03
				max. Earth dist.	-1340 Apr 09 j 07:55	6° V 37'02	49.89018 AU
conjunction	-1347 Apr 02 j 07:00	29° H 55'25	-15°30'03	morning rise	-1340 Apr 12 j 12:09	6° V 41'21	
minimum elong	-1347 Apr 02 j 07:10	29° H 55'26	15°30'03	retrograde	-1340 Jul 20 j 12:05	8° V 05'48	
max. Earth dist.	-1347 Apr 03 j 01:50	29° H 56'30	50.02169 AU	opposition	-1340 Oct 11 j 16:47	7° V 06'05	-15°09'53
	-1347 Apr 05 j 15:35	0° V		min. Earth dist.	-1340 Oct 11 j 09:26	7° V 06'26	47.94005 AU
retrograde	-1347 Jul 14 j 02:56	1° V 25'04		direct	-1339 Jan 01 j 04:46	6° V 07'03	
opposition	-1347 Oct 05 j 09:50	0° V 25'17	-16°04'43	evening set	-1339 Apr 06 j 00:22	7° V 27'48	
min. Earth dist.	-1347 Oct 04 j 17:09	0° V 26'05	48.09555 AU				
	-1347 Oct 28 j 09:25	30° R H		conjunction	-1339 Apr 10 j 04:05	7° V 33'27	-14°29'40
direct	-1347 Dec 25 j 15:48	29° H 26'23		minimum elong	-1339 Apr 10 j 04:17	7° V 33'27	14°29'40
	-1346 Feb 20 j 21:43	0° V		max. Earth dist.	-1339 Apr 10 j 11:24	7° V 33'52	49.85550 AU
				morning rise	-1339 Apr 14 j 08:24	7° V 39'08	
conjunction	-1346 Apr 03 j 12:38	0° V 52'52	-15°23'18	retrograde	-1339 Jul 21 j 19:26	9° V 02'43	
minimum elong	-1346 Apr 03 j 12:48	0° V 52'52	15°23'18	opposition	-1339 Oct 12 j 21:04	8° V 03'00	-15°01'04
max. Earth dist.	-1346 Apr 04 j 05:14	0° V 53'48	50.01758 AU	min. Earth dist.	-1339 Oct 12 j 14:15	8° V 03'19	47.90268 AU
retrograde	-1346 Jul 15 j 07:34	2° V 22'28		direct	-1338 Jan 02 j 07:21	7° V 03'56	
opposition	-1346 Oct 06 j 14:26	1° V 22'45	-15°57'35	evening set	-1338 Apr 06 j 16:48	8° V 23'59	
min. Earth dist.	-1346 Oct 05 j 23:57	1° V 23'26	48.08787 AU				
direct	-1346 Dec 26 j 21:44	0° V 23'51		conjunction	-1338 Apr 11 j 09:41	8° V 30'22	-14°21'02
				minimum elong	-1338 Apr 11 j 09:52	8° V 30'22	14°21'01
conjunction	-1345 Apr 04 j 18:32	1° V 50'19	-15°16'19	max. Earth dist.	-1338 Apr 11 j 16:26	8° V 30'45	49.81793 AU
minimum elong	-1345 Apr 04 j 18:43	1° V 50'20	15°16'18	morning rise	-1338 Apr 16 j 03:10	8° V 36'47	
max. Earth dist.	-1345 Apr 05 j 10:29	1° V 51'14	50.00835 AU	retrograde	-1338 Jul 23 j 01:46	9° V 59'38	
retrograde	-1345 Jul 16 j 11:24	3° V 19'53		opposition	-1338 Oct 14 j 01:30	8° V 59'55	-14°51'58
opposition	-1345 Oct 07 j 18:51	2° V 20'12	-15°50'13	min. Earth dist.	-1338 Oct 13 j 20:23	9° V 00'09	47.86235 AU
min. Earth dist.	-1345 Oct 07 j 05:33	2° V 20'49	48.07476 AU	direct	-1337 Jan 03 j 10:40	8° V 00'50	

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 5

Attention, astronomical year style is used: The year -1337 in astronomical counting style is the year 1338 BCE in historical counting style.

evening set	-1337 Apr 07 j 10:38	9°♊20'15		opposition	-1331 Oct 20 j 08:28	15°♊41'07	-13°41'26
				min. Earth dist.	-1331 Oct 20 j 12:31	15°♊40'56	47.46609 AU
conjunction	-1337 Apr 12 j 15:22	9°♊27'18	-14°12'08	direct	-1330 Jan 09 j 19:12	14°♊41'52	
minimum elong	-1337 Apr 12 j 15:34	9°♊27'19	14°12'08	evening set	-1330 Apr 11 j 09:02	15°♊58'05	
max. Earth dist.	-1337 Apr 12 j 21:16	9°♊27'38	49.77756 AU				
morning rise	-1337 Apr 17 j 20:44	9°♊34'24		conjunction	-1330 Apr 19 j 08:13	16°♊08'55	-13°03'17
retrograde	-1337 Jul 24 j 06:39	10°♊56'34		minimum elong	-1330 Apr 19 j 08:26	16°♊08'56	13°03'17
opposition	-1337 Oct 15 j 05:41	9°♊56'53	-14°42'36	max. Earth dist.	-1330 Apr 19 j 04:03	16°♊08'41	49.37496 AU
min. Earth dist.	-1337 Oct 15 j 00:42	9°♊57'07	47.81902 AU	morning rise	-1330 Apr 27 j 08:13	16°♊19'48	
direct	-1336 Jan 04 j 15:04	8°♊57'47		retrograde	-1330 Jul 30 j 17:46	17°♊38'29	
evening set	-1336 Apr 07 j 05:08	10°♊16'38		opposition	-1330 Oct 21 j 12:56	16°♊38'45	-13°30'26
				min. Earth dist.	-1330 Oct 21 j 17:54	16°♊38'31	47.38984 AU
conjunction	-1336 Apr 12 j 20:57	10°♊24'20	-14°02'59	direct	-1329 Jan 11 j 03:05	15°♊39'26	
minimum elong	-1336 Apr 12 j 21:09	10°♊24'20	14°02'58	evening set	-1329 Apr 12 j 07:03	16°♊55'17	
max. Earth dist.	-1336 Apr 13 j 00:55	10°♊24'33	49.73392 AU				
morning rise	-1336 Apr 18 j 13:31	10°♊32'03		conjunction	-1329 Apr 20 j 14:06	17°♊06'34	-12°52'33
retrograde	-1336 Jul 24 j 11:15	11°♊53'38		minimum elong	-1329 Apr 20 j 14:18	17°♊06'35	12°52'32
opposition	-1336 Oct 15 j 10:08	10°♊53'57	-14°33'00	max. Earth dist.	-1329 Apr 20 j 07:33	17°♊06'12	49.29817 AU
min. Earth dist.	-1336 Oct 15 j 07:01	10°♊54'06	47.77226 AU	morning rise	-1329 Apr 28 j 22:09	17°♊17'55	
direct	-1335 Jan 04 j 20:10	9°♊54'52		retrograde	-1329 Aug 01 j 01:09	18°♊36'12	
evening set	-1335 Apr 08 j 00:22	11°♊13'12		opposition	-1329 Oct 22 j 17:19	17°♊36'25	-13°19'11
				min. Earth dist.	-1329 Oct 22 j 23:13	17°♊36'09	47.30968 AU
conjunction	-1335 Apr 14 j 02:38	11°♊21'28	-13°53'35	direct	-1328 Jan 12 j 05:58	16°♊37'02	
minimum elong	-1335 Apr 14 j 02:50	11°♊21'29	13°53'36	evening set	-1328 Apr 12 j 05:10	17°♊52'33	
max. Earth dist.	-1335 Apr 14 j 06:21	11°♊21'41	49.68656 AU				
morning rise	-1335 Apr 20 j 05:34	11°♊29'48		conjunction	-1328 Apr 20 j 20:05	18°♊04'17	-12°41'34
retrograde	-1335 Jul 25 j 14:50	12°♊50'49		minimum elong	-1328 Apr 20 j 20:18	18°♊04'17	12°41'34
opposition	-1335 Oct 16 j 14:32	11°♊51'10	-14°23'08	max. Earth dist.	-1328 Apr 20 j 12:53	18°♊03'52	49.21760 AU
min. Earth dist.	-1335 Oct 16 j 12:25	11°♊51'16	47.72127 AU	morning rise	-1328 Apr 29 j 11:55	18°♊16'05	
direct	-1334 Jan 06 j 02:41	10°♊52'04		retrograde	-1328 Aug 01 j 07:54	19°♊33'58	
evening set	-1334 Apr 08 j 20:28	12°♊09'56		opposition	-1328 Oct 22 j 21:56	18°♊34'09	-13°07'41
				min. Earth dist.	-1328 Oct 23 j 05:31	18°♊33'47	47.22596 AU
conjunction	-1334 Apr 15 j 08:27	12°♊18'46	-13°43'58	direct	-1327 Jan 12 j 09:17	17°♊34'42	
minimum elong	-1334 Apr 15 j 08:39	12°♊18'46	13°43'57	evening set	-1327 Apr 13 j 03:32	18°♊49'53	
max. Earth dist.	-1334 Apr 15 j 09:44	12°♊18'50	49.63469 AU				
morning rise	-1334 Apr 21 j 21:16	12°♊27'39		conjunction	-1327 Apr 22 j 01:55	19°♊02'03	-12°30'20
retrograde	-1334 Jul 26 j 22:24	13°♊48'10		minimum elong	-1327 Apr 22 j 02:06	19°♊02'04	12°30'19
opposition	-1334 Oct 17 j 18:53	12°♊48'31	-14°13'03	max. Earth dist.	-1327 Apr 21 j 17:50	19°♊01'36	49.13389 AU
min. Earth dist.	-1334 Oct 17 j 18:02	12°♊48'33	47.66551 AU	morning rise	-1327 May 01 j 01:11	19°♊14'17	
direct	-1333 Jan 07 j 05:36	11°♊49'24		retrograde	-1327 Aug 02 j 13:40	20°♊31'49	
evening set	-1333 Apr 09 j 17:03	13°♊06'50		opposition	-1327 Oct 24 j 02:26	19°♊31'58	-12°55'54
				min. Earth dist.	-1327 Oct 24 j 10:04	19°♊31'36	47.13919 AU
conjunction	-1333 Apr 16 j 14:29	13°♊16'11	-13°34'08	direct	-1326 Jan 13 j 13:46	18°♊32'26	
minimum elong	-1333 Apr 16 j 14:40	13°♊16'12	13°34'08	evening set	-1326 Apr 14 j 02:14	19°♊47'20	
max. Earth dist.	-1333 Apr 16 j 14:30	13°♊16'11	49.57759 AU				
morning rise	-1333 Apr 23 j 12:42	13°♊25'36		conjunction	-1326 Apr 23 j 07:55	19°♊59'56	-12°18'51
retrograde	-1333 Jul 28 j 05:56	14°♊45'38		minimum elong	-1326 Apr 23 j 08:08	19°♊59'57	12°18'51
opposition	-1333 Oct 18 j 23:29	13°♊45'59	-14°02'44	max. Earth dist.	-1326 Apr 22 j 21:57	19°♊59'22	49.04711 AU
min. Earth dist.	-1333 Oct 19 j 00:53	13°♊45'55	47.60428 AU	morning rise	-1326 May 02 j 14:42	20°♊12'36	
direct	-1332 Jan 08 j 08:32	12°♊46'51		retrograde	-1326 Aug 03 j 18:21	21°♊29'47	
evening set	-1332 Apr 09 j 14:04	14°♊03'50		opposition	-1326 Oct 25 j 07:02	20°♊29'54	-12°43'52
				min. Earth dist.	-1326 Oct 25 j 16:28	20°♊29'26	47.04951 AU
conjunction	-1332 Apr 16 j 20:19	14°♊13'43	-13°24'04	direct	-1325 Jan 14 j 19:20	19°♊30'19	
minimum elong	-1332 Apr 16 j 20:32	14°♊13'43	13°24'03	evening set	-1325 Apr 15 j 01:16	20°♊44'57	
max. Earth dist.	-1332 Apr 16 j 18:51	14°♊13'38	49.51517 AU				
morning rise	-1332 Apr 24 j 03:24	14°♊23'38		conjunction	-1325 Apr 24 j 14:10	20°♊57'58	-12°07'06
retrograde	-1332 Jul 28 j 11:32	15°♊43'11		minimum elong	-1325 Apr 24 j 14:22	20°♊57'58	12°07'05
opposition	-1332 Oct 19 j 03:56	14°♊43'32	-13°52'12	max. Earth dist.	-1325 Apr 24 j 04:06	20°♊57'23	48.95747 AU
min. Earth dist.	-1332 Oct 19 j 05:44	14°♊43'27	47.53768 AU	morning rise	-1325 May 04 j 03:56	21°♊11'02	
direct	-1331 Jan 08 j 12:39	13°♊44'20		retrograde	-1325 Aug 04 j 21:30	22°♊27'55	
evening set	-1331 Apr 10 j 11:20	15°♊00'56		opposition	-1325 Oct 26 j 11:42	21°♊28'00	-12°31'34
				min. Earth dist.	-1325 Oct 26 j 21:40	21°♊27'31	46.95675 AU
conjunction	-1331 Apr 18 j 02:12	15°♊11'18	-13°13'48	direct	-1324 Jan 16 j 02:43	20°♊28'22	
minimum elong	-1331 Apr 18 j 02:23	15°♊11'18	13°13'48	evening set	-1324 Apr 15 j 00:26	21°♊42'45	
max. Earth dist.	-1331 Apr 17 j 22:23	15°♊11'05	49.44744 AU				
morning rise	-1331 Apr 25 j 17:59	15°♊21'42		conjunction	-1324 Apr 24 j 20:08	21°♊56'10	-11°55'06
retrograde	-1331 Jul 29 j 15:10	16°♊40'49		minimum elong	-1324 Apr 24 j 20:20	21°♊56'11	11°55'07

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 6

Attention, astronomical year style is used: The year -1324 in astronomical counting style is the year 1325 BCE in historical counting style.

max. Earth dist.	-1324 Apr 24 j 08:03	21° Υ 55'29	48.86470 AU	conjunction	-1317 May 02 j 18:17	28° Υ 48'52	-10°24'27
morning rise	-1324 May 04 j 16:57	22° Υ 09'40		minimum elong	-1317 May 02 j 18:29	28° Υ 48'53	10°24'26
retrograde	-1324 Aug 05 j 04:03	23° Υ 26'16		max. Earth dist.	-1317 May 01 j 20:10	28° Υ 47'35	48.08888 AU
opposition	-1324 Oct 26 j 16:24	22° Υ 26'19	-12°19'00	morning rise	-1317 May 14 j 11:01	29° Υ 05'01	
min. Earth dist.	-1324 Oct 27 j 03:25	22° Υ 25'47	46.86072 AU		-1317 Jun 30 j 09:04	0° \mathcal{B}	
direct	-1323 Jan 16 j 06:57	21° Υ 26'38		retrograde	-1317 Aug 13 j 00:23	0° \mathcal{B} 19'54	
evening set	-1323 Apr 15 j 23:52	22° Υ 40'47			-1317 Sep 25 j 20:30	30° $\mathcal{R}\Upsilon$	
				opposition	-1317 Nov 03 j 03:14	29° Υ 19'27	-10°44'08
conjunction	-1323 Apr 26 j 02:28	22° Υ 54'36	-11°42'52	min. Earth dist.	-1317 Nov 03 j 23:25	29° Υ 18'29	46.05794 AU
minimum elong	-1323 Apr 26 j 02:40	22° Υ 54'37	11°42'51	direct	-1316 Jan 23 j 18:08	28° Υ 19'02	
max. Earth dist.	-1323 Apr 25 j 13:32	22° Υ 53'52	48.76822 AU	evening set	-1316 Apr 21 j 03:30	29° Υ 31'53	
morning rise	-1323 May 06 j 06:03	23° Υ 08'30		max. Earth dist.	-1316 May 02 j 00:53	29° Υ 46'56	47.96034 AU
retrograde	-1323 Aug 06 j 12:02	24° Υ 24'50					
opposition	-1323 Oct 27 j 21:11	23° Υ 24'52	-12°06'11	conjunction	-1316 May 03 j 00:54	29° Υ 48'19	-10°10'32
min. Earth dist.	-1323 Oct 28 j 10:09	23° Υ 24'14	46.76064 AU	minimum elong	-1316 May 03 j 01:05	29° Υ 48'20	10°10'31
direct	-1322 Jan 17 j 10:02	22° Υ 25'07			-1316 May 11 j 11:07	0° \mathcal{B}	
evening set	-1322 Apr 16 j 23:46	23° Υ 39'03		morning rise	-1316 May 14 j 23:25	0° \mathcal{B} 04'50	
				retrograde	-1316 Aug 13 j 07:04	1° \mathcal{B} 19'31	
conjunction	-1322 Apr 27 j 08:56	23° Υ 53'16	-11°30'23	opposition	-1316 Nov 03 j 08:33	0° \mathcal{B} 18'58	-10°29'34
minimum elong	-1322 Apr 27 j 09:08	23° Υ 53'17	11°30'22	min. Earth dist.	-1316 Nov 04 j 06:34	0° \mathcal{B} 17'54	45.92640 AU
max. Earth dist.	-1322 Apr 26 j 18:33	23° Υ 52'27	48.66750 AU		-1316 Nov 19 j 21:28	30° $\mathcal{R}\Upsilon$	
morning rise	-1322 May 07 j 19:04	24° Υ 07'34		direct	-1315 Jan 23 j 23:32	29° Υ 18'25	
retrograde	-1322 Aug 07 j 20:32	25° Υ 23'38			-1315 Mar 29 j 00:41	0° \mathcal{B}	
opposition	-1322 Oct 29 j 02:00	24° Υ 23'37	-11°53'07	evening set	-1315 Apr 22 j 04:47	0° \mathcal{B} 31'09	
min. Earth dist.	-1322 Oct 29 j 15:27	24° Υ 22'58	46.65589 AU	max. Earth dist.	-1315 May 03 j 07:52	0° \mathcal{B} 46'33	47.82885 AU
direct	-1321 Jan 18 j 12:45	23° Υ 23'47					
evening set	-1321 Apr 17 j 23:55	24° Υ 37'32		conjunction	-1315 May 04 j 07:51	0° \mathcal{B} 47'56	-9°56'21
				minimum elong	-1315 May 04 j 08:03	0° \mathcal{B} 47'57	9°56'21
conjunction	-1321 Apr 28 j 15:28	24° Υ 52'08	-11°17'40	morning rise	-1315 May 16 j 11:45	1° \mathcal{B} 04'48	
minimum elong	-1321 Apr 28 j 15:40	24° Υ 52'09	11°17'38	retrograde	-1315 Aug 14 j 10:55	2° \mathcal{B} 19'19	
max. Earth dist.	-1321 Apr 27 j 22:42	24° Υ 51'11	48.56166 AU	opposition	-1315 Nov 04 j 13:47	1° \mathcal{B} 18'41	-10°14'43
morning rise	-1321 May 09 j 08:09	25° Υ 06'49		min. Earth dist.	-1315 Nov 05 j 12:07	1° \mathcal{B} 17'35	45.79202 AU
retrograde	-1321 Aug 09 j 01:42	26° Υ 22'38		direct	-1314 Jan 25 j 07:35	0° \mathcal{B} 18'00	
opposition	-1321 Oct 30 j 06:59	25° Υ 22'33	-11°39'49	evening set	-1314 Apr 23 j 06:27	1° \mathcal{B} 30'39	
min. Earth dist.	-1321 Oct 30 j 22:50	25° Υ 21'48	46.54596 AU				
direct	-1320 Jan 19 j 18:47	24° Υ 22'38		conjunction	-1314 May 05 j 14:46	1° \mathcal{B} 47'46	-9°41'54
evening set	-1320 Apr 18 j 00:14	25° Υ 36'11		minimum elong	-1314 May 05 j 14:57	1° \mathcal{B} 47'47	9°41'53
				max. Earth dist.	-1314 May 04 j 12:44	1° \mathcal{B} 46'15	47.69475 AU
conjunction	-1320 Apr 28 j 22:09	25° Υ 51'10	-11°04'43	morning rise	-1314 May 18 j 00:13	2° \mathcal{B} 04'59	
minimum elong	-1320 Apr 28 j 22:21	25° Υ 51'10	11°04'42	retrograde	-1314 Aug 15 j 17:34	3° \mathcal{B} 19'22	
max. Earth dist.	-1320 Apr 28 j 04:45	25° Υ 50'10	48.45066 AU	opposition	-1314 Nov 05 j 19:12	2° \mathcal{B} 18'39	-9°59'35
morning rise	-1320 May 09 j 20:57	26° Υ 06'13		min. Earth dist.	-1314 Nov 06 j 18:31	2° \mathcal{B} 17'30	45.65517 AU
retrograde	-1320 Aug 09 j 04:04	27° Υ 21'47		direct	-1313 Jan 26 j 12:48	1° \mathcal{B} 17'52	
opposition	-1320 Oct 30 j 12:00	26° Υ 21'38	-11°26'16	evening set	-1313 Apr 24 j 08:11	2° \mathcal{B} 30'25	
min. Earth dist.	-1320 Oct 31 j 04:45	26° Υ 20'49	46.43078 AU				
direct	-1319 Jan 20 j 03:37	25° Υ 21'36		conjunction	-1313 May 06 j 21:55	2° \mathcal{B} 47'54	-9°27'11
evening set	-1319 Apr 19 j 00:44	26° Υ 34'57		minimum elong	-1313 May 06 j 22:07	2° \mathcal{B} 47'54	9°27'11
max. Earth dist.	-1319 Apr 29 j 08:39	26° Υ 49'09	48.33461 AU	max. Earth dist.	-1313 May 05 j 19:23	2° \mathcal{B} 46'21	47.55801 AU
				morning rise	-1313 May 19 j 12:31	3° \mathcal{B} 05'27	
conjunction	-1319 Apr 30 j 04:38	26° Υ 50'18	-10°51'32	retrograde	-1313 Aug 17 j 00:59	4° \mathcal{B} 19'43	
minimum elong	-1319 Apr 30 j 04:50	26° Υ 50'19	10°51'31	opposition	-1313 Nov 07 j 00:45	3° \mathcal{B} 18'56	-9°44'11
morning rise	-1319 May 11 j 09:42	27° Υ 05'43		min. Earth dist.	-1313 Nov 08 j 01:27	3° \mathcal{B} 17'43	45.51565 AU
retrograde	-1319 Aug 10 j 10:28	28° Υ 21'03		direct	-1312 Jan 27 j 17:32	2° \mathcal{B} 18'03	
opposition	-1319 Oct 31 j 17:04	27° Υ 20'48	-11°12'29	evening set	-1312 Apr 24 j 10:17	3° \mathcal{B} 30'34	
min. Earth dist.	-1319 Nov 01 j 11:05	27° Υ 19'56	46.31076 AU	max. Earth dist.	-1312 May 06 j 01:31	3° \mathcal{B} 46'46	47.41874 AU
direct	-1318 Jan 21 j 08:50	26° Υ 20'39					
evening set	-1318 Apr 20 j 01:27	27° Υ 33'49		conjunction	-1312 May 07 j 05:06	3° \mathcal{B} 48'23	-9°12'12
				minimum elong	-1312 May 07 j 05:16	3° \mathcal{B} 48'23	9°12'11
conjunction	-1318 May 01 j 11:28	27° Υ 49'32	-10°38'07	morning rise	-1312 May 20 j 00:48	4° \mathcal{B} 06'16	
minimum elong	-1318 May 01 j 11:39	27° Υ 49'32	10°38'06	retrograde	-1312 Aug 17 j 10:58	5° \mathcal{B} 20'27	
max. Earth dist.	-1318 Apr 30 j 14:33	27° Υ 48'19	48.21376 AU	opposition	-1312 Nov 07 j 06:17	4° \mathcal{B} 19'36	-9°28'29
morning rise	-1318 May 12 j 22:26	28° Υ 05'19		min. Earth dist.	-1312 Nov 08 j 07:06	4° \mathcal{B} 18'23	45.37336 AU
retrograde	-1318 Aug 11 j 17:01	29° Υ 20'25		direct	-1311 Jan 27 j 20:13	3° \mathcal{B} 18'37	
opposition	-1318 Nov 01 j 22:08	28° Υ 20'05	-10°58'27	evening set	-1311 Apr 25 j 12:32	4° \mathcal{B} 31'07	
min. Earth dist.	-1318 Nov 02 j 18:05	28° Υ 19'07	46.18623 AU	max. Earth dist.	-1311 May 07 j 06:56	4° \mathcal{B} 47'33	47.27623 AU
direct	-1317 Jan 22 j 13:46	27° Υ 19'48					
evening set	-1317 Apr 21 j 02:31	28° Υ 32'47		conjunction	-1311 May 08 j 12:21	4° \mathcal{B} 49'16	-8°56'58

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 7

Attention, astronomical year style is used: The year -1311 in astronomical counting style is the year 1312 BCE in historical counting style.

minimum elong	-1311 May 08 j 12:32	4° 8 49'17	8°56'57	max. Earth dist.	-1304 May 14 j 04:50	12° 8 03'39	46.15543 AU
morning rise	-1311 May 21 j 13:10	5° 8 07'30					
retrograde	-1311 Aug 18 j 18:40	6° 8 21'37		conjunction	-1304 May 15 j 20:36	12° 8 06'02	-7°03'04
opposition	-1311 Nov 08 j 12:08	5° 8 20'42	-9°12'30	minimum elong	-1304 May 15 j 20:46	12° 8 06'03	7°03'03
min. Earth dist.	-1311 Nov 09 j 15:11	5° 8 19'22	45.22757 AU	morning rise	-1304 May 30 j 04:17	12° 8 26'28	
direct	-1310 Jan 29 j 01:26	4° 8 19'37		retrograde	-1304 Aug 25 j 21:32	13° 8 40'19	
evening set	-1310 Apr 26 j 15:17	5° 8 32'07		opposition	-1304 Nov 15 j 08:02	12° 8 38'32	-7°13'11
				min. Earth dist.	-1304 Nov 16 j 19:36	12° 8 36'45	44.08234 AU
conjunction	-1310 May 09 j 20:05	5° 8 50'36	-8°41'27	direct	-1303 Feb 05 j 02:08	11° 8 36'17	
minimum elong	-1310 May 09 j 20:16	5° 8 50'37	8°41'25	evening set	-1303 May 02 j 18:07	12° 8 48'59	
max. Earth dist.	-1310 May 08 j 14:11	5° 8 48'50	47.12986 AU	max. Earth dist.	-1303 May 15 j 12:59	13° 8 07'15	45.97988 AU
morning rise	-1310 May 23 j 01:34	6° 8 09'10					
retrograde	-1310 Aug 19 j 22:57	7° 8 23'12		conjunction	-1303 May 17 j 05:08	13° 8 09'40	-6°45'44
opposition	-1310 Nov 09 j 17:54	6° 8 22'13	-8°56'16	minimum elong	-1303 May 17 j 05:17	13° 8 09'40	6°45'43
min. Earth dist.	-1310 Nov 10 j 21:41	6° 8 20'51	45.07750 AU	morning rise	-1303 May 31 j 16:32	13° 8 30'23	
direct	-1309 Jan 30 j 10:45	5° 8 21'01		retrograde	-1303 Aug 27 j 03:07	14° 8 44'16	
evening set	-1309 Apr 27 j 18:28	6° 8 33'31		opposition	-1303 Nov 16 j 14:57	13° 8 42'19	-6°55'00
max. Earth dist.	-1309 May 09 j 19:15	6° 8 50'25	46.97895 AU	min. Earth dist.	-1303 Nov 18 j 03:39	13° 8 40'28	43.90422 AU
				direct	-1302 Feb 06 j 10:57	12° 8 39'53	
conjunction	-1309 May 11 j 03:50	6° 8 52'21	-8°25'41	evening set	-1302 May 03 j 23:12	13° 8 52'40	
minimum elong	-1309 May 11 j 04:00	6° 8 52'21	8°25'41	max. Earth dist.	-1302 May 16 j 20:30	14° 8 11'08	45.80190 AU
morning rise	-1309 May 24 j 14:11	7° 8 11'14					
retrograde	-1309 Aug 21 j 05:46	8° 8 25'14		conjunction	-1302 May 18 j 13:52	14° 8 13'38	-6°28'08
opposition	-1309 Nov 11 j 00:00	7° 8 24'09	-8°39'46	minimum elong	-1302 May 18 j 14:01	14° 8 13'39	6°28'07
min. Earth dist.	-1309 Nov 12 j 05:19	7° 8 22'42	44.92277 AU	morning rise	-1302 Jun 02 j 05:02	14° 8 34'39	
direct	-1308 Jan 31 j 17:35	6° 8 22'49			-1302 Jun 20 j 22:55	15° 8	
evening set	-1308 Apr 27 j 21:36	7° 8 35'19		retrograde	-1302 Aug 28 j 13:17	15° 8 48'35	
max. Earth dist.	-1308 May 10 j 02:14	7° 8 52'29	46.82307 AU		-1302 Nov 06 j 14:37	15° 8 46'29	-6°36'32
				opposition	-1302 Nov 17 j 21:48	14° 8 46'29	-6°36'32
conjunction	-1308 May 11 j 11:42	7° 8 54'28	-8°09'41	min. Earth dist.	-1302 Nov 19 j 10:38	14° 8 44'38	43.72385 AU
minimum elong	-1308 May 11 j 11:53	7° 8 54'28	8°09'39	direct	-1301 Feb 07 j 15:47	13° 8 43'51	
morning rise	-1308 May 25 j 02:28	8° 8 13'40		evening set	-1301 May 05 j 04:33	14° 8 56'46	
retrograde	-1308 Aug 21 j 12:45	9° 8 27'38			-1301 May 07 j 11:08	15° 8	
opposition	-1308 Nov 11 j 06:18	8° 8 26'26	-8°23'00	max. Earth dist.	-1301 May 18 j 03:58	15° 8 15'26	45.62153 AU
min. Earth dist.	-1308 Nov 12 j 13:24	8° 8 24'54	44.76302 AU				
direct	-1307 Jan 31 j 23:57	7° 8 24'57		conjunction	-1301 May 19 j 22:49	15° 8 18'02	-6°10'15
evening set	-1307 Apr 29 j 01:15	8° 8 37'28		minimum elong	-1301 May 19 j 22:57	15° 8 18'02	6°10'14
max. Earth dist.	-1307 May 11 j 08:37	8° 8 54'50	46.66248 AU	morning rise	-1301 Jun 03 j 17:30	15° 8 39'20	
				retrograde	-1301 Aug 29 j 23:46	16° 8 53'20	
conjunction	-1307 May 12 j 19:44	8° 8 56'55	-7°53'25	opposition	-1301 Nov 19 j 05:08	15° 8 51'05	-6°17'46
minimum elong	-1307 May 12 j 19:54	8° 8 56'55	7°53'25	min. Earth dist.	-1301 Nov 20 j 19:50	15° 8 49'08	43.54119 AU
morning rise	-1307 May 26 j 14:58	9° 8 16'26			-1300 Jan 07 j 13:21	15° 8 48'17	
retrograde	-1307 Aug 22 j 22:17	10° 8 30'21		direct	-1300 Feb 08 j 20:33	14° 8 48'17	
opposition	-1307 Nov 12 j 12:27	9° 8 29'02	-8°05'58		-1300 Mar 12 j 05:24	15° 8	
min. Earth dist.	-1307 Nov 13 j 20:08	9° 8 27'28	44.59869 AU	evening set	-1300 May 05 j 10:01	16° 8 01'21	
direct	-1306 Feb 02 j 04:26	8° 8 27'22		max. Earth dist.	-1300 May 18 j 12:53	16° 8 20'17	45.43887 AU
evening set	-1306 Apr 30 j 05:08	9° 8 39'54					
max. Earth dist.	-1306 May 12 j 14:41	9° 8 57'27	46.49726 AU	conjunction	-1300 May 20 j 07:49	16° 8 22'54	-5°52'05
				minimum elong	-1300 May 20 j 07:58	16° 8 22'54	5°52'05
conjunction	-1306 May 14 j 03:57	9° 8 59'40	-7°36'54	morning rise	-1300 Jun 04 j 05:48	16° 8 44'29	
minimum elong	-1306 May 14 j 04:07	9° 8 59'41	7°36'53	retrograde	-1300 Aug 30 j 07:58	17° 8 58'35	
morning rise	-1306 May 28 j 03:31	10° 8 19'30		opposition	-1300 Nov 19 j 12:29	16° 8 56'12	-5°58'41
retrograde	-1306 Aug 24 j 08:11	11° 8 33'23		min. Earth dist.	-1300 Nov 21 j 03:18	16° 8 54'15	43.35598 AU
opposition	-1306 Nov 13 j 18:57	10° 8 31'54	-7°48'39	direct	-1299 Feb 09 j 05:52	15° 8 53'14	
min. Earth dist.	-1306 Nov 15 j 04:48	10° 8 30'14	44.43006 AU	evening set	-1299 May 06 j 16:10	17° 8 06'29	
direct	-1305 Feb 03 j 09:53	9° 8 30'04		max. Earth dist.	-1299 May 19 j 19:52	17° 8 25'33	45.25338 AU
evening set	-1305 May 01 j 09:13	10° 8 42'38					
max. Earth dist.	-1305 May 13 j 22:44	11° 8 00'28	46.32806 AU	conjunction	-1299 May 21 j 17:06	17° 8 28'19	-5°33'39
				minimum elong	-1299 May 21 j 17:14	17° 8 28'20	5°33'37
conjunction	-1305 May 15 j 12:17	11° 8 02'43	-7°20'07	morning rise	-1299 Jun 05 j 18:28	17° 8 50'12	
minimum elong	-1305 May 15 j 12:27	11° 8 02'43	7°20'06	retrograde	-1299 Aug 31 j 16:55	19° 8 04'24	
morning rise	-1305 May 29 j 15:50	11° 8 22'51		opposition	-1299 Nov 20 j 19:59	18° 8 01'54	-5°39'19
retrograde	-1305 Aug 25 j 14:29	12° 8 36'42		min. Earth dist.	-1299 Nov 22 j 12:26	17° 8 59'51	43.16777 AU
opposition	-1305 Nov 15 j 01:23	11° 8 35'04	-7°31'03	direct	-1298 Feb 10 j 14:06	16° 8 58'44	
min. Earth dist.	-1305 Nov 16 j 11:37	11° 8 33'22	44.25769 AU	evening set	-1298 May 07 j 22:38	18° 8 12'12	
direct	-1304 Feb 04 j 18:55	10° 8 33'01		max. Earth dist.	-1298 May 21 j 05:07	18° 8 31'31	45.06431 AU
evening set	-1304 May 01 j 13:39	11° 8 45'40					

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 8

Attention, astronomical year style is used: The year -1298 in astronomical counting style is the year 1299 BCE in historical counting style.

conjunction	-1298 May 23 j 02:53	18° 8 34'19	-5°14'55	evening set	-1291 May 15 j 07:15	26° 8 08'23	
minimum elong	-1298 May 23 j 03:01	18° 8 34'20	5°14'55	max. Earth dist.	-1291 May 28 j 20:29	26° 8 28'45	43.62298 AU
morning rise	-1298 Jun 07 j 07:08	18° 8 56'29					
retrograde	-1298 Sep 02 j 00:36	20° 8 10'51		conjunction	-1291 May 31 j 04:33	26° 8 32'18	-2°56'15
opposition	-1298 Nov 22 j 03:52	19° 8 08'11	-5°19'40	minimum elong	-1291 May 31 j 04:38	26° 8 32'19	2°56'14
min. Earth dist.	-1298 Nov 23 j 21:48	19° 8 06'03	42.97558 AU	morning rise	-1291 Jun 16 j 01:22	26° 8 56'14	
direct	-1297 Feb 11 j 23:15	18° 8 04'51		retrograde	-1291 Sep 10 j 01:03	28° 8 12'05	
evening set	-1297 May 09 j 05:37	19° 8 18'32		opposition	-1291 Nov 29 j 16:34	27° 8 08'03	-2°53'51
max. Earth dist.	-1297 May 22 j 13:00	19° 8 37'59	44.87107 AU	min. Earth dist.	-1291 Dec 01 j 19:07	27° 8 05'24	41.51545 AU
				direct	-1290 Feb 19 j 09:17	26° 8 02'58	
conjunction	-1297 May 24 j 12:41	19° 8 40'55	-4°55'56	evening set	-1290 May 16 j 17:01	27° 8 18'43	
minimum elong	-1297 May 24 j 12:48	19° 8 40'56	4°55'54	max. Earth dist.	-1290 May 30 j 07:37	27° 8 39'17	43.40455 AU
morning rise	-1297 Jun 08 j 19:54	20° 8 03'21					
retrograde	-1297 Sep 03 j 10:59	21° 8 17'53		conjunction	-1290 Jun 01 j 16:04	27° 8 42'52	-2°35'20
opposition	-1297 Nov 23 j 11:50	20° 8 15'05	-4°59'43	minimum elong	-1290 Jun 01 j 16:08	27° 8 42'52	2°35'19
min. Earth dist.	-1297 Nov 25 j 06:32	20° 8 12'54	42.77906 AU	morning rise	-1290 Jun 17 j 14:30	28° 8 07'01	
direct	-1296 Feb 13 j 05:56	19° 8 11'32		retrograde	-1290 Sep 11 j 13:29	29° 8 23'11	
evening set	-1296 May 09 j 12:55	20° 8 25'27		opposition	-1290 Dec 01 j 02:09	28° 8 18'55	-2°31'49
max. Earth dist.	-1296 May 22 j 21:08	20° 8 45'03	44.67315 AU	min. Earth dist.	-1290 Dec 03 j 04:30	28° 8 16'17	41.29553 AU
				direct	-1289 Feb 20 j 19:06	27° 8 13'35	
conjunction	-1296 May 24 j 22:48	20° 8 48'07	-4°36'40	evening set	-1289 May 18 j 03:16	28° 8 29'44	
minimum elong	-1296 May 24 j 22:55	20° 8 48'07	4°36'39	max. Earth dist.	-1289 May 31 j 17:17	28° 8 50'23	43.18433 AU
morning rise	-1296 Jun 09 j 08:42	21° 8 10'48					
retrograde	-1296 Sep 03 j 22:35	22° 8 25'31		conjunction	-1289 Jun 03 j 03:41	28° 8 54'07	-2°14'08
opposition	-1296 Nov 23 j 20:12	21° 8 22'32	-4°39'28	minimum elong	-1289 Jun 03 j 03:45	28° 8 54'07	2°14'07
min. Earth dist.	-1296 Nov 25 j 17:08	21° 8 20'14	42.57790 AU	morning rise	-1289 Jun 19 j 03:35	29° 8 18'29	
direct	-1295 Feb 13 j 12:26	20° 8 18'46			-1289 Jul 19 j 15:35	0° II	
evening set	-1295 May 10 j 20:30	21° 8 32'56		retrograde	-1289 Sep 13 j 03:12	0° II 34'59	
max. Earth dist.	-1295 May 24 j 06:47	21° 8 52'44	44.47074 AU		-1289 Nov 08 j 05:59	30° R 8	
				opposition	-1289 Dec 02 j 12:05	29° 8 30'30	-2°09'29
conjunction	-1295 May 26 j 09:08	21° 8 55'52	-4°17'08	min. Earth dist.	-1289 Dec 04 j 15:57	29° 8 27'46	41.07408 AU
minimum elong	-1295 May 26 j 09:14	21° 8 55'52	4°17'06	direct	-1288 Feb 22 j 04:33	28° 8 24'54	
morning rise	-1295 Jun 10 j 21:33	22° 8 18'49		evening set	-1288 May 18 j 13:53	29° 8 41'30	
retrograde	-1295 Sep 05 j 09:43	23° 8 33'43			-1288 May 30 j 16:55	0° II	
opposition	-1295 Nov 25 j 04:37	22° 8 30'32	-4°18'57	max. Earth dist.	-1288 Jun 01 j 05:35	0° II 02'22	42.96255 AU
min. Earth dist.	-1295 Nov 27 j 01:58	22° 8 28'12	42.37226 AU				
direct	-1294 Feb 14 j 21:25	21° 8 26'31		conjunction	-1288 Jun 03 j 15:46	0° II 06'06	-1°52'39
evening set	-1294 May 12 j 04:44	22° 8 40'59		minimum elong	-1288 Jun 03 j 15:49	0° II 06'06	1°52'38
max. Earth dist.	-1294 May 25 j 14:43	23° 8 00'51	44.26392 AU	morning rise	-1288 Jun 19 j 16:43	0° II 30'41	
				retrograde	-1288 Sep 13 j 13:50	1° II 47'33	
conjunction	-1294 May 27 j 19:41	23° 8 04'09	-3°57'20	opposition	-1288 Dec 02 j 22:14	0° II 42'52	-1°46'51
minimum elong	-1294 May 27 j 19:46	23° 8 04'10	3°57'19	min. Earth dist.	-1288 Dec 05 j 02:34	0° II 40'06	40.85095 AU
morning rise	-1294 Jun 12 j 10:35	23° 8 27'22			-1287 Jan 08 j 16:48	30° R 8	
retrograde	-1294 Sep 06 j 20:00	24° 8 42'27		direct	-1287 Feb 22 j 16:55	29° 8 37'01	
opposition	-1294 Nov 26 j 13:14	23° 8 39'05	-3°58'07		-1287 Apr 08 j 04:36	0° II	
min. Earth dist.	-1294 Nov 28 j 12:34	23° 8 36'38	42.16263 AU	evening set	-1287 May 20 j 01:10	0° II 54'05	
direct	-1293 Feb 16 j 06:13	22° 8 34'49		max. Earth dist.	-1287 Jun 02 j 16:02	1° II 15'01	42.73894 AU
evening set	-1293 May 13 j 13:11	23° 8 49'33					
max. Earth dist.	-1293 May 27 j 01:13	24° 8 09'38	44.05325 AU	conjunction	-1287 Jun 05 j 04:01	1° II 18'54	-1°30'54
				minimum elong	-1287 Jun 05 j 04:03	1° II 18'54	1°30'53
conjunction	-1293 May 29 j 06:34	24° 8 12'59	-3°37'15	morning rise	-1287 Jun 21 j 06:09	1° II 43'42	
minimum elong	-1293 May 29 j 06:40	24° 8 13'00	3°37'13	retrograde	-1287 Sep 15 j 01:21	3° II 00'58	
morning rise	-1293 Jun 13 j 23:30	24° 8 36'26		opposition	-1287 Dec 04 j 08:41	1° II 56'05	-1°23'54
retrograde	-1293 Sep 08 j 02:57	25° 8 51'45		min. Earth dist.	-1287 Dec 06 j 13:56	1° II 53'15	40.62579 AU
opposition	-1293 Nov 27 j 22:10	24° 8 48'10	-3°37'00	direct	-1286 Feb 24 j 03:14	0° II 49'57	
min. Earth dist.	-1293 Nov 29 j 22:26	24° 8 45'40	41.94948 AU	evening set	-1286 May 21 j 13:04	2° II 07'32	
direct	-1292 Feb 17 j 18:10	23° 8 43'38		max. Earth dist.	-1286 Jun 04 j 03:50	2° II 28'35	42.51266 AU
evening set	-1292 May 13 j 21:58	24° 8 58'41					
max. Earth dist.	-1292 May 27 j 10:18	25° 8 18'53	43.83946 AU	conjunction	-1286 Jun 06 j 16:52	2° II 32'34	-1°08'52
				minimum elong	-1286 Jun 06 j 16:54	2° II 32'34	1°08'50
conjunction	-1292 May 29 j 17:18	25° 8 22'22	-3°16'53	morning rise	-1286 Jun 22 j 19:37	2° II 57'34	
minimum elong	-1292 May 29 j 17:23	25° 8 22'22	3°16'53	retrograde	-1286 Sep 16 j 12:25	4° II 15'16	
morning rise	-1292 Jun 14 j 12:24	25° 8 46'03		opposition	-1286 Dec 05 j 19:32	3° II 10'09	-1°00'40
retrograde	-1292 Sep 08 j 13:32	27° 8 01'37		min. Earth dist.	-1286 Dec 08 j 02:35	3° II 07'13	40.39776 AU
opposition	-1292 Nov 28 j 07:14	25° 8 57'48	-3°15'35	direct	-1285 Feb 25 j 13:35	2° II 03'46	
min. Earth dist.	-1292 Nov 30 j 08:01	25° 8 55'16	41.73362 AU	evening set	-1285 May 23 j 01:36	3° II 21'52	
direct	-1291 Feb 18 j 02:29	24° 8 53'00		max. Earth dist.	-1285 Jun 05 j 16:01	3° II 43'01	42.28334 AU

Attention, astronomical year style is used: The year -1285 in astronomical counting style is the year 1286 BCE in historical counting style.

conjunction	-1285 Jun 08 j 06:00	3°II47'05	-0°46'33	opposition	-1279 Dec 14 j 09:02	12°II11'59	1°50'06
minimum elong	-1285 Jun 08 j 06:01	3°II47'05	0°46'32	min. Earth dist.	-1279 Dec 16 j 23:23	12°II08'33	38.71606 AU
morning rise	-1285 Jun 24 j 09:19	4°II12'17		direct	-1278 Mar 06 j 00:12	11°II03'11	
retrograde	-1285 Sep 18 j 02:55	5°II30'26		evening set	-1278 Jun 01 j 09:33	12°II25'48	
opposition	-1285 Dec 07 j 06:43	4°II25'05	-0°37'08	max. Earth dist.	-1278 Jun 14 j 13:44	12°II47'16	40.59207 AU
min. Earth dist.	-1285 Dec 09 j 14:00	4°II22'07	40.16649 AU				
direct	-1284 Feb 26 j 22:24	3°II18'24		conjunction	-1278 Jun 17 j 11:22	12°II52'03	1°56'53
evening set	-1284 May 23 j 14:35	4°II37'04		minimum elong	-1278 Jun 17 j 11:18	12°II52'02	1°56'55
max. Earth dist.	-1284 Jun 06 j 03:07	4°II58'14	42.05040 AU	morning rise	-1278 Jul 03 j 11:18	13°II18'13	
				retrograde	-1278 Sep 27 j 08:30	14°II40'20	
conjunction	-1284 Jun 08 j 19:18	5°II02'27	-0°24'00	opposition	-1278 Dec 15 j 22:40	13°II32'54	2°15'35
minimum elong	-1284 Jun 08 j 19:19	5°II02'28	0°23'58	min. Earth dist.	-1278 Dec 18 j 12:41	13°II29'27	38.46864 AU
morning rise	-1284 Jun 24 j 22:57	5°II27'50		direct	-1277 Mar 07 j 13:51	12°II23'44	
retrograde	-1284 Sep 18 j 17:45	6°II46'29		evening set	-1277 Jun 03 j 03:08	13°II47'10	
opposition	-1284 Dec 07 j 18:21	5°II40'51	-0°13'18	max. Earth dist.	-1277 Jun 16 j 03:57	14°II08'35	40.34394 AU
min. Earth dist.	-1284 Dec 10 j 03:50	5°II37'46	39.93169 AU				
direct	-1283 Feb 27 j 08:09	4°II33'51		conjunction	-1277 Jun 19 j 03:17	14°II13'31	2°21'12
evening set	-1283 May 25 j 04:12	5°II53'06		minimum elong	-1277 Jun 19 j 03:13	14°II13'30	2°21'13
max. Earth dist.	-1283 Jun 07 j 16:41	6°II14'23	41.81391 AU	morning rise	-1277 Jul 05 j 01:44	14°II39'46	
				retrograde	-1277 Sep 29 j 01:46	16°II02'37	
conjunction	-1283 Jun 10 j 09:14	6°II18'40	-0°01'11	opposition	-1277 Dec 17 j 12:52	14°II54'53	2°41'20
minimum elong	-1283 Jun 10 j 09:14	6°II18'40	0°01'10	min. Earth dist.	-1277 Dec 20 j 04:00	14°II51'22	38.22108 AU
behind sun begin	-1283 Jun 10 j 02:42	6°II18'15		direct	-1276 Mar 08 j 03:04	13°II45'22	
behind sun end	-1283 Jun 10 j 15:45	6°II19'04		evening set	-1276 Jun 03 j 21:09	15°II09'41	
morning rise	-1283 Jun 26 j 12:50	6°II44'11		max. Earth dist.	-1276 Jun 16 j 20:39	15°II31'09	40.09554 AU
asc. node	-1283 Jun 28 j 11:31	6°II47'12					
retrograde	-1283 Sep 20 j 07:15	8°II03'20		conjunction	-1276 Jun 19 j 19:40	15°II36'06	2°45'44
opposition	-1283 Dec 09 j 06:07	6°II57'26	0°10'49	minimum elong	-1276 Jun 19 j 19:34	15°II36'06	2°45'46
min. Earth dist.	-1283 Dec 11 j 16:08	6°II54'18	39.69341 AU	morning rise	-1276 Jul 05 j 16:03	16°II02'26	
direct	-1282 Feb 28 j 22:26	5°II50'05		retrograde	-1276 Sep 29 j 16:44	17°II26'04	
evening set	-1282 May 26 j 18:36	7°II09'56		opposition	-1276 Dec 18 j 03:32	16°II18'04	3°07'19
max. Earth dist.	-1282 Jun 09 j 04:27	7°II31'12	41.57407 AU	min. Earth dist.	-1276 Dec 20 j 19:09	16°II14'29	37.97320 AU
				direct	-1275 Mar 09 j 19:45	15°II08'12	
conjunction	-1282 Jun 11 j 23:22	7°II35'40	0°21'59	evening set	-1275 Jun 05 j 16:19	16°II33'27	
minimum elong	-1282 Jun 11 j 23:22	7°II35'40	0°22'01	max. Earth dist.	-1275 Jun 18 j 12:14	16°II54'51	39.84677 AU
morning rise	-1282 Jun 28 j 02:56	8°II01'21					
retrograde	-1282 Sep 21 j 21:42	9°II21'00		conjunction	-1275 Jun 21 j 12:32	16°II59'56	3°10'29
opposition	-1282 Dec 10 j 18:18	8°II14'49	0°35'13	minimum elong	-1275 Jun 21 j 12:27	16°II59'56	3°10'30
min. Earth dist.	-1282 Dec 13 j 05:37	8°II11'35	39.45217 AU	morning rise	-1275 Jul 07 j 06:53	17°II26'19	
direct	-1281 Mar 02 j 11:34	7°II07'07		retrograde	-1275 Oct 01 j 10:24	18°II50'48	
evening set	-1281 May 28 j 09:19	8°II27'36		opposition	-1275 Dec 19 j 18:24	17°II42'31	3°33'32
max. Earth dist.	-1281 Jun 10 j 18:28	8°II48'57	41.33126 AU	min. Earth dist.	-1275 Dec 22 j 10:21	17°II38'54	37.72488 AU
				direct	-1274 Mar 11 j 09:53	16°II32'19	
conjunction	-1281 Jun 13 j 13:52	8°II53'29	0°45'20	evening set	-1274 Jun 07 j 12:17	17°II58'33	
minimum elong	-1281 Jun 13 j 13:51	8°II53'29	0°45'21	max. Earth dist.	-1274 Jun 20 j 04:57	18°II19'53	39.59691 AU
morning rise	-1281 Jun 29 j 16:47	9°II19'18					
retrograde	-1281 Sep 23 j 09:58	10°II39'30		conjunction	-1274 Jun 23 j 06:07	18°II25'05	3°35'26
opposition	-1281 Dec 12 j 06:55	9°II33'01	0°59'54	minimum elong	-1274 Jun 23 j 06:00	18°II25'04	3°35'28
min. Earth dist.	-1281 Dec 14 j 19:31	9°II29'42	39.20834 AU	morning rise	-1274 Jul 08 j 21:46	18°II51'30	
direct	-1280 Mar 03 j 01:09	8°II24'57		retrograde	-1274 Oct 03 j 02:55	20°II16'53	
evening set	-1280 May 29 j 00:46	9°II46'05		opposition	-1274 Dec 21 j 10:05	19°II08'19	3°59'59
max. Earth dist.	-1280 Jun 11 j 08:11	10°II07'28	41.08632 AU	min. Earth dist.	-1274 Dec 24 j 03:45	19°II04'35	37.47534 AU
				direct	-1273 Mar 12 j 23:26	17°II57'46	
conjunction	-1280 Jun 14 j 04:35	10°II12'06	1°08'56	evening set	-1273 Jun 09 j 09:04	19°II25'01	
minimum elong	-1280 Jun 14 j 04:33	10°II12'06	1°08'58	max. Earth dist.	-1273 Jun 21 j 22:29	19°II46'19	39.34561 AU
morning rise	-1280 Jun 30 j 06:55	10°II38'04					
retrograde	-1280 Sep 24 j 00:01	11°II58'51		conjunction	-1273 Jun 25 j 00:01	19°II51'34	4°00'35
opposition	-1280 Dec 12 j 19:39	10°II52'03	1°24'52	minimum elong	-1273 Jun 24 j 23:53	19°II51'33	4°00'36
min. Earth dist.	-1280 Dec 15 j 08:22	10°II48'43	38.96283 AU	morning rise	-1273 Jul 10 j 12:46	20°II18'01	
direct	-1279 Mar 04 j 13:11	9°II43'37		retrograde	-1273 Oct 04 j 21:55	21°II44'20	
evening set	-1279 May 30 j 16:47	11°II05'28		opposition	-1273 Dec 23 j 02:09	20°II35'27	4°26'38
max. Earth dist.	-1279 Jun 12 j 21:52	11°II26'50	40.83968 AU	min. Earth dist.	-1273 Dec 25 j 19:48	20°II31'42	37.22418 AU
				direct	-1272 Mar 13 j 14:24	19°II24'32	
conjunction	-1279 Jun 15 j 19:45	11°II31'36	1°32'48	evening set	-1272 Jun 10 j 06:50	20°II52'52	
minimum elong	-1279 Jun 15 j 19:42	11°II31'36	1°32'49	max. Earth dist.	-1272 Jun 22 j 14:53	21°II13'58	39.09230 AU
morning rise	-1279 Jul 01 j 21:03	11°II57'41					
retrograde	-1279 Sep 25 j 16:11	13°II19'07		conjunction	-1272 Jun 25 j 18:31	21°II19'25	4°25'54

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 10

Attention, astronomical year style is used: The year -1272 in astronomical counting style is the year 1273 BCE in historical counting style.

minimum elong	-1272 Jun 25 j 18:22	21°II19'25	4°25'55	min. Earth dist.	-1265 Jan 05 j 08:39	1°☾18'35	35.42972 AU
morning rise	-1272 Jul 11 j 04:03	21°II45'51		direct	-1265 Mar 24 j 18:45	0°☾08'47	
retrograde	-1272 Oct 05 j 19:27	23°II13'09		evening set	-1265 Jun 23 j 17:16	1°☾46'02	
opposition	-1272 Dec 23 j 18:47	22°II03'57	4°53'30	max. Earth dist.	-1265 Jul 04 j 10:43	2°☾05'34	37.28465 AU
min. Earth dist.	-1272 Dec 26 j 14:18	22°II00'04	36.97115 AU				
direct	-1271 Mar 15 j 04:23	20°II52'38		conjunction	-1265 Jul 07 j 19:02	2°☾11'44	7°26'44
evening set	-1271 Jun 12 j 05:25	22°II22'05		minimum elong	-1265 Jul 07 j 18:47	2°☾11'42	7°26'46
max. Earth dist.	-1271 Jun 24 j 10:04	22°II43'07	38.83699 AU	morning rise	-1265 Jul 21 j 18:22	2°☾37'16	
				retrograde	-1265 Oct 17 j 21:05	4°☾12'44	
conjunction	-1271 Jun 27 j 13:41	22°II48'37	4°51'23	opposition	-1264 Jan 04 j 06:50	3°☾00'50	8°05'36
minimum elong	-1271 Jun 27 j 13:32	22°II48'36	4°51'24	min. Earth dist.	-1264 Jan 07 j 06:15	2°☾56'33	35.17472 AU
morning rise	-1271 Jul 12 j 19:28	23°II15'00		direct	-1264 Mar 25 j 13:00	1°☾46'22	
retrograde	-1271 Oct 07 j 14:16	24°II43'19		evening set	-1264 Jun 24 j 22:50	3°☾25'10	
opposition	-1271 Dec 25 j 12:00	23°II33'46	5°20'33	max. Earth dist.	-1264 Jul 05 j 10:38	3°☾44'27	37.02833 AU
min. Earth dist.	-1271 Dec 28 j 07:48	23°II29'51	36.71611 AU				
direct	-1270 Mar 16 j 22:24	22°II22'03		conjunction	-1264 Jul 08 j 18:02	3°☾50'36	7°52'47
evening set	-1270 Jun 14 j 05:07	23°II52'40		minimum elong	-1264 Jul 08 j 17:46	3°☾50'34	7°52'47
max. Earth dist.	-1270 Jun 26 j 03:39	24°II13'27	38.57976 AU	morning rise	-1264 Jul 22 j 10:31	4°☾15'52	
				retrograde	-1264 Oct 18 j 20:26	5°☾52'46	
conjunction	-1270 Jun 29 j 09:14	24°II19'08	5°17'02	opposition	-1263 Jan 05 j 04:07	4°☾40'29	8°33'17
minimum elong	-1270 Jun 29 j 09:03	24°II19'07	5°17'03	min. Earth dist.	-1263 Jan 08 j 03:18	4°☾36'11	34.92147 AU
morning rise	-1270 Jul 14 j 11:08	24°II45'28		direct	-1263 Mar 27 j 11:02	3°☾25'35	
retrograde	-1270 Oct 09 j 11:11	26°II14'49		evening set	-1263 Jun 27 j 05:46	5°☾06'00	
opposition	-1270 Dec 27 j 05:38	25°II04'54	5°47'47	max. Earth dist.	-1263 Jul 07 j 09:10	5°☾24'51	36.77378 AU
min. Earth dist.	-1270 Dec 30 j 02:31	25°II00'54	36.45959 AU				
direct	-1269 Mar 18 j 16:43	23°II52'45		conjunction	-1263 Jul 10 j 17:36	5°☾31'08	8°18'47
evening set	-1269 Jun 16 j 05:33	25°II24'35		minimum elong	-1263 Jul 10 j 17:20	5°☾31'07	8°18'49
max. Earth dist.	-1269 Jun 27 j 23:38	25°II45'12	38.32103 AU	morning rise	-1263 Jul 24 j 03:03	5°☾56'06	
				retrograde	-1263 Oct 20 j 22:31	7°☾34'30	
conjunction	-1269 Jul 01 j 05:27	25°II50'57	5°42'48	opposition	-1262 Jan 07 j 02:05	6°☾21'51	9°00'57
minimum elong	-1269 Jul 01 j 05:16	25°II50'57	5°42'50	min. Earth dist.	-1262 Jan 10 j 01:26	6°☾17'31	34.67003 AU
morning rise	-1269 Jul 16 j 02:45	26°II17'12		direct	-1262 Mar 29 j 09:07	5°☾06'31	
retrograde	-1269 Oct 11 j 05:54	27°II47'39		evening set	-1262 Jun 29 j 13:49	6°☾48'40	
opposition	-1269 Dec 29 j 00:00	26°II37'21	6°15'09	max. Earth dist.	-1262 Jul 09 j 09:50	7°☾07'07	36.52051 AU
min. Earth dist.	-1269 Dec 31 j 21:56	26°II33'16	36.20197 AU				
direct	-1268 Mar 19 j 12:13	25°II24'45		conjunction	-1262 Jul 12 j 18:01	7°☾13'26	8°44'44
evening set	-1268 Jun 17 j 06:55	26°II57'50		minimum elong	-1262 Jul 12 j 17:43	7°☾13'25	8°44'45
max. Earth dist.	-1268 Jun 28 j 19:17	27°II18'13	38.06157 AU	morning rise	-1262 Jul 25 j 19:32	7°☾38'02	
				retrograde	-1262 Oct 22 j 22:54	9°☾18'03	
conjunction	-1268 Jul 02 j 01:53	27°II24'06	6°08'41	opposition	-1261 Jan 09 j 00:55	8°☾05'02	9°28'32
minimum elong	-1268 Jul 02 j 01:41	27°II24'05	6°08'43	min. Earth dist.	-1261 Jan 12 j 01:13	8°☾00'36	34.41979 AU
morning rise	-1268 Jul 16 j 18:29	27°II50'13		direct	-1261 Mar 31 j 07:15	6°☾49'16	
retrograde	-1268 Oct 12 j 02:34	29°II21'49		evening set	-1261 Jul 01 j 23:21	8°☾33'13	
opposition	-1268 Dec 29 j 18:44	28°II11'08	6°42'39	max. Earth dist.	-1261 Jul 11 j 10:34	8°☾51'09	36.26836 AU
min. Earth dist.	-1267 Jan 01 j 16:29	28°II07'01	35.94404 AU				
direct	-1267 Mar 21 j 06:21	26°II58'03		conjunction	-1261 Jul 14 j 19:03	8°☾57'34	9°10'35
evening set	-1267 Jun 19 j 09:19	28°II32'27		minimum elong	-1261 Jul 14 j 18:45	8°☾57'33	9°10'37
max. Earth dist.	-1267 Jun 30 j 15:32	28°II52'34	37.80180 AU	morning rise	-1261 Jul 27 j 12:19	9°☾21'46	
				retrograde	-1261 Oct 25 j 00:12	11°☾03'27	
conjunction	-1267 Jul 03 j 23:07	28°II58'34	6°34'40	opposition	-1260 Jan 11 j 00:23	9°☾50'04	9°56'03
minimum elong	-1267 Jul 03 j 22:54	28°II58'33	6°34'41	min. Earth dist.	-1260 Jan 14 j 00:12	9°☾45'38	34.17060 AU
morning rise	-1267 Jul 18 j 10:22	29°II24'32		direct	-1260 Apr 01 j 05:43	8°☾33'51	
	-1267 Aug 08 j 13:53	0°☾		evening set	-1260 Jul 03 j 09:58	10°☾19'40	
retrograde	-1267 Oct 13 j 22:25	0°☾57'21		max. Earth dist.	-1260 Jul 12 j 11:22	10°☾37'01	36.01681 AU
	-1267 Dec 21 j 20:34	30°☾II					
opposition	-1267 Dec 31 j 14:06	29°II46'15	7°10'15	conjunction	-1260 Jul 15 j 20:48	10°☾43'34	9°36'19
min. Earth dist.	-1266 Jan 03 j 13:18	29°II42'02	35.68637 AU	minimum elong	-1260 Jul 15 j 20:28	10°☾43'32	9°36'19
direct	-1266 Mar 22 j 23:42	28°II32'43		morning rise	-1260 Jul 28 j 05:08	11°☾07'18	
	-1266 Jun 16 j 17:10	0°☾		retrograde	-1260 Oct 26 j 01:54	12°☾50'44	
evening set	-1266 Jun 21 j 12:50	0°☾08'30		opposition	-1259 Jan 12 j 00:47	11°☾36'57	10°23'25
max. Earth dist.	-1266 Jul 02 j 13:53	0°☾28'25	37.54265 AU	min. Earth dist.	-1259 Jan 15 j 01:58	11°☾32'25	33.92205 AU
				direct	-1259 Apr 03 j 03:13	10°☾20'17	
conjunction	-1266 Jul 05 j 20:54	0°☾34'25	7°00'41	evening set	-1259 Jul 05 j 22:14	12°☾08'04	
minimum elong	-1266 Jul 05 j 20:39	0°☾34'24	7°00'42	max. Earth dist.	-1259 Jul 14 j 14:31	12°☾24'51	35.76590 AU
morning rise	-1266 Jul 20 j 02:22	1°☾00'11					
retrograde	-1266 Oct 15 j 20:50	2°☾34'17		conjunction	-1259 Jul 17 j 23:25	12°☾31'26	10°01'52
opposition	-1265 Jan 02 j 10:08	1°☾22'48	7°37'55	minimum elong	-1259 Jul 17 j 23:05	12°☾31'24	10°01'54

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 11

Attention, astronomical year style is used: The year -1259 in astronomical counting style is the year 1260 BCE in historical counting style.

morning rise	-1259 Jul 29 j 22:08	12° $\overline{54}$ '38	conjunction	-1252 Jul 31 j 13:18	25° $\overline{59}$ '09	12°51'59
retrograde	-1259 Oct 28 j 05:01	14° $\overline{39}$ '54	minimum elong	-1252 Jul 31 j 12:54	25° $\overline{59}$ '07	12°51'59
opposition	-1258 Jan 14 j 01:45	13° $\overline{25}$ '43 10°50'38	morning rise	-1252 Aug 08 j 19:07	26° $\overline{16}$ '21	
min. Earth dist.	-1258 Jan 17 j 02:25	13° $\overline{21}$ '11 33.67420 AU	retrograde	-1252 Nov 11 j 01:18	28° $\overline{17}$ '07	
direct	-1258 Apr 05 j 03:13	12° $\overline{08}$ '34	opposition	-1251 Jan 27 j 07:29	26° $\overline{59}$ '54	13°51'26
evening set	-1258 Jul 08 j 11:53	13° $\overline{58}$ '24	min. Earth dist.	-1251 Jan 30 j 06:17	26° $\overline{55}$ '16	32.00799 AU
max. Earth dist.	-1258 Jul 16 j 16:28	14° $\overline{14}$ '25 35.51572 AU	direct	-1251 Apr 18 j 02:49	25° $\overline{39}$ '20	
			evening set	-1251 Jul 26 j 07:12	27° $\overline{46}$ '24	
conjunction	-1258 Jul 20 j 02:44	14° $\overline{21}$ '10 10°27'14	max. Earth dist.	-1251 Jul 30 j 14:53	27° $\overline{55}$ '29	33.84069 AU
minimum elong	-1258 Jul 20 j 02:23	14° $\overline{21}$ '08 10°27'14				
morning rise	-1258 Jul 31 j 15:20	14° $\overline{43}$ '46	conjunction	-1251 Aug 02 j 21:46	28° $\overline{02}$ '26	13°14'14
retrograde	-1258 Oct 30 j 10:10	16° $\overline{30}$ '57	minimum elong	-1251 Aug 02 j 21:23	28° $\overline{02}$ '24	13°14'15
opposition	-1257 Jan 16 j 03:40	15° $\overline{16}$ '20 11°17'37	morning rise	-1251 Aug 10 j 10:48	28° $\overline{18}$ '21	
min. Earth dist.	-1257 Jan 19 j 05:19	15° $\overline{11}$ '43 33.42751 AU		-1251 Oct 07 j 15:01	0° Ω	
direct	-1257 Apr 07 j 02:48	13° $\overline{58}$ '42	retrograde	-1251 Nov 13 j 10:40	0° Ω 21'51	
evening set	-1257 Jul 11 j 02:45	15° $\overline{50}$ '40		-1251 Dec 21 j 04:10	30° \overline{R} $\overline{5}$	
max. Earth dist.	-1257 Jul 18 j 21:25	16° $\overline{06}$ '02 35.26679 AU	opposition	-1250 Jan 29 j 15:05	29° $\overline{04}$ '14	14°15'02
			min. Earth dist.	-1250 Feb 01 j 14:02	28° $\overline{59}$ '34	31.78796 AU
conjunction	-1257 Jul 22 j 06:41	16° $\overline{12}$ '46 10°52'21	direct	-1250 Apr 20 j 07:35	27° $\overline{43}$ '14	
minimum elong	-1257 Jul 22 j 06:20	16° $\overline{12}$ '44 10°52'22	evening set	-1250 Jul 29 j 11:15	29° $\overline{53}$ '22	
morning rise	-1257 Aug 02 j 08:11	16° $\overline{34}$ '42		-1250 Aug 01 j 14:15	0° Ω	
retrograde	-1257 Nov 01 j 15:18	18° $\overline{23}$ '53	max. Earth dist.	-1250 Aug 02 j 02:23	0° Ω 01'05	33.62020 AU
opposition	-1256 Jan 18 j 06:20	17° $\overline{08}$ '50 11°44'21				
min. Earth dist.	-1256 Jan 21 j 07:46	17° $\overline{04}$ '11 33.18234 AU	conjunction	-1250 Aug 05 j 07:06	0° Ω 07'54	13°35'46
direct	-1256 Apr 08 j 06:48	15° $\overline{50}$ '42	minimum elong	-1250 Aug 05 j 06:42	0° Ω 07'52	13°35'47
evening set	-1256 Jul 12 j 19:19	17° $\overline{44}$ '52	morning rise	-1250 Aug 12 j 01:28	0° Ω 22'20	
max. Earth dist.	-1256 Jul 20 j 01:09	17° $\overline{59}$ '21 35.01980 AU	retrograde	-1250 Nov 15 j 20:48	2° Ω 28'45	
			opposition	-1249 Jan 31 j 23:43	1° Ω 10'45	14°37'50
conjunction	-1256 Jul 23 j 11:18	18° $\overline{06}$ '13 11°17'09	min. Earth dist.	-1249 Feb 03 j 21:20	1° Ω 06'09	31.57320 AU
minimum elong	-1256 Jul 23 j 10:56	18° $\overline{06}$ '11 11°17'09		-1249 Mar 27 j 01:56	30° \overline{R} $\overline{5}$	
morning rise	-1256 Aug 03 j 01:14	18° $\overline{27}$ '25	direct	-1249 Apr 22 j 15:20	29° $\overline{49}$ '21	
retrograde	-1256 Nov 02 j 22:39	20° $\overline{18}$ '40		-1249 May 18 j 22:45	0° Ω	
opposition	-1255 Jan 19 j 09:32	19° $\overline{03}$ '11 12°10'44	evening set	-1249 Aug 01 j 17:58	2° Ω 02'45	
min. Earth dist.	-1255 Jan 22 j 10:49	18° $\overline{58}$ '31 32.93964 AU	max. Earth dist.	-1249 Aug 04 j 12:11	2° Ω 08'40	33.40494 AU
direct	-1255 Apr 10 j 09:56	17° $\overline{44}$ '32				
evening set	-1255 Jul 15 j 13:20	19° $\overline{41}$ '03	conjunction	-1249 Aug 07 j 16:59	2° Ω 15'34	13°56'32
max. Earth dist.	-1255 Jul 22 j 07:32	19° $\overline{54}$ '41 34.77537 AU	minimum elong	-1249 Aug 07 j 16:36	2° Ω 15'32	13°56'34
			morning rise	-1249 Aug 13 j 14:48	2° Ω 28'17	
conjunction	-1255 Jul 25 j 16:51	20° $\overline{01}$ '33 11°41'35	retrograde	-1249 Nov 18 j 09:27	4° Ω 37'52	
minimum elong	-1255 Jul 25 j 16:28	20° $\overline{01}$ '31 11°41'37	opposition	-1248 Feb 03 j 09:14	3° Ω 19'29	14°59'48
morning rise	-1255 Aug 04 j 18:08	20° $\overline{21}$ '55	min. Earth dist.	-1248 Feb 06 j 06:26	3° Ω 14'54	31.36362 AU
retrograde	-1255 Nov 05 j 03:26	22° $\overline{15}$ '22	direct	-1248 Apr 23 j 22:14	1° Ω 57'40	
opposition	-1254 Jan 21 j 13:49	20° $\overline{59}$ '25 12°36'42	evening set	-1248 Aug 04 j 04:52	4° Ω 14'38	
min. Earth dist.	-1254 Jan 24 j 15:24	20° $\overline{54}$ '42 32.69994 AU	max. Earth dist.	-1248 Aug 06 j 01:06	4° Ω 18'38	33.19463 AU
direct	-1254 Apr 12 j 13:49	19° $\overline{40}$ '16				
evening set	-1254 Jul 18 j 09:04	21° $\overline{39}$ '13	conjunction	-1248 Aug 09 j 04:00	4° Ω 25'25	14°16'28
max. Earth dist.	-1254 Jul 24 j 14:01	21° $\overline{51}$ '53 34.53453 AU	minimum elong	-1248 Aug 09 j 03:37	4° Ω 25'23	14°16'28
			morning rise	-1248 Aug 14 j 01:58	4° Ω 36'07	
conjunction	-1254 Jul 27 j 22:52	21° $\overline{58}$ '47 12°05'35	retrograde	-1248 Nov 19 j 21:50	6° Ω 49'08	
minimum elong	-1254 Jul 27 j 22:28	21° $\overline{58}$ '45 12°05'36	opposition	-1247 Feb 04 j 19:37	5° Ω 30'23	15°20'51
morning rise	-1254 Aug 06 j 10:45	22° $\overline{18}$ '12	min. Earth dist.	-1247 Feb 07 j 16:15	5° Ω 25'48	31.15878 AU
retrograde	-1254 Nov 07 j 10:22	24° $\overline{13}$ '57	direct	-1247 Apr 26 j 09:17	4° Ω 08'09	
opposition	-1253 Jan 23 j 18:48	22° $\overline{57}$ '34 13°02'12	evening set	-1247 Aug 07 j 21:56	6° Ω 29'13	
min. Earth dist.	-1253 Jan 26 j 19:05	22° $\overline{52}$ '54 32.46432 AU	max. Earth dist.	-1247 Aug 08 j 12:58	6° Ω 30'35	32.98929 AU
direct	-1253 Apr 14 j 18:22	21° $\overline{37}$ '56				
evening set	-1253 Jul 21 j 06:24	23° $\overline{39}$ '26	conjunction	-1247 Aug 11 j 15:45	6° Ω 37'26	14°35'29
max. Earth dist.	-1253 Jul 26 j 21:22	23° $\overline{51}$ '01 34.29798 AU	minimum elong	-1247 Aug 11 j 15:22	6° Ω 37'24	14°35'30
			morning rise	-1247 Aug 15 j 08:39	6° Ω 45'34	
conjunction	-1253 Jul 30 j 05:46	23° $\overline{57}$ '58 12°29'04	retrograde	-1247 Nov 22 j 12:36	9° Ω 02'32	
minimum elong	-1253 Jul 30 j 05:23	23° $\overline{57}$ '56 12°29'06	opposition	-1246 Feb 07 j 06:59	7° Ω 43'24	15°40'56
morning rise	-1253 Aug 08 j 03:13	24° $\overline{16}$ '20	min. Earth dist.	-1246 Feb 10 j 02:20	7° Ω 38'53	30.95889 AU
retrograde	-1253 Nov 09 j 17:32	26° $\overline{14}$ '31	direct	-1246 Apr 28 j 20:32	6° Ω 20'45	
opposition	-1252 Jan 26 j 00:46	24° $\overline{57}$ '43 13°27'08	max. Earth dist.	-1246 Aug 11 j 03:08	8° Ω 44'45	32.78889 AU
min. Earth dist.	-1252 Jan 29 j 01:23	24° $\overline{52}$ '59 32.23351 AU	evening set	-1246 Aug 12 j 05:51	8° Ω 47'13	
direct	-1252 Apr 15 j 21:00	23° $\overline{37}$ '36				
evening set	-1252 Jul 23 j 05:45	25° $\overline{41}$ '48	conjunction	-1246 Aug 14 j 04:21	8° Ω 51'31	14°53'32
max. Earth dist.	-1252 Jul 28 j 06:27	25° $\overline{52}$ '16 34.06667 AU	minimum elong	-1246 Aug 14 j 03:58	8° Ω 51'29	14°53'32

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 12

Attention, astronomical year style is used: The year -1246 in astronomical counting style is the year 1247 BCE in historical counting style.

morning rise	-1246 Aug 16 j 02:03	8° Ω 55'44		minimum elong	-1238 Sep 02 j 08:46	27° Ω 50'40	16°32'32
retrograde	-1246 Nov 25 j 01:15	11° Ω 18'00			-1238 Nov 05 j 14:25	0° Υ	
opposition	-1245 Feb 09 j 19:26	9° Ω 58'28	15°59'56	retrograde	-1238 Dec 14 j 14:27	0° Υ 26'45	
min. Earth dist.	-1245 Feb 12 j 14:37	9° Ω 53'56	30.76400 AU		-1237 Jan 23 j 21:41	30° \mathcal{R} Ω	
direct	-1245 May 01 j 07:41	8° Ω 35'25		opposition	-1237 Mar 01 j 03:41	29° Ω 04'34	17°42'01
max. Earth dist.	-1245 Aug 13 j 17:36	11° Ω 00'53	32.59403 AU	min. Earth dist.	-1237 Mar 03 j 07:52	29° Ω 00'56	29.46501 AU
				direct	-1237 May 20 j 06:22	27° Ω 38'56	
conjunction	-1245 Aug 16 j 17:37	11° Ω 07'36	15°10'32		-1237 Aug 27 j 08:25	0° Υ	
minimum elong	-1245 Aug 16 j 17:16	11° Ω 07'34	15°10'33	max. Earth dist.	-1237 Sep 02 j 21:11	0° Υ 15'27	31.31325 AU
retrograde	-1245 Nov 27 j 16:29	13° Ω 35'24					
opposition	-1244 Feb 12 j 08:30	12° Ω 15'29	16°17'46	conjunction	-1237 Sep 05 j 03:21	0° Υ 20'48	16°37'58
min. Earth dist.	-1244 Feb 15 j 01:44	12° Ω 11'03	30.57475 AU	minimum elong	-1237 Sep 05 j 03:12	0° Υ 20'47	16°37'59
direct	-1244 May 02 j 20:38	10° Ω 52'01		retrograde	-1237 Dec 17 j 09:35	2° Υ 57'50	
max. Earth dist.	-1244 Aug 15 j 08:46	13° Ω 18'56	32.40506 AU	opposition	-1236 Mar 02 j 23:10	1° Υ 35'28	17°47'10
				min. Earth dist.	-1236 Mar 05 j 01:49	1° Υ 31'56	29.34351 AU
conjunction	-1244 Aug 18 j 07:40	13° Ω 25'36	15°26'23	direct	-1236 May 22 j 00:29	0° Υ 09'42	
minimum elong	-1244 Aug 18 j 07:19	13° Ω 25'34	15°26'23	max. Earth dist.	-1236 Sep 04 j 17:53	2° Υ 47'16	31.19578 AU
	-1244 Oct 02 j 10:14	15° Ω					
retrograde	-1244 Nov 29 j 07:18	15° Ω 54'42		conjunction	-1236 Sep 06 j 22:05	2° Υ 52'27	16°41'39
	-1243 Jan 29 j 00:51	15° \mathcal{R} Ω		minimum elong	-1236 Sep 06 j 21:57	2° Υ 52'27	16°41'40
opposition	-1243 Feb 13 j 22:35	14° Ω 34'24	16°34'22	retrograde	-1236 Dec 19 j 07:49	5° Υ 30'24	
min. Earth dist.	-1243 Feb 16 j 15:37	14° Ω 29'57	30.39159 AU	opposition	-1235 Mar 05 j 19:16	4° Υ 07'51	17°50'26
direct	-1243 May 05 j 08:11	13° Ω 10'31		min. Earth dist.	-1235 Mar 07 j 18:47	4° Υ 04'31	29.23125 AU
	-1243 Jul 31 j 15:35	15° Ω		direct	-1235 May 24 j 20:58	2° Υ 41'56	
max. Earth dist.	-1243 Aug 18 j 01:42	15° Ω 38'56	32.22281 AU	max. Earth dist.	-1235 Sep 07 j 16:16	5° Υ 20'36	31.08758 AU
conjunction	-1243 Aug 20 j 22:23	15° Ω 45'26	15°41'01	conjunction	-1235 Sep 09 j 17:24	5° Υ 25'31	16°43'33
minimum elong	-1243 Aug 20 j 22:04	15° Ω 45'25	15°41'02	minimum elong	-1235 Sep 09 j 17:21	5° Υ 25'31	16°43'34
retrograde	-1243 Dec 01 j 22:02	18° Ω 15'47		retrograde	-1235 Dec 22 j 03:35	8° Υ 04'16	
opposition	-1242 Feb 16 j 13:22	16° Ω 55'07	16°49'36	opposition	-1234 Mar 08 j 16:09	6° Υ 41'33	17°51'45
min. Earth dist.	-1242 Feb 19 j 03:57	16° Ω 50'49	30.21530 AU	min. Earth dist.	-1234 Mar 10 j 14:25	6° Υ 38'18	29.12794 AU
direct	-1242 May 07 j 23:02	15° Ω 30'51		direct	-1234 May 27 j 16:38	5° Υ 15'32	
max. Earth dist.	-1242 Aug 20 j 18:08	18° Ω 00'36	32.04800 AU	max. Earth dist.	-1234 Sep 10 j 14:28	7° Υ 55'06	30.98883 AU
conjunction	-1242 Aug 23 j 13:43	18° Ω 07'04	15°54'19	conjunction	-1234 Sep 12 j 13:04	7° Υ 59'47	16°43'38
minimum elong	-1242 Aug 23 j 13:25	18° Ω 07'02	15°54'19	minimum elong	-1234 Sep 12 j 13:01	7° Υ 59'47	16°43'38
retrograde	-1242 Dec 04 j 13:48	20° Ω 38'38		retrograde	-1234 Dec 25 j 01:09	10° Υ 39'14	
opposition	-1241 Feb 19 j 05:09	19° Ω 17'35	17°03'23	opposition	-1233 Mar 11 j 13:29	9° Υ 16'22	17°51'06
min. Earth dist.	-1241 Feb 21 j 18:44	19° Ω 13'20	30.04690 AU	min. Earth dist.	-1233 Mar 13 j 08:13	9° Υ 13'21	29.03367 AU
direct	-1241 May 10 j 12:08	17° Ω 52'57		direct	-1233 May 30 j 14:09	7° Υ 50'15	
max. Earth dist.	-1241 Aug 23 j 13:20	20° Ω 24'13	31.88172 AU	max. Earth dist.	-1233 Sep 13 j 12:55	10° Υ 30'37	30.89933 AU
conjunction	-1241 Aug 26 j 05:34	20° Ω 30'24	16°06'12	conjunction	-1233 Sep 15 j 08:57	10° Υ 35'04	16°41'52
minimum elong	-1241 Aug 26 j 05:18	20° Ω 30'23	16°06'13	minimum elong	-1233 Sep 15 j 08:59	10° Υ 35'04	16°41'52
retrograde	-1241 Dec 07 j 06:00	23° Ω 03'09		retrograde	-1233 Dec 27 j 22:25	13° Υ 15'06	
opposition	-1240 Feb 21 j 21:40	21° Ω 41'46	17°15'36	opposition	-1232 Mar 13 j 11:21	11° Υ 52'05	17°48'27
min. Earth dist.	-1240 Feb 24 j 08:43	21° Ω 37'41	29.88708 AU	min. Earth dist.	-1232 Mar 15 j 04:35	11° Υ 49'10	28.94849 AU
direct	-1240 May 12 j 03:51	20° Ω 16'49		direct	-1232 Jun 01 j 10:19	10° Υ 25'52	
max. Earth dist.	-1240 Aug 25 j 07:10	22° Ω 49'21	31.72471 AU	max. Earth dist.	-1232 Sep 15 j 12:19	13° Υ 06'59	30.81947 AU
conjunction	-1240 Aug 27 j 22:05	22° Ω 55'27	16°16'35	conjunction	-1232 Sep 17 j 05:11	13° Υ 11'07	16°38'14
minimum elong	-1240 Aug 27 j 21:49	22° Ω 55'26	16°16'35	minimum elong	-1232 Sep 17 j 05:13	13° Υ 11'07	16°38'13
retrograde	-1240 Dec 09 j 00:16	25° Ω 29'22		retrograde	-1232 Dec 29 j 19:14	15° Υ 51'38	
opposition	-1239 Feb 23 j 14:47	24° Ω 07'40	17°26'10	opposition	-1231 Mar 16 j 09:22	14° Υ 28'28	17°43'45
min. Earth dist.	-1239 Feb 25 j 23:57	24° Ω 03'42	29.73672 AU	min. Earth dist.	-1231 Mar 17 j 23:07	14° Υ 25'48	28.87258 AU
direct	-1239 May 14 j 18:31	22° Ω 42'26		direct	-1231 Jun 04 j 08:55	13° Υ 02'11	
max. Earth dist.	-1239 Aug 28 j 04:06	25° Ω 16'26	31.57754 AU	max. Earth dist.	-1231 Sep 18 j 11:01	15° Υ 43'49	30.74940 AU
conjunction	-1239 Aug 30 j 15:23	25° Ω 22'13	16°25'23	conjunction	-1231 Sep 20 j 01:33	15° Υ 47'44	16°32'41
minimum elong	-1239 Aug 30 j 15:11	25° Ω 22'12	16°25'24	minimum elong	-1231 Sep 20 j 01:39	15° Υ 47'45	16°32'41
retrograde	-1239 Dec 11 j 18:10	27° Ω 57'13		retrograde	-1230 Jan 01 j 15:19	18° Υ 28'37	
opposition	-1238 Feb 26 j 08:55	26° Ω 35'17	17°34'59	opposition	-1230 Mar 19 j 07:55	17° Υ 05'19	17°36'59
min. Earth dist.	-1238 Feb 28 j 15:54	26° Ω 31'27	29.59595 AU	min. Earth dist.	-1230 Mar 20 j 19:37	17° Υ 02'48	28.80655 AU
direct	-1238 May 17 j 12:44	25° Ω 09'50		direct	-1230 Jun 07 j 06:03	15° Υ 38'58	
max. Earth dist.	-1238 Aug 30 j 23:19	27° Ω 45'01	31.44046 AU	max. Earth dist.	-1230 Sep 21 j 11:26	18° Υ 21'11	30.68985 AU
conjunction	-1238 Sep 02 j 08:58	27° Ω 50'41	16°32'32	conjunction	-1230 Sep 22 j 21:51	18° Υ 24'41	16°25'13

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 13

Attention, astronomical year style is used: The year -1230 in astronomical counting style is the year 1231 BCE in historical counting style.

minimum elong	-1230 Sep 22 j 21:58	18° 10 24'41	16°25'13	conjunction	-1222 Oct 13 j 12:05	9° 15 14'58	14°17'32
retrograde	-1229 Jan 04 j 11:35	21° 10 05'48		minimum elong	-1222 Oct 13 j 12:26	9° 15 15'01	14°17'32
opposition	-1229 Mar 22 j 06:40	19° 10 42'23	17°28'09	max. Earth dist.	-1222 Oct 13 j 05:40	9° 15 14'20	30.64056 AU
min. Earth dist.	-1229 Mar 23 j 14:53	19° 10 40'07	28.75089 AU	morning rise	-1222 Oct 18 j 05:42	9° 15 26'27	
direct	-1229 Jun 10 j 04:56	18° 10 16'00		retrograde	-1221 Jan 25 j 06:15	11° 15 54'49	
max. Earth dist.	-1229 Sep 24 j 10:13	20° 10 58'30	30.64138 AU	opposition	-1221 Apr 12 j 20:36	10° 15 31'40	15°04'21
				min. Earth dist.	-1221 Apr 13 j 02:27	10° 15 31'15	28.72620 AU
conjunction	-1229 Sep 25 j 18:09	21° 10 01'45	16°15'49	direct	-1221 Jul 01 j 16:52	9° 15 06'29	
minimum elong	-1229 Sep 25 j 18:19	21° 10 01'46	16°15'49	evening set	-1221 Oct 10 j 10:42	11° 15 34'47	
retrograde	-1228 Jan 07 j 08:38	23° 10 43'03					
opposition	-1228 Mar 24 j 05:22	22° 10 19'31	17°17'12	conjunction	-1221 Oct 16 j 06:41	11° 15 48'51	13°53'51
min. Earth dist.	-1228 Mar 25 j 10:32	22° 10 17'27	28.70651 AU	minimum elong	-1221 Oct 16 j 07:04	11° 15 48'54	13°53'50
direct	-1228 Jun 12 j 01:59	20° 10 53'08		max. Earth dist.	-1221 Oct 16 j 03:25	11° 15 48'32	30.68574 AU
max. Earth dist.	-1228 Sep 26 j 11:08	23° 10 36'01	30.60477 AU	morning rise	-1221 Oct 22 j 03:08	12° 15 02'59	
				retrograde	-1220 Jan 28 j 02:10	14° 15 28'06	
conjunction	-1228 Sep 27 j 14:30	23° 10 38'49	16°04'29	opposition	-1220 Apr 14 j 18:17	13° 15 05'06	14°38'11
minimum elong	-1228 Sep 27 j 14:41	23° 10 38'50	16°04'29	min. Earth dist.	-1220 Apr 14 j 20:10	13° 15 04'59	28.77264 AU
retrograde	-1227 Jan 09 j 03:35	26° 10 20'09		direct	-1220 Jul 03 j 16:37	11° 15 40'11	
opposition	-1227 Mar 27 j 04:21	24° 10 56'34	17°04'10	evening set	-1220 Oct 11 j 05:41	14° 15 05'22	
min. Earth dist.	-1227 Mar 28 j 06:12	24° 10 54'45	28.67381 AU				
direct	-1227 Jun 15 j 01:42	23° 10 30'14		conjunction	-1220 Oct 18 j 00:50	14° 15 21'42	13°28'42
max. Earth dist.	-1227 Sep 29 j 09:46	26° 10 13'13	30.58048 AU	minimum elong	-1220 Oct 18 j 01:13	14° 15 21'45	13°28'42
				max. Earth dist.	-1220 Oct 18 j 00:26	14° 15 21'40	30.74083 AU
conjunction	-1227 Sep 30 j 10:33	26° 10 15'44	15°51'13	morning rise	-1220 Oct 24 j 20:23	14° 15 38'05	
minimum elong	-1227 Sep 30 j 10:47	26° 10 15'45	15°51'12	retrograde	-1219 Jan 29 j 19:56	17° 15 00'18	
retrograde	-1226 Jan 12 j 01:05	28° 10 57'03		opposition	-1219 Apr 17 j 15:51	15° 15 37'27	14°10'29
opposition	-1226 Mar 30 j 03:17	27° 10 33'27	16°49'03	min. Earth dist.	-1219 Apr 17 j 15:20	15° 15 37'29	28.82893 AU
min. Earth dist.	-1226 Mar 31 j 01:08	27° 10 31'54	28.65338 AU	direct	-1219 Jul 06 j 13:22	14° 15 12'48	
direct	-1226 Jun 17 j 23:35	26° 10 07'12		evening set	-1219 Oct 13 j 02:48	16° 15 35'03	
max. Earth dist.	-1226 Oct 02 j 10:35	28° 10 50'23	30.56876 AU				
				conjunction	-1219 Oct 20 j 18:24	16° 15 53'21	13°02'11
conjunction	-1226 Oct 03 j 06:39	28° 10 52'26	15°36'02	minimum elong	-1219 Oct 20 j 18:48	16° 15 53'23	13°02'10
minimum elong	-1226 Oct 03 j 06:54	28° 10 52'28	15°36'03	max. Earth dist.	-1219 Oct 20 j 21:43	16° 15 53'41	30.80584 AU
	-1226 Oct 31 j 18:45	0° 15		morning rise	-1219 Oct 28 j 10:17	17° 15 11'41	
retrograde	-1225 Jan 14 j 20:33	1° 15 33'38		retrograde	-1218 Feb 01 j 13:25	19° 15 31'11	
opposition	-1225 Apr 02 j 02:18	0° 15 10'04	16°31'53	opposition	-1218 Apr 20 j 12:51	18° 15 08'29	13°41'21
min. Earth dist.	-1225 Apr 02 j 21:19	0° 15 08'43	28.64512 AU	min. Earth dist.	-1218 Apr 20 j 08:43	18° 15 08'47	28.89485 AU
	-1225 Apr 08 j 01:31	30° 15		direct	-1218 Jul 09 j 12:25	16° 15 44'07	
direct	-1225 Jun 20 j 21:38	28° 15 43'58		evening set	-1218 Oct 15 j 01:10	19° 15 03'34	
	-1225 Aug 28 j 14:00	0° 15					
max. Earth dist.	-1225 Oct 05 j 09:01	1° 15 27'04	30.56947 AU	conjunction	-1218 Oct 23 j 11:19	19° 15 23'37	12°34'23
				minimum elong	-1218 Oct 23 j 11:43	19° 15 23'40	12°34'24
conjunction	-1225 Oct 06 j 02:18	1° 15 28'49	15°19'01	max. Earth dist.	-1218 Oct 23 j 17:06	19° 15 24'12	30.88062 AU
minimum elong	-1225 Oct 06 j 02:36	1° 15 28'51	15°19'00	morning rise	-1218 Oct 31 j 21:49	19° 15 43'41	
retrograde	-1224 Jan 17 j 18:13	4° 15 09'49		retrograde	-1217 Feb 04 j 06:59	22° 15 00'38	
opposition	-1224 Apr 04 j 01:02	2° 15 46'19	16°12'45	opposition	-1217 Apr 23 j 09:15	20° 15 38'05	13°10'53
min. Earth dist.	-1224 Apr 04 j 15:46	2° 15 45'17	28.64880 AU	min. Earth dist.	-1217 Apr 23 j 02:00	20° 15 38'35	28.97084 AU
direct	-1224 Jun 22 j 21:05	1° 15 20'25		direct	-1217 Jul 12 j 08:11	19° 15 14'00	
				evening set	-1217 Oct 17 j 00:26	21° 15 30'46	
conjunction	-1224 Oct 07 j 21:56	4° 15 04'48	15°00'12				
minimum elong	-1224 Oct 07 j 22:15	4° 15 04'50	15°00'12	conjunction	-1217 Oct 26 j 03:38	21° 15 52'22	12°05'24
max. Earth dist.	-1224 Oct 07 j 08:58	4° 15 03'29	30.58195 AU	minimum elong	-1217 Oct 26 j 04:02	21° 15 52'25	12°05'23
retrograde	-1223 Jan 19 j 13:32	6° 15 45'30		max. Earth dist.	-1217 Oct 26 j 13:35	21° 15 53'21	30.96558 AU
opposition	-1223 Apr 06 j 23:43	5° 15 22'06	15°51'44	morning rise	-1217 Nov 04 j 06:58	22° 15 14'00	
min. Earth dist.	-1223 Apr 07 j 12:10	5° 15 21'14	28.66381 AU	retrograde	-1216 Feb 06 j 21:06	24° 15 28'29	
direct	-1223 Jun 25 j 19:29	3° 15 56'25		opposition	-1216 Apr 25 j 05:03	23° 15 06'07	12°39'11
evening set	-1223 Oct 07 j 10:30	6° 15 32'16		min. Earth dist.	-1216 Apr 24 j 18:42	23° 15 06'49	29.05695 AU
				direct	-1216 Jul 14 j 05:52	21° 15 42'19	
conjunction	-1223 Oct 10 j 17:12	6° 15 40'14	14°39'41	evening set	-1216 Oct 18 j 00:23	23° 15 56'30	
minimum elong	-1223 Oct 10 j 17:33	6° 15 40'16	14°39'40				
max. Earth dist.	-1223 Oct 10 j 07:07	6° 15 39'13	30.60588 AU	conjunction	-1216 Oct 27 j 19:06	24° 15 19'30	11°35'18
morning rise	-1223 Oct 14 j 00:30	6° 15 48'16		minimum elong	-1216 Oct 27 j 19:30	24° 15 19'32	11°35'17
retrograde	-1222 Jan 22 j 10:38	9° 15 20'33		max. Earth dist.	-1216 Oct 28 j 07:22	24° 15 20'42	31.06091 AU
opposition	-1222 Apr 09 j 22:13	7° 15 57'16	15°28'54	morning rise	-1216 Nov 06 j 14:09	24° 15 42'31	
min. Earth dist.	-1222 Apr 10 j 06:16	7° 15 56'43	28.68977 AU	retrograde	-1215 Feb 08 j 12:28	26° 15 54'40	
direct	-1222 Jun 28 j 18:38	6° 15 31'50		min. Earth dist.	-1215 Apr 27 j 09:53	25° 15 33'27	29.15385 AU
evening set	-1222 Oct 08 j 18:59	9° 15 03'34		opposition	-1215 Apr 28 j 00:08	25° 15 32'29	12°06'20

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 14

Attention, astronomical year style is used: The year -1215 in astronomical counting style is the year 1216 BCE in historical counting style.

direct	-1215 Jul 17 j 00:14	24° <u>♂</u> 09'00		minimum elong	-1209 Nov 13 j 13:26	10° <u>♂</u> 42'34	7°41'43
evening set	-1215 Oct 20 j 00:50	26° <u>♂</u> 20'42		max. Earth dist.	-1209 Nov 14 j 23:13	10° <u>♂</u> 45'44	32.01696 AU
				morning rise	-1209 Nov 26 j 16:17	11° <u>♂</u> 11'55	
conjunction	-1215 Oct 30 j 10:06	26° <u>♂</u> 44'58	11°04'11	retrograde	-1208 Feb 25 j 08:08	13° <u>♂</u> 10'15	
minimum elong	-1215 Oct 30 j 10:30	26° <u>♂</u> 45'00	11°04'09	min. Earth dist.	-1208 May 13 j 08:04	11° <u>♂</u> 52'22	30.11846 AU
max. Earth dist.	-1215 Oct 31 j 02:52	26° <u>♂</u> 46'36	31.16712 AU	opposition	-1208 May 14 j 19:24	11° <u>♂</u> 50'03	7°53'32
morning rise	-1215 Nov 09 j 19:25	27° <u>♂</u> 09'14		direct	-1208 Aug 02 j 21:44	10° <u>♂</u> 29'23	
retrograde	-1214 Feb 11 j 02:01	29° <u>♂</u> 19'08		evening set	-1208 Nov 01 j 12:35	12° <u>♂</u> 26'17	
opposition	-1214 Apr 30 j 18:48	27° <u>♂</u> 57'11	11°32'26				
min. Earth dist.	-1214 Apr 30 j 01:50	27° <u>♂</u> 58'20	29.26169 AU	conjunction	-1208 Nov 14 j 23:21	12° <u>♂</u> 56'07	7°06'21
direct	-1214 Jul 19 j 18:46	26° <u>♂</u> 34'03		minimum elong	-1208 Nov 14 j 23:38	12° <u>♂</u> 56'09	7°06'20
evening set	-1214 Oct 22 j 01:43	28° <u>♂</u> 43'22		max. Earth dist.	-1208 Nov 16 j 12:26	12° <u>♂</u> 59'34	32.18763 AU
				morning rise	-1208 Nov 28 j 10:15	13° <u>♂</u> 25'59	
conjunction	-1214 Nov 02 j 00:10	29° <u>♂</u> 08'44	10°32'08		-1207 Jan 20 j 03:20	15° <u>♂</u>	
minimum elong	-1214 Nov 02 j 00:33	29° <u>♂</u> 08'47	10°32'08	retrograde	-1207 Feb 26 j 17:00	15° <u>♂</u> 22'39	
max. Earth dist.	-1214 Nov 02 j 19:23	29° <u>♂</u> 10'36	31.28432 AU		-1207 Apr 06 j 14:53	15° <u>♂</u>	
morning rise	-1214 Nov 12 j 22:53	29° <u>♂</u> 34'09		min. Earth dist.	-1207 May 15 j 19:18	14° <u>♂</u> 05'14	30.28953 AU
	-1214 Nov 24 j 10:04	0° <u>♂</u>		opposition	-1207 May 17 j 09:00	14° <u>♂</u> 02'47	7°15'30
retrograde	-1213 Feb 13 j 16:40	1° <u>♂</u> 41'54		direct	-1207 Aug 05 j 13:37	12° <u>♂</u> 42'32	
opposition	-1213 May 03 j 12:36	0° <u>♂</u> 20'12	10°57'37	evening set	-1207 Nov 03 j 15:05	14° <u>♂</u> 37'37	
min. Earth dist.	-1213 May 02 j 15:13	0° <u>♂</u> 21'38	29.38053 AU		-1207 Nov 13 j 19:43	15° <u>♂</u>	
	-1213 May 16 j 03:46	30° <u>♂</u>					
direct	-1213 Jul 22 j 12:48	28° <u>♂</u> 57'26		conjunction	-1207 Nov 17 j 08:47	15° <u>♂</u> 07'52	6°30'44
	-1213 Sep 23 j 12:37	0° <u>♂</u>		minimum elong	-1207 Nov 17 j 09:03	15° <u>♂</u> 07'53	6°30'43
evening set	-1213 Oct 24 j 02:55	1° <u>♂</u> 04'28		max. Earth dist.	-1207 Nov 18 j 23:12	15° <u>♂</u> 11'24	32.36465 AU
				morning rise	-1207 Dec 01 j 03:01	15° <u>♂</u> 38'09	
conjunction	-1213 Nov 04 j 13:48	1° <u>♂</u> 30'52	9°59'16	retrograde	-1206 Mar 01 j 02:58	17° <u>♂</u> 33'13	
minimum elong	-1213 Nov 04 j 14:11	1° <u>♂</u> 30'54	9°59'15	min. Earth dist.	-1206 May 18 j 05:25	16° <u>♂</u> 16'16	30.46717 AU
max. Earth dist.	-1213 Nov 05 j 13:09	1° <u>♂</u> 33'07	31.41215 AU	opposition	-1206 May 19 j 21:55	16° <u>♂</u> 13'39	6°37'19
morning rise	-1213 Nov 16 j 00:46	1° <u>♂</u> 57'16			-1206 Jul 19 j 01:12	15° <u>♂</u>	
retrograde	-1212 Feb 16 j 05:23	4° <u>♂</u> 02'59		direct	-1206 Aug 08 j 03:00	14° <u>♂</u> 53'47	
min. Earth dist.	-1212 May 04 j 06:06	2° <u>♂</u> 43'08	29.50986 AU		-1206 Aug 27 j 19:42	15° <u>♂</u>	
opposition	-1212 May 05 j 05:41	2° <u>♂</u> 41'33	10°21'58	evening set	-1206 Nov 05 j 17:17	16° <u>♂</u> 47'08	
direct	-1212 Jul 24 j 05:48	1° <u>♂</u> 19'12					
evening set	-1212 Oct 25 j 04:32	3° <u>♂</u> 24'02		conjunction	-1206 Nov 19 j 17:34	17° <u>♂</u> 17'43	5°54'59
				minimum elong	-1206 Nov 19 j 17:48	17° <u>♂</u> 17'44	5°54'59
conjunction	-1212 Nov 06 j 02:39	3° <u>♂</u> 51'19	9°25'41	max. Earth dist.	-1206 Nov 21 j 11:12	17° <u>♂</u> 21'32	32.54778 AU
minimum elong	-1212 Nov 06 j 03:01	3° <u>♂</u> 51'21	9°25'41	morning rise	-1206 Dec 03 j 18:06	17° <u>♂</u> 48'20	
max. Earth dist.	-1212 Nov 07 j 04:25	3° <u>♂</u> 53'47	31.55016 AU	retrograde	-1205 Mar 03 j 09:54	19° <u>♂</u> 41'52	
morning rise	-1212 Nov 18 j 00:59	4° <u>♂</u> 18'37		min. Earth dist.	-1205 May 20 j 16:06	18° <u>♂</u> 25'18	30.65086 AU
retrograde	-1211 Feb 17 j 19:12	6° <u>♂</u> 22'22		opposition	-1205 May 22 j 10:03	18° <u>♂</u> 22'36	5°59'02
opposition	-1211 May 07 j 22:06	5° <u>♂</u> 01'15	9°45'37	direct	-1205 Aug 10 j 16:46	17° <u>♂</u> 03'08	
min. Earth dist.	-1211 May 06 j 18:24	5° <u>♂</u> 03'05	29.64905 AU	evening set	-1205 Nov 07 j 19:43	18° <u>♂</u> 54'49	
direct	-1211 Jul 26 j 22:10	3° <u>♂</u> 39'18					
evening set	-1211 Oct 27 j 06:10	5° <u>♂</u> 42'02		conjunction	-1205 Nov 22 j 01:30	19° <u>♂</u> 25'39	5°19'10
				minimum elong	-1205 Nov 22 j 01:43	19° <u>♂</u> 25'40	5°19'08
conjunction	-1211 Nov 08 j 14:45	6° <u>♂</u> 10'06	8°51'31	max. Earth dist.	-1205 Nov 23 j 20:18	19° <u>♂</u> 29'32	32.73683 AU
minimum elong	-1211 Nov 08 j 15:06	6° <u>♂</u> 10'08	8°51'29	morning rise	-1205 Dec 06 j 07:54	19° <u>♂</u> 56'32	
max. Earth dist.	-1211 Nov 09 j 19:51	6° <u>♂</u> 12'52	31.69741 AU	retrograde	-1204 Mar 04 j 17:18	21° <u>♂</u> 48'35	
morning rise	-1211 Nov 20 j 23:33	6° <u>♂</u> 38'11		min. Earth dist.	-1204 May 21 j 23:55	20° <u>♂</u> 32'30	30.84086 AU
retrograde	-1210 Feb 20 j 07:49	8° <u>♂</u> 40'04		opposition	-1204 May 23 j 21:06	20° <u>♂</u> 29'37	5°20'45
min. Earth dist.	-1210 May 09 j 08:18	7° <u>♂</u> 21'13	29.79744 AU	direct	-1204 Aug 12 j 04:04	19° <u>♂</u> 10'32	
opposition	-1210 May 10 j 14:04	7° <u>♂</u> 19'15	9°08'41	evening set	-1204 Nov 08 j 21:56	21° <u>♂</u> 00'37	
direct	-1210 Jul 29 j 14:19	5° <u>♂</u> 57'44					
evening set	-1210 Oct 29 j 08:11	7° <u>♂</u> 58'26		conjunction	-1204 Nov 23 j 08:46	21° <u>♂</u> 31'38	4°43'21
				minimum elong	-1204 Nov 23 j 08:58	21° <u>♂</u> 31'39	4°43'21
conjunction	-1210 Nov 11 j 02:19	8° <u>♂</u> 27'11	8°16'50	max. Earth dist.	-1204 Nov 25 j 06:50	21° <u>♂</u> 35'48	32.93197 AU
minimum elong	-1210 Nov 11 j 02:39	8° <u>♂</u> 27'13	8°16'49	morning rise	-1204 Dec 07 j 20:05	22° <u>♂</u> 02'43	
max. Earth dist.	-1210 Nov 12 j 10:11	8° <u>♂</u> 30'12	31.85336 AU	retrograde	-1203 Mar 06 j 23:01	23° <u>♂</u> 53'23	
morning rise	-1210 Nov 23 j 20:37	8° <u>♂</u> 55'58		min. Earth dist.	-1203 May 24 j 09:08	22° <u>♂</u> 37'40	31.03740 AU
retrograde	-1209 Feb 22 j 20:40	10° <u>♂</u> 56'02		opposition	-1203 May 26 j 07:42	22° <u>♂</u> 34'42	4°42'31
min. Earth dist.	-1209 May 11 j 19:58	9° <u>♂</u> 37'42	29.95413 AU	direct	-1203 Aug 14 j 14:30	21° <u>♂</u> 16'00	
opposition	-1209 May 13 j 05:01	9° <u>♂</u> 35'32	8°31'17	evening set	-1203 Nov 11 j 00:01	23° <u>♂</u> 04'35	
direct	-1209 Aug 01 j 07:35	8° <u>♂</u> 14'26					
evening set	-1209 Oct 31 j 10:21	10° <u>♂</u> 13'12		conjunction	-1203 Nov 25 j 15:05	23° <u>♂</u> 35'44	4°07'36
				minimum elong	-1203 Nov 25 j 15:15	23° <u>♂</u> 35'45	4°07'34
conjunction	-1209 Nov 13 j 13:07	10° <u>♂</u> 42'32	7°41'45	max. Earth dist.	-1203 Nov 27 j 14:49	23° <u>♂</u> 40'00	33.13367 AU

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 15

Attention, astronomical year style is used: The year -1203 in astronomical counting style is the year 1204 BCE in historical counting style.

morning rise	-1203 Dec 10 j 06:48	24° \mathbb{M} 06'56		direct	-1196 Aug 28 j 23:16	5° \mathbb{X} 06'55	
retrograde	-1202 Mar 09 j 05:51	25° \mathbb{M} 56'17		evening set	-1196 Nov 23 j 13:25	6° \mathbb{X} 47'11	
min. Earth dist.	-1202 May 26 j 15:21	24° \mathbb{M} 41'05	31.24075 AU				
opposition	-1202 May 28 j 17:22	24° \mathbb{M} 37'55	4°04'25	conjunction	-1196 Dec 08 j 17:56	7° \mathbb{X} 17'44	0°04'01
direct	-1202 Aug 16 j 23:54	23° \mathbb{M} 19'37		minimum elong	-1196 Dec 08 j 17:56	7° \mathbb{X} 17'44	0°04'01
evening set	-1202 Nov 13 j 02:11	25° \mathbb{M} 06'47		behind sun begin	-1196 Dec 08 j 11:40	7° \mathbb{X} 17'14	
				behind sun end	-1196 Dec 09 j 00:13	7° \mathbb{X} 18'14	
conjunction	-1202 Nov 27 j 20:53	25° \mathbb{M} 38'00	3°31'58	max. Earth dist.	-1196 Dec 11 j 06:38	7° \mathbb{X} 22'52	34.70626 AU
minimum elong	-1202 Nov 27 j 21:01	25° \mathbb{M} 38'00	3°31'58	morning rise	-1196 Dec 23 j 23:40	7° \mathbb{X} 48'24	
max. Earth dist.	-1202 Nov 29 j 23:14	25° \mathbb{M} 42'28	33.34191 AU	desc. node	-1195 Jan 21 j 00:14	8° \mathbb{X} 39'13	
morning rise	-1202 Dec 12 j 16:21	26° \mathbb{M} 09'17		retrograde	-1195 Mar 22 j 08:46	9° \mathbb{X} 30'33	
retrograde	-1201 Mar 11 j 12:03	27° \mathbb{M} 57'24		min. Earth dist.	-1195 Jun 09 j 01:57	8° \mathbb{X} 18'31	32.82482 AU
min. Earth dist.	-1201 May 28 j 22:43	26° \mathbb{M} 42'36	31.45104 AU	opposition	-1195 Jun 11 j 16:59	8° \mathbb{X} 14'41	-0°13'40
opposition	-1201 May 31 j 02:15	26° \mathbb{M} 39'21	3°26'30	direct	-1195 Aug 31 j 03:56	6° \mathbb{X} 59'27	
direct	-1201 Aug 19 j 08:47	25° \mathbb{M} 21'29		evening set	-1195 Nov 25 j 15:03	8° \mathbb{X} 38'46	
evening set	-1201 Nov 15 j 04:08	27° \mathbb{M} 07'19					
				conjunction	-1195 Dec 10 j 19:23	9° \mathbb{X} 09'03	-0°29'22
conjunction	-1201 Nov 30 j 01:59	27° \mathbb{M} 38'32	2°56'32	minimum elong	-1195 Dec 10 j 19:22	9° \mathbb{X} 09'03	0°29'23
minimum elong	-1201 Nov 30 j 02:06	27° \mathbb{M} 38'33	2°56'31	max. Earth dist.	-1195 Dec 13 j 09:54	9° \mathbb{X} 14'18	34.94569 AU
max. Earth dist.	-1201 Dec 02 j 06:34	27° \mathbb{M} 43'10	33.55678 AU	morning rise	-1195 Dec 26 j 00:59	9° \mathbb{X} 39'28	
morning rise	-1201 Dec 15 j 00:30	28° \mathbb{M} 09'50		retrograde	-1194 Mar 24 j 10:24	11° \mathbb{X} 20'49	
retrograde	-1200 Mar 12 j 18:12	29° \mathbb{M} 56'47		min. Earth dist.	-1194 Jun 11 j 06:00	10° \mathbb{X} 09'06	33.06540 AU
min. Earth dist.	-1200 May 30 j 04:08	28° \mathbb{M} 42'29	31.66771 AU	opposition	-1194 Jun 13 j 21:19	10° \mathbb{X} 05'17	-0°48'44
opposition	-1200 Jun 01 j 10:20	28° \mathbb{M} 39'06	2°48'51	direct	-1194 Sep 02 j 07:09	8° \mathbb{X} 50'26	
direct	-1200 Aug 20 j 18:21	27° \mathbb{M} 21'40		evening set	-1194 Nov 27 j 16:37	10° \mathbb{X} 28'50	
evening set	-1200 Nov 16 j 06:06	29° \mathbb{M} 06'16					
				conjunction	-1194 Dec 12 j 20:25	10° \mathbb{X} 58'50	-1°02'10
conjunction	-1200 Dec 01 j 06:15	29° \mathbb{M} 37'26	2°21'20	minimum elong	-1194 Dec 12 j 20:23	10° \mathbb{X} 58'50	1°02'10
minimum elong	-1200 Dec 01 j 06:20	29° \mathbb{M} 37'27	2°21'20	max. Earth dist.	-1194 Dec 15 j 11:43	11° \mathbb{X} 04'07	35.18688 AU
max. Earth dist.	-1200 Dec 03 j 12:31	29° \mathbb{M} 42'10	33.77753 AU	morning rise	-1194 Dec 28 j 01:23	11° \mathbb{X} 28'57	
	-1200 Dec 12 j 01:48	0° \mathbb{X}		retrograde	-1193 Mar 26 j 11:47	13° \mathbb{X} 09'32	
morning rise	-1200 Dec 16 j 07:25	0° \mathbb{X} 08'42		min. Earth dist.	-1193 Jun 13 j 07:40	11° \mathbb{X} 58'12	33.30760 AU
retrograde	-1199 Mar 14 j 23:53	1° \mathbb{X} 54'35		opposition	-1193 Jun 16 j 00:37	11° \mathbb{X} 54'18	-1°23'14
min. Earth dist.	-1199 Jun 01 j 09:31	0° \mathbb{X} 40'45	31.89043 AU	direct	-1193 Sep 04 j 10:06	10° \mathbb{X} 39'48	
opposition	-1199 Jun 03 j 17:52	0° \mathbb{X} 37'15	2°11'31	evening set	-1193 Nov 29 j 18:06	12° \mathbb{X} 17'22	
	-1199 Jun 29 j 18:11	30° \mathbb{K} \mathbb{M}					
direct	-1199 Aug 23 j 01:09	29° \mathbb{M} 20'16		conjunction	-1193 Dec 14 j 20:41	12° \mathbb{X} 47'02	-1°34'27
	-1199 Oct 13 j 18:52	0° \mathbb{X}		minimum elong	-1193 Dec 14 j 20:38	12° \mathbb{X} 47'02	1°34'29
evening set	-1199 Nov 18 j 07:55	1° \mathbb{X} 03'41		max. Earth dist.	-1193 Dec 17 j 12:46	12° \mathbb{X} 52'20	35.42941 AU
				morning rise	-1193 Dec 30 j 00:47	13° \mathbb{X} 16'50	
conjunction	-1199 Dec 03 j 10:07	1° \mathbb{X} 34'46	1°46'26	retrograde	-1192 Mar 27 j 12:56	14° \mathbb{X} 56'40	
minimum elong	-1199 Dec 03 j 10:11	1° \mathbb{X} 34'47	1°46'25	min. Earth dist.	-1192 Jun 14 j 09:41	13° \mathbb{X} 45'39	33.55157 AU
max. Earth dist.	-1199 Dec 05 j 19:07	1° \mathbb{X} 39'42	34.00375 AU	opposition	-1192 Jun 17 j 03:30	13° \mathbb{X} 41'44	-1°57'09
morning rise	-1199 Dec 18 j 13:05	2° \mathbb{X} 05'57		direct	-1192 Sep 05 j 12:59	12° \mathbb{X} 27'34	
retrograde	-1198 Mar 17 j 02:10	3° \mathbb{X} 50'49		evening set	-1192 Nov 30 j 19:07	14° \mathbb{X} 04'19	
min. Earth dist.	-1198 Jun 03 j 14:50	2° \mathbb{X} 37'26	32.11829 AU				
opposition	-1198 Jun 06 j 00:40	2° \mathbb{X} 33'51	1°34'33	conjunction	-1192 Dec 15 j 20:21	14° \mathbb{X} 33'38	-2°06'13
direct	-1198 Aug 25 j 09:59	1° \mathbb{X} 17'20		minimum elong	-1192 Dec 15 j 20:17	14° \mathbb{X} 33'38	2°06'14
evening set	-1198 Nov 20 j 09:47	2° \mathbb{X} 59'38		max. Earth dist.	-1192 Dec 18 j 14:20	14° \mathbb{X} 39'02	35.67366 AU
				morning rise	-1192 Dec 30 j 22:49	15° \mathbb{X} 03'05	
conjunction	-1198 Dec 05 j 13:10	3° \mathbb{X} 30'35	1°11'53	retrograde	-1191 Mar 29 j 12:05	16° \mathbb{X} 42'12	
minimum elong	-1198 Dec 05 j 13:13	3° \mathbb{X} 30'35	1°11'52	min. Earth dist.	-1191 Jun 16 j 10:52	15° \mathbb{X} 31'31	33.79743 AU
max. Earth dist.	-1198 Dec 07 j 22:53	3° \mathbb{X} 35'33	34.23450 AU	opposition	-1191 Jun 19 j 05:39	15° \mathbb{X} 27'32	-2°30'27
morning rise	-1198 Dec 20 j 17:43	4° \mathbb{X} 01'38		direct	-1191 Sep 07 j 17:29	14° \mathbb{X} 13'43	
retrograde	-1197 Mar 19 j 05:39	5° \mathbb{X} 45'32		evening set	-1191 Dec 02 j 20:13	15° \mathbb{X} 49'42	
min. Earth dist.	-1197 Jun 05 j 18:33	4° \mathbb{X} 32'40	32.35060 AU				
opposition	-1197 Jun 08 j 06:47	4° \mathbb{X} 28'57	0°58'00	conjunction	-1191 Dec 17 j 19:22	16° \mathbb{X} 18'38	-2°37'25
direct	-1197 Aug 27 j 16:44	3° \mathbb{X} 12'52		minimum elong	-1191 Dec 17 j 19:16	16° \mathbb{X} 18'38	2°37'27
evening set	-1197 Nov 22 j 11:35	4° \mathbb{X} 54'08		max. Earth dist.	-1191 Dec 20 j 13:39	16° \mathbb{X} 24'01	35.91992 AU
				morning rise	-1190 Jan 01 j 20:07	16° \mathbb{X} 47'42	
conjunction	-1197 Dec 07 j 15:53	5° \mathbb{X} 24'54	0°37'43	retrograde	-1190 Mar 31 j 12:16	18° \mathbb{X} 26'11	
minimum elong	-1197 Dec 07 j 15:54	5° \mathbb{X} 24'55	0°37'41	min. Earth dist.	-1190 Jun 18 j 10:22	17° \mathbb{X} 15'51	34.04588 AU
max. Earth dist.	-1197 Dec 10 j 04:08	5° \mathbb{X} 30'02	34.46892 AU	opposition	-1190 Jun 21 j 07:09	17° \mathbb{X} 11'47	-3°03'08
morning rise	-1197 Dec 22 j 21:10	5° \mathbb{X} 55'47		direct	-1190 Sep 09 j 19:08	15° \mathbb{X} 58'18	
retrograde	-1196 Mar 20 j 06:55	7° \mathbb{X} 38'47		evening set	-1190 Dec 04 j 20:58	17° \mathbb{X} 33'34	
min. Earth dist.	-1196 Jun 06 j 23:34	6° \mathbb{X} 26'17	32.58633 AU				
opposition	-1196 Jun 09 j 12:10	6° \mathbb{X} 22'34	0°21'55	conjunction	-1190 Dec 19 j 17:57	18° \mathbb{X} 02'06	-3°08'03

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 16

Attention, astronomical year style is used: The year -1190 in astronomical counting style is the year 1191 BCE in historical counting style.

minimum elong	-1190 Dec 19 j 17:50	18° ♂ 02'06	3°08'04	evening set	-1183 Dec 16 j 23:10	29° ♂ 05'25	
max. Earth dist.	-1190 Dec 22 j 14:31	18° ♂ 07'38	36.16866 AU				
morning rise	-1189 Jan 03 j 16:18	18° ♂ 30'46		conjunction	-1183 Dec 30 j 18:13	29° ♂ 30'37	-6°25'21
retrograde	-1189 Apr 02 j 08:01	20° ♂ 08'39		minimum elong	-1183 Dec 30 j 18:02	29° ♂ 30'36	6°25'22
min. Earth dist.	-1189 Jun 20 j 11:02	18° ♂ 58'37	34.29690 AU	max. Earth dist.	-1182 Jan 02 j 20:40	29° ♂ 36'19	37.95769 AU
opposition	-1189 Jun 23 j 08:03	18° ♂ 54'33	-3°35'10	morning rise	-1182 Jan 13 j 14:48	29° ♂ 55'56	
direct	-1189 Sep 11 j 21:58	17° ♂ 41'24			-1182 Jan 15 j 21:17	0° ♂	
evening set	-1189 Dec 06 j 21:43	19° ♂ 16'01		retrograde	-1182 Apr 13 j 08:16	1° ♂ 30'57	
				min. Earth dist.	-1182 Jul 01 j 20:31	0° ♂ 23'17	36.09920 AU
conjunction	-1189 Dec 21 j 15:55	19° ♂ 44'08	-3°38'06	opposition	-1182 Jul 04 j 22:44	0° ♂ 19'04	-7°00'29
minimum elong	-1189 Dec 21 j 15:48	19° ♂ 44'07	3°38'07		-1182 Jul 19 j 02:00	30° ♂	
max. Earth dist.	-1189 Dec 24 j 12:43	19° ♂ 49'39	36.41993 AU	direct	-1182 Sep 23 j 14:02	29° ♂ 08'25	
morning rise	-1188 Jan 05 j 11:41	20° ♂ 12'22			-1182 Nov 25 j 03:51	0° ♂	
retrograde	-1188 Apr 03 j 05:02	21° ♂ 49'42		evening set	-1182 Dec 18 j 23:06	0° ♂ 39'50	
min. Earth dist.	-1188 Jun 21 j 08:54	20° ♂ 40'05	34.55054 AU				
opposition	-1188 Jun 24 j 08:09	20° ♂ 35'54	-4°06'33	conjunction	-1181 Jan 01 j 13:13	1° ♂ 04'29	-6°51'02
direct	-1188 Sep 12 j 22:56	19° ♂ 23'07		minimum elong	-1181 Jan 01 j 13:02	1° ♂ 04'29	6°51'03
evening set	-1188 Dec 07 j 22:16	20° ♂ 57'08		max. Earth dist.	-1181 Jan 04 j 14:59	1° ♂ 10'07	38.21310 AU
				morning rise	-1181 Jan 15 j 04:51	1° ♂ 29'16	
conjunction	-1188 Dec 22 j 13:25	21° ♂ 24'49	-4°07'32	retrograde	-1181 Apr 15 j 02:41	3° ♂ 04'00	
minimum elong	-1188 Dec 22 j 13:18	21° ♂ 24'48	4°07'32	min. Earth dist.	-1181 Jul 03 j 15:58	1° ♂ 56'40	36.35568 AU
max. Earth dist.	-1188 Dec 25 j 12:04	21° ♂ 30'25	36.67351 AU	opposition	-1181 Jul 06 j 19:21	1° ♂ 52'24	-7°27'06
morning rise	-1187 Jan 06 j 06:10	21° ♂ 52'36		direct	-1181 Sep 25 j 11:23	0° ♂ 42'04	
retrograde	-1187 Apr 05 j 02:32	23° ♂ 29'27		evening set	-1181 Dec 20 j 22:51	2° ♂ 13'09	
min. Earth dist.	-1187 Jun 23 j 08:31	22° ♂ 20'09	34.80654 AU				
opposition	-1187 Jun 26 j 08:01	22° ♂ 15'58	-4°37'15	conjunction	-1180 Jan 03 j 07:42	2° ♂ 37'15	-7°16'06
direct	-1187 Sep 14 j 21:58	21° ♂ 03'33		minimum elong	-1180 Jan 03 j 07:30	2° ♂ 37'14	7°16'07
evening set	-1187 Dec 09 j 22:32	22° ♂ 37'01		max. Earth dist.	-1180 Jan 06 j 10:07	2° ♂ 42'53	38.46686 AU
				morning rise	-1180 Jan 16 j 18:11	3° ♂ 01'28	
conjunction	-1187 Dec 24 j 10:24	23° ♂ 04'14	-4°36'20	retrograde	-1180 Apr 15 j 21:26	4° ♂ 35'57	
minimum elong	-1187 Dec 24 j 10:15	23° ♂ 04'13	4°36'21	min. Earth dist.	-1180 Jul 04 j 12:47	3° ♂ 28'49	36.61077 AU
max. Earth dist.	-1187 Dec 27 j 09:56	23° ♂ 09'52	36.92916 AU	opposition	-1180 Jul 07 j 15:33	3° ♂ 24'36	-7°53'02
morning rise	-1186 Jan 07 j 23:42	23° ♂ 31'34		direct	-1180 Sep 26 j 07:00	2° ♂ 14'33	
retrograde	-1186 Apr 06 j 23:51	25° ♂ 07'58		evening set	-1180 Dec 21 j 22:22	3° ♂ 45'19	
min. Earth dist.	-1186 Jun 25 j 06:05	23° ♂ 59'03	35.06425 AU				
opposition	-1186 Jun 28 j 07:08	23° ♂ 54'49	-5°07'16	conjunction	-1179 Jan 04 j 01:50	4° ♂ 08'51	-7°40'33
direct	-1186 Sep 16 j 21:09	22° ♂ 42'46		minimum elong	-1179 Jan 04 j 01:38	4° ♂ 08'50	7°40'34
evening set	-1186 Dec 11 j 22:55	24° ♂ 15'45		max. Earth dist.	-1179 Jan 07 j 04:45	4° ♂ 14'29	38.71947 AU
				morning rise	-1179 Jan 17 j 06:40	4° ♂ 32'30	
conjunction	-1186 Dec 26 j 06:55	24° ♂ 42'28	-5°04'32	retrograde	-1179 Apr 17 j 15:42	6° ♂ 06'44	
minimum elong	-1186 Dec 26 j 06:46	24° ♂ 42'28	5°04'32	min. Earth dist.	-1179 Jul 06 j 07:41	4° ♂ 59'53	36.86481 AU
max. Earth dist.	-1186 Dec 29 j 06:59	24° ♂ 48'07	37.18603 AU	opposition	-1179 Jul 09 j 11:12	4° ♂ 55'39	-8°18'17
morning rise	-1185 Jan 09 j 16:40	25° ♂ 09'20		direct	-1179 Sep 28 j 02:58	3° ♂ 45'52	
retrograde	-1185 Apr 08 j 22:41	26° ♂ 45'20		evening set	-1179 Dec 23 j 21:41	5° ♂ 16'21	
min. Earth dist.	-1185 Jun 27 j 04:07	25° ♂ 36'45	35.32319 AU				
opposition	-1185 Jun 30 j 05:42	25° ♂ 32'31	-5°36'35	conjunction	-1178 Jan 05 j 19:16	5° ♂ 39'19	-8°04'21
direct	-1185 Sep 18 j 18:09	24° ♂ 20'50		minimum elong	-1178 Jan 05 j 19:03	5° ♂ 39'18	8°04'23
evening set	-1185 Dec 13 j 23:04	25° ♂ 53'22		max. Earth dist.	-1178 Jan 08 j 22:02	5° ♂ 44'53	38.97119 AU
				morning rise	-1178 Jan 18 j 18:30	6° ♂ 02'23	
conjunction	-1185 Dec 28 j 03:12	26° ♂ 19'36	-5°32'06	retrograde	-1178 Apr 19 j 11:59	7° ♂ 36'24	
minimum elong	-1185 Dec 28 j 03:01	26° ♂ 19'35	5°32'07	min. Earth dist.	-1178 Jul 08 j 02:24	6° ♂ 29'47	37.11851 AU
max. Earth dist.	-1185 Dec 31 j 04:40	26° ♂ 25'19	37.44362 AU	opposition	-1178 Jul 11 j 06:28	6° ♂ 25'33	-8°42'52
morning rise	-1184 Jan 11 j 08:44	26° ♂ 45'57		direct	-1178 Sep 29 j 20:01	5° ♂ 16'02	
retrograde	-1184 Apr 09 j 18:51	28° ♂ 21'36		evening set	-1178 Dec 25 j 20:51	6° ♂ 46'17	
min. Earth dist.	-1184 Jun 28 j 02:05	27° ♂ 13'20	35.58238 AU				
opposition	-1184 Jul 01 j 03:48	27° ♂ 09'06	-6°05'14	conjunction	-1177 Jan 07 j 12:35	7° ♂ 08'39	-8°27'32
direct	-1184 Sep 19 j 17:16	25° ♂ 57'47		minimum elong	-1177 Jan 07 j 12:23	7° ♂ 08'38	8°27'33
evening set	-1184 Dec 14 j 23:10	27° ♂ 29'55		max. Earth dist.	-1177 Jan 10 j 16:47	7° ♂ 14'17	39.22271 AU
				morning rise	-1177 Jan 20 j 05:38	7° ♂ 31'07	
conjunction	-1184 Dec 28 j 22:46	27° ♂ 55'39	-5°59'02	retrograde	-1177 Apr 21 j 04:22	9° ♂ 04'57	
minimum elong	-1184 Dec 28 j 22:36	27° ♂ 55'38	5°59'03	min. Earth dist.	-1177 Jul 09 j 21:12	7° ♂ 58'33	37.37207 AU
max. Earth dist.	-1184 Dec 31 j 23:50	28° ♂ 01'17	37.70104 AU	opposition	-1177 Jul 13 j 01:01	7° ♂ 54'21	-9°06'45
morning rise	-1183 Jan 12 j 00:04	28° ♂ 21'29		direct	-1177 Oct 01 j 15:37	6° ♂ 45'06	
retrograde	-1183 Apr 11 j 15:36	29° ♂ 56'48		evening set	-1177 Dec 27 j 20:00	8° ♂ 15'09	
min. Earth dist.	-1183 Jun 29 j 22:31	28° ♂ 48'54	35.84130 AU				
opposition	-1183 Jul 03 j 01:31	28° ♂ 44'38	-6°33'12	conjunction	-1176 Jan 09 j 05:20	8° ♂ 36'55	-8°50'04
direct	-1183 Sep 21 j 14:18	27° ♂ 33'39		minimum elong	-1176 Jan 09 j 05:07	8° ♂ 36'54	8°50'05

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 17

Attention, astronomical year style is used: The year -1176 in astronomical counting style is the year 1177 BCE in historical counting style.

max. Earth dist.	-1176 Jan 12 j 09:02	8° $\overline{3}$ 42'30	39.47429 AU	conjunction	-1169 Jan 18 j 17:48	18° $\overline{3}$ 30'03	-11°10'32
morning rise	-1176 Jan 21 j 16:09	8° $\overline{3}$ 58'48		minimum elong	-1169 Jan 18 j 17:35	18° $\overline{3}$ 30'02	11°10'33
retrograde	-1176 Apr 21 j 20:03	10° $\overline{3}$ 32'28		max. Earth dist.	-1169 Jan 21 j 22:27	18° $\overline{3}$ 35'28	41.21639 AU
min. Earth dist.	-1176 Jul 10 j 13:57	9° $\overline{3}$ 26'24	37.62586 AU	morning rise	-1169 Jan 29 j 01:46	18° $\overline{3}$ 47'29	
opposition	-1176 Jul 13 j 19:15	9° $\overline{3}$ 22'07	-9°29'57	retrograde	-1169 May 02 j 07:27	20° $\overline{3}$ 20'54	
direct	-1176 Oct 02 j 10:40	8° $\overline{3}$ 13'10		min. Earth dist.	-1169 Jul 21 j 11:08	19° $\overline{3}$ 16'32	39.37748 AU
evening set	-1176 Dec 28 j 18:43	9° $\overline{3}$ 43'02		opposition	-1169 Jul 24 j 16:12	19° $\overline{3}$ 12'23	-11°53'56
				direct	-1169 Oct 13 j 09:37	18° $\overline{3}$ 05'22	
conjunction	-1175 Jan 09 j 21:38	10° $\overline{3}$ 04'12	-9°11'58	evening set	-1168 Jan 10 j 09:19	19° $\overline{3}$ 34'50	
minimum elong	-1175 Jan 09 j 21:26	10° $\overline{3}$ 04'11	9°12'00				
max. Earth dist.	-1175 Jan 13 j 02:49	10° $\overline{3}$ 09'51	39.72597 AU	conjunction	-1168 Jan 20 j 08:09	19° $\overline{3}$ 51'32	-11°28'17
morning rise	-1175 Jan 22 j 01:55	10° $\overline{3}$ 25'28		minimum elong	-1168 Jan 20 j 07:57	19° $\overline{3}$ 51'31	11°28'17
retrograde	-1175 Apr 23 j 10:04	11° $\overline{3}$ 59'02		max. Earth dist.	-1168 Jan 23 j 12:53	19° $\overline{3}$ 56'55	41.45604 AU
min. Earth dist.	-1175 Jul 12 j 08:28	10° $\overline{3}$ 53'11	37.87972 AU	morning rise	-1168 Jan 30 j 08:00	20° $\overline{3}$ 08'18	
opposition	-1175 Jul 15 j 13:13	10° $\overline{3}$ 48'56	-9°52'28	retrograde	-1168 May 02 j 21:16	21° $\overline{3}$ 41'45	
direct	-1175 Oct 04 j 06:56	9° $\overline{3}$ 40'17		min. Earth dist.	-1168 Jul 22 j 03:46	20° $\overline{3}$ 37'31	39.61772 AU
evening set	-1175 Dec 30 j 17:32	11° $\overline{3}$ 10'00		opposition	-1168 Jul 25 j 07:37	20° $\overline{3}$ 33'26	-12°12'03
				direct	-1168 Oct 14 j 01:47	19° $\overline{3}$ 26'39	
conjunction	-1174 Jan 11 j 13:45	11° $\overline{3}$ 30'34	-9°33'15	evening set	-1167 Jan 11 j 07:40	20° $\overline{3}$ 56'08	
minimum elong	-1174 Jan 11 j 13:32	11° $\overline{3}$ 30'33	9°33'15				
max. Earth dist.	-1174 Jan 14 j 18:48	11° $\overline{3}$ 36'10	39.97770 AU	conjunction	-1167 Jan 20 j 22:08	21° $\overline{3}$ 12'09	-11°45'28
morning rise	-1174 Jan 23 j 11:11	11° $\overline{3}$ 51'12		minimum elong	-1167 Jan 20 j 21:55	21° $\overline{3}$ 12'08	11°45'29
retrograde	-1174 Apr 25 j 01:42	13° $\overline{3}$ 24'42		max. Earth dist.	-1167 Jan 24 j 02:42	21° $\overline{3}$ 17'30	41.69265 AU
min. Earth dist.	-1174 Jul 14 j 00:37	12° $\overline{3}$ 19'09	38.13335 AU	morning rise	-1167 Jan 30 j 13:20	21° $\overline{3}$ 28'14	
opposition	-1174 Jul 17 j 06:32	12° $\overline{3}$ 14'52	-10°14'18	retrograde	-1167 May 04 j 10:49	23° $\overline{3}$ 01'45	
direct	-1174 Oct 06 j 00:48	11° $\overline{3}$ 06'30		min. Earth dist.	-1167 Jul 23 j 18:33	21° $\overline{3}$ 57'42	39.85494 AU
evening set	-1173 Jan 01 j 16:15	12° $\overline{3}$ 36'07		opposition	-1167 Jul 26 j 22:32	21° $\overline{3}$ 53'38	-12°29'35
				direct	-1167 Oct 15 j 17:12	20° $\overline{3}$ 47'03	
conjunction	-1173 Jan 13 j 05:26	12° $\overline{3}$ 56'03	-9°53'54	evening set	-1166 Jan 13 j 06:08	22° $\overline{3}$ 16'35	
minimum elong	-1173 Jan 13 j 05:13	12° $\overline{3}$ 56'02	9°53'55				
max. Earth dist.	-1173 Jan 16 j 10:46	13° $\overline{3}$ 01'39	40.22885 AU	conjunction	-1166 Jan 22 j 11:46	22° $\overline{3}$ 31'55	-12°02'06
morning rise	-1173 Jan 24 j 20:01	13° $\overline{3}$ 16'05		minimum elong	-1166 Jan 22 j 11:34	22° $\overline{3}$ 31'54	12°02'07
retrograde	-1173 Apr 26 j 19:01	14° $\overline{3}$ 49'31		max. Earth dist.	-1166 Jan 25 j 15:32	22° $\overline{3}$ 37'10	41.92650 AU
min. Earth dist.	-1173 Jul 15 j 18:09	13° $\overline{3}$ 44'13	38.38630 AU	morning rise	-1166 Jan 31 j 18:19	22° $\overline{3}$ 47'18	
opposition	-1173 Jul 18 j 23:40	13° $\overline{3}$ 39'58	-10°35'29	retrograde	-1166 May 06 j 02:30	24° $\overline{3}$ 20'53	
direct	-1173 Oct 07 j 16:30	12° $\overline{3}$ 31'53		min. Earth dist.	-1166 Jul 25 j 09:20	23° $\overline{3}$ 17'00	40.08989 AU
evening set	-1172 Jan 03 j 14:50	14° $\overline{3}$ 01'26		opposition	-1166 Jul 28 j 13:04	23° $\overline{3}$ 12'58	-12°46'32
				direct	-1166 Oct 17 j 06:02	22° $\overline{3}$ 06'36	
conjunction	-1172 Jan 14 j 20:56	14° $\overline{3}$ 20'44	-10°13'56	evening set	-1165 Jan 15 j 04:28	23° $\overline{3}$ 36'12	
minimum elong	-1172 Jan 14 j 20:43	14° $\overline{3}$ 20'43	10°13'57				
max. Earth dist.	-1172 Jan 18 j 03:01	14° $\overline{3}$ 26'21	40.47900 AU	conjunction	-1165 Jan 24 j 01:15	23° $\overline{3}$ 50'51	-12°18'11
morning rise	-1172 Jan 26 j 04:04	14° $\overline{3}$ 40'08		minimum elong	-1165 Jan 24 j 01:03	23° $\overline{3}$ 50'50	12°18'12
retrograde	-1172 Apr 27 j 11:27	16° $\overline{3}$ 13'32		max. Earth dist.	-1165 Jan 27 j 05:58	23° $\overline{3}$ 56'08	42.15831 AU
min. Earth dist.	-1172 Jul 16 j 10:48	15° $\overline{3}$ 08'29	38.63773 AU	morning rise	-1165 Feb 01 j 22:39	24° $\overline{3}$ 05'32	
opposition	-1172 Jul 19 j 16:16	15° $\overline{3}$ 04'15	-10°56'02	retrograde	-1165 May 07 j 15:20	25° $\overline{3}$ 39'13	
direct	-1172 Oct 08 j 08:34	13° $\overline{3}$ 56'28		min. Earth dist.	-1165 Jul 27 j 00:14	24° $\overline{3}$ 35'29	40.32285 AU
evening set	-1171 Jan 04 j 13:33	15° $\overline{3}$ 25'58		opposition	-1165 Jul 30 j 03:16	24° $\overline{3}$ 31'30	-13°02'53
				direct	-1165 Oct 18 j 20:38	23° $\overline{3}$ 25'21	
conjunction	-1171 Jan 15 j 12:03	15° $\overline{3}$ 44'38	-10°33'23	evening set	-1164 Jan 17 j 02:54	24° $\overline{3}$ 55'04	
minimum elong	-1171 Jan 15 j 11:50	15° $\overline{3}$ 44'37	10°33'24				
max. Earth dist.	-1171 Jan 18 j 17:10	15° $\overline{3}$ 50'08	40.72738 AU	conjunction	-1164 Jan 25 j 14:14	25° $\overline{3}$ 09'00	-12°33'42
morning rise	-1171 Jan 26 j 11:50	16° $\overline{3}$ 03'23		minimum elong	-1164 Jan 25 j 14:03	25° $\overline{3}$ 08'59	12°33'43
retrograde	-1171 Apr 29 j 05:14	17° $\overline{3}$ 36'46		max. Earth dist.	-1164 Jan 28 j 17:54	25° $\overline{3}$ 14'11	42.38844 AU
min. Earth dist.	-1171 Jul 18 j 02:48	16° $\overline{3}$ 31'59	38.88727 AU	morning rise	-1164 Feb 03 j 02:15	25° $\overline{3}$ 22'58	
opposition	-1171 Jul 21 j 08:40	16° $\overline{3}$ 27'46	-11°15'56	retrograde	-1164 May 08 j 04:56	26° $\overline{3}$ 56'47	
direct	-1171 Oct 09 j 22:50	15° $\overline{3}$ 20'15		min. Earth dist.	-1164 Jul 27 j 13:09	25° $\overline{3}$ 53'19	40.55431 AU
evening set	-1170 Jan 06 j 12:02	16° $\overline{3}$ 49'43		opposition	-1164 Jul 30 j 17:06	25° $\overline{3}$ 49'18	-13°18'39
				direct	-1164 Oct 19 j 09:48	24° $\overline{3}$ 43'22	
conjunction	-1170 Jan 17 j 03:01	17° $\overline{3}$ 07'44	-10°52'14	evening set	-1163 Jan 18 j 01:15	26° $\overline{3}$ 13'15	
minimum elong	-1170 Jan 17 j 02:49	17° $\overline{3}$ 07'44	10°52'15				
max. Earth dist.	-1170 Jan 20 j 08:57	17° $\overline{3}$ 13'16	40.97338 AU	conjunction	-1163 Jan 26 j 03:04	26° $\overline{3}$ 26'27	-12°48'41
morning rise	-1170 Jan 27 j 19:01	17° $\overline{3}$ 25'50		minimum elong	-1163 Jan 26 j 02:52	26° $\overline{3}$ 26'26	12°48'42
retrograde	-1170 Apr 30 j 18:37	18° $\overline{3}$ 59'14		max. Earth dist.	-1163 Jan 29 j 07:27	26° $\overline{3}$ 31'40	42.61711 AU
min. Earth dist.	-1170 Jul 19 j 20:13	17° $\overline{3}$ 54'37	39.13398 AU	morning rise	-1163 Feb 03 j 05:27	26° $\overline{3}$ 39'41	
opposition	-1170 Jul 23 j 00:45	17° $\overline{3}$ 50'29	-11°35'14	retrograde	-1163 May 09 j 15:16	28° $\overline{3}$ 13'42	
direct	-1170 Oct 11 j 16:16	16° $\overline{3}$ 43'13		min. Earth dist.	-1163 Jul 29 j 03:59	27° $\overline{3}$ 10'22	40.78433 AU
evening set	-1169 Jan 08 j 10:48	18° $\overline{3}$ 12'41		opposition	-1163 Aug 01 j 06:47	27° $\overline{3}$ 06'26	-13°33'50

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 18

Attention, astronomical year style is used: The year -1163 in astronomical counting style is the year 1164 BCE in historical counting style.

direct	-1163 Oct 21 j 01:34	26° Z 00'44		conjunction	-1156 Feb 04 j 14:49	5° \approx 12'49	-14°19'02
evening set	-1162 Jan 19 j 23:50	27° Z 30'48		minimum elong	-1156 Feb 04 j 14:40	5° \approx 12'48	14°19'03
				max. Earth dist.	-1156 Feb 07 j 15:31	5° \approx 17'37	44.15189 AU
conjunction	-1162 Jan 27 j 15:39	27° Z 43'15	-13°03'06	morning rise	-1156 Feb 09 j 06:50	5° \approx 20'12	
minimum elong	-1162 Jan 27 j 15:29	27° Z 43'15	13°03'07	retrograde	-1156 May 18 j 03:12	6° \approx 56'36	
max. Earth dist.	-1162 Jan 30 j 19:45	27° Z 48'26	42.84445 AU	min. Earth dist.	-1156 Aug 06 j 23:30	5° \approx 54'31	42.32072 AU
morning rise	-1162 Feb 04 j 07:54	27° Z 55'45		opposition	-1156 Aug 09 j 22:20	5° \approx 50'51	-15°05'09
retrograde	-1162 May 11 j 03:07	29° Z 29'59		direct	-1156 Oct 29 j 17:57	4° \approx 46'42	
min. Earth dist.	-1162 Jul 30 j 16:37	28° Z 26'55	41.01267 AU	evening set	-1155 Feb 01 j 01:55	6° \approx 19'26	
opposition	-1162 Aug 02 j 20:01	28° Z 22'57	-13°48'27				
direct	-1162 Oct 22 j 15:59	27° Z 17'30		conjunction	-1155 Feb 05 j 02:03	6° \approx 25'44	-14°30'04
evening set	-1161 Jan 21 j 22:33	28° Z 47'48		minimum elong	-1155 Feb 05 j 01:55	6° \approx 25'44	14°30'04
				max. Earth dist.	-1155 Feb 08 j 02:35	6° \approx 30'30	44.35606 AU
conjunction	-1161 Jan 29 j 03:58	28° Z 59'30	-13°17'00	morning rise	-1155 Feb 09 j 02:08	6° \approx 32'03	
minimum elong	-1161 Jan 29 j 03:47	28° Z 59'29	13°17'00	retrograde	-1155 May 19 j 14:52	8° \approx 09'01	
max. Earth dist.	-1161 Feb 01 j 07:35	29° Z 04'36	43.06987 AU	min. Earth dist.	-1155 Aug 08 j 11:30	7° \approx 07'03	42.52443 AU
morning rise	-1161 Feb 05 j 09:52	29° Z 11'14		opposition	-1155 Aug 11 j 09:45	7° \approx 03'26	-15°16'15
	-1161 Mar 09 j 21:42	0° \approx		direct	-1155 Oct 31 j 05:31	5° \approx 59'26	
retrograde	-1161 May 12 j 18:13	0° \approx 45'43		evening set	-1154 Feb 03 j 07:17	7° \approx 32'55	
	-1161 Jul 18 j 07:21	30° R Z					
min. Earth dist.	-1161 Aug 01 j 06:16	29° Z 42'50	41.23908 AU	conjunction	-1154 Feb 06 j 12:51	7° \approx 37'59	-14°40'38
opposition	-1161 Aug 04 j 08:59	29° Z 38'55	-14°02'31	minimum elong	-1154 Feb 06 j 12:43	7° \approx 37'58	14°40'40
direct	-1161 Oct 24 j 02:34	28° Z 33'43		morning rise	-1154 Feb 09 j 18:22	7° \approx 43'03	
	-1160 Jan 21 j 05:18	0° \approx		max. Earth dist.	-1154 Feb 09 j 11:50	7° \approx 42'37	44.55629 AU
evening set	-1160 Jan 23 j 21:34	0° \approx 04'18		retrograde	-1154 May 21 j 04:02	9° \approx 20'46	
				min. Earth dist.	-1154 Aug 09 j 23:01	8° \approx 18'55	42.72462 AU
conjunction	-1160 Jan 30 j 16:11	0° \approx 15'12	-13°30'22	opposition	-1154 Aug 12 j 20:58	8° \approx 15'20	-15°26'52
minimum elong	-1160 Jan 30 j 16:02	0° \approx 15'12	13°30'23	direct	-1154 Nov 01 j 14:22	7° \approx 11'29	
max. Earth dist.	-1160 Feb 02 j 20:17	0° \approx 20'19	43.29319 AU	evening set	-1153 Feb 05 j 17:43	8° \approx 46'02	
morning rise	-1160 Feb 06 j 11:06	0° \approx 26'09					
retrograde	-1160 May 13 j 06:26	2° \approx 00'56		conjunction	-1153 Feb 07 j 23:36	8° \approx 49'32	-14°50'46
min. Earth dist.	-1160 Aug 01 j 19:39	0° \approx 58'14	41.46285 AU	minimum elong	-1153 Feb 07 j 23:28	8° \approx 49'32	14°50'46
opposition	-1160 Aug 04 j 21:43	0° \approx 54'22	-14°16'02	morning rise	-1153 Feb 10 j 05:20	8° \approx 53'02	
	-1160 Sep 25 j 02:25	30° R Z		max. Earth dist.	-1153 Feb 10 j 23:01	8° \approx 54'11	44.75324 AU
direct	-1160 Oct 24 j 15:22	29° Z 49'25		retrograde	-1153 May 22 j 13:05	10° \approx 31'50	
	-1160 Nov 22 j 15:49	0° \approx		min. Earth dist.	-1153 Aug 11 j 11:11	9° \approx 30'04	42.92169 AU
evening set	-1159 Jan 24 j 20:49	1° \approx 20'18		opposition	-1153 Aug 14 j 07:44	9° \approx 26'33	-15°37'01
				direct	-1153 Nov 03 j 02:20	8° \approx 22'51	
conjunction	-1159 Jan 31 j 03:57	1° \approx 30'24	-13°43'15				
minimum elong	-1159 Jan 31 j 03:47	1° \approx 30'24	13°43'15	conjunction	-1152 Feb 09 j 10:01	10° \approx 00'27	-15°00'26
max. Earth dist.	-1159 Feb 03 j 06:35	1° \approx 35'24	43.51365 AU	minimum elong	-1152 Feb 09 j 09:53	10° \approx 00'26	15°00'27
morning rise	-1159 Feb 06 j 11:23	1° \approx 40'31		max. Earth dist.	-1152 Feb 12 j 08:13	10° \approx 04'59	44.94756 AU
retrograde	-1159 May 14 j 20:05	3° \approx 15'38		retrograde	-1152 May 22 j 21:36	11° \approx 42'16	
min. Earth dist.	-1159 Aug 03 j 08:11	2° \approx 13'10	41.68356 AU	min. Earth dist.	-1152 Aug 11 j 21:17	10° \approx 40'40	43.11628 AU
opposition	-1159 Aug 06 j 10:17	2° \approx 09'19	-14°29'02	opposition	-1152 Aug 14 j 18:21	10° \approx 37'08	-15°46'41
direct	-1159 Oct 26 j 01:57	1° \approx 04'35		direct	-1152 Nov 03 j 14:01	9° \approx 33'35	
evening set	-1158 Jan 26 j 20:42	2° \approx 35'50					
				conjunction	-1151 Feb 09 j 20:04	11° \approx 10'44	-15°09'38
conjunction	-1158 Feb 01 j 15:50	2° \approx 45'06	-13°55'38	minimum elong	-1151 Feb 09 j 19:58	11° \approx 10'44	15°09'38
minimum elong	-1158 Feb 01 j 15:41	2° \approx 45'05	13°55'39	max. Earth dist.	-1151 Feb 12 j 18:17	11° \approx 15'16	45.13945 AU
max. Earth dist.	-1158 Feb 04 j 18:52	2° \approx 50'06	43.73061 AU	retrograde	-1151 May 24 j 06:34	12° \approx 52'08	
morning rise	-1158 Feb 07 j 11:10	2° \approx 54'22		min. Earth dist.	-1151 Aug 13 j 09:07	11° \approx 50'37	43.30857 AU
retrograde	-1158 May 16 j 06:36	4° \approx 29'51		opposition	-1151 Aug 16 j 04:54	11° \approx 47'09	-15°55'53
min. Earth dist.	-1158 Aug 04 j 22:15	3° \approx 27'29	41.90036 AU	direct	-1151 Nov 05 j 01:46	10° \approx 43'46	
opposition	-1158 Aug 07 j 22:30	3° \approx 23'44	-14°41'33				
direct	-1158 Oct 27 j 15:28	2° \approx 19'13		conjunction	-1150 Feb 11 j 06:12	12° \approx 20'30	-15°18'24
evening set	-1157 Jan 28 j 21:26	3° \approx 50'54		minimum elong	-1150 Feb 11 j 06:05	12° \approx 20'29	15°18'24
				max. Earth dist.	-1150 Feb 14 j 04:17	12° \approx 25'00	45.32923 AU
conjunction	-1157 Feb 03 j 03:32	3° \approx 59'15	-14°07'33	retrograde	-1150 May 25 j 15:40	14° \approx 01'28	
minimum elong	-1157 Feb 03 j 03:22	3° \approx 59'15	14°07'34	min. Earth dist.	-1150 Aug 14 j 19:09	13° \approx 00'07	43.49847 AU
max. Earth dist.	-1157 Feb 06 j 05:04	4° \approx 04'08	43.94354 AU	opposition	-1150 Aug 17 j 14:56	12° \approx 56'40	-16°04'36
morning rise	-1157 Feb 08 j 09:44	4° \approx 07'37		direct	-1150 Nov 06 j 13:02	11° \approx 53'27	
retrograde	-1157 May 17 j 16:22	5° \approx 43'31					
min. Earth dist.	-1157 Aug 06 j 10:02	4° \approx 41'21	42.11278 AU	conjunction	-1149 Feb 12 j 16:00	13° \approx 29'46	-15°26'43
opposition	-1157 Aug 09 j 10:28	4° \approx 37'36	-14°53'35	minimum elong	-1149 Feb 12 j 15:55	13° \approx 29'46	15°26'43
direct	-1157 Oct 29 j 04:47	3° \approx 33'17		max. Earth dist.	-1149 Feb 15 j 12:46	13° \approx 34'10	45.51659 AU
evening set	-1156 Jan 30 j 22:52	5° \approx 05'26			-1149 Apr 26 j 20:20	15° \approx	

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 19

Attention, astronomical year style is used: The year -1149 in astronomical counting style is the year 1150 BCE in historical counting style.

retrograde	-1149 May 27 j 04:14	15° \approx 10'21		max. Earth dist.	-1141 Feb 24 j 08:16	22° \approx 33'50	46.88197 AU
	-1149 Jun 26 j 19:54	15° \approx		retrograde	-1141 Jun 05 j 03:59	24° \approx 07'35	
min. Earth dist.	-1149 Aug 16 j 05:46	14° \approx 09'08	43.68592 AU	min. Earth dist.	-1141 Aug 25 j 15:10	23° \approx 07'09	45.04376 AU
opposition	-1149 Aug 19 j 00:59	14° \approx 05'44	-16°12'52	opposition	-1141 Aug 28 j 02:07	23° \approx 04'14	-17°04'26
direct	-1149 Nov 07 j 20:51	13° \approx 02'42		direct	-1141 Nov 16 j 22:29	22° \approx 02'24	
conjunction	-1148 Feb 14 j 01:39	14° \approx 38'38	-15°34'36	conjunction	-1140 Feb 23 j 02:04	23° \approx 35'31	-16°23'47
minimum elong	-1148 Feb 14 j 01:32	14° \approx 38'37	15°34'37	minimum elong	-1140 Feb 23 j 02:03	23° \approx 35'31	16°23'47
max. Earth dist.	-1148 Feb 16 j 22:59	14° \approx 43'03	45.70128 AU	max. Earth dist.	-1140 Feb 25 j 15:54	23° \approx 39'21	47.03476 AU
	-1148 Feb 28 j 03:44	15° \approx		retrograde	-1140 Jun 05 j 09:36	25° \approx 12'48	
retrograde	-1148 May 27 j 14:29	16° \approx 18'49		min. Earth dist.	-1140 Aug 25 j 23:02	24° \approx 12'31	45.19589 AU
min. Earth dist.	-1148 Aug 16 j 16:53	15° \approx 17'43	43.87031 AU	opposition	-1140 Aug 28 j 10:20	24° \approx 09'35	-17°09'08
opposition	-1148 Aug 19 j 10:49	15° \approx 14'24	-16°20'42	direct	-1140 Nov 17 j 09:13	23° \approx 07'52	
	-1148 Aug 31 j 10:12	15° \approx					
direct	-1148 Nov 08 j 05:53	14° \approx 11'33		conjunction	-1139 Feb 23 j 10:17	24° \approx 40'40	-16°28'15
	-1147 Jan 13 j 03:39	15° \approx		minimum elong	-1139 Feb 23 j 10:15	24° \approx 40'39	16°28'16
				max. Earth dist.	-1139 Feb 25 j 22:57	24° \approx 44'24	47.18476 AU
conjunction	-1147 Feb 14 j 11:11	15° \approx 47'07	-15°42'04	retrograde	-1139 Jun 06 j 18:37	26° \approx 17'37	
minimum elong	-1147 Feb 14 j 11:07	15° \approx 47'07	15°42'05	min. Earth dist.	-1139 Aug 27 j 08:19	25° \approx 17'24	45.34548 AU
max. Earth dist.	-1147 Feb 17 j 06:56	15° \approx 51'25	45.88288 AU	opposition	-1139 Aug 29 j 18:27	25° \approx 14'31	-17°13'27
retrograde	-1147 May 29 j 00:35	17° \approx 26'56		direct	-1139 Nov 18 j 17:45	24° \approx 12'56	
min. Earth dist.	-1147 Aug 18 j 02:20	16° \approx 26'01	44.05131 AU				
opposition	-1147 Aug 20 j 20:23	16° \approx 22'42	-16°28'07	conjunction	-1138 Feb 24 j 18:32	25° \approx 45'25	-16°32'20
direct	-1147 Nov 09 j 14:16	15° \approx 20'02		minimum elong	-1138 Feb 24 j 18:31	25° \approx 45'25	16°32'20
				max. Earth dist.	-1138 Feb 27 j 07:35	25° \approx 49'10	47.33235 AU
conjunction	-1146 Feb 15 j 20:39	16° \approx 55'15	-15°49'08	retrograde	-1138 Jun 08 j 04:07	27° \approx 22'03	
minimum elong	-1146 Feb 15 j 20:34	16° \approx 55'15	15°49'09	min. Earth dist.	-1138 Aug 28 j 16:59	26° \approx 21'56	45.49236 AU
max. Earth dist.	-1146 Feb 18 j 15:57	16° \approx 59'31	46.06062 AU	opposition	-1138 Aug 31 j 02:21	26° \approx 19'06	-17°17'23
retrograde	-1146 May 30 j 07:40	18° \approx 34'43		direct	-1138 Nov 20 j 00:46	25° \approx 17'39	
min. Earth dist.	-1146 Aug 19 j 13:56	17° \approx 33'52	44.22812 AU				
opposition	-1146 Aug 22 j 05:56	17° \approx 30'40	-16°35'07	conjunction	-1137 Feb 26 j 02:31	26° \approx 49'51	-16°36'03
direct	-1146 Nov 11 j 02:13	16° \approx 28'10		minimum elong	-1137 Feb 26 j 02:30	26° \approx 49'51	16°36'04
				max. Earth dist.	-1137 Feb 28 j 13:50	26° \approx 53'28	47.47730 AU
conjunction	-1145 Feb 17 j 06:08	18° \approx 03'02	-15°55'49	retrograde	-1137 Jun 09 j 14:39	28° \approx 26'10	
minimum elong	-1145 Feb 17 j 06:05	18° \approx 03'02	15°55'50	min. Earth dist.	-1137 Aug 30 j 00:42	27° \approx 26'11	45.63657 AU
max. Earth dist.	-1145 Feb 20 j 00:30	18° \approx 07'13	46.23403 AU	opposition	-1137 Sep 01 j 10:01	27° \approx 23'22	-17°20'55
retrograde	-1145 May 31 j 15:42	19° \approx 42'08		direct	-1137 Nov 21 j 05:44	26° \approx 22'03	
min. Earth dist.	-1145 Aug 20 j 23:28	18° \approx 41'27	44.40017 AU				
opposition	-1145 Aug 23 j 15:01	18° \approx 38'15	-16°41'44	conjunction	-1136 Feb 27 j 10:26	27° \approx 53'58	-16°39'25
direct	-1145 Nov 12 j 13:14	17° \approx 35'55		minimum elong	-1136 Feb 27 j 10:26	27° \approx 53'58	16°39'25
				max. Earth dist.	-1136 Feb 29 j 21:46	27° \approx 57'35	47.61940 AU
conjunction	-1144 Feb 18 j 15:16	19° \approx 10'27	-16°02'09	retrograde	-1136 Jun 09 j 20:32	29° \approx 29'59	
minimum elong	-1144 Feb 18 j 15:12	19° \approx 10'26	16°02'09	min. Earth dist.	-1136 Aug 30 j 10:11	28° \approx 30'04	45.77765 AU
max. Earth dist.	-1144 Feb 21 j 07:50	19° \approx 14'30	46.40259 AU	opposition	-1136 Sep 01 j 17:43	28° \approx 27'20	-17°24'06
retrograde	-1144 Jun 01 j 03:07	20° \approx 49'11		direct	-1136 Nov 21 j 14:16	27° \approx 26'10	
min. Earth dist.	-1144 Aug 21 j 09:54	19° \approx 48'34	44.56747 AU				
opposition	-1144 Aug 24 j 00:13	19° \approx 45'27	-16°47'59	conjunction	-1135 Feb 27 j 18:13	28° \approx 57'49	-16°42'25
direct	-1144 Nov 12 j 20:37	18° \approx 43'15		minimum elong	-1135 Feb 27 j 18:13	28° \approx 57'49	16°42'26
				max. Earth dist.	-1135 Mar 02 j 04:32	29° \approx 01'22	47.75831 AU
conjunction	-1143 Feb 19 j 00:15	20° \approx 17'25	-16°08'06		-1135 Apr 15 j 04:32	0° \approx	
minimum elong	-1143 Feb 19 j 00:12	20° \approx 17'25	16°08'07	retrograde	-1135 Jun 11 j 01:37	0° \approx 33'33	
max. Earth dist.	-1143 Feb 21 j 16:49	20° \approx 21'27	46.56652 AU		-1135 Aug 08 j 10:34	30° \approx	
retrograde	-1143 Jun 02 j 12:02	21° \approx 55'47		min. Earth dist.	-1135 Aug 31 j 17:48	29° \approx 33'46	45.91507 AU
min. Earth dist.	-1143 Aug 22 j 20:10	20° \approx 55'13	44.73005 AU	opposition	-1135 Sep 03 j 01:10	29° \approx 31'03	-17°26'56
opposition	-1143 Aug 25 j 09:07	20° \approx 52'11	-16°53'51	direct	-1135 Nov 22 j 23:49	28° \approx 30'01	
direct	-1143 Nov 14 j 05:49	19° \approx 50'07			-1134 Feb 28 j 02:41	0° \approx	
conjunction	-1142 Feb 20 j 09:04	21° \approx 23'55	-16°13'42	conjunction	-1134 Mar 01 j 02:01	0° \approx 01'25	-16°45'06
minimum elong	-1142 Feb 20 j 09:01	21° \approx 23'55	16°13'42	minimum elong	-1134 Mar 01 j 02:03	0° \approx 01'25	16°45'06
max. Earth dist.	-1142 Feb 22 j 23:42	21° \approx 27'49	46.72613 AU	max. Earth dist.	-1134 Mar 03 j 10:51	0° \approx 04'52	47.89312 AU
retrograde	-1142 Jun 03 j 21:16	23° \approx 01'54		retrograde	-1134 Jun 12 j 09:36	1° \approx 36'53	
min. Earth dist.	-1142 Aug 24 j 04:51	22° \approx 01'28	44.88866 AU	min. Earth dist.	-1134 Sep 02 j 02:59	0° \approx 37'09	46.04818 AU
opposition	-1142 Aug 26 j 17:38	21° \approx 58'27	-16°59'20	opposition	-1134 Sep 04 j 08:31	0° \approx 34'31	-17°29'25
direct	-1142 Nov 15 j 12:57	20° \approx 56'29			-1134 Oct 05 j 12:52	30° \approx	
				direct	-1134 Nov 24 j 07:53	29° \approx 33'37	
conjunction	-1141 Feb 21 j 17:43	22° \approx 29'57	-16°18'56		-1133 Jan 11 j 21:24	0° \approx	
minimum elong	-1141 Feb 21 j 17:41	22° \approx 29'57	16°18'57				

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 20

Attention, astronomical year style is used: The year -1133 in astronomical counting style is the year 1134 BCE in historical counting style.

conjunction	-1133 Mar 02 j 09:54	1° 10 04'45	-16°47'28	retrograde	-1125 Jun 22 j 00:14	10° 10 52'38	
minimum elong	-1133 Mar 02 j 09:54	1° 10 04'45	16°47'28	min. Earth dist.	-1125 Sep 11 j 23:54	9° 10 53'24	47.04424 AU
max. Earth dist.	-1133 Mar 04 j 18:16	1° 10 08'09	48.02337 AU	opposition	-1125 Sep 13 j 20:52	9° 10 51'14	-17°37'50
retrograde	-1133 Jun 13 j 16:50	2° 10 39'56		direct	-1125 Dec 03 j 20:57	8° 10 51'10	
min. Earth dist.	-1133 Sep 03 j 11:25	1° 10 40'16	46.17623 AU				
opposition	-1133 Sep 05 j 15:47	1° 10 37'43	-17°31'36	conjunction	-1124 Mar 11 j 01:48	10° 10 20'13	-16°55'04
direct	-1133 Nov 25 j 16:07	0° 10 36'55		minimum elong	-1124 Mar 11 j 01:51	10° 10 20'13	16°55'05
				max. Earth dist.	-1124 Mar 13 j 00:19	10° 10 22'58	49.00066 AU
conjunction	-1132 Mar 02 j 17:23	2° 10 07'47	-16°49'32	retrograde	-1124 Jun 22 j 05:50	11° 10 53'08	
minimum elong	-1132 Mar 02 j 17:25	2° 10 07'47	16°49'33	min. Earth dist.	-1124 Sep 12 j 07:54	10° 10 53'56	47.13763 AU
max. Earth dist.	-1132 Mar 04 j 23:26	2° 10 11'02	48.14851 AU	opposition	-1124 Sep 14 j 03:06	10° 10 51'51	-17°37'10
retrograde	-1132 Jun 14 j 02:59	3° 10 42'41		direct	-1124 Dec 04 j 04:26	9° 10 51'53	
min. Earth dist.	-1132 Sep 03 j 19:26	2° 10 43'05	46.29914 AU				
opposition	-1132 Sep 05 j 23:01	2° 10 40'35	-17°33'29	conjunction	-1123 Mar 12 j 08:34	11° 10 20'46	-16°54'22
direct	-1132 Nov 25 j 20:48	1° 10 39'53		minimum elong	-1123 Mar 12 j 08:39	11° 10 20'47	16°54'22
				max. Earth dist.	-1123 Mar 14 j 06:51	11° 10 23'30	49.09238 AU
conjunction	-1131 Mar 04 j 00:57	3° 10 10'29	-16°51'18	retrograde	-1123 Jun 23 j 11:32	12° 10 53'30	
minimum elong	-1131 Mar 04 j 00:58	3° 10 10'29	16°51'19	min. Earth dist.	-1123 Sep 13 j 14:34	11° 10 54'24	47.22712 AU
max. Earth dist.	-1131 Mar 06 j 06:34	3° 10 13'42	48.26848 AU	opposition	-1123 Sep 15 j 09:01	11° 10 52'21	-17°36'12
retrograde	-1131 Jun 15 j 10:22	4° 10 45'06		direct	-1123 Dec 05 j 11:55	10° 10 52'30	
min. Earth dist.	-1131 Sep 05 j 04:36	3° 10 45'29	46.41693 AU				
opposition	-1131 Sep 07 j 06:03	3° 10 43'05	-17°35'04	conjunction	-1122 Mar 13 j 15:12	12° 10 21'13	-16°53'23
direct	-1131 Nov 27 j 03:40	2° 10 42'28		minimum elong	-1122 Mar 13 j 15:16	12° 10 21'13	16°53'23
				max. Earth dist.	-1122 Mar 15 j 11:11	12° 10 23'48	49.17992 AU
conjunction	-1130 Mar 05 j 08:23	4° 10 12'49	-16°52'47	retrograde	-1122 Jun 24 j 21:22	13° 10 53'46	
minimum elong	-1130 Mar 05 j 08:26	4° 10 12'49	16°52'48	min. Earth dist.	-1122 Sep 14 j 21:41	12° 10 54'43	47.31218 AU
max. Earth dist.	-1130 Mar 07 j 12:30	4° 10 15'56	48.38376 AU	opposition	-1122 Sep 16 j 14:58	12° 10 52'44	-17°34'57
retrograde	-1130 Jun 16 j 15:21	5° 10 47'08		direct	-1122 Dec 06 j 15:26	11° 10 52'59	
min. Earth dist.	-1130 Sep 06 j 11:30	4° 10 47'36	46.53014 AU				
opposition	-1130 Sep 08 j 12:49	4° 10 45'12	-17°36'20	conjunction	-1121 Mar 14 j 21:52	13° 10 21'33	-16°52'08
direct	-1130 Nov 28 j 11:42	3° 10 44'40		minimum elong	-1121 Mar 14 j 21:58	13° 10 21'33	16°52'08
				max. Earth dist.	-1121 Mar 16 j 17:25	13° 10 24'06	49.26258 AU
conjunction	-1129 Mar 06 j 15:32	5° 10 14'45	-16°53'57	retrograde	-1121 Jun 26 j 05:18	14° 10 53'55	
minimum elong	-1129 Mar 06 j 15:35	5° 10 14'46	16°53'57	min. Earth dist.	-1121 Sep 16 j 05:38	13° 10 54'51	47.39199 AU
max. Earth dist.	-1129 Mar 08 j 18:13	5° 10 17'47	48.49463 AU	opposition	-1121 Sep 17 j 20:49	13° 10 52'59	-17°33'27
retrograde	-1129 Jun 17 j 21:02	6° 10 48'49		direct	-1121 Dec 07 j 19:45	12° 10 53'19	
min. Earth dist.	-1129 Sep 07 j 19:56	5° 10 49'17	46.63938 AU				
opposition	-1129 Sep 09 j 19:30	5° 10 46'58	-17°37'17	conjunction	-1120 Mar 15 j 04:29	14° 10 21'43	-16°50'37
direct	-1129 Nov 29 j 20:22	4° 10 46'31		minimum elong	-1120 Mar 15 j 04:33	14° 10 21'43	16°50'37
				max. Earth dist.	-1120 Mar 16 j 22:01	14° 10 24'08	49.34007 AU
conjunction	-1128 Mar 06 j 22:42	6° 10 16'22	-16°54'48	retrograde	-1120 Jun 26 j 11:20	15° 10 53'52	
minimum elong	-1128 Mar 06 j 22:45	6° 10 16'22	16°54'49	min. Earth dist.	-1120 Sep 16 j 11:44	14° 10 54'53	47.46645 AU
max. Earth dist.	-1128 Mar 09 j 01:26	6° 10 19'23	48.60196 AU	opposition	-1120 Sep 18 j 02:34	14° 10 53'01	-17°31'41
retrograde	-1128 Jun 18 j 03:48	7° 10 50'09		direct	-1120 Dec 08 j 00:45	13° 10 53'25	
min. Earth dist.	-1128 Sep 08 j 03:05	6° 10 50'41	46.74512 AU				
opposition	-1128 Sep 10 j 02:00	6° 10 48'25	-17°37'55	conjunction	-1119 Mar 16 j 10:52	15° 10 21'38	-16°48'52
direct	-1128 Nov 30 j 03:50	5° 10 48'02		minimum elong	-1119 Mar 16 j 10:58	15° 10 21'39	16°48'52
				max. Earth dist.	-1119 Mar 18 j 02:46	15° 10 23'58	49.41213 AU
conjunction	-1127 Mar 08 j 05:31	7° 10 17'39	-16°55'21	retrograde	-1119 Jun 27 j 14:35	16° 10 53'36	
minimum elong	-1127 Mar 08 j 05:34	7° 10 17'40	16°55'20	min. Earth dist.	-1119 Sep 17 j 19:48	15° 10 54'33	47.53560 AU
max. Earth dist.	-1127 Mar 10 j 06:21	7° 10 20'33	48.70609 AU	opposition	-1119 Sep 19 j 08:21	15° 10 52'49	-17°29'39
retrograde	-1127 Jun 19 j 13:31	8° 10 51'13		direct	-1119 Dec 09 j 09:35	14° 10 53'15	
min. Earth dist.	-1127 Sep 09 j 09:55	7° 10 51'49	46.84786 AU				
opposition	-1127 Sep 11 j 08:28	7° 10 49'34	-17°38'12	conjunction	-1118 Mar 17 j 17:24	16° 10 21'17	-16°46'51
direct	-1127 Dec 01 j 07:31	6° 10 49'17		minimum elong	-1118 Mar 17 j 17:30	16° 10 21'18	16°46'51
				max. Earth dist.	-1118 Mar 19 j 08:44	16° 10 23'35	49.47919 AU
conjunction	-1126 Mar 09 j 12:29	8° 10 18'42	-16°55'34	retrograde	-1118 Jun 28 j 18:06	17° 10 53'02	
minimum elong	-1126 Mar 09 j 12:32	8° 10 18'42	16°55'34	min. Earth dist.	-1118 Sep 19 j 02:00	16° 10 54'01	47.59985 AU
max. Earth dist.	-1126 Mar 11 j 13:18	8° 10 21'35	48.80723 AU	opposition	-1118 Sep 20 j 13:43	16° 10 52'18	-17°27'22
retrograde	-1126 Jun 20 j 19:39	9° 10 52'01		direct	-1118 Dec 10 j 18:24	15° 10 52'46	
min. Earth dist.	-1126 Sep 10 j 17:52	8° 10 52'40	46.94755 AU				
opposition	-1126 Sep 12 j 14:42	8° 10 50'30	-17°38'11	conjunction	-1117 Mar 18 j 23:37	17° 10 20'38	-16°44'35
direct	-1126 Dec 02 j 13:40	7° 10 50'19		minimum elong	-1117 Mar 18 j 23:44	17° 10 20'38	16°44'35
				max. Earth dist.	-1117 Mar 20 j 12:41	17° 10 22'47	49.54172 AU
conjunction	-1125 Mar 10 j 19:18	9° 10 19'32	-16°55'28	retrograde	-1117 Jun 30 j 02:23	18° 10 52'10	
minimum elong	-1125 Mar 10 j 19:23	9° 10 19'33	16°55'28	min. Earth dist.	-1117 Sep 20 j 08:24	17° 10 53'09	47.66002 AU
max. Earth dist.	-1125 Mar 12 j 18:57	9° 10 22'21	48.90554 AU	opposition	-1117 Sep 21 j 19:11	17° 10 51'29	-17°24'49

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 21

Attention, astronomical year style is used: The year -1117 in astronomical counting style is the year 1118 BCE in historical counting style.

direct	-1117 Dec 11 j 22:21	16° $\mathbf{\text{X}}$ 51'59		minimum elong	-1108 Mar 27 j 05:20	26° $\mathbf{\text{X}}$ 05'49	16°11'47
				max. Earth dist.	-1108 Mar 28 j 09:25	26° $\mathbf{\text{X}}$ 07'26	49.95241 AU
conjunction	-1116 Mar 19 j 05:40	18° $\mathbf{\text{X}}$ 19'40	-16°42'02	retrograde	-1108 Jul 08 j 02:18	27° $\mathbf{\text{X}}$ 36'06	
minimum elong	-1116 Mar 19 j 05:47	18° $\mathbf{\text{X}}$ 19'41	16°42'02	opposition	-1108 Sep 29 j 16:46	26° $\mathbf{\text{X}}$ 36'02	-16°49'07
max. Earth dist.	-1116 Mar 20 j 18:40	18° $\mathbf{\text{X}}$ 21'49	49.60039 AU	min. Earth dist.	-1108 Sep 28 j 15:45	26° $\mathbf{\text{X}}$ 37'13	48.04784 AU
retrograde	-1116 Jun 30 j 08:42	19° $\mathbf{\text{X}}$ 51'01		direct	-1108 Dec 19 j 23:16	25° $\mathbf{\text{X}}$ 36'59	
min. Earth dist.	-1116 Sep 20 j 15:22	18° $\mathbf{\text{X}}$ 51'57	47.71649 AU				
opposition	-1116 Sep 22 j 00:35	18° $\mathbf{\text{X}}$ 50'22	-17°21'58	conjunction	-1107 Mar 28 j 11:00	27° $\mathbf{\text{X}}$ 03'46	-16°06'53
direct	-1116 Dec 12 j 03:38	17° $\mathbf{\text{X}}$ 50'54		minimum elong	-1107 Mar 28 j 11:08	27° $\mathbf{\text{X}}$ 03'46	16°06'53
				max. Earth dist.	-1107 Mar 29 j 12:34	27° $\mathbf{\text{X}}$ 05'14	49.97700 AU
conjunction	-1115 Mar 20 j 11:47	19° $\mathbf{\text{X}}$ 18'26	-16°39'13	retrograde	-1107 Jul 09 j 10:03	28° $\mathbf{\text{X}}$ 33'56	
minimum elong	-1115 Mar 20 j 11:54	19° $\mathbf{\text{X}}$ 18'26	16°39'13	opposition	-1107 Sep 30 j 21:32	27° $\mathbf{\text{X}}$ 33'55	-16°43'53
max. Earth dist.	-1115 Mar 21 j 23:26	19° $\mathbf{\text{X}}$ 20'29	49.65583 AU	min. Earth dist.	-1107 Sep 29 j 21:58	27° $\mathbf{\text{X}}$ 35'02	48.06903 AU
retrograde	-1115 Jul 01 j 14:02	20° $\mathbf{\text{X}}$ 49'35		direct	-1107 Dec 21 j 02:51	26° $\mathbf{\text{X}}$ 34'54	
min. Earth dist.	-1115 Sep 21 j 20:30	19° $\mathbf{\text{X}}$ 50'34	47.76988 AU				
opposition	-1115 Sep 23 j 05:41	19° $\mathbf{\text{X}}$ 48'59	-17°18'50	conjunction	-1106 Mar 29 j 16:55	28° $\mathbf{\text{X}}$ 01'36	-16°01'45
direct	-1115 Dec 13 j 08:11	18° $\mathbf{\text{X}}$ 49'33		minimum elong	-1106 Mar 29 j 17:05	28° $\mathbf{\text{X}}$ 01'37	16°01'46
				max. Earth dist.	-1106 Mar 30 j 17:59	28° $\mathbf{\text{X}}$ 03'02	49.99651 AU
conjunction	-1114 Mar 21 j 17:47	20° $\mathbf{\text{X}}$ 16'57	-16°36'06	retrograde	-1106 Jul 10 j 16:24	29° $\mathbf{\text{X}}$ 31'40	
minimum elong	-1114 Mar 21 j 17:55	20° $\mathbf{\text{X}}$ 16'57	16°36'06	min. Earth dist.	-1106 Oct 01 j 04:35	28° $\mathbf{\text{X}}$ 32'43	48.08523 AU
max. Earth dist.	-1114 Mar 23 j 04:17	20° $\mathbf{\text{X}}$ 18'56	49.70822 AU	opposition	-1106 Oct 02 j 02:18	28° $\mathbf{\text{X}}$ 31'41	-16°38'25
retrograde	-1114 Jul 02 j 18:15	21° $\mathbf{\text{X}}$ 47'56		direct	-1106 Dec 22 j 07:24	27° $\mathbf{\text{X}}$ 32'41	
min. Earth dist.	-1114 Sep 23 j 03:28	20° $\mathbf{\text{X}}$ 48'54	47.82033 AU				
opposition	-1114 Sep 24 j 10:57	20° $\mathbf{\text{X}}$ 47'24	-17°15'25	conjunction	-1105 Mar 30 j 22:35	28° $\mathbf{\text{X}}$ 59'18	-15°56'23
direct	-1114 Dec 14 j 14:26	19° $\mathbf{\text{X}}$ 48'00		minimum elong	-1105 Mar 30 j 22:44	28° $\mathbf{\text{X}}$ 59'18	15°56'22
				max. Earth dist.	-1105 Mar 31 j 21:56	29° $\mathbf{\text{X}}$ 00'38	50.01148 AU
conjunction	-1113 Mar 22 j 23:46	21° $\mathbf{\text{X}}$ 15'16	-16°32'43		-1105 May 18 j 13:23	0° $\mathbf{\text{Y}}$	
minimum elong	-1113 Mar 22 j 23:53	21° $\mathbf{\text{X}}$ 15'17	16°32'43	retrograde	-1105 Jul 11 j 21:56	0° $\mathbf{\text{Y}}$ 29'14	
max. Earth dist.	-1113 Mar 24 j 10:05	21° $\mathbf{\text{X}}$ 17'15	49.75783 AU		-1105 Sep 04 j 21:03	30° $\mathbf{\text{R}}$ $\mathbf{\text{X}}$	
retrograde	-1113 Jul 03 j 21:44	22° $\mathbf{\text{X}}$ 46'06		min. Earth dist.	-1105 Oct 02 j 09:24	29° $\mathbf{\text{X}}$ 30'18	48.09720 AU
min. Earth dist.	-1113 Sep 24 j 08:47	21° $\mathbf{\text{X}}$ 47'08	47.86780 AU	opposition	-1105 Oct 03 j 06:51	29° $\mathbf{\text{X}}$ 29'17	-16°32'42
opposition	-1113 Sep 25 j 15:57	21° $\mathbf{\text{X}}$ 45'39	-17°11'42	direct	-1105 Dec 23 j 10:53	28° $\mathbf{\text{X}}$ 30'17	
direct	-1113 Dec 15 j 21:54	20° $\mathbf{\text{X}}$ 46'19					
				conjunction	-1104 Mar 31 j 04:11	29° $\mathbf{\text{X}}$ 56'50	-15°50'46
conjunction	-1112 Mar 23 j 05:34	22° $\mathbf{\text{X}}$ 13'28	-16°29'03	minimum elong	-1104 Mar 31 j 04:21	29° $\mathbf{\text{X}}$ 56'51	15°50'47
minimum elong	-1112 Mar 23 j 05:42	22° $\mathbf{\text{X}}$ 13'29	16°29'03	max. Earth dist.	-1104 Apr 01 j 02:11	29° $\mathbf{\text{X}}$ 58'06	50.02242 AU
max. Earth dist.	-1112 Mar 24 j 13:58	22° $\mathbf{\text{X}}$ 15'20	49.80453 AU		-1104 Apr 02 j 11:41	0° $\mathbf{\text{Y}}$	
retrograde	-1112 Jul 04 j 05:20	23° $\mathbf{\text{X}}$ 44'11		retrograde	-1104 Jul 12 j 01:37	1° $\mathbf{\text{Y}}$ 26'41	
opposition	-1112 Sep 25 j 21:02	22° $\mathbf{\text{X}}$ 43'48	-17°07'42	opposition	-1104 Oct 03 j 11:29	0° $\mathbf{\text{Y}}$ 26'45	-16°26'43
min. Earth dist.	-1112 Sep 24 j 14:48	22° $\mathbf{\text{X}}$ 45'14	47.91233 AU	min. Earth dist.	-1104 Oct 02 j 16:00	0° $\mathbf{\text{Y}}$ 27'40	48.10548 AU
direct	-1112 Dec 16 j 01:52	21° $\mathbf{\text{X}}$ 44'32			-1104 Oct 27 j 20:33	30° $\mathbf{\text{R}}$ $\mathbf{\text{X}}$	
				direct	-1104 Dec 23 j 16:41	29° $\mathbf{\text{X}}$ 27'46	
conjunction	-1111 Mar 24 j 11:27	23° $\mathbf{\text{X}}$ 11'36	-16°25'06		-1103 Feb 17 j 14:00	0° $\mathbf{\text{Y}}$	
minimum elong	-1111 Mar 24 j 11:34	23° $\mathbf{\text{X}}$ 11'36	16°25'07				
max. Earth dist.	-1111 Mar 25 j 19:46	23° $\mathbf{\text{X}}$ 13'27	49.84797 AU	conjunction	-1103 Apr 01 j 09:51	0° $\mathbf{\text{Y}}$ 54'15	-15°44'54
retrograde	-1111 Jul 05 j 12:31	24° $\mathbf{\text{X}}$ 42'12		minimum elong	-1103 Apr 01 j 10:01	0° $\mathbf{\text{Y}}$ 54'16	15°44'53
min. Earth dist.	-1111 Sep 25 j 21:33	23° $\mathbf{\text{X}}$ 43'15	47.95315 AU	max. Earth dist.	-1103 Apr 02 j 07:34	0° $\mathbf{\text{Y}}$ 55'29	50.03003 AU
opposition	-1111 Sep 27 j 02:04	23° $\mathbf{\text{X}}$ 41'54	-17°03'26	retrograde	-1103 Jul 13 j 03:52	2° $\mathbf{\text{Y}}$ 24'00	
direct	-1111 Dec 17 j 05:39	22° $\mathbf{\text{X}}$ 42'43		opposition	-1103 Oct 04 j 15:59	1° $\mathbf{\text{Y}}$ 24'05	-16°20'28
				min. Earth dist.	-1103 Oct 03 j 20:45	1° $\mathbf{\text{Y}}$ 25'00	48.11042 AU
conjunction	-1110 Mar 25 j 17:25	24° $\mathbf{\text{X}}$ 09'42	-16°20'54	direct	-1103 Dec 25 j 00:22	0° $\mathbf{\text{Y}}$ 25'07	
minimum elong	-1110 Mar 25 j 17:34	24° $\mathbf{\text{X}}$ 09'43	16°20'54				
max. Earth dist.	-1110 Mar 26 j 23:57	24° $\mathbf{\text{X}}$ 11'27	49.88757 AU	conjunction	-1102 Apr 02 j 15:25	1° $\mathbf{\text{Y}}$ 51'33	-15°38'46
retrograde	-1110 Jul 06 j 19:34	25° $\mathbf{\text{X}}$ 40'11		minimum elong	-1102 Apr 02 j 15:34	1° $\mathbf{\text{Y}}$ 51'33	15°38'46
min. Earth dist.	-1110 Sep 27 j 02:41	24° $\mathbf{\text{X}}$ 41'19	47.98977 AU	max. Earth dist.	-1102 Apr 03 j 11:05	1° $\mathbf{\text{Y}}$ 52'40	50.03448 AU
opposition	-1110 Sep 28 j 06:50	24° $\mathbf{\text{X}}$ 39'59	-16°58'54	retrograde	-1102 Jul 14 j 10:00	3° $\mathbf{\text{Y}}$ 21'13	
direct	-1110 Dec 18 j 08:36	23° $\mathbf{\text{X}}$ 40'51		opposition	-1102 Oct 05 j 20:26	2° $\mathbf{\text{Y}}$ 21'21	-16°13'57
				min. Earth dist.	-1102 Oct 05 j 02:20	2° $\mathbf{\text{Y}}$ 22'13	48.11244 AU
conjunction	-1109 Mar 26 j 23:19	25° $\mathbf{\text{X}}$ 07'47	-16°16'28	direct	-1102 Dec 26 j 04:48	1° $\mathbf{\text{Y}}$ 22'23	
minimum elong	-1109 Mar 26 j 23:27	25° $\mathbf{\text{X}}$ 07'47	16°16'27				
max. Earth dist.	-1109 Mar 28 j 04:14	25° $\mathbf{\text{X}}$ 09'26	49.92250 AU	conjunction	-1101 Apr 03 j 21:02	2° $\mathbf{\text{Y}}$ 48'47	-15°32'22
retrograde	-1109 Jul 07 j 23:28	26° $\mathbf{\text{X}}$ 38'10		minimum elong	-1101 Apr 03 j 21:13	2° $\mathbf{\text{Y}}$ 48'48	15°32'21
min. Earth dist.	-1109 Sep 28 j 10:06	25° $\mathbf{\text{X}}$ 39'15	48.02149 AU	max. Earth dist.	-1101 Apr 04 j 16:40	2° $\mathbf{\text{Y}}$ 49'54	50.03602 AU
opposition	-1109 Sep 29 j 11:51	25° $\mathbf{\text{X}}$ 38'02	-16°54'08	retrograde	-1101 Jul 15 j 16:50	4° $\mathbf{\text{Y}}$ 18'23	
direct	-1109 Dec 19 j 15:09	24° $\mathbf{\text{X}}$ 38'58		min. Earth dist.	-1101 Oct 06 j 08:09	3° $\mathbf{\text{Y}}$ 19'22	48.11144 AU
				opposition	-1101 Oct 07 j 00:59	3° $\mathbf{\text{Y}}$ 18'34	-16°07'10
conjunction	-1108 Mar 27 j 05:11	26° $\mathbf{\text{X}}$ 05'49	-16°11'47	direct	-1101 Dec 27 j 08:27	2° $\mathbf{\text{Y}}$ 19'38	

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 22

Attention, astronomical year style is used: The year -1100 in astronomical counting style is the year 1101 BCE in historical counting style.

conjunction	-1100 Apr 04 j 02:25	3° Υ 46'00	-15°25'43	retrograde	-1093 Jul 23 j 08:51	11° Υ 55'54	
minimum elong	-1100 Apr 04 j 02:35	3° Υ 46'00	15°25'43	opposition	-1093 Oct 14 j 12:31	10° Υ 56'14	-15°04'07
max. Earth dist.	-1100 Apr 04 j 20:34	3° Υ 47'01	50.03472 AU	min. Earth dist.	-1093 Oct 14 j 05:35	10° Υ 56'34	47.95058 AU
retrograde	-1100 Jul 16 j 01:06	5° Υ 15'32		direct	-1092 Jan 03 j 23:00	9° Υ 57'16	
opposition	-1100 Oct 07 j 05:27	4° Υ 15'46	-16°00'07	evening set	-1092 Apr 07 j 11:21	11° Υ 17'30	
min. Earth dist.	-1100 Oct 06 j 12:44	4° Υ 16'33	48.10742 AU				
direct	-1100 Dec 27 j 09:48	3° Υ 16'51		conjunction	-1092 Apr 11 j 23:41	11° Υ 23'38	-14°24'05
				minimum elong	-1092 Apr 11 j 23:52	11° Υ 23'39	14°24'04
conjunction	-1099 Apr 05 j 08:01	4° Υ 43'13	-15°18'48	max. Earth dist.	-1092 Apr 12 j 05:57	11° Υ 24'00	49.86500 AU
minimum elong	-1099 Apr 05 j 08:12	4° Υ 43'14	15°18'48	morning rise	-1092 Apr 16 j 12:39	11° Υ 29'49	
max. Earth dist.	-1099 Apr 06 j 00:55	4° Υ 44'10	50.03005 AU	retrograde	-1092 Jul 23 j 14:17	12° Υ 52'54	
retrograde	-1099 Jul 17 j 05:32	6° Υ 12'43		opposition	-1092 Oct 14 j 16:56	11° Υ 53'13	-14°55'12
opposition	-1099 Oct 08 j 09:55	5° Υ 12'59	-15°52'48	min. Earth dist.	-1092 Oct 14 j 11:24	11° Υ 53'29	47.90915 AU
min. Earth dist.	-1099 Oct 07 j 19:23	5° Υ 13'41	48.09980 AU	direct	-1091 Jan 04 j 03:38	10° Υ 54'13	
direct	-1099 Dec 28 j 14:27	4° Υ 14'06		evening set	-1091 Apr 08 j 04:49	12° Υ 13'47	
conjunction	-1098 Apr 06 j 13:48	5° Υ 40'28	-15°11'39	conjunction	-1091 Apr 13 j 05:24	12° Υ 20'36	-14°15'21
minimum elong	-1098 Apr 06 j 13:57	5° Υ 40'29	15°11'39	minimum elong	-1091 Apr 13 j 05:35	12° Υ 20'36	14°15'21
max. Earth dist.	-1098 Apr 07 j 06:05	5° Υ 41'24	50.02159 AU	max. Earth dist.	-1091 Apr 13 j 11:23	12° Υ 20'56	49.82298 AU
retrograde	-1098 Jul 18 j 07:09	7° Υ 09'56		morning rise	-1091 Apr 18 j 06:35	12° Υ 27'28	
opposition	-1098 Oct 09 j 14:19	6° Υ 10'15	-15°45'15	retrograde	-1091 Jul 24 j 19:44	13° Υ 49'51	
min. Earth dist.	-1098 Oct 09 j 00:26	6° Υ 10'54	48.08788 AU	opposition	-1091 Oct 15 j 21:13	12° Υ 50'10	-14°46'01
direct	-1098 Dec 29 j 22:30	5° Υ 11'23		min. Earth dist.	-1091 Oct 15 j 17:02	12° Υ 50'21	47.86409 AU
				direct	-1090 Jan 05 j 08:25	11° Υ 51'07	
conjunction	-1097 Apr 07 j 19:20	6° Υ 37'45	-15°04'16	evening set	-1090 Apr 08 j 23:18	13° Υ 10'06	
minimum elong	-1097 Apr 07 j 19:32	6° Υ 37'46	15°04'16				
max. Earth dist.	-1097 Apr 08 j 09:04	6° Υ 38'32	50.00844 AU	conjunction	-1090 Apr 14 j 11:02	13° Υ 17'33	-14°06'23
retrograde	-1097 Jul 19 j 12:57	8° Υ 07'12		minimum elong	-1090 Apr 14 j 11:14	13° Υ 17'33	14°06'22
opposition	-1097 Oct 10 j 18:49	7° Υ 07'33	-15°37'28	max. Earth dist.	-1090 Apr 14 j 15:27	13° Υ 17'47	49.77774 AU
min. Earth dist.	-1097 Oct 10 j 06:31	7° Υ 08'08	48.07106 AU	morning rise	-1090 Apr 19 j 23:27	13° Υ 25'02	
direct	-1097 Dec 31 j 03:28	6° Υ 08'41		retrograde	-1090 Jul 26 j 03:36	14° Υ 46'47	
evening set	-1096 Apr 06 j 15:58	7° Υ 33'11		opposition	-1090 Oct 17 j 01:31	13° Υ 47'06	-14°36'35
				min. Earth dist.	-1090 Oct 16 j 21:28	13° Υ 47'17	47.81595 AU
conjunction	-1096 Apr 08 j 01:08	7° Υ 35'03	-14°56'40	direct	-1089 Jan 06 j 10:06	12° Υ 48'02	
minimum elong	-1096 Apr 08 j 01:19	7° Υ 35'04	14°56'40	evening set	-1089 Apr 09 j 18:11	14° Υ 06'28	
morning rise	-1096 Apr 09 j 10:43	7° Υ 36'58					
max. Earth dist.	-1096 Apr 08 j 14:11	7° Υ 35'48	49.99009 AU	conjunction	-1089 Apr 15 j 16:31	14° Υ 14'31	-13°57'09
retrograde	-1096 Jul 19 j 18:50	9° Υ 04'28		minimum elong	-1089 Apr 15 j 16:42	14° Υ 14'32	13°57'09
opposition	-1096 Oct 10 j 23:20	8° Υ 04'50	-15°29'28	max. Earth dist.	-1089 Apr 15 j 19:45	14° Υ 14'42	49.72936 AU
min. Earth dist.	-1096 Oct 10 j 12:56	8° Υ 05'19	48.04875 AU	morning rise	-1089 Apr 21 j 15:35	14° Υ 22'36	
direct	-1096 Dec 31 j 08:11	7° Υ 05'58		retrograde	-1089 Jul 27 j 09:08	15° Υ 43'47	
evening set	-1095 Apr 06 j 18:12	8° Υ 28'53		opposition	-1089 Oct 18 j 05:57	14° Υ 44'06	-14°26'53
				min. Earth dist.	-1089 Oct 18 j 03:50	14° Υ 44'12	47.76478 AU
conjunction	-1095 Apr 09 j 06:51	8° Υ 32'19	-14°48'51	direct	-1088 Jan 07 j 13:37	13° Υ 45'01	
minimum elong	-1095 Apr 09 j 07:02	8° Υ 32'20	14°48'51	evening set	-1088 Apr 09 j 13:57	15° Υ 02'58	
max. Earth dist.	-1095 Apr 09 j 17:49	8° Υ 32'57	49.96638 AU				
morning rise	-1095 Apr 11 j 19:58	8° Υ 35'47		conjunction	-1088 Apr 15 j 22:13	15° Υ 11'35	-13°47'40
retrograde	-1095 Jul 21 j 01:48	10° Υ 01'41		minimum elong	-1088 Apr 15 j 22:26	15° Υ 11'35	13°47'39
opposition	-1095 Oct 12 j 03:46	9° Υ 02'03	-15°21'15	max. Earth dist.	-1088 Apr 16 j 01:09	15° Υ 11'45	49.67817 AU
min. Earth dist.	-1095 Oct 11 j 18:01	9° Υ 02'31	48.02102 AU	morning rise	-1088 Apr 22 j 07:13	15° Υ 20'14	
direct	-1094 Jan 01 j 10:54	8° Υ 03'10		retrograde	-1088 Jul 27 j 11:00	16° Υ 40'53	
evening set	-1094 Apr 07 j 05:03	9° Υ 25'01		opposition	-1088 Oct 18 j 10:13	15° Υ 41'13	-14°16'55
				min. Earth dist.	-1088 Oct 18 j 08:16	15° Υ 41'18	47.71057 AU
conjunction	-1094 Apr 10 j 12:34	9° Υ 29'31	-14°40'50	direct	-1087 Jan 07 j 21:15	14° Υ 42'07	
minimum elong	-1094 Apr 10 j 12:45	9° Υ 29'32	14°40'49	evening set	-1087 Apr 10 j 10:06	15° Υ 59'37	
max. Earth dist.	-1094 Apr 10 j 21:39	9° Υ 30'02	49.93719 AU				
morning rise	-1094 Apr 13 j 20:35	9° Υ 34'03		conjunction	-1087 Apr 17 j 03:50	16° Υ 08'46	-13°37'56
retrograde	-1094 Jul 22 j 06:42	10° Υ 58'50		minimum elong	-1087 Apr 17 j 04:01	16° Υ 08'47	13°37'56
opposition	-1094 Oct 13 j 08:10	9° Υ 59'12	-15°12'48	max. Earth dist.	-1087 Apr 17 j 04:30	16° Υ 08'49	49.62376 AU
min. Earth dist.	-1094 Oct 13 j 00:45	9° Υ 59'33	47.98811 AU	morning rise	-1087 Apr 23 j 22:25	16° Υ 17'59	
direct	-1093 Jan 02 j 15:47	9° Υ 00'16		retrograde	-1087 Jul 28 j 16:16	17° Υ 38'08	
evening set	-1093 Apr 07 j 19:26	10° Υ 21'15		opposition	-1087 Oct 19 j 14:38	16° Υ 38'29	-14°06'42
				min. Earth dist.	-1087 Oct 19 j 14:10	16° Υ 38'30	47.65298 AU
conjunction	-1093 Apr 11 j 18:18	10° Υ 26'38	-14°32'34	direct	-1086 Jan 09 j 02:31	15° Υ 39'23	
minimum elong	-1093 Apr 11 j 18:30	10° Υ 26'38	14°32'34	evening set	-1086 Apr 11 j 06:50	16° Υ 56'28	
max. Earth dist.	-1093 Apr 12 j 02:48	10° Υ 27'07	49.90325 AU				
morning rise	-1093 Apr 15 j 17:42	10° Υ 32'02		conjunction	-1086 Apr 18 j 09:44	17° Υ 06'08	-13°27'57

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 23

Attention, astronomical year style is used: The year -1086 in astronomical counting style is the year 1087 BCE in historical counting style.

minimum elong	-1086 Apr 18 j 09:57	17° Υ 06'09	13°27'56	evening set	-1079 Apr 15 j 17:30	23° Υ 37'42	
max. Earth dist.	-1086 Apr 18 j 10:05	17° Υ 06'10	49.56556 AU				
morning rise	-1086 Apr 25 j 13:26	17° Υ 15'52		conjunction	-1079 Apr 25 j 03:27	23° Υ 50'32	-12°11'46
retrograde	-1086 Jul 29 j 22:24	18° Υ 35'34		minimum elong	-1079 Apr 25 j 03:39	23° Υ 50'33	12°11'45
opposition	-1086 Oct 20 j 19:00	17° Υ 35'56	-13°56'14	max. Earth dist.	-1079 Apr 24 j 16:53	23° Υ 49'56	49.02418 AU
min. Earth dist.	-1086 Oct 20 j 20:10	17° Υ 35'53	47.59118 AU	morning rise	-1079 May 04 j 14:28	24° Υ 03'26	
direct	-1085 Jan 10 j 06:46	16° Υ 36'50		retrograde	-1079 Aug 05 j 16:05	25° Υ 20'22	
evening set	-1085 Apr 12 j 04:04	17° Υ 53'31		opposition	-1079 Oct 27 j 02:46	24° Υ 20'27	-12°36'28
				min. Earth dist.	-1079 Oct 27 j 13:12	24° Υ 19'57	47.02362 AU
conjunction	-1085 Apr 19 j 15:34	18° Υ 03'41	-13°17'45	direct	-1078 Jan 16 j 13:12	23° Υ 20'50	
minimum elong	-1085 Apr 19 j 15:46	18° Υ 03'41	13°17'44	evening set	-1078 Apr 16 j 16:39	24° Υ 35'10	
max. Earth dist.	-1085 Apr 19 j 13:55	18° Υ 03'35	49.50303 AU				
morning rise	-1085 Apr 27 j 03:56	18° Υ 13'55		conjunction	-1078 Apr 26 j 09:36	24° Υ 48'25	-11°59'56
retrograde	-1085 Jul 31 j 06:25	19° Υ 33'11		minimum elong	-1078 Apr 26 j 09:48	24° Υ 48'26	11°59'56
opposition	-1085 Oct 21 j 23:26	18° Υ 33'33	-13°45'33	max. Earth dist.	-1078 Apr 25 j 22:39	24° Υ 47'47	48.93053 AU
min. Earth dist.	-1085 Oct 22 j 01:14	18° Υ 33'28	47.52476 AU	morning rise	-1078 May 06 j 03:27	25° Υ 01'43	
direct	-1084 Jan 11 j 08:36	17° Υ 34'25		retrograde	-1078 Aug 06 j 18:51	26° Υ 18'20	
evening set	-1084 Apr 12 j 01:26	18° Υ 50'43		opposition	-1078 Oct 28 j 07:16	25° Υ 18'20	-12°24'04
				min. Earth dist.	-1078 Oct 28 j 17:45	25° Υ 17'50	46.92699 AU
conjunction	-1084 Apr 19 j 21:23	19° Υ 01'23	-13°07'19	direct	-1077 Jan 17 j 20:32	24° Υ 18'38	
minimum elong	-1084 Apr 19 j 21:36	19° Υ 01'23	13°07'18	evening set	-1077 Apr 17 j 15:57	25° Υ 32'44	
max. Earth dist.	-1084 Apr 19 j 17:55	19° Υ 01'11	49.43540 AU				
morning rise	-1084 Apr 27 j 18:17	19° Υ 12'05		conjunction	-1077 Apr 27 j 15:36	25° Υ 46'22	-11°47'51
retrograde	-1084 Jul 31 j 12:30	20° Υ 30'56		minimum elong	-1077 Apr 27 j 15:48	25° Υ 46'23	11°47'50
opposition	-1084 Oct 22 j 04:05	19° Υ 31'17	-13°34'37	max. Earth dist.	-1077 Apr 27 j 02:36	25° Υ 45'37	48.83409 AU
min. Earth dist.	-1084 Oct 22 j 08:15	19° Υ 31'05	47.45306 AU	morning rise	-1077 May 07 j 16:25	26° Υ 00'05	
direct	-1083 Jan 11 j 13:02	18° Υ 32'06		retrograde	-1077 Aug 07 j 23:05	27° Υ 16'23	
evening set	-1083 Apr 12 j 23:27	19° Υ 48'03		opposition	-1077 Oct 29 j 12:01	26° Υ 16'21	-12°11'24
				min. Earth dist.	-1077 Oct 29 j 23:44	26° Υ 15'47	46.82777 AU
conjunction	-1083 Apr 21 j 03:30	19° Υ 59'10	-12°56'40	direct	-1076 Jan 19 j 02:39	25° Υ 16'34	
minimum elong	-1083 Apr 21 j 03:42	19° Υ 59'11	12°56'39	evening set	-1076 Apr 17 j 15:16	26° Υ 30'25	
max. Earth dist.	-1083 Apr 20 j 23:09	19° Υ 58'55	49.36257 AU				
morning rise	-1083 Apr 29 j 08:23	20° Υ 10'20		conjunction	-1076 Apr 27 j 21:44	26° Υ 44'28	-11°35'30
retrograde	-1083 Aug 01 j 15:07	21° Υ 28'46		minimum elong	-1076 Apr 27 j 21:55	26° Υ 44'28	11°35'30
opposition	-1083 Oct 23 j 08:30	20° Υ 29'05	-13°23'28	max. Earth dist.	-1076 Apr 27 j 08:43	26° Υ 43'43	48.73500 AU
min. Earth dist.	-1083 Oct 23 j 13:21	20° Υ 28'51	47.37602 AU	morning rise	-1076 May 08 j 05:08	26° Υ 58'34	
direct	-1082 Jan 12 j 20:20	19° Υ 29'50		retrograde	-1076 Aug 08 j 03:57	28° Υ 14'37	
evening set	-1082 Apr 13 j 21:43	20° Υ 45'27		opposition	-1076 Oct 29 j 16:51	27° Υ 14'31	-11°58'28
				min. Earth dist.	-1076 Oct 30 j 05:42	27° Υ 13'54	46.72570 AU
conjunction	-1082 Apr 22 j 09:30	20° Υ 57'00	-12°45'47	direct	-1075 Jan 19 j 08:40	26° Υ 14'41	
minimum elong	-1082 Apr 22 j 09:42	20° Υ 57'01	12°45'47	evening set	-1075 Apr 18 j 15:10	27° Υ 28'19	
max. Earth dist.	-1082 Apr 22 j 02:30	20° Υ 56'36	49.28449 AU				
morning rise	-1082 Apr 30 j 22:20	21° Υ 08'37		conjunction	-1075 Apr 29 j 04:00	27° Υ 42'45	-11°22'53
retrograde	-1082 Aug 02 j 20:13	22° Υ 26'40		minimum elong	-1075 Apr 29 j 04:12	27° Υ 42'46	11°22'52
opposition	-1082 Oct 24 j 13:05	21° Υ 26'55	-13°12'05	max. Earth dist.	-1075 Apr 28 j 13:21	27° Υ 41'54	48.63312 AU
min. Earth dist.	-1082 Oct 24 j 19:44	21° Υ 26'36	47.29406 AU	morning rise	-1075 May 09 j 17:56	27° Υ 57'15	
direct	-1081 Jan 14 j 01:52	20° Υ 27'36		retrograde	-1075 Aug 09 j 12:03	29° Υ 13'03	
evening set	-1081 Apr 14 j 19:59	21° Υ 42'51		opposition	-1075 Oct 30 j 21:29	28° Υ 12'56	-11°45'16
				min. Earth dist.	-1075 Oct 31 j 10:46	28° Υ 12'17	46.62064 AU
conjunction	-1081 Apr 23 j 15:28	21° Υ 54'51	-12°34'41	direct	-1074 Jan 20 j 11:18	27° Υ 13'02	
minimum elong	-1081 Apr 23 j 15:39	21° Υ 54'51	12°34'41	evening set	-1074 Apr 19 j 15:13	28° Υ 26'29	
max. Earth dist.	-1081 Apr 23 j 07:56	21° Υ 54'25	49.20165 AU				
morning rise	-1081 May 02 j 11:49	22° Υ 06'54		conjunction	-1074 Apr 30 j 10:27	28° Υ 41'18	-11°10'01
retrograde	-1081 Aug 04 j 00:16	23° Υ 24'34		minimum elong	-1074 Apr 30 j 10:38	28° Υ 41'19	11°10'01
opposition	-1081 Oct 25 j 17:40	22° Υ 24'46	-13°00'28	max. Earth dist.	-1074 Apr 29 j 18:18	28° Υ 40'22	48.52773 AU
min. Earth dist.	-1081 Oct 26 j 01:39	22° Υ 24'23	47.20754 AU	morning rise	-1074 May 11 j 06:46	28° Υ 56'11	
direct	-1080 Jan 15 j 08:25	21° Υ 25'21			-1074 Jul 08 j 09:08	0° \mathcal{B}	
evening set	-1080 Apr 14 j 18:43	22° Υ 40'16		retrograde	-1074 Aug 10 j 19:27	0° \mathcal{B} 11'45	
					-1074 Sep 13 j 06:02	30° $\mathcal{R}\Upsilon$	
conjunction	-1080 Apr 23 j 21:25	22° Υ 52'41	-12°23'21	opposition	-1074 Nov 01 j 02:29	29° Υ 11'37	-11°31'48
minimum elong	-1080 Apr 23 j 21:37	22° Υ 52'42	12°23'21	min. Earth dist.	-1074 Nov 01 j 17:58	29° Υ 10'52	46.51179 AU
max. Earth dist.	-1080 Apr 23 j 12:12	22° Υ 52'09	49.11475 AU	direct	-1073 Jan 21 j 15:08	28° Υ 11'39	
morning rise	-1080 May 03 j 01:09	23° Υ 05'11		evening set	-1073 Apr 20 j 15:31	29° Υ 24'57	
retrograde	-1080 Aug 04 j 08:28	24° Υ 22'28					
opposition	-1080 Oct 25 j 22:05	23° Υ 22'36	-12°48'36	conjunction	-1073 May 01 j 16:56	29° Υ 40'08	-10°56'55
min. Earth dist.	-1080 Oct 26 j 06:32	23° Υ 22'12	47.11728 AU	minimum elong	-1073 May 01 j 17:08	29° Υ 40'09	10°56'54
direct	-1079 Jan 15 j 10:36	22° Υ 23'05		max. Earth dist.	-1073 May 01 j 00:12	29° Υ 39'11	48.41832 AU

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 24

Attention, astronomical year style is used: The year -1073 in astronomical counting style is the year 1074 BCE in historical counting style.

morning rise	-1073 May 12 j 19:18	29° Υ 55'24	direct	-1066 Jan 28 j 06:57	5° δ 08'35	
	-1073 May 16 j 04:43	0° δ	evening set	-1066 Apr 26 j 00:50	6° δ 21'04	
retrograde	-1073 Aug 12 j 00:28	1° δ 10'46				
opposition	-1073 Nov 02 j 07:27	0° δ 10'35 -11°18'05	conjunction	-1066 May 08 j 17:31	6° δ 38'43 -9°18'28	
min. Earth dist.	-1073 Nov 02 j 23:25	0° δ 09'49 46.39850 AU	minimum elong	-1066 May 08 j 17:43	6° δ 38'44 9°18'27	
	-1073 Nov 11 j 12:01	30° κ Υ	max. Earth dist.	-1066 May 07 j 14:35	6° δ 37'09 47.52084 AU	
direct	-1072 Jan 22 j 21:38	29° Υ 10'33	morning rise	-1066 May 21 j 11:00	6° δ 56'27	
	-1072 Apr 02 j 13:58	0° δ	retrograde	-1066 Aug 18 j 19:07	8° δ 10'38	
evening set	-1072 Apr 20 j 16:13	0° δ 23'42	opposition	-1066 Nov 08 j 20:37	7° δ 09'52 -9°35'03	
			min. Earth dist.	-1066 Nov 09 j 21:49	7° δ 08'38 45.47574 AU	
conjunction	-1072 May 01 j 23:33	0° δ 39'16 -10°43'34	direct	-1065 Jan 29 j 15:07	6° δ 09'00	
minimum elong	-1072 May 01 j 23:44	0° δ 39'17 10°43'34	evening set	-1065 Apr 27 j 02:59	7° δ 21'24	
max. Earth dist.	-1072 May 01 j 04:06	0° δ 38'09 48.30414 AU	max. Earth dist.	-1065 May 08 j 19:59	7° δ 37'43 47.37792 AU	
morning rise	-1072 May 13 j 08:05	0° δ 54'54				
retrograde	-1072 Aug 12 j 06:41	2° δ 10'04	conjunction	-1065 May 10 j 00:34	7° δ 39'23 -9°03'23	
opposition	-1072 Nov 02 j 12:32	1° δ 09'50 -11°04'07	minimum elong	-1065 May 10 j 00:45	7° δ 39'24 9°03'23	
min. Earth dist.	-1072 Nov 03 j 06:28	1° δ 08'58 46.28032 AU	morning rise	-1065 May 22 j 23:10	7° δ 57'27	
direct	-1071 Jan 23 j 03:18	0° δ 09'43	retrograde	-1065 Aug 20 j 03:26	9° δ 11'33	
evening set	-1071 Apr 21 j 17:06	1° δ 22'44	opposition	-1065 Nov 10 j 02:17	8° δ 10'40 -9°19'15	
max. Earth dist.	-1071 May 02 j 10:16	1° δ 37'29 48.18484 AU	min. Earth dist.	-1065 Nov 11 j 03:47	8° δ 09'25 45.33006 AU	
			direct	-1064 Jan 30 j 19:09	7° δ 09'40	
conjunction	-1071 May 03 j 06:29	1° δ 38'39 -10°30'00	evening set	-1064 Apr 27 j 05:24	8° δ 22'02	
minimum elong	-1071 May 03 j 06:41	1° δ 38'40 10°30'00	max. Earth dist.	-1064 May 09 j 02:17	8° δ 38'37 47.23232 AU	
morning rise	-1071 May 14 j 20:47	1° δ 54'39				
retrograde	-1071 Aug 13 j 11:11	3° δ 09'38	conjunction	-1064 May 10 j 07:59	8° δ 40'22 -8°48'02	
opposition	-1071 Nov 03 j 17:46	2° δ 09'20 -10°49'55	minimum elong	-1064 May 10 j 08:10	8° δ 40'22 8°48'02	
min. Earth dist.	-1071 Nov 04 j 13:09	2° δ 08'23 46.15684 AU	morning rise	-1064 May 23 j 11:28	8° δ 58'46	
direct	-1070 Jan 24 j 10:26	1° δ 09'06	retrograde	-1064 Aug 20 j 12:14	10° δ 12'46	
evening set	-1070 Apr 22 j 18:21	2° δ 21'59	opposition	-1064 Nov 10 j 08:06	9° δ 11'48 -9°03'10	
			min. Earth dist.	-1064 Nov 11 j 11:25	9° δ 10'28 45.18171 AU	
conjunction	-1070 May 04 j 13:19	2° δ 38'16 -10°16'11	direct	-1063 Jan 30 j 23:02	8° δ 10'41	
minimum elong	-1070 May 04 j 13:30	2° δ 38'16 10°16'10	evening set	-1063 Apr 28 j 08:11	9° δ 23'02	
max. Earth dist.	-1070 May 03 j 14:59	2° δ 36'58 48.06048 AU	max. Earth dist.	-1063 May 10 j 09:27	9° δ 39'55 47.08408 AU	
morning rise	-1070 May 16 j 09:23	2° δ 54'37				
retrograde	-1070 Aug 14 j 19:46	4° δ 09'25	conjunction	-1063 May 11 j 15:36	9° δ 41'41 -8°32'25	
opposition	-1070 Nov 04 j 22:53	3° δ 09'02 -10°35'28	minimum elong	-1063 May 11 j 15:46	9° δ 41'42 8°32'25	
min. Earth dist.	-1070 Nov 05 j 19:07	3° δ 08'03 46.02850 AU	morning rise	-1063 May 24 j 23:46	10° δ 00'25	
direct	-1069 Jan 25 j 13:39	2° δ 08'42	retrograde	-1063 Aug 21 j 20:36	11° δ 14'21	
evening set	-1069 Apr 23 j 19:37	3° δ 21'27	opposition	-1063 Nov 11 j 13:58	10° δ 13'18 -8°46'48	
			min. Earth dist.	-1063 Nov 12 j 17:29	10° δ 11'57 45.03041 AU	
conjunction	-1069 May 05 j 20:15	3° δ 38'05 -10°02'08	direct	-1062 Feb 01 j 04:56	9° δ 12'04	
minimum elong	-1069 May 05 j 20:27	3° δ 38'06 10°02'08	evening set	-1062 Apr 29 j 11:19	10° δ 24'26	
max. Earth dist.	-1069 May 04 j 20:18	3° δ 36'42 47.93130 AU				
morning rise	-1069 May 17 j 21:56	3° δ 54'47	conjunction	-1062 May 12 j 23:15	10° δ 43'25 -8°16'32	
retrograde	-1069 Aug 16 j 05:02	5° δ 09'25	minimum elong	-1062 May 12 j 23:25	10° δ 43'25 8°16'31	
opposition	-1069 Nov 06 j 04:17	4° δ 08'56 -10°20'46	max. Earth dist.	-1062 May 11 j 14:46	10° δ 41'30 46.93251 AU	
min. Earth dist.	-1069 Nov 07 j 02:41	4° δ 07'51 45.89568 AU	morning rise	-1062 May 26 j 12:10	11° δ 02'27	
direct	-1068 Jan 26 j 16:25	3° δ 08'28	retrograde	-1062 Aug 23 j 04:22	12° δ 16'21	
evening set	-1068 Apr 23 j 21:02	4° δ 21'07	opposition	-1062 Nov 12 j 20:00	11° δ 15'13 -8°30'09	
max. Earth dist.	-1068 May 05 j 02:37	4° δ 36'40 47.79805 AU	min. Earth dist.	-1062 Nov 14 j 01:26	11° δ 13'46 44.87561 AU	
			direct	-1061 Feb 02 j 11:22	10° δ 13'51	
conjunction	-1068 May 06 j 03:11	4° δ 38'06 -9°47'50	evening set	-1061 Apr 30 j 14:39	11° δ 26'15	
minimum elong	-1068 May 06 j 03:22	4° δ 38'06 9°47'49	max. Earth dist.	-1061 May 12 j 22:19	11° δ 43'36 46.77704 AU	
morning rise	-1068 May 18 j 10:13	4° δ 55'09				
retrograde	-1068 Aug 16 j 10:03	6° δ 09'36	conjunction	-1061 May 14 j 07:14	11° δ 45'33 -8°00'23	
opposition	-1068 Nov 06 j 09:36	5° δ 09'02 -10°05'48	minimum elong	-1061 May 14 j 07:24	11° δ 45'33 8°00'22	
min. Earth dist.	-1068 Nov 07 j 08:11	5° δ 07'56 45.75894 AU	morning rise	-1061 May 28 j 00:27	12° δ 04'55	
direct	-1067 Jan 26 j 23:33	4° δ 08'26	retrograde	-1061 Aug 24 j 09:03	13° δ 18'46	
evening set	-1067 Apr 24 j 22:53	5° δ 20'59	opposition	-1061 Nov 14 j 02:15	12° δ 17'32 -8°13'14	
max. Earth dist.	-1067 May 06 j 07:24	5° δ 36'44 47.66104 AU	min. Earth dist.	-1061 Nov 15 j 08:49	12° δ 16'02 44.71652 AU	
			direct	-1060 Feb 03 j 19:55	11° δ 16'02	
conjunction	-1067 May 07 j 10:14	5° δ 38'18 -9°33'17	evening set	-1060 Apr 30 j 18:22	12° δ 28'28	
minimum elong	-1067 May 07 j 10:25	5° δ 38'19 9°33'17	max. Earth dist.	-1060 May 13 j 04:05	12° δ 45'59 46.61707 AU	
morning rise	-1067 May 19 j 22:44	5° δ 55'42				
retrograde	-1067 Aug 17 j 14:55	7° δ 10'00	conjunction	-1060 May 14 j 15:12	12° δ 48'04 -7°43'59	
opposition	-1067 Nov 07 j 15:00	6° δ 09'19 -9°50'34	minimum elong	-1060 May 14 j 15:23	12° δ 48'05 7°43'58	
min. Earth dist.	-1067 Nov 08 j 15:18	6° δ 08'08 45.61886 AU	morning rise	-1060 May 28 j 12:54	13° δ 07'45	

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 25

Attention, astronomical year style is used: The year -1060 in astronomical counting style is the year 1061 BCE in historical counting style.

retrograde	-1060 Aug 24 j 16:52	14° 8 21'36	min. Earth dist.	-1054 Nov 22 j 17:27	19° 8 41'24	43.47699 AU
opposition	-1060 Nov 14 j 08:37	13° 8 20'15 -7°56'03	direct	-1053 Feb 10 j 20:04	18° 8 40'32	
min. Earth dist.	-1060 Nov 15 j 16:16	13° 8 18'41 44.55270 AU	evening set	-1053 May 08 j 04:42	19° 8 53'34	
direct	-1059 Feb 04 j 02:06	12° 8 18'35	max. Earth dist.	-1053 May 21 j 08:06	20° 8 12'33	45.37286 AU
evening set	-1059 May 01 j 22:27	13° 8 31'03				
max. Earth dist.	-1059 May 14 j 10:44	13° 8 48'47 46.45196 AU	conjunction	-1053 May 23 j 04:11	20° 8 15'14 -5°41'53	
			minimum elong	-1053 May 23 j 04:19	20° 8 15'14 5°41'51	
conjunction	-1059 May 15 j 23:36	13° 8 50'58 -7°27'19	morning rise	-1053 Jun 07 j 03:57	20° 8 36'57	
minimum elong	-1059 May 15 j 23:45	13° 8 50'59 7°27'18	retrograde	-1053 Sep 02 j 04:21	21° 8 51'02	
morning rise	-1059 May 30 j 01:25	14° 8 10'57	opposition	-1053 Nov 22 j 09:10	20° 8 48'34 -5°47'59	
	-1059 Jul 09 j 00:10	15° 8	min. Earth dist.	-1053 Nov 24 j 00:41	20° 8 46'34 43.28703 AU	
retrograde	-1059 Aug 26 j 02:29	15° 8 24'48	direct	-1052 Feb 12 j 02:25	19° 8 45'30	
	-1059 Oct 13 j 13:43	15° 8	evening set	-1052 May 08 j 10:48	20° 8 58'43	
opposition	-1059 Nov 15 j 15:12	14° 8 23'19 -7°38'36	max. Earth dist.	-1052 May 21 j 15:21	21° 8 17'52 45.18292 AU	
min. Earth dist.	-1059 Nov 17 j 01:09	14° 8 21'37 44.38373 AU				
direct	-1058 Feb 05 j 06:45	13° 8 21'28	conjunction	-1052 May 23 j 13:25	21° 8 20'40 -5°23'20	
evening set	-1058 May 03 j 02:50	14° 8 33'59	minimum elong	-1052 May 23 j 13:33	21° 8 20'41 5°23'20	
max. Earth dist.	-1058 May 15 j 18:11	14° 8 51'56 46.28196 AU	morning rise	-1052 Jun 07 j 16:26	21° 8 42'40	
			retrograde	-1052 Sep 02 j 15:22	22° 8 56'53	
conjunction	-1058 May 17 j 08:06	14° 8 54'12 -7°10'25	opposition	-1052 Nov 22 j 16:51	21° 8 54'15 -5°28'31	
minimum elong	-1058 May 17 j 08:16	14° 8 54'13 7°10'24	min. Earth dist.	-1052 Nov 24 j 10:05	21° 8 52'10 43.09499 AU	
	-1058 May 21 j 09:05	15° 8	direct	-1051 Feb 12 j 09:12	20° 8 51'00	
morning rise	-1058 May 31 j 13:54	15° 8 14'29	evening set	-1051 May 09 j 17:18	22° 8 04'26	
retrograde	-1058 Aug 27 j 11:12	16° 8 28'19	max. Earth dist.	-1051 May 23 j 01:06	22° 8 23'51 44.99083 AU	
opposition	-1058 Nov 16 j 21:50	15° 8 26'41 -7°20'53				
min. Earth dist.	-1058 Nov 18 j 08:08	15° 8 24'59 44.20996 AU	conjunction	-1051 May 24 j 23:08	22° 8 26'40 -5°04'31	
	-1058 Dec 09 j 23:18	15° 8	minimum elong	-1051 May 24 j 23:16	22° 8 26'41 5°04'30	
direct	-1057 Feb 06 j 13:02	14° 8 24'39	morning rise	-1051 Jun 09 j 04:56	22° 8 48'57	
	-1057 Apr 05 j 10:14	15° 8	retrograde	-1051 Sep 03 j 22:35	24° 8 03'18	
evening set	-1057 May 04 j 07:22	15° 8 37'14	opposition	-1051 Nov 24 j 00:35	23° 8 00'33 -5°08'44	
max. Earth dist.	-1057 May 17 j 00:06	15° 8 55'20 46.10722 AU	min. Earth dist.	-1051 Nov 25 j 18:16	22° 8 58'25 42.90060 AU	
			direct	-1050 Feb 13 j 19:03	21° 8 57'06	
conjunction	-1057 May 18 j 16:27	15° 8 57'45 -6°53'15	evening set	-1050 May 11 j 00:23	23° 8 10'47	
minimum elong	-1057 May 18 j 16:36	15° 8 57'45 6°53'14	max. Earth dist.	-1050 May 24 j 08:55	23° 8 30'20 44.79626 AU	
morning rise	-1057 Jun 02 j 02:16	16° 8 18'20				
retrograde	-1057 Aug 28 j 19:17	17° 8 32'10	conjunction	-1050 May 26 j 08:55	23° 8 33'18 -4°45'25	
opposition	-1057 Nov 18 j 04:41	16° 8 30'21 -7°02'53	minimum elong	-1050 May 26 j 09:01	23° 8 33'18 4°45'24	
min. Earth dist.	-1057 Nov 19 j 17:02	16° 8 28'33 44.03185 AU	morning rise	-1050 Jun 10 j 17:41	23° 8 55'51	
direct	-1056 Feb 07 j 20:44	15° 8 28'07	retrograde	-1050 Sep 05 j 07:11	25° 8 10'23	
evening set	-1056 May 04 j 12:11	16° 8 40'47	opposition	-1050 Nov 25 j 08:37	24° 8 07'29 -4°48'40	
max. Earth dist.	-1056 May 17 j 08:37	16° 8 59'09 45.92837 AU	min. Earth dist.	-1050 Nov 27 j 03:22	24° 8 05'18 42.70359 AU	
			direct	-1049 Feb 15 j 03:29	23° 8 03'52	
conjunction	-1056 May 19 j 01:15	17° 8 01'36 -6°35'49	evening set	-1049 May 12 j 07:35	24° 8 17'48	
minimum elong	-1056 May 19 j 01:24	17° 8 01'36 6°35'49	max. Earth dist.	-1049 May 25 j 18:02	24° 8 37'34 44.59846 AU	
morning rise	-1056 Jun 02 j 14:39	17° 8 22'28				
retrograde	-1056 Aug 29 j 00:28	18° 8 36'19	conjunction	-1049 May 27 j 18:55	24° 8 40'36 -4°26'02	
opposition	-1056 Nov 18 j 11:31	17° 8 34'21 -6°44'36	minimum elong	-1049 May 27 j 19:02	24° 8 40'36 4°26'01	
min. Earth dist.	-1056 Nov 20 j 00:46	17° 8 32'29 43.84989 AU	morning rise	-1049 Jun 12 j 06:10	25° 8 03'24	
direct	-1055 Feb 08 j 06:55	16° 8 31'54	retrograde	-1049 Sep 06 j 16:55	26° 8 18'10	
evening set	-1055 May 05 j 17:29	17° 8 44'39	opposition	-1049 Nov 26 j 17:00	25° 8 15'07 -4°28'18	
max. Earth dist.	-1055 May 18 j 15:22	18° 8 03'11 45.74604 AU	min. Earth dist.	-1049 Nov 28 j 13:34	25° 8 12'49 42.50307 AU	
			direct	-1048 Feb 16 j 10:42	24° 8 11'17	
conjunction	-1055 May 20 j 10:03	18° 8 05'46 -6°18'07	evening set	-1048 May 12 j 15:28	25° 8 25'31	
minimum elong	-1055 May 20 j 10:12	18° 8 05'46 6°18'05	max. Earth dist.	-1048 May 26 j 03:11	25° 8 45'26 44.39697 AU	
morning rise	-1055 Jun 04 j 03:13	18° 8 26'55				
retrograde	-1055 Aug 30 j 09:04	19° 8 40'49	conjunction	-1048 May 28 j 05:19	25° 8 48'33 -4°06'23	
opposition	-1055 Nov 19 j 18:32	18° 8 38'41 -6°26'01	minimum elong	-1048 May 28 j 05:25	25° 8 48'34 4°06'22	
min. Earth dist.	-1055 Nov 21 j 08:33	18° 8 36'46 43.66482 AU	morning rise	-1048 Jun 12 j 19:04	26° 8 11'38	
direct	-1054 Feb 09 j 13:41	17° 8 36'01	retrograde	-1048 Sep 07 j 04:58	27° 8 26'37	
evening set	-1054 May 06 j 22:55	18° 8 48'54	opposition	-1048 Nov 27 j 01:23	26° 8 23'24 -4°07'38	
max. Earth dist.	-1054 May 19 j 23:27	19° 8 07'39 45.56061 AU	min. Earth dist.	-1048 Nov 28 j 22:21	26° 8 21'05 42.29859 AU	
			direct	-1047 Feb 16 j 16:34	25° 8 19'21	
conjunction	-1054 May 21 j 19:03	19° 8 10'17 -6°00'08	evening set	-1047 May 13 j 23:52	26° 8 33'53	
minimum elong	-1054 May 21 j 19:12	19° 8 10'18 6°00'08	max. Earth dist.	-1047 May 27 j 11:29	26° 8 53'54 44.19113 AU	
morning rise	-1054 Jun 05 j 15:32	19° 8 31'44				
retrograde	-1054 Aug 31 j 17:48	20° 8 45'43	conjunction	-1047 May 29 j 16:01	26° 8 57'10 -3°46'27	
opposition	-1054 Nov 21 j 01:50	19° 8 43'24 -6°07'09	minimum elong	-1047 May 29 j 16:07	26° 8 57'11 3°46'26	

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 26

Attention, astronomical year style is used: The year -1047 in astronomical counting style is the year 1048 BCE in historical counting style.

morning rise	-1047 Jun 14 j 08:05	27° 8 20'30	opposition	-1041 Dec 05 j 19:52	4° II 37'50	-1°34'43
retrograde	-1047 Sep 08 j 16:59	28° 8 35'43	min. Earth dist.	-1041 Dec 08 j 00:19	4° II 35'03	40.76720 AU
opposition	-1047 Nov 28 j 10:16	27° 8 32'18 -3°46'41	direct	-1040 Feb 25 j 12:19	3° II 31'49	
min. Earth dist.	-1047 Nov 30 j 09:31	27° 8 29'52 42.08980 AU	evening set	-1040 May 21 j 21:51	4° II 48'58	
direct	-1046 Feb 18 j 00:55	26° 8 28'01	max. Earth dist.	-1040 Jun 04 j 12:31	5° II 09'55	42.65416 AU
evening set	-1046 May 15 j 08:30	27° 8 42'51				
max. Earth dist.	-1046 May 28 j 22:00	28° 8 03'04 43.98099 AU	conjunction	-1040 Jun 07 j 01:05	5° II 13'51	-1°19'16
			minimum elong	-1040 Jun 07 j 01:08	5° II 13'51	1°19'15
conjunction	-1046 May 31 j 02:56	28° 8 06'24 -3°26'15	morning rise	-1040 Jun 23 j 03:40	5° II 38'43	
minimum elong	-1046 May 31 j 03:02	28° 8 06'24 3°26'14	retrograde	-1040 Sep 16 j 23:46	6° II 56'04	
morning rise	-1046 Jun 15 j 20:57	28° 8 29'58	opposition	-1040 Dec 06 j 06:22	5° II 51'00	-1°11'40
retrograde	-1046 Sep 10 j 02:44	29° 8 45'24	min. Earth dist.	-1040 Dec 08 j 12:02	5° II 48'08	40.53998 AU
opposition	-1046 Nov 29 j 19:15	28° 8 41'47 -3°25'26	direct	-1039 Feb 25 j 23:17	4° II 44'42	
min. Earth dist.	-1046 Dec 01 j 19:08	28° 8 39'18 41.87678 AU	evening set	-1039 May 23 j 09:50	6° II 02'21	
direct	-1045 Feb 19 j 12:42	27° 8 37'14	max. Earth dist.	-1039 Jun 06 j 01:21	6° II 23'29	42.42648 AU
evening set	-1045 May 16 j 17:41	28° 8 52'24				
max. Earth dist.	-1045 May 30 j 06:34	29° 8 12'42 43.76687 AU	conjunction	-1039 Jun 08 j 14:00	6° II 27'27	-0°57'09
			minimum elong	-1039 Jun 08 j 14:02	6° II 27'27	0°57'09
conjunction	-1045 Jun 01 j 13:57	29° 8 16'12 -3°05'47	morning rise	-1039 Jun 24 j 17:03	6° II 52'30	
minimum elong	-1045 Jun 01 j 14:02	29° 8 16'12 3°05'46	retrograde	-1039 Sep 18 j 10:18	8° II 10'18	
morning rise	-1045 Jun 17 j 10:02	29° 8 40'00	opposition	-1039 Dec 07 j 17:21	7° II 05'00	-0°48'20
	-1045 Jul 01 j 10:14	0° II	min. Earth dist.	-1039 Dec 09 j 23:57	7° II 02'04	40.31129 AU
retrograde	-1045 Sep 11 j 13:43	0° II 55'41	direct	-1038 Feb 27 j 12:06	5° II 58'26	
	-1045 Nov 24 j 15:20	30° 8	evening set	-1038 May 24 j 22:26	7° II 16'38	
opposition	-1045 Dec 01 j 04:24	29° 8 51'50 -3°03'53	max. Earth dist.	-1038 Jun 07 j 13:03	7° II 37'50	42.19727 AU
min. Earth dist.	-1045 Dec 03 j 05:37	29° 8 49'17 41.66017 AU				
direct	-1044 Feb 20 j 22:40	28° 8 47'00	conjunction	-1038 Jun 10 j 02:59	7° II 41'54	-0°34'45
	-1044 May 15 j 10:13	0° II	minimum elong	-1038 Jun 10 j 03:00	7° II 41'54	0°34'44
evening set	-1044 May 17 j 03:05	0° II 02'31	morning rise	-1038 Jun 26 j 06:34	8° II 07'09	
max. Earth dist.	-1044 May 30 j 17:14	0° II 22'59 43.54915 AU	retrograde	-1038 Sep 19 j 23:35	9° II 25'25	
			opposition	-1038 Dec 09 j 04:30	8° II 19'54	-0°24'41
conjunction	-1044 Jun 02 j 01:20	0° II 26'32 -2°45'02	min. Earth dist.	-1038 Dec 11 j 11:24	8° II 16'57	40.08095 AU
minimum elong	-1044 Jun 02 j 01:24	0° II 26'33 2°45'00	direct	-1037 Feb 28 j 22:14	7° II 13'04	
morning rise	-1044 Jun 17 j 23:00	0° II 50'34	evening set	-1037 May 26 j 11:40	8° II 31'51	
retrograde	-1044 Sep 11 j 21:46	2° II 06'33	max. Earth dist.	-1037 Jun 09 j 01:11	8° II 53'07	41.96581 AU
opposition	-1044 Dec 01 j 13:57	1° II 02'27 -2°42'03				
min. Earth dist.	-1044 Dec 03 j 16:36	0° II 59'48 41.44022 AU	conjunction	-1037 Jun 11 j 16:31	8° II 57'18	-0°12'07
	-1043 Feb 06 j 07:11	30° 8	minimum elong	-1037 Jun 11 j 16:31	8° II 57'18	0°12'06
direct	-1043 Feb 21 j 09:35	29° 8 57'20	behind sun begin	-1037 Jun 11 j 12:12	8° II 57'02	
	-1043 Mar 08 j 07:17	0° II	behind sun end	-1037 Jun 11 j 20:51	8° II 57'35	
evening set	-1043 May 18 j 13:08	1° II 13'12	morning rise	-1037 Jun 27 j 20:12	9° II 22'44	
max. Earth dist.	-1043 Jun 01 j 03:44	1° II 33'47 43.32849 AU	retrograde	-1037 Sep 21 j 13:28	10° II 41'32	
			opposition	-1037 Dec 10 j 16:09	9° II 35'47	-0°00'46
conjunction	-1043 Jun 03 j 12:55	1° II 37'26 -2°24'00	min. Earth dist.	-1037 Dec 13 j 01:03	9° II 32'43	39.84818 AU
minimum elong	-1043 Jun 03 j 12:59	1° II 37'27 2°23'59	asc. node	-1037 Dec 22 j 05:58	9° II 20'54	
morning rise	-1043 Jun 19 j 12:11	2° II 01'42	direct	-1036 Mar 01 j 07:47	8° II 28'39	
retrograde	-1043 Sep 13 j 09:18	3° II 17'58	evening set	-1036 May 27 j 01:31	9° II 48'04	
opposition	-1043 Dec 02 j 23:29	2° II 13'38 -2°19'54	max. Earth dist.	-1036 Jun 09 j 14:41	10° II 09'27	41.73164 AU
min. Earth dist.	-1043 Dec 05 j 02:23	2° II 10'57 41.21775 AU				
direct	-1042 Feb 22 j 18:08	1° II 08'12	conjunction	-1036 Jun 12 j 06:28	10° II 13'42	0°10'54
evening set	-1042 May 19 j 23:37	2° II 24'28	minimum elong	-1036 Jun 12 j 06:28	10° II 13'42	0°10'55
max. Earth dist.	-1042 Jun 02 j 13:54	2° II 45'09 43.10535 AU	behind sun begin	-1036 Jun 12 j 01:35	10° II 13'24	
			behind sun end	-1036 Jun 12 j 11:20	10° II 14'00	
conjunction	-1042 Jun 05 j 00:45	2° II 48'56 -2°02'42	morning rise	-1036 Jun 28 j 10:05	10° II 39'17	
minimum elong	-1042 Jun 05 j 00:48	2° II 48'56 2°02'41	retrograde	-1036 Sep 22 j 05:05	11° II 58'38	
morning rise	-1042 Jun 21 j 01:17	3° II 13'23	opposition	-1036 Dec 11 j 04:07	10° II 52'39	0°23'27
retrograde	-1042 Sep 14 j 23:18	4° II 30'00	min. Earth dist.	-1036 Dec 13 j 13:19	10° II 49'33	39.61237 AU
opposition	-1042 Dec 04 j 09:36	3° II 25'24 -1°57'27	direct	-1035 Mar 02 j 19:16	9° II 45'13	
min. Earth dist.	-1042 Dec 06 j 14:14	3° II 22'37 40.99325 AU	evening set	-1035 May 28 j 16:14	11° II 05'18	
direct	-1041 Feb 24 j 01:06	2° II 19'41	max. Earth dist.	-1035 Jun 11 j 02:28	11° II 26'38	41.49405 AU
evening set	-1041 May 21 j 10:18	3° II 36'22				
max. Earth dist.	-1041 Jun 04 j 02:04	3° II 57'15 42.88048 AU	conjunction	-1035 Jun 13 j 20:49	11° II 31'05	0°34'03
			minimum elong	-1035 Jun 13 j 20:48	11° II 31'05	0°34'04
conjunction	-1041 Jun 06 j 12:44	4° II 01'02 -1°41'08	morning rise	-1035 Jun 30 j 00:10	11° II 56'49	
minimum elong	-1041 Jun 06 j 12:47	4° II 01'02 1°41'07	retrograde	-1035 Sep 23 j 21:34	13° II 16'44	
morning rise	-1041 Jun 22 j 14:18	4° II 25'42	opposition	-1035 Dec 12 j 16:31	12° II 10'29	0°47'57
retrograde	-1041 Sep 16 j 10:52	5° II 42'40	min. Earth dist.	-1035 Dec 15 j 03:40	12° II 07'16	39.37325 AU

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 27

Attention, astronomical year style is used: The year -1034 in astronomical counting style is the year 1035 BCE in historical counting style.

direct	-1034 Mar 04 j 06:42	11°II02'44		retrograde	-1028 Oct 03 j 13:19	22°II51'26	
evening set	-1034 May 30 j 07:25	12°II23'30		opposition	-1028 Dec 21 j 18:13	21°II43'00	3°46'53
max. Earth dist.	-1034 Jun 12 j 16:57	12°II44'56	41.25303 AU	min. Earth dist.	-1028 Dec 24 j 10:59	21°II39'21	37.63417 AU
				direct	-1027 Mar 13 j 07:17	20°II32'40	
conjunction	-1034 Jun 15 j 11:40	12°II49'26	0°57'29	evening set	-1027 Jun 09 j 12:58	21°II59'15	
minimum elong	-1034 Jun 15 j 11:38	12°II49'26	0°57'31	max. Earth dist.	-1027 Jun 22 j 04:13	22°II20'34	39.50449 AU
morning rise	-1034 Jul 01 j 14:16	13°II15'19					
retrograde	-1034 Sep 25 j 10:30	14°II35'49		conjunction	-1027 Jun 25 j 05:29	22°II25'46	3°48'06
opposition	-1034 Dec 14 j 05:22	13°II29'18	1°12'44	minimum elong	-1027 Jun 25 j 05:22	22°II25'46	3°48'07
min. Earth dist.	-1034 Dec 16 j 17:19	13°II26'01	39.13077 AU	morning rise	-1027 Jul 10 j 19:44	22°II52'10	
direct	-1033 Mar 05 j 21:12	12°II21'13		retrograde	-1027 Oct 05 j 04:20	24°II17'54	
evening set	-1033 May 31 j 23:13	13°II42'42		opposition	-1027 Dec 23 j 10:01	23°II09'11	4°13'23
max. Earth dist.	-1033 Jun 14 j 05:58	14°II04'06	41.00883 AU	min. Earth dist.	-1027 Dec 26 j 03:35	23°II05'26	37.38256 AU
				direct	-1026 Mar 15 j 00:24	21°II58'28	
conjunction	-1033 Jun 17 j 02:33	14°II08'46	1°21'11	evening set	-1026 Jun 11 j 10:09	23°II26'05	
minimum elong	-1033 Jun 17 j 02:30	14°II08'45	1°21'11	max. Earth dist.	-1026 Jun 23 j 21:34	23°II47'18	39.25186 AU
morning rise	-1033 Jul 03 j 04:28	14°II34'46					
retrograde	-1033 Sep 27 j 00:38	15°II55'53		conjunction	-1026 Jun 26 j 23:32	23°II52'37	4°13'17
opposition	-1033 Dec 15 j 18:29	14°II49'05	1°37'47	minimum elong	-1026 Jun 26 j 23:24	23°II52'36	4°13'18
min. Earth dist.	-1033 Dec 18 j 07:18	14°II45'44	38.88543 AU	morning rise	-1026 Jul 12 j 10:50	24°II19'01	
direct	-1032 Mar 06 j 10:53	13°II40'39		retrograde	-1026 Oct 06 j 22:12	25°II45'42	
evening set	-1032 Jun 01 j 15:43	15°II02'51		opposition	-1026 Dec 25 j 02:13	24°II36'40	4°40'05
max. Earth dist.	-1032 Jun 14 j 20:28	15°II24'16	40.76170 AU	min. Earth dist.	-1026 Dec 27 j 19:42	24°II32'55	37.13085 AU
				direct	-1025 Mar 16 j 15:38	23°II25'34	
conjunction	-1032 Jun 17 j 18:08	15°II29'02	1°45'07	evening set	-1025 Jun 13 j 08:00	24°II54'17	
minimum elong	-1032 Jun 17 j 18:04	15°II29'02	1°45'08	max. Earth dist.	-1025 Jun 25 j 14:57	25°II15'22	38.99854 AU
morning rise	-1032 Jul 03 j 18:47	15°II55'09					
retrograde	-1032 Sep 27 j 14:38	17°II16'57		conjunction	-1025 Jun 28 j 18:04	25°II20'48	4°38'38
opposition	-1032 Dec 16 j 07:58	16°II09'50	2°03'06	minimum elong	-1025 Jun 28 j 17:55	25°II20'48	4°38'39
min. Earth dist.	-1032 Dec 18 j 22:35	16°II06'21	38.63755 AU	morning rise	-1025 Jul 14 j 01:53	25°II47'12	
direct	-1031 Mar 07 j 23:09	15°II01'01		retrograde	-1025 Oct 08 j 16:54	27°II14'53	
evening set	-1031 Jun 03 j 08:59	16°II24'00		opposition	-1025 Dec 26 j 19:06	26°II05'31	5°06'59
max. Earth dist.	-1031 Jun 16 j 11:44	16°II45'26	40.51239 AU	min. Earth dist.	-1025 Dec 29 j 14:24	26°II01'39	36.87836 AU
				direct	-1024 Mar 17 j 04:54	24°II54'03	
conjunction	-1031 Jun 19 j 10:02	16°II50'17	2°09'17	evening set	-1024 Jun 14 j 07:02	26°II23'55	
minimum elong	-1031 Jun 19 j 09:58	16°II50'17	2°09'17	max. Earth dist.	-1024 Jun 26 j 10:11	26°II44'54	38.74416 AU
morning rise	-1031 Jul 05 j 09:19	17°II16'30					
retrograde	-1031 Sep 29 j 06:53	18°II38'59		conjunction	-1024 Jun 29 j 13:23	26°II50'23	5°04'08
opposition	-1031 Dec 17 j 21:50	17°II31'33	2°28'41	minimum elong	-1024 Jun 29 j 13:12	26°II50'22	5°04'09
min. Earth dist.	-1031 Dec 20 j 12:19	17°II28'04	38.38789 AU	morning rise	-1024 Jul 14 j 17:21	27°II16'44	
direct	-1030 Mar 09 j 11:44	16°II22'21		retrograde	-1024 Oct 09 j 12:55	28°II45'28	
evening set	-1030 Jun 05 j 02:50	17°II46'10		opposition	-1024 Dec 27 j 12:20	27°II35'46	5°34'03
max. Earth dist.	-1030 Jun 18 j 02:07	18°II07'32	40.26134 AU	min. Earth dist.	-1024 Dec 30 j 07:35	27°II31'52	36.62460 AU
				direct	-1023 Mar 18 j 22:23	26°II23'54	
conjunction	-1030 Jun 21 j 02:08	18°II12'32	2°33'40	evening set	-1023 Jun 16 j 07:09	27°II54'57	
minimum elong	-1030 Jun 21 j 02:03	18°II12'31	2°33'42	max. Earth dist.	-1023 Jun 28 j 03:53	28°II15'40	38.48816 AU
morning rise	-1030 Jul 06 j 23:40	18°II38'49					
retrograde	-1030 Oct 01 j 01:02	20°II02'03		conjunction	-1023 Jul 01 j 09:13	28°II21'21	5°29'47
opposition	-1030 Dec 19 j 12:15	18°II54'17	2°54'31	minimum elong	-1023 Jul 01 j 09:02	28°II21'21	5°29'48
min. Earth dist.	-1030 Dec 22 j 04:19	18°II50'42	38.13705 AU	morning rise	-1023 Jul 16 j 09:03	28°II47'38	
direct	-1029 Mar 11 j 00:36	17°II44'42			-1023 Sep 05 j 15:14	0°☾	
evening set	-1029 Jun 06 j 21:21	19°II09'23		retrograde	-1023 Oct 11 j 11:47	0°☾17'27	
max. Earth dist.	-1029 Jun 19 j 19:15	19°II30'49	40.00939 AU		-1023 Nov 16 j 15:53	30°☿II	
				opposition	-1023 Dec 29 j 06:22	29°II07'24	6°01'17
conjunction	-1029 Jun 22 j 18:49	19°II35'49	2°58'17	min. Earth dist.	-1022 Jan 01 j 03:12	29°II03'24	36.36936 AU
minimum elong	-1029 Jun 22 j 18:43	19°II35'48	2°58'18	direct	-1022 Mar 20 j 14:51	27°II55'06	
morning rise	-1029 Jul 08 j 14:11	20°II02'09		evening set	-1022 Jun 18 j 07:58	29°II27'25	
retrograde	-1029 Oct 02 j 18:51	21°II26'10		max. Earth dist.	-1022 Jun 30 j 00:26	29°II48'00	38.23048 AU
opposition	-1029 Dec 21 j 02:59	20°II18'04	3°20'35				
min. Earth dist.	-1029 Dec 23 j 18:59	20°II14'28	37.88564 AU	conjunction	-1022 Jul 03 j 05:35	29°II53'43	5°55'34
direct	-1028 Mar 11 j 16:42	19°II08'06		minimum elong	-1022 Jul 03 j 05:23	29°II53'42	5°55'34
evening set	-1028 Jun 07 j 16:48	20°II33'43			-1022 Jul 06 j 18:13	0°☾	
max. Earth dist.	-1028 Jun 20 j 10:33	20°II55'02	39.75706 AU	morning rise	-1022 Jul 18 j 00:37	0°☾19'53	
				retrograde	-1022 Oct 13 j 08:12	1°☾50'51	
conjunction	-1028 Jun 23 j 11:49	21°II00'12	3°23'06	opposition	-1022 Dec 31 j 00:59	0°☾40'25	6°28'39
minimum elong	-1028 Jun 23 j 11:42	21°II00'11	3°23'07	min. Earth dist.	-1021 Jan 02 j 22:20	0°☾36'21	36.11254 AU
morning rise	-1028 Jul 09 j 04:58	21°II26'35			-1021 Jan 30 j 11:39	30°☿II	

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 28

Attention, astronomical year style is used: The year -1021 in astronomical counting style is the year 1022 BCE in historical counting style.

direct	-1021 Mar 22 j 10:41	29° Π 27'41	morning rise	-1015 Jul 27 j 17:58	11° \ominus 44'41	
	-1021 May 11 j 11:46	0° \ominus	retrograde	-1015 Oct 25 j 01:33	13° \ominus 25'22	
evening set	-1021 Jun 20 j 10:01	1° \ominus 01'18	opposition	-1014 Jan 11 j 03:39	12° \ominus 12'06	9°41'54
max. Earth dist.	-1021 Jul 01 j 19:39	1° \ominus 21'34	min. Earth dist.	-1014 Jan 14 j 03:33	12° \ominus 07'41	34.31910 AU
			direct	-1014 Apr 02 j 08:46	10° \ominus 56'04	
conjunction	-1021 Jul 05 j 02:27	1° \ominus 27'28	evening set	-1014 Jul 04 j 05:51	12° \ominus 40'44	
minimum elong	-1021 Jul 05 j 02:15	1° \ominus 27'27	max. Earth dist.	-1014 Jul 13 j 12:43	12° \ominus 58'24	36.16655 AU
morning rise	-1021 Jul 19 j 16:37	1° \ominus 53'29				
retrograde	-1021 Oct 15 j 05:57	3° \ominus 25'38	conjunction	-1014 Jul 16 j 21:21	13° \ominus 04'51	9°23'04
opposition	-1020 Jan 01 j 19:55	2° \ominus 14'49	minimum elong	-1014 Jul 16 j 21:02	13° \ominus 04'50	9°23'04
min. Earth dist.	-1020 Jan 04 j 17:56	2° \ominus 10'41	morning rise	-1014 Jul 29 j 10:32	13° \ominus 28'48	
direct	-1020 Mar 23 j 05:30	1° \ominus 01'37	retrograde	-1014 Oct 27 j 04:31	15° \ominus 11'12	
evening set	-1020 Jun 21 j 12:56	2° \ominus 36'35	opposition	-1013 Jan 13 j 03:17	13° \ominus 57'34	10°09'17
max. Earth dist.	-1020 Jul 02 j 16:41	2° \ominus 56'35	min. Earth dist.	-1013 Jan 16 j 02:52	13° \ominus 53'09	34.07055 AU
			direct	-1013 Apr 04 j 08:08	12° \ominus 41'06	
conjunction	-1020 Jul 06 j 00:05	3° \ominus 02'35	evening set	-1013 Jul 06 j 16:55	14° \ominus 27'42	
minimum elong	-1020 Jul 05 j 23:51	3° \ominus 02'34	max. Earth dist.	-1013 Jul 15 j 14:54	14° \ominus 44'50	35.91640 AU
morning rise	-1020 Jul 20 j 08:36	3° \ominus 28'26				
retrograde	-1020 Oct 16 j 01:39	5° \ominus 01'49	conjunction	-1013 Jul 18 j 23:21	14° \ominus 51'20	9°48'39
opposition	-1019 Jan 02 j 15:42	3° \ominus 50'36	minimum elong	-1013 Jul 18 j 23:01	14° \ominus 51'18	9°48'40
min. Earth dist.	-1019 Jan 05 j 14:58	3° \ominus 46'22	morning rise	-1013 Jul 31 j 03:14	15° \ominus 14'47	
direct	-1019 Mar 25 j 01:26	2° \ominus 36'56	retrograde	-1013 Oct 29 j 06:32	16° \ominus 58'59	
evening set	-1019 Jun 23 j 17:01	4° \ominus 13'18	opposition	-1012 Jan 15 j 03:43	15° \ominus 44'59	10°36'30
max. Earth dist.	-1019 Jul 04 j 14:24	4° \ominus 33'01	min. Earth dist.	-1012 Jan 18 j 04:15	15° \ominus 40'28	33.82419 AU
			direct	-1012 Apr 05 j 07:03	14° \ominus 28'06	
conjunction	-1019 Jul 07 j 22:06	4° \ominus 39'06	evening set	-1012 Jul 08 j 05:40	16° \ominus 16'43	
minimum elong	-1019 Jul 07 j 21:52	4° \ominus 39'05	max. Earth dist.	-1012 Jul 16 j 17:46	16° \ominus 33'14	35.66832 AU
morning rise	-1019 Jul 22 j 00:44	5° \ominus 04'45				
retrograde	-1019 Oct 17 j 23:39	6° \ominus 39'25	conjunction	-1012 Jul 20 j 02:04	16° \ominus 39'47	10°14'02
opposition	-1018 Jan 04 j 11:52	5° \ominus 27'48	minimum elong	-1012 Jul 20 j 01:43	16° \ominus 39'45	10°14'03
min. Earth dist.	-1018 Jan 07 j 10:44	5° \ominus 23'33	morning rise	-1012 Jul 31 j 20:09	17° \ominus 02'41	
direct	-1018 Mar 26 j 20:39	4° \ominus 13'38	retrograde	-1012 Oct 30 j 09:58	18° \ominus 48'47	
evening set	-1018 Jun 25 j 22:04	5° \ominus 51'30	opposition	-1011 Jan 16 j 04:57	17° \ominus 34'25	11°03'30
max. Earth dist.	-1018 Jul 06 j 11:58	6° \ominus 10'51	min. Earth dist.	-1011 Jan 19 j 04:42	17° \ominus 29'55	33.57972 AU
			direct	-1011 Apr 07 j 06:47	16° \ominus 17'04	
conjunction	-1018 Jul 09 j 20:45	6° \ominus 17'03	evening set	-1011 Jul 10 j 19:42	18° \ominus 07'48	
minimum elong	-1018 Jul 09 j 20:29	6° \ominus 17'02	max. Earth dist.	-1011 Jul 18 j 20:24	18° \ominus 23'33	35.42170 AU
morning rise	-1018 Jul 23 j 16:56	6° \ominus 42'27				
retrograde	-1018 Oct 19 j 22:24	8° \ominus 18'31	conjunction	-1011 Jul 22 j 05:33	18° \ominus 30'14	10°39'11
opposition	-1017 Jan 06 j 08:51	7° \ominus 06'28	minimum elong	-1011 Jul 22 j 05:12	18° \ominus 30'13	10°39'13
min. Earth dist.	-1017 Jan 09 j 09:02	7° \ominus 02'07	morning rise	-1011 Aug 02 j 13:08	18° \ominus 52'31	
direct	-1017 Mar 28 j 14:55	5° \ominus 51'49	retrograde	-1011 Nov 01 j 13:22	20° \ominus 40'35	
evening set	-1017 Jun 28 j 04:04	7° \ominus 31'15	opposition	-1010 Jan 18 j 07:09	19° \ominus 25'50	11°30'16
max. Earth dist.	-1017 Jul 08 j 11:57	7° \ominus 50'18	min. Earth dist.	-1010 Jan 21 j 08:05	19° \ominus 21'14	33.33683 AU
			direct	-1010 Apr 09 j 06:13	18° \ominus 08'02	
conjunction	-1017 Jul 11 j 19:52	7° \ominus 56'30	evening set	-1010 Jul 13 j 11:22	20° \ominus 00'57	
minimum elong	-1017 Jul 11 j 19:36	7° \ominus 56'29	max. Earth dist.	-1010 Jul 21 j 01:40	20° \ominus 16'01	35.17669 AU
morning rise	-1017 Jul 25 j 09:03	8° \ominus 21'37				
retrograde	-1017 Oct 21 j 22:23	9° \ominus 59'08	conjunction	-1010 Jul 24 j 09:52	20° \ominus 22'41	11°04'04
opposition	-1016 Jan 08 j 06:25	8° \ominus 46'40	minimum elong	-1010 Jul 24 j 09:30	20° \ominus 22'40	11°04'04
min. Earth dist.	-1016 Jan 11 j 05:54	8° \ominus 42'20	morning rise	-1010 Aug 04 j 06:04	20° \ominus 44'16	
direct	-1016 Mar 29 j 12:51	7° \ominus 31'33	retrograde	-1010 Nov 03 j 18:23	22° \ominus 34'24	
evening set	-1016 Jun 29 j 11:30	9° \ominus 12'37	opposition	-1009 Jan 20 j 10:05	21° \ominus 19'13	11°56'43
max. Earth dist.	-1016 Jul 09 j 10:32	9° \ominus 31'12	min. Earth dist.	-1009 Jan 23 j 10:19	21° \ominus 14'39	33.09557 AU
			direct	-1009 Apr 11 j 08:07	20° \ominus 00'58	
conjunction	-1016 Jul 12 j 19:42	9° \ominus 37'33	evening set	-1009 Jul 16 j 04:27	21° \ominus 56'09	
minimum elong	-1016 Jul 12 j 19:24	9° \ominus 37'32	max. Earth dist.	-1009 Jul 23 j 05:24	22° \ominus 10'16	34.93335 AU
morning rise	-1016 Jul 26 j 01:31	10° \ominus 02'19				
retrograde	-1016 Oct 23 j 01:07	11° \ominus 41'23	conjunction	-1009 Jul 26 j 14:48	22° \ominus 17'06	11°28'36
opposition	-1015 Jan 09 j 04:34	10° \ominus 28'30	minimum elong	-1009 Jul 26 j 14:25	22° \ominus 17'04	11°28'37
min. Earth dist.	-1015 Jan 12 j 04:36	10° \ominus 24'07	morning rise	-1009 Aug 05 j 23:06	22° \ominus 37'54	
direct	-1015 Mar 31 j 09:46	9° \ominus 12'55	retrograde	-1009 Nov 06 j 01:20	24° \ominus 30'11	
evening set	-1015 Jul 01 j 20:02	10° \ominus 55'44	opposition	-1008 Jan 22 j 13:51	23° \ominus 14'34	12°22'50
max. Earth dist.	-1015 Jul 11 j 12:11	11° \ominus 13'57	min. Earth dist.	-1008 Jan 25 j 14:45	23° \ominus 09'55	32.85627 AU
			direct	-1008 Apr 12 j 09:22	21° \ominus 55'49	
conjunction	-1015 Jul 14 j 20:20	11° \ominus 20'18	evening set	-1008 Jul 17 j 23:20	23° \ominus 53'23	
minimum elong	-1015 Jul 14 j 20:02	11° \ominus 20'16	max. Earth dist.	-1008 Jul 24 j 12:26	24° \ominus 06'39	34.69202 AU

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 29

Attention, astronomical year style is used: The year -1008 in astronomical counting style is the year 1009 BCE in historical counting style.

conjunction	-1008 Jul 27 j 20:44	24° $\mathring{\text{E}}$ 13'27	11°52'46	morning rise	-1002 Aug 15 j 10:35	6° $\mathring{\text{N}}$ 44'02	
minimum elong	-1008 Jul 27 j 20:22	24° $\mathring{\text{E}}$ 13'25	11°52'46	retrograde	-1002 Nov 20 j 15:49	8° $\mathring{\text{N}}$ 54'57	
morning rise	-1008 Aug 06 j 15:59	24° $\mathring{\text{E}}$ 33'23		opposition	-1001 Feb 05 j 15:47	7° $\mathring{\text{N}}$ 36'20	15°09'30
retrograde	-1008 Nov 07 j 08:02	26° $\mathring{\text{E}}$ 27'53		min. Earth dist.	-1001 Feb 08 j 12:31	7° $\mathring{\text{N}}$ 31'45	31.28875 AU
opposition	-1007 Jan 23 j 18:23	25° $\mathring{\text{E}}$ 11'51	12°48'31	direct	-1001 Apr 27 j 05:19	6° $\mathring{\text{N}}$ 14'17	
min. Earth dist.	-1007 Jan 26 j 19:03	25° $\mathring{\text{E}}$ 07'11	32.61921 AU	evening set	-1001 Aug 07 j 23:32	8° $\mathring{\text{N}}$ 32'47	
direct	-1007 Apr 14 j 14:52	23° $\mathring{\text{E}}$ 52'36		max. Earth dist.	-1001 Aug 09 j 08:25	8° $\mathring{\text{N}}$ 35'46	33.12005 AU
evening set	-1007 Jul 20 j 19:57	25° $\mathring{\text{E}}$ 52'38					
max. Earth dist.	-1007 Jul 26 j 18:23	26° $\mathring{\text{E}}$ 04'48	34.45338 AU	conjunction	-1001 Aug 12 j 10:17	8° $\mathring{\text{N}}$ 42'30	14°25'14
				minimum elong	-1001 Aug 12 j 09:54	8° $\mathring{\text{N}}$ 42'27	14°25'15
conjunction	-1007 Jul 30 j 03:15	26° $\mathring{\text{E}}$ 11'44	12°16'29	morning rise	-1001 Aug 16 j 19:58	8° $\mathring{\text{N}}$ 52'06	
minimum elong	-1007 Jul 30 j 02:52	26° $\mathring{\text{E}}$ 11'42	12°16'30	retrograde	-1001 Nov 23 j 03:42	11° $\mathring{\text{N}}$ 06'39	
morning rise	-1007 Aug 08 j 08:46	26° $\mathring{\text{E}}$ 30'41		opposition	-1000 Feb 08 j 02:30	9° $\mathring{\text{N}}$ 47'42	15°30'02
retrograde	-1007 Nov 09 j 17:41	28° $\mathring{\text{E}}$ 27'31		min. Earth dist.	-1000 Feb 10 j 21:47	9° $\mathring{\text{N}}$ 43'11	31.08744 AU
opposition	-1006 Jan 25 j 23:47	27° $\mathring{\text{E}}$ 11'01	13°13'43	direct	-1000 Apr 28 j 15:19	8° $\mathring{\text{N}}$ 25'15	
min. Earth dist.	-1006 Jan 28 j 23:56	27° $\mathring{\text{E}}$ 06'22	32.38534 AU	evening set	-1000 Aug 10 j 20:48	10° $\mathring{\text{N}}$ 48'15	
direct	-1006 Apr 16 j 20:43	25° $\mathring{\text{E}}$ 51'16		max. Earth dist.	-1000 Aug 10 j 20:31	10° $\mathring{\text{N}}$ 48'13	32.91884 AU
evening set	-1006 Jul 23 j 18:06	27° $\mathring{\text{E}}$ 53'55					
max. Earth dist.	-1006 Jul 29 j 02:44	28° $\mathring{\text{E}}$ 05'01	34.21807 AU	conjunction	-1000 Aug 13 j 22:15	10° $\mathring{\text{N}}$ 54'59	14°43'43
				minimum elong	-1000 Aug 13 j 21:53	10° $\mathring{\text{N}}$ 54'57	14°43'44
conjunction	-1006 Aug 01 j 10:29	28° $\mathring{\text{E}}$ 11'55	12°39'41	morning rise	-1000 Aug 16 j 22:52	11° $\mathring{\text{N}}$ 01'39	
minimum elong	-1006 Aug 01 j 10:05	28° $\mathring{\text{E}}$ 11'52	12°39'41	retrograde	-1000 Nov 24 j 18:12	13° $\mathring{\text{N}}$ 20'35	
morning rise	-1006 Aug 10 j 00:58	28° $\mathring{\text{E}}$ 29'46		opposition	-999 Feb 09 j 14:05	12° $\mathring{\text{N}}$ 01'16	15°49'30
	-1006 Sep 29 j 22:16	0° $\mathring{\text{N}}$		min. Earth dist.	-999 Feb 12 j 08:36	11° $\mathring{\text{N}}$ 56'47	30.89215 AU
retrograde	-1006 Nov 12 j 00:42	0° $\mathring{\text{N}}$ 29'04		direct	-999 May 01 j 00:30	10° $\mathring{\text{N}}$ 38'27	
	-1006 Dec 26 j 03:46	30° $\mathring{\text{R}}$ $\mathring{\text{E}}$		max. Earth dist.	-999 Aug 13 j 11:40	13° $\mathring{\text{N}}$ 03'04	32.72351 AU
opposition	-1005 Jan 28 j 06:07	29° $\mathring{\text{E}}$ 12'07	13°38'21				
min. Earth dist.	-1005 Jan 31 j 06:28	29° $\mathring{\text{E}}$ 07'25	32.15522 AU	conjunction	-999 Aug 16 j 11:13	13° $\mathring{\text{N}}$ 09'42	15°01'11
direct	-1005 Apr 19 j 02:30	27° $\mathring{\text{E}}$ 51'52		minimum elong	-999 Aug 16 j 10:51	13° $\mathring{\text{N}}$ 09'40	15°01'13
evening set	-1005 Jul 26 j 18:27	29° $\mathring{\text{E}}$ 57'14			-999 Oct 11 j 06:01	15° $\mathring{\text{N}}$	
	-1005 Jul 28 j 02:12	0° $\mathring{\text{N}}$		retrograde	-999 Nov 27 j 08:14	15° $\mathring{\text{N}}$ 36'40	
max. Earth dist.	-1005 Jul 31 j 11:22	0° $\mathring{\text{N}}$ 07'05	33.98711 AU		-998 Jan 15 j 04:06	15° $\mathring{\text{R}}$ $\mathring{\text{N}}$	
				opposition	-998 Feb 12 j 02:50	14° $\mathring{\text{N}}$ 17'01	16°07'52
conjunction	-1005 Aug 03 j 18:25	0° $\mathring{\text{N}}$ 14'00	13°02'17	min. Earth dist.	-998 Feb 14 j 20:31	14° $\mathring{\text{N}}$ 12'35	30.70248 AU
minimum elong	-1005 Aug 03 j 18:01	0° $\mathring{\text{N}}$ 13'58	13°02'18	direct	-998 May 03 j 12:46	12° $\mathring{\text{N}}$ 53'51	
morning rise	-1005 Aug 11 j 16:47	0° $\mathring{\text{N}}$ 30'37			-998 Aug 07 j 03:11	15° $\mathring{\text{N}}$	
retrograde	-1005 Nov 14 j 09:33	2° $\mathring{\text{N}}$ 32'32		max. Earth dist.	-998 Aug 16 j 01:38	15° $\mathring{\text{N}}$ 19'55	32.53405 AU
opposition	-1004 Jan 30 j 13:01	1° $\mathring{\text{N}}$ 15'08	14°02'20				
min. Earth dist.	-1004 Feb 02 j 11:53	1° $\mathring{\text{N}}$ 10'30	31.92988 AU	conjunction	-998 Aug 19 j 00:38	15° $\mathring{\text{N}}$ 26'33	15°17'34
	-1004 Apr 01 j 00:27	30° $\mathring{\text{R}}$ $\mathring{\text{E}}$		minimum elong	-998 Aug 19 j 00:17	15° $\mathring{\text{N}}$ 26'31	15°17'33
direct	-1004 Apr 20 j 09:15	29° $\mathring{\text{E}}$ 54'23		retrograde	-998 Nov 30 j 01:14	17° $\mathring{\text{N}}$ 54'54	
	-1004 May 09 j 10:54	0° $\mathring{\text{N}}$		opposition	-997 Feb 14 j 16:19	16° $\mathring{\text{N}}$ 34'54	16°25'01
evening set	-1004 Jul 28 j 20:57	2° $\mathring{\text{N}}$ 02'40		min. Earth dist.	-997 Feb 17 j 08:24	16° $\mathring{\text{N}}$ 30'32	30.51858 AU
max. Earth dist.	-1004 Aug 01 j 20:48	2° $\mathring{\text{N}}$ 11'06	33.76115 AU	direct	-997 May 06 j 02:07	15° $\mathring{\text{N}}$ 11'22	
				max. Earth dist.	-997 Aug 18 j 17:59	17° $\mathring{\text{N}}$ 38'59	32.35036 AU
conjunction	-1004 Aug 05 j 03:16	2° $\mathring{\text{N}}$ 18'02	13°24'13				
minimum elong	-1004 Aug 05 j 02:53	2° $\mathring{\text{N}}$ 18'00	13°24'14	conjunction	-997 Aug 21 j 15:09	17° $\mathring{\text{N}}$ 45'30	15°32'46
morning rise	-1004 Aug 12 j 08:04	2° $\mathring{\text{N}}$ 33'16		minimum elong	-997 Aug 21 j 14:49	17° $\mathring{\text{N}}$ 45'28	15°32'47
retrograde	-1004 Nov 15 j 18:37	4° $\mathring{\text{N}}$ 37'57		retrograde	-997 Dec 02 j 15:54	20° $\mathring{\text{N}}$ 15'09	
opposition	-1003 Jan 31 j 21:06	3° $\mathring{\text{N}}$ 20'08	14°25'35	opposition	-996 Feb 17 j 06:43	18° $\mathring{\text{N}}$ 54'49	16°40'54
min. Earth dist.	-1003 Feb 03 j 20:05	3° $\mathring{\text{N}}$ 15'27	31.70999 AU	min. Earth dist.	-996 Feb 19 j 22:34	18° $\mathring{\text{N}}$ 50'27	30.34041 AU
direct	-1003 Apr 22 j 14:41	1° $\mathring{\text{N}}$ 58'55		direct	-996 May 07 j 15:21	17° $\mathring{\text{N}}$ 30'56	
evening set	-1003 Aug 01 j 02:08	4° $\mathring{\text{N}}$ 10'18		max. Earth dist.	-996 Aug 20 j 10:25	19° $\mathring{\text{N}}$ 59'58	32.17292 AU
max. Earth dist.	-1003 Aug 04 j 08:09	4° $\mathring{\text{N}}$ 17'14	33.54112 AU				
				conjunction	-996 Aug 23 j 06:16	20° $\mathring{\text{N}}$ 06'25	15°46'43
conjunction	-1003 Aug 07 j 12:46	4° $\mathring{\text{N}}$ 24'04	13°45'25	minimum elong	-996 Aug 23 j 05:57	20° $\mathring{\text{N}}$ 06'23	15°46'43
minimum elong	-1003 Aug 07 j 12:22	4° $\mathring{\text{N}}$ 24'02	13°45'26	retrograde	-996 Dec 04 j 09:06	22° $\mathring{\text{N}}$ 37'20	
morning rise	-1003 Aug 13 j 22:02	4° $\mathring{\text{N}}$ 37'44		opposition	-995 Feb 18 j 21:57	21° $\mathring{\text{N}}$ 16'40	16°55'26
retrograde	-1003 Nov 18 j 04:41	6° $\mathring{\text{N}}$ 45'24		min. Earth dist.	-995 Feb 21 j 11:32	21° $\mathring{\text{N}}$ 12'26	30.16844 AU
opposition	-1002 Feb 03 j 06:00	5° $\mathring{\text{N}}$ 27'10	14°48'00	direct	-995 May 10 j 06:29	19° $\mathring{\text{N}}$ 52'26	
min. Earth dist.	-1002 Feb 06 j 02:56	5° $\mathring{\text{N}}$ 22'36	31.49615 AU	max. Earth dist.	-995 Aug 23 j 03:40	22° $\mathring{\text{N}}$ 22'51	32.00197 AU
direct	-1002 Apr 24 j 22:21	4° $\mathring{\text{N}}$ 05'31					
evening set	-1002 Aug 04 j 10:29	6° $\mathring{\text{N}}$ 20'16		conjunction	-995 Aug 25 j 22:01	22° $\mathring{\text{N}}$ 29'12	15°59'21
max. Earth dist.	-1002 Aug 06 j 18:50	6° $\mathring{\text{N}}$ 25'20	33.32736 AU	minimum elong	-995 Aug 25 j 21:43	22° $\mathring{\text{N}}$ 29'11	15°59'22
				retrograde	-995 Dec 07 j 02:00	25° $\mathring{\text{N}}$ 01'21	
conjunction	-1002 Aug 09 j 23:07	6° $\mathring{\text{N}}$ 32'12	14°05'46	opposition	-994 Feb 21 j 14:10	23° $\mathring{\text{N}}$ 40'19	17°08'29
minimum elong	-1002 Aug 09 j 22:43	6° $\mathring{\text{N}}$ 32'10	14°05'46	min. Earth dist.	-994 Feb 24 j 03:17	23° $\mathring{\text{N}}$ 36'07	30.00318 AU

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 30

Attention, astronomical year style is used: The year -994 in astronomical counting style is the year 995 BCE in historical counting style.

direct	-994 May 12 j 20:26	22° Ω 15'45		direct	-986 Jun 01 j 22:35	12° \mathbb{N} 17'05	
max. Earth dist.	-994 Aug 25 j 22:27	24° Ω 47'34	31.83844 AU	max. Earth dist.	-986 Sep 16 j 00:53	14° \mathbb{N} 57'43	30.87527 AU
conjunction	-994 Aug 28 j 14:23	24° Ω 53'45	16°10'35	conjunction	-986 Sep 17 j 18:55	15° \mathbb{N} 01'58	16°40'11
minimum elong	-994 Aug 28 j 14:07	24° Ω 53'43	16°10'35	minimum elong	-986 Sep 17 j 18:56	15° \mathbb{N} 01'58	16°40'11
retrograde	-994 Dec 09 j 18:58	27° Ω 27'02		retrograde	-986 Dec 30 j 06:05	17° \mathbb{N} 42'06	
opposition	-993 Feb 24 j 06:54	26° Ω 05'41	17°20'00	opposition	-985 Mar 16 j 21:55	16° \mathbb{N} 19'00	17°46'13
min. Earth dist.	-993 Feb 26 j 17:16	26° Ω 01'38	29.84538 AU	min. Earth dist.	-985 Mar 18 j 13:47	16° \mathbb{N} 16'12	28.92692 AU
direct	-993 May 15 j 12:52	24° Ω 40'47		direct	-985 Jun 04 j 19:49	14° \mathbb{N} 52'45	
max. Earth dist.	-993 Aug 28 j 16:45	27° Ω 13'50	31.68291 AU	max. Earth dist.	-985 Sep 18 j 23:34	17° \mathbb{N} 34'02	30.80130 AU
conjunction	-993 Aug 31 j 07:17	27° Ω 19'56	16°20'18	conjunction	-985 Sep 20 j 15:08	17° \mathbb{N} 38'02	16°35'38
minimum elong	-993 Aug 31 j 07:03	27° Ω 19'54	16°20'19	minimum elong	-985 Sep 20 j 15:12	17° \mathbb{N} 38'02	16°35'38
retrograde	-993 Dec 12 j 11:47	29° Ω 54'19		retrograde	-984 Jan 02 j 04:27	20° \mathbb{N} 18'37	
opposition	-992 Feb 27 j 00:33	28° Ω 32'38	17°29'52	opposition	-984 Mar 18 j 20:06	18° \mathbb{N} 55'25	17°40'32
min. Earth dist.	-992 Feb 29 j 09:53	28° Ω 28'39	29.69588 AU	min. Earth dist.	-984 Mar 20 j 08:18	18° \mathbb{N} 52'52	28.85686 AU
direct	-992 May 17 j 04:27	27° Ω 07'25		direct	-984 Jun 06 j 18:30	17° \mathbb{N} 29'07	
max. Earth dist.	-992 Aug 30 j 13:42	29° Ω 41'51	31.53638 AU	max. Earth dist.	-984 Sep 20 j 23:00	20° \mathbb{N} 10'58	30.73711 AU
conjunction	-992 Sep 02 j 00:46	29° Ω 47'38	16°28'26	conjunction	-984 Sep 22 j 11:34	20° \mathbb{N} 14'41	16°29'10
minimum elong	-992 Sep 02 j 00:34	29° Ω 47'37	16°28'26	minimum elong	-984 Sep 22 j 11:39	20° \mathbb{N} 14'41	16°29'10
	-992 Sep 07 j 07:09	0° \mathbb{N}		retrograde	-983 Jan 04 j 01:39	22° \mathbb{N} 55'37	
retrograde	-992 Dec 14 j 05:23	2° \mathbb{N} 23'02		opposition	-983 Mar 21 j 18:45	21° \mathbb{N} 32'18	17°32'48
opposition	-991 Feb 28 j 18:53	1° \mathbb{N} 01'04	17°37'59	min. Earth dist.	-983 Mar 23 j 05:11	21° \mathbb{N} 29'52	28.79641 AU
min. Earth dist.	-991 Mar 03 j 01:19	0° \mathbb{N} 57'16	29.55543 AU	direct	-983 Jun 09 j 16:17	20° \mathbb{N} 06'00	
	-991 Apr 10 j 09:47	30° \mathbb{R} Ω		max. Earth dist.	-983 Sep 23 j 22:40	22° \mathbb{N} 48'18	30.68309 AU
direct	-991 May 19 j 22:00	29° Ω 35'35		conjunction	-983 Sep 25 j 08:03	22° \mathbb{N} 51'41	16°20'48
	-991 Jun 27 j 10:47	0° \mathbb{N}		minimum elong	-983 Sep 25 j 08:12	22° \mathbb{N} 51'42	16°20'49
max. Earth dist.	-991 Sep 02 j 09:17	2° \mathbb{N} 11'08	31.39968 AU	retrograde	-982 Jan 06 j 23:30	25° \mathbb{N} 32'51	
conjunction	-991 Sep 04 j 18:41	2° \mathbb{N} 16'47	16°34'54	opposition	-982 Mar 24 j 17:29	24° \mathbb{N} 09'27	17°23'00
minimum elong	-991 Sep 04 j 18:31	2° \mathbb{N} 16'46	16°34'55	min. Earth dist.	-982 Mar 26 j 00:07	24° \mathbb{N} 07'17	28.74577 AU
retrograde	-991 Dec 17 j 00:42	4° \mathbb{N} 53'11		direct	-982 Jun 12 j 16:11	22° \mathbb{N} 43'08	
opposition	-990 Mar 03 j 13:57	3° \mathbb{N} 30'56	17°44'16	max. Earth dist.	-982 Sep 26 j 21:45	25° \mathbb{N} 25'43	30.63927 AU
min. Earth dist.	-990 Mar 05 j 18:17	3° \mathbb{N} 27'16	29.42506 AU	conjunction	-982 Sep 28 j 04:25	25° \mathbb{N} 28'50	16°10'33
direct	-990 May 22 j 14:15	2° \mathbb{N} 05'13		minimum elong	-982 Sep 28 j 04:35	25° \mathbb{N} 28'51	16°10'32
max. Earth dist.	-990 Sep 05 j 07:39	4° \mathbb{N} 42'02	31.27356 AU	retrograde	-981 Jan 09 j 19:36	28° \mathbb{N} 10'07	
conjunction	-990 Sep 07 j 13:05	4° \mathbb{N} 47'20	16°39'37	opposition	-981 Mar 27 j 16:22	26° \mathbb{N} 46'38	17°11'09
minimum elong	-990 Sep 07 j 12:57	4° \mathbb{N} 47'19	16°39'37	min. Earth dist.	-981 Mar 28 j 20:53	26° \mathbb{N} 44'38	28.70531 AU
retrograde	-990 Dec 19 j 18:51	7° \mathbb{N} 24'38		direct	-981 Jun 15 j 13:47	25° \mathbb{N} 20'20	
opposition	-989 Mar 06 j 09:40	6° \mathbb{N} 02'10	17°48'38	max. Earth dist.	-981 Sep 29 j 22:05	28° \mathbb{N} 03'13	30.60620 AU
min. Earth dist.	-989 Mar 08 j 11:19	5° \mathbb{N} 58'41	29.30495 AU	conjunction	-981 Oct 01 j 00:47	28° \mathbb{N} 05'56	15°58'23
direct	-989 May 25 j 10:08	4° \mathbb{N} 36'17		minimum elong	-981 Oct 01 j 01:01	28° \mathbb{N} 05'57	15°58'23
max. Earth dist.	-989 Sep 08 j 04:15	7° \mathbb{N} 14'05	31.15822 AU		-981 Nov 21 j 18:34	0° Ω	
conjunction	-989 Sep 10 j 07:55	7° \mathbb{N} 19'14	16°42'33	retrograde	-980 Jan 12 j 16:01	0° Ω 47'12	
minimum elong	-989 Sep 10 j 07:50	7° \mathbb{N} 19'13	16°42'33		-980 Mar 07 j 09:58	30° \mathbb{R} \mathbb{N}	
retrograde	-989 Dec 22 j 15:53	9° \mathbb{N} 57'22		opposition	-980 Mar 29 j 15:07	29° \mathbb{N} 23'40	16°57'15
opposition	-988 Mar 08 j 05:44	8° \mathbb{N} 34'42	17°51'03	min. Earth dist.	-980 Mar 30 j 15:59	29° \mathbb{N} 21'55	28.67541 AU
min. Earth dist.	-988 Mar 10 j 04:35	8° \mathbb{N} 31'25	29.19537 AU	direct	-980 Jun 17 j 13:39	27° \mathbb{N} 57'25	
direct	-988 May 27 j 05:08	7° \mathbb{N} 08'40			-980 Sep 15 j 03:32	0° Ω	
max. Earth dist.	-988 Sep 10 j 03:35	9° \mathbb{N} 47'36	31.05353 AU	conjunction	-980 Oct 02 j 20:53	0° Ω 42'47	15°44'21
conjunction	-988 Sep 12 j 03:21	9° \mathbb{N} 52'23	16°43'38	minimum elong	-980 Oct 02 j 21:07	0° Ω 42'48	15°44'20
minimum elong	-988 Sep 12 j 03:17	9° \mathbb{N} 52'23	16°43'37	max. Earth dist.	-980 Oct 01 j 20:50	0° Ω 40'20	30.58434 AU
retrograde	-988 Dec 24 j 11:25	12° \mathbb{N} 31'18		retrograde	-979 Jan 14 j 12:45	3° Ω 23'58	
opposition	-987 Mar 11 j 02:43	11° \mathbb{N} 08'28	17°51'28	opposition	-979 Apr 01 j 14:05	2° Ω 00'23	16°41'20
min. Earth dist.	-987 Mar 12 j 23:32	11° \mathbb{N} 05'19	29.09594 AU	min. Earth dist.	-979 Apr 02 j 11:50	1° Ω 58'51	28.65697 AU
direct	-987 May 30 j 00:35	9° \mathbb{N} 42'21		direct	-979 Jun 20 j 10:54	0° Ω 34'12	
max. Earth dist.	-987 Sep 13 j 01:16	12° \mathbb{N} 22'06	30.95935 AU	conjunction	-979 Oct 05 j 16:43	3° Ω 19'13	15°28'27
conjunction	-987 Sep 14 j 22:51	12° \mathbb{N} 26'41	16°42'51	minimum elong	-979 Oct 05 j 17:01	3° Ω 19'15	15°28'26
minimum elong	-987 Sep 14 j 22:50	12° \mathbb{N} 26'41	16°42'52	max. Earth dist.	-979 Oct 04 j 21:22	3° Ω 17'15	30.57448 AU
retrograde	-987 Dec 27 j 09:57	15° \mathbb{N} 06'16		retrograde	-978 Jan 17 j 07:18	6° Ω 00'13	
opposition	-986 Mar 14 j 00:04	13° \mathbb{N} 43'17	17°49'52	opposition	-978 Apr 04 j 12:56	4° Ω 36'39	16°23'24
min. Earth dist.	-986 Mar 15 j 17:34	13° \mathbb{N} 40'22	29.00658 AU	min. Earth dist.	-978 Apr 05 j 07:04	4° Ω 35'23	28.65040 AU

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 31

Attention, astronomical year style is used: The year -978 in astronomical counting style is the year 979 BCE in historical counting style.

direct	-978 Jun 23 j 10:49	3° <u>♁</u> 10'36		min. Earth dist.	-971 Apr 22 j 15:10	22° <u>♁</u> 30'59	28.93682 AU
				direct	-971 Jul 11 j 19:38	21° <u>♁</u> 06'22	
conjunction	-978 Oct 08 j 12:17	5° <u>♁</u> 55'10	15°10'43	evening set	-971 Oct 17 j 00:53	23° <u>♁</u> 24'38	
minimum elong	-978 Oct 08 j 12:34	5° <u>♁</u> 55'12	15°10'42				
max. Earth dist.	-978 Oct 07 j 19:33	5° <u>♁</u> 53'28	30.57709 AU	conjunction	-971 Oct 25 j 19:04	23° <u>♁</u> 45'25	12°21'22
retrograde	-977 Jan 20 j 03:37	8° <u>♁</u> 35'54		minimum elong	-971 Oct 25 j 19:28	23° <u>♁</u> 45'27	12°21'21
opposition	-977 Apr 07 j 11:24	7° <u>♁</u> 12'23	16°03'30	max. Earth dist.	-971 Oct 26 j 02:57	23° <u>♁</u> 46'12	30.92793 AU
min. Earth dist.	-977 Apr 08 j 01:38	7° <u>♁</u> 11'23	28.65635 AU	morning rise	-971 Nov 03 j 13:31	24° <u>♁</u> 06'14	
direct	-977 Jun 26 j 07:57	5° <u>♁</u> 46'29		retrograde	-970 Feb 06 j 13:39	26° <u>♁</u> 22'03	
evening set	-977 Oct 09 j 03:46	8° <u>♁</u> 25'17		opposition	-970 Apr 25 j 17:42	24° <u>♁</u> 59'41	12°56'37
				min. Earth dist.	-970 Apr 25 j 09:11	25° <u>♁</u> 00'16	29.01979 AU
conjunction	-977 Oct 11 j 07:44	8° <u>♁</u> 30'33	14°51'12	direct	-970 Jul 14 j 15:21	23° <u>♁</u> 35'48	
minimum elong	-977 Oct 11 j 08:04	8° <u>♁</u> 30'35	14°51'11	evening set	-970 Oct 19 j 00:47	25° <u>♁</u> 51'27	
max. Earth dist.	-977 Oct 10 j 19:49	8° <u>♁</u> 29'20	30.59242 AU				
morning rise	-977 Oct 13 j 12:20	8° <u>♁</u> 35'53		conjunction	-970 Oct 28 j 11:17	26° <u>♁</u> 13'43	11°51'50
retrograde	-976 Jan 22 j 22:14	11° <u>♁</u> 10'56		minimum elong	-970 Oct 28 j 11:41	26° <u>♁</u> 13'45	11°51'50
opposition	-976 Apr 09 j 09:54	9° <u>♁</u> 47'31	15°41'43	max. Earth dist.	-970 Oct 28 j 22:29	26° <u>♁</u> 14'49	31.01950 AU
min. Earth dist.	-976 Apr 09 j 21:07	9° <u>♁</u> 46'44	28.67457 AU	morning rise	-970 Nov 06 j 21:55	26° <u>♁</u> 36'01	
direct	-976 Jun 28 j 05:40	8° <u>♁</u> 21'51		retrograde	-969 Feb 09 j 05:54	28° <u>♁</u> 49'25	
evening set	-976 Oct 09 j 03:04	10° <u>♁</u> 55'38		opposition	-969 Apr 28 j 13:06	27° <u>♁</u> 27'15	12°24'22
				min. Earth dist.	-969 Apr 28 j 01:04	27° <u>♁</u> 28'05	29.11196 AU
conjunction	-976 Oct 13 j 02:34	11° <u>♁</u> 05'17	14°29'58	direct	-969 Jul 17 j 13:20	26° <u>♁</u> 03'41	
minimum elong	-976 Oct 13 j 02:54	11° <u>♁</u> 05'19	14°29'58	evening set	-969 Oct 21 j 01:14	28° <u>♁</u> 16'49	
max. Earth dist.	-976 Oct 12 j 17:21	11° <u>♁</u> 04'21	30.62024 AU				
morning rise	-976 Oct 17 j 02:36	11° <u>♁</u> 15'00		conjunction	-969 Oct 31 j 02:46	28° <u>♁</u> 40'25	11°21'17
retrograde	-975 Jan 24 j 18:26	13° <u>♁</u> 45'15		minimum elong	-969 Oct 31 j 03:10	28° <u>♁</u> 40'28	11°21'16
opposition	-975 Apr 12 j 08:05	12° <u>♁</u> 21'58	15°18'07	max. Earth dist.	-969 Oct 31 j 16:21	28° <u>♁</u> 41'45	31.12021 AU
min. Earth dist.	-975 Apr 12 j 14:55	12° <u>♁</u> 21'29	28.70499 AU	morning rise	-969 Nov 10 j 04:34	29° <u>♁</u> 04'02	
direct	-975 Jul 01 j 03:58	10° <u>♁</u> 56'33			-969 Dec 05 j 14:46	0° <u>♁</u>	
evening set	-975 Oct 10 j 15:25	13° <u>♁</u> 26'37		retrograde	-968 Feb 11 j 22:20	1° <u>♁</u> 15'09	
					-968 Apr 26 j 03:18	30° <u>♁</u>	
conjunction	-975 Oct 15 j 21:15	13° <u>♁</u> 39'18	14°07'07	opposition	-968 Apr 30 j 08:06	29° <u>♁</u> 53'10	11°51'04
minimum elong	-975 Oct 15 j 21:38	13° <u>♁</u> 39'20	14°07'07	min. Earth dist.	-968 Apr 29 j 17:11	29° <u>♁</u> 54'11	29.21354 AU
max. Earth dist.	-975 Oct 15 j 16:39	13° <u>♁</u> 38'50	30.66008 AU	direct	-968 Jul 19 j 08:41	28° <u>♁</u> 29'55	
morning rise	-975 Oct 21 j 03:34	13° <u>♁</u> 52'01			-968 Oct 03 j 20:25	0° <u>♁</u>	
retrograde	-974 Jan 27 j 12:34	16° <u>♁</u> 18'46		evening set	-968 Oct 22 j 01:59	0° <u>♁</u> 40'36	
opposition	-974 Apr 15 j 06:03	14° <u>♁</u> 55'38	14°52'49				
min. Earth dist.	-974 Apr 15 j 10:24	14° <u>♁</u> 55'20	28.74700 AU	conjunction	-968 Nov 01 j 17:30	1° <u>♁</u> 05'23	10°49'46
direct	-974 Jul 04 j 01:47	13° <u>♁</u> 30'30		minimum elong	-968 Nov 01 j 17:53	1° <u>♁</u> 05'25	10°49'46
evening set	-974 Oct 12 j 08:31	15° <u>♁</u> 57'19		max. Earth dist.	-968 Nov 02 j 10:59	1° <u>♁</u> 07'05	31.23036 AU
				morning rise	-968 Nov 12 j 09:01	1° <u>♁</u> 30'12	
conjunction	-974 Oct 18 j 15:20	16° <u>♁</u> 12'27	13°42'44	retrograde	-967 Feb 13 j 10:58	3° <u>♁</u> 39'05	
minimum elong	-974 Oct 18 j 15:42	16° <u>♁</u> 12'29	13°42'44	min. Earth dist.	-967 May 02 j 08:31	2° <u>♁</u> 18'31	29.32459 AU
max. Earth dist.	-974 Oct 18 j 13:23	16° <u>♁</u> 12'15	30.71144 AU	opposition	-967 May 03 j 02:27	2° <u>♁</u> 17'19	11°16'48
morning rise	-974 Oct 24 j 22:35	16° <u>♁</u> 27'38		direct	-967 Jul 22 j 04:58	0° <u>♁</u> 54'23	
retrograde	-973 Jan 30 j 08:15	18° <u>♁</u> 51'20		evening set	-967 Oct 24 j 03:13	3° <u>♁</u> 02'41	
opposition	-973 Apr 18 j 03:31	17° <u>♁</u> 28'23	14°25'54				
min. Earth dist.	-973 Apr 18 j 03:29	17° <u>♁</u> 28'23	28.80003 AU	conjunction	-967 Nov 04 j 07:26	3° <u>♁</u> 28'32	10°17'24
direct	-973 Jul 06 j 23:12	16° <u>♁</u> 03'33		minimum elong	-967 Nov 04 j 07:49	3° <u>♁</u> 28'34	10°17'24
evening set	-973 Oct 14 j 04:21	18° <u>♁</u> 27'23		max. Earth dist.	-967 Nov 05 j 03:08	3° <u>♁</u> 30'27	31.35012 AU
				morning rise	-967 Nov 15 j 11:56	3° <u>♁</u> 54'25	
conjunction	-973 Oct 21 j 09:07	18° <u>♁</u> 44'37	13°16'55	retrograde	-966 Feb 16 j 00:42	6° <u>♁</u> 01'09	
minimum elong	-973 Oct 21 j 09:32	18° <u>♁</u> 44'40	13°16'54	opposition	-966 May 05 j 19:56	4° <u>♁</u> 39'36	10°41'39
max. Earth dist.	-973 Oct 21 j 11:00	18° <u>♁</u> 44'49	30.77348 AU	min. Earth dist.	-966 May 04 j 22:19	4° <u>♁</u> 41'04	29.44573 AU
morning rise	-973 Oct 28 j 14:14	19° <u>♁</u> 01'56		direct	-966 Jul 24 j 22:17	3° <u>♁</u> 17'01	
retrograde	-972 Feb 02 j 02:15	21° <u>♁</u> 22'50		evening set	-966 Oct 26 j 04:32	5° <u>♁</u> 23'02	
opposition	-972 Apr 20 j 00:42	20° <u>♁</u> 00'05	13°57'29				
min. Earth dist.	-972 Apr 19 j 22:32	20° <u>♁</u> 00'14	28.86345 AU	conjunction	-966 Nov 06 j 20:45	5° <u>♁</u> 49'51	9°44'16
direct	-972 Jul 08 j 20:50	18° <u>♁</u> 35'34		minimum elong	-966 Nov 06 j 21:07	5° <u>♁</u> 49'53	9°44'16
evening set	-972 Oct 15 j 02:08	20° <u>♁</u> 56'33		max. Earth dist.	-966 Nov 07 j 20:43	5° <u>♁</u> 52'09	31.47993 AU
				morning rise	-966 Nov 18 j 12:58	6° <u>♁</u> 16'39	
conjunction	-972 Oct 23 j 02:24	21° <u>♁</u> 15'40	12°49'45	retrograde	-965 Feb 18 j 12:13	8° <u>♁</u> 21'22	
minimum elong	-972 Oct 23 j 02:48	21° <u>♁</u> 15'42	12°49'45	opposition	-965 May 08 j 12:48	7° <u>♁</u> 00'04	10°05'45
max. Earth dist.	-972 Oct 23 j 07:10	21° <u>♁</u> 16'08	30.84588 AU	min. Earth dist.	-965 May 07 j 12:42	7° <u>♁</u> 01'41	29.57696 AU
morning rise	-972 Oct 31 j 02:58	21° <u>♁</u> 34'49		direct	-965 Jul 27 j 15:50	5° <u>♁</u> 37'50	
retrograde	-971 Feb 03 j 21:12	23° <u>♁</u> 53'07		evening set	-965 Oct 28 j 06:17	7° <u>♁</u> 41'41	
opposition	-971 Apr 22 j 21:25	22° <u>♁</u> 30'34	13°27'41				

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 32

Attention, astronomical year style is used: The year -965 in astronomical counting style is the year 966 BCE in historical counting style.

conjunction	-965 Nov 09 j 09:13	8°M.09'19	9°10'28	max. Earth dist.	-959 Nov 23 j 16:46	21°M.33'56	32.64220 AU
minimum elong	-965 Nov 09 j 09:35	8°M.09'21	9°10'27	morning rise	-959 Dec 06 j 01:14	22°M.00'47	
max. Earth dist.	-965 Nov 10 j 11:19	8°M.11'49	31.61980 AU	retrograde	-958 Mar 05 j 15:03	23°M.53'40	
morning rise	-965 Nov 21 j 12:26	8°M.36'59		min. Earth dist.	-958 May 22 j 19:06	22°M.37'27	30.74675 AU
retrograde	-964 Feb 21 j 01:04	10°M.39'44		opposition	-958 May 24 j 14:25	22°M.34'40	5°41'57
min. Earth dist.	-964 May 09 j 00:28	9°M.20'36	29.71839 AU	direct	-958 Aug 12 j 20:32	21°M.15'29	
opposition	-964 May 10 j 04:49	9°M.18'43	9°29'11	evening set	-958 Nov 09 j 21:40	23°M.06'34	
direct	-964 Jul 29 j 07:49	7°M.56'53					
evening set	-964 Oct 29 j 08:02	9°M.58'39		conjunction	-958 Nov 24 j 05:47	23°M.37'31	5°03'11
				minimum elong	-958 Nov 24 j 05:59	23°M.37'32	5°03'11
conjunction	-964 Nov 10 j 21:07	10°M.27'02	8°36'06	max. Earth dist.	-958 Nov 26 j 01:30	23°M.41'28	32.83590 AU
minimum elong	-964 Nov 10 j 21:28	10°M.27'03	8°36'05	morning rise	-958 Dec 08 j 14:33	24°M.08'30	
max. Earth dist.	-964 Nov 12 j 03:12	10°M.29'53	31.76954 AU	retrograde	-957 Mar 07 j 23:01	25°M.59'58	
morning rise	-964 Nov 23 j 10:18	10°M.55'25		min. Earth dist.	-957 May 25 j 03:36	24°M.44'13	30.94105 AU
retrograde	-963 Feb 22 j 11:41	12°M.56'21		opposition	-957 May 27 j 01:27	24°M.41'18	5°03'41
opposition	-963 May 12 j 20:20	11°M.35'37	8°52'04	direct	-957 Aug 15 j 08:13	23°M.22'32	
min. Earth dist.	-963 May 11 j 13:54	11°M.37'38	29.86963 AU	evening set	-957 Nov 11 j 23:59	25°M.12'05	
direct	-963 Jul 31 j 23:10	10°M.14'13					
evening set	-963 Oct 31 j 09:59	12°M.13'59		conjunction	-957 Nov 26 j 12:54	25°M.43'11	4°27'24
				minimum elong	-957 Nov 26 j 13:05	25°M.43'12	4°27'22
conjunction	-963 Nov 13 j 08:09	12°M.43'00	8°01'14	max. Earth dist.	-957 Nov 28 j 11:35	25°M.47'23	33.03453 AU
minimum elong	-963 Nov 13 j 08:28	12°M.43'02	8°01'13	morning rise	-957 Dec 11 j 02:12	26°M.14'21	
max. Earth dist.	-963 Nov 14 j 16:26	12°M.46'03	31.92870 AU	retrograde	-956 Mar 09 j 04:18	28°M.04'28	
morning rise	-963 Nov 26 j 06:33	13°M.12'03		min. Earth dist.	-956 May 26 j 12:44	26°M.49'06	31.14028 AU
	-962 Jan 29 j 21:15	15°M.		opposition	-956 May 28 j 11:46	26°M.46'06	4°25'30
retrograde	-962 Feb 24 j 23:47	15°M.11'12		direct	-956 Aug 16 j 20:17	25°M.27'44	
	-962 Mar 23 j 18:46	15°R.M.		evening set	-956 Nov 13 j 02:22	27°M.15'50	
min. Earth dist.	-962 May 14 j 00:37	13°M.53'04	30.02999 AU				
opposition	-962 May 15 j 10:57	13°M.50'49	8°14'31	conjunction	-956 Nov 27 j 19:10	27°M.47'01	3°51'42
direct	-962 Aug 03 j 13:40	12°M.29'51		minimum elong	-956 Nov 27 j 19:19	27°M.47'02	3°51'42
evening set	-962 Nov 02 j 12:06	14°M.27'43		max. Earth dist.	-956 Nov 29 j 18:48	27°M.51'16	33.23800 AU
				morning rise	-956 Dec 12 j 12:41	28°M.18'17	
conjunction	-962 Nov 15 j 18:39	14°M.57'17	7°26'01		-955 Feb 18 j 00:35	0°X	
minimum elong	-962 Nov 15 j 18:56	14°M.57'19	7°26'01	retrograde	-955 Mar 11 j 10:19	0°X07'07	
	-962 Nov 16 j 23:41	15°M.			-955 Apr 02 j 06:37	30°R.M.	
max. Earth dist.	-962 Nov 17 j 06:02	15°M.00'36	32.09628 AU	min. Earth dist.	-955 May 28 j 19:06	28°M.52'13	31.34473 AU
morning rise	-962 Nov 29 j 01:27	15°M.26'53		opposition	-955 May 30 j 21:12	28°M.49'03	3°47'30
retrograde	-961 Feb 27 j 10:23	17°M.24'22		direct	-955 Aug 19 j 05:59	27°M.31'04	
min. Earth dist.	-961 May 16 j 12:47	16°M.06'40	30.19873 AU	evening set	-955 Nov 15 j 04:26	29°M.17'44	
opposition	-961 May 18 j 00:50	16°M.04'19	7°36'38				
	-961 Jul 04 j 11:10	15°R.M.		conjunction	-955 Nov 30 j 00:43	29°M.48'58	3°16'11
direct	-961 Aug 06 j 03:02	14°M.43'48		minimum elong	-955 Nov 30 j 00:51	29°M.48'59	3°16'09
	-961 Sep 07 j 00:24	15°M.		max. Earth dist.	-955 Dec 02 j 03:17	29°M.53'27	33.44643 AU
evening set	-961 Nov 04 j 14:24	16°M.39'52			-955 Dec 05 j 05:28	0°X	
				morning rise	-955 Dec 14 j 21:38	0°X20'17	
conjunction	-961 Nov 18 j 04:29	17°M.09'54	6°50'31	retrograde	-954 Mar 13 j 14:07	2°X07'53	
minimum elong	-961 Nov 18 j 04:46	17°M.09'55	6°50'29	min. Earth dist.	-954 May 31 j 02:51	0°X53'20	31.55454 AU
max. Earth dist.	-961 Nov 19 j 18:22	17°M.13'24	32.27169 AU	opposition	-954 Jun 02 j 05:58	0°X50'07	3°09'44
morning rise	-961 Dec 01 j 18:47	17°M.39'57			-954 Jul 08 j 08:53	30°R.M.	
retrograde	-960 Feb 29 j 21:16	19°M.35'49		direct	-954 Aug 21 j 14:46	29°M.32'31	
min. Earth dist.	-960 May 17 j 22:53	18°M.18'41	30.37491 AU		-954 Oct 03 j 02:40	0°X	
opposition	-960 May 19 j 14:04	18°M.16'08	6°58'30	evening set	-954 Nov 17 j 06:33	1°X17'51	
direct	-960 Aug 07 j 18:27	16°M.56'04					
evening set	-960 Nov 05 j 16:43	18°M.50'25		conjunction	-954 Dec 02 j 05:34	1°X49'04	2°40'52
				minimum elong	-954 Dec 02 j 05:40	1°X49'04	2°40'51
conjunction	-960 Nov 19 j 13:28	19°M.20'49	6°14'49	max. Earth dist.	-954 Dec 04 j 09:28	1°X53'37	33.66021 AU
minimum elong	-960 Nov 19 j 13:44	19°M.20'50	6°14'49	morning rise	-954 Dec 17 j 05:19	2°X20'21	
max. Earth dist.	-960 Nov 21 j 05:27	19°M.24'29	32.45385 AU	retrograde	-953 Mar 15 j 19:09	4°X06'48	
morning rise	-960 Dec 03 j 10:43	19°M.51'16		min. Earth dist.	-953 Jun 02 j 07:32	2°X52'43	31.77000 AU
retrograde	-959 Mar 03 j 08:01	21°M.45'37		opposition	-953 Jun 04 j 13:40	2°X49'21	2°32'15
min. Earth dist.	-959 May 20 j 09:24	20°M.28'55	30.55790 AU	direct	-953 Aug 23 j 22:00	1°X32'07	
opposition	-959 May 22 j 02:44	20°M.26'16	6°20'15	evening set	-953 Nov 19 j 08:35	3°X16'12	
direct	-959 Aug 10 j 07:00	19°M.06'39					
evening set	-959 Nov 07 j 19:08	20°M.59'20		conjunction	-953 Dec 04 j 09:43	3°X47'21	2°05'49
				minimum elong	-953 Dec 04 j 09:48	3°X47'21	2°05'48
conjunction	-959 Nov 21 j 22:03	21°M.30'02	5°39'01	max. Earth dist.	-953 Dec 06 j 15:55	3°X52'04	33.87947 AU
minimum elong	-959 Nov 21 j 22:17	21°M.30'03	5°39'00	morning rise	-953 Dec 19 j 11:46	4°X18'34	

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 33

Attention, astronomical year style is used: The year -952 in astronomical counting style is the year 953 BCE in historical counting style.

retrograde	-952 Mar 16 j 23:43	6°♂03'57		evening set	-946 Dec 01 j 19:40	16°♂21'03	
min. Earth dist.	-952 Jun 03 j 13:22	4°♂50'14	31.99138 AU				
opposition	-952 Jun 05 j 20:58	4°♂46'48	1°55'05	conjunction	-946 Dec 16 j 21:40	16°♂50'35	-1°48'31
direct	-952 Aug 25 j 04:40	3°♂29'58		minimum elong	-946 Dec 16 j 21:36	16°♂50'34	1°48'32
evening set	-952 Nov 20 j 10:18	5°♂12'53		max. Earth dist.	-946 Dec 19 j 14:40	16°♂55'56	35.53873 AU
				morning rise	-945 Jan 01 j 01:02	17°♂20'13	
conjunction	-952 Dec 05 j 13:10	5°♂43'54	1°31'05	retrograde	-945 Mar 30 j 11:18	18°♂59'42	
minimum elong	-952 Dec 05 j 13:14	5°♂43'54	1°31'05	min. Earth dist.	-945 Jun 17 j 10:05	17°♂48'51	33.66246 AU
max. Earth dist.	-952 Dec 07 j 21:38	5°♂48'46	34.10442 AU	opposition	-945 Jun 20 j 04:03	17°♂44'55	-2°11'53
morning rise	-952 Dec 20 j 16:49	6°♂15'01		direct	-945 Sep 08 j 16:13	16°♂30'55	
retrograde	-951 Mar 19 j 03:54	7°♂59'22		evening set	-945 Dec 03 j 20:54	18°♂07'22	
min. Earth dist.	-951 Jun 05 j 17:26	6°♂46'07	32.21829 AU				
opposition	-951 Jun 08 j 03:24	6°♂42'33	1°18'19	conjunction	-945 Dec 18 j 21:18	18°♂36'32	-2°20'02
direct	-951 Aug 27 j 12:56	5°♂26'08		minimum elong	-945 Dec 18 j 21:13	18°♂36'32	2°20'02
evening set	-951 Nov 22 j 12:10	7°♂07'57		max. Earth dist.	-945 Dec 21 j 15:11	18°♂41'55	35.78532 AU
				morning rise	-944 Jan 02 j 22:55	19°♂05'49	
conjunction	-951 Dec 07 j 15:59	7°♂38'49	0°56'43	retrograde	-944 Mar 31 j 11:33	20°♂44'38	
minimum elong	-951 Dec 07 j 16:01	7°♂38'49	0°56'42	min. Earth dist.	-944 Jun 18 j 10:41	19°♂34'09	33.91017 AU
max. Earth dist.	-951 Dec 10 j 01:45	7°♂43'45	34.33446 AU	opposition	-944 Jun 21 j 05:59	19°♂30'10	-2°44'55
morning rise	-951 Dec 22 j 20:58	8°♂09'46		direct	-944 Sep 09 j 18:11	18°♂16'31	
retrograde	-950 Mar 21 j 08:47	9°♂53'10		evening set	-944 Dec 04 j 21:57	19°♂52'14	
min. Earth dist.	-950 Jun 07 j 21:04	8°♂40'22	32.45048 AU				
opposition	-950 Jun 10 j 09:03	8°♂36'42	0°41'59	conjunction	-944 Dec 19 j 20:07	20°♂21'01	-2°50'59
direct	-950 Aug 29 j 18:11	7°♂20'41		minimum elong	-944 Dec 19 j 20:01	20°♂21'00	2°50'59
evening set	-950 Nov 24 j 13:46	9°♂01'28		max. Earth dist.	-944 Dec 22 j 14:30	20°♂26'23	36.03267 AU
				morning rise	-943 Jan 03 j 19:51	20°♂49'54	
conjunction	-950 Dec 09 j 18:20	9°♂32'09	0°22'45	retrograde	-943 Apr 02 j 11:29	22°♂28'07	
minimum elong	-950 Dec 09 j 18:21	9°♂32'09	0°22'45	min. Earth dist.	-943 Jun 20 j 11:06	21°♂17'57	34.15904 AU
max. Earth dist.	-950 Dec 12 j 06:38	9°♂37'16	34.56918 AU	opposition	-943 Jun 23 j 07:24	21°♂13'55	-3°17'18
morning rise	-950 Dec 24 j 23:48	10°♂02'55		direct	-943 Sep 11 j 18:44	20°♂00'36	
retrograde	-949 Mar 23 j 09:18	11°♂45'25		evening set	-943 Dec 06 j 22:45	21°♂35'39	
min. Earth dist.	-949 Jun 10 j 01:04	10°♂33'01	32.68700 AU				
opposition	-949 Jun 12 j 14:06	10°♂29'18	0°06'08	conjunction	-943 Dec 21 j 18:37	22°♂04'00	-3°21'21
desc. node	-949 Aug 14 j 21:36	9°♂18'00		minimum elong	-943 Dec 21 j 18:30	22°♂03'59	3°21'22
direct	-949 Sep 01 j 00:52	9°♂13'42		max. Earth dist.	-943 Dec 24 j 14:50	22°♂09'29	36.28110 AU
evening set	-949 Nov 26 j 15:20	10°♂53'31		morning rise	-942 Jan 05 j 15:46	22°♂32'29	
				retrograde	-942 Apr 04 j 08:17	24°♂10'06	
conjunction	-949 Dec 11 j 19:49	11°♂23'57	-0°10'51	min. Earth dist.	-942 Jun 22 j 11:10	23°♂00'13	34.40915 AU
minimum elong	-949 Dec 11 j 19:49	11°♂23'57	0°10'53	opposition	-942 Jun 25 j 07:54	22°♂56'11	-3°49'03
behind sun begin	-949 Dec 11 j 14:55	11°♂23'34		direct	-942 Sep 13 j 21:58	21°♂43'11	
behind sun end	-949 Dec 12 j 00:42	11°♂24'21		evening set	-942 Dec 08 j 23:29	23°♂17'36	
max. Earth dist.	-949 Dec 14 j 08:39	11°♂29'05	34.80771 AU				
morning rise	-949 Dec 27 j 01:34	11°♂54'30		conjunction	-942 Dec 23 j 16:21	23°♂45'31	-3°51'08
retrograde	-948 Mar 24 j 10:42	13°♂36'10		minimum elong	-942 Dec 23 j 16:14	23°♂45'31	3°51'08
min. Earth dist.	-948 Jun 11 j 03:05	12°♂24'14	32.92728 AU	max. Earth dist.	-942 Dec 26 j 12:33	23°♂50'58	36.53091 AU
opposition	-948 Jun 13 j 18:31	12°♂20'23	-0°29'13	morning rise	-941 Jan 07 j 10:49	24°♂13'34	
direct	-948 Sep 02 j 06:14	11°♂05'13		retrograde	-941 Apr 06 j 06:08	25°♂50'38	
evening set	-948 Nov 27 j 16:49	12°♂44'07		min. Earth dist.	-941 Jun 24 j 09:15	24°♂41'09	34.66114 AU
				opposition	-941 Jun 27 j 07:55	24°♂37'01	-4°20'09
conjunction	-948 Dec 12 j 21:01	13°♂14'17	-0°43'54	direct	-941 Sep 15 j 22:52	23°♂24'21	
minimum elong	-948 Dec 12 j 20:59	13°♂14'17	0°43'54	evening set	-941 Dec 10 j 23:49	24°♂58'10	
max. Earth dist.	-948 Dec 15 j 12:18	13°♂19'35	35.04933 AU				
morning rise	-948 Dec 28 j 02:20	13°♂44'34		conjunction	-941 Dec 25 j 13:33	25°♂25'39	-4°20'18
retrograde	-947 Mar 26 j 10:23	15°♂25'27		minimum elong	-941 Dec 25 j 13:25	25°♂25'38	4°20'19
min. Earth dist.	-947 Jun 13 j 06:43	14°♂13'52	33.17047 AU	max. Earth dist.	-941 Dec 28 j 11:55	25°♂31'13	36.78255 AU
opposition	-947 Jun 15 j 22:24	14°♂10'01	-1°04'01	morning rise	-940 Jan 09 j 04:44	25°♂53'14	
direct	-947 Sep 04 j 11:08	12°♂55'16		retrograde	-940 Apr 07 j 01:35	27°♂29'50	
evening set	-947 Nov 29 j 18:14	14°♂33'18		min. Earth dist.	-940 Jun 25 j 08:43	26°♂20'37	34.91521 AU
				opposition	-940 Jun 28 j 07:29	26°♂16'30	-4°50'33
conjunction	-947 Dec 14 j 21:34	15°♂03'09	-1°16'28	direct	-940 Sep 16 j 23:45	25°♂04'11	
minimum elong	-947 Dec 14 j 21:31	15°♂03'09	1°16'29	evening set	-940 Dec 12 j 00:10	26°♂37'28	
max. Earth dist.	-947 Dec 17 j 13:13	15°♂08'26	35.29332 AU				
morning rise	-947 Dec 30 j 02:09	15°♂33'08		conjunction	-940 Dec 26 j 10:20	27°♂04'27	-4°48'51
retrograde	-946 Mar 28 j 11:00	17°♂13'18		minimum elong	-940 Dec 26 j 10:11	27°♂04'26	4°48'51
min. Earth dist.	-946 Jun 15 j 07:39	16°♂02'09	33.41574 AU	max. Earth dist.	-940 Dec 29 j 09:05	27°♂10'01	37.03637 AU
opposition	-946 Jun 18 j 01:29	15°♂58'12	-1°38'15	morning rise	-939 Jan 09 j 22:00	27°♂31'34	
direct	-946 Sep 06 j 14:25	14°♂43'50		retrograde	-939 Apr 08 j 21:50	29°♂07'44	

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 34

Attention, astronomical year style is used: The year -939 in astronomical counting style is the year 940 BCE in historical counting style.

min. Earth dist.	-939 Jun 27 j 05:23	27° 27 58'56	35.17150 AU	direct	-933 Sep 29 j 05:33	6° 31 11'20	
opposition	-939 Jun 30 j 06:16	27° 27 54'42	-5°20'16	evening set	-933 Dec 24 j 22:58	7° 32 42'04	
direct	-939 Sep 18 j 22:47	26° 27 42'44					
evening set	-939 Dec 14 j 00:18	28° 27 15'32		conjunction	-932 Jan 06 j 23:51	8° 33 05'20	-7°50'55
				minimum elong	-932 Jan 06 j 23:39	8° 33 05'20	7°50'55
conjunction	-939 Dec 28 j 06:35	28° 27 42'03	-5°16'45	max. Earth dist.	-932 Jan 10 j 02:51	8° 33 10'58	38.83809 AU
minimum elong	-939 Dec 28 j 06:25	28° 27 42'02	5°16'46	morning rise	-932 Jan 20 j 02:06	8° 33 28'44	
max. Earth dist.	-939 Dec 31 j 06:43	28° 27 47'41	37.29209 AU	retrograde	-932 Apr 19 j 12:11	10° 33 02'54	
morning rise	-938 Jan 11 j 14:28	29° 27 08'41		min. Earth dist.	-932 Jul 08 j 04:32	8° 33 56'17	36.98544 AU
	-938 Feb 11 j 10:48	0° 33		opposition	-932 Jul 11 j 08:41	8° 33 52'01	-8°28'58
retrograde	-938 Apr 10 j 19:32	0° 33 44'28		direct	-932 Sep 30 j 02:01	7° 33 42'26	
	-938 Jun 11 j 04:54	30° 33 11'20		evening set	-932 Dec 25 j 22:25	9° 33 12'54	
min. Earth dist.	-938 Jun 29 j 03:33	29° 27 35'58	35.42973 AU				
opposition	-938 Jul 02 j 04:42	29° 27 31'45	-5°49'18	conjunction	-931 Jan 07 j 17:23	9° 33 35'36	-8°14'25
direct	-938 Sep 20 j 19:25	28° 27 20'09		minimum elong	-931 Jan 07 j 17:11	9° 33 35'35	8°14'26
evening set	-938 Dec 16 j 00:16	29° 27 52'30		max. Earth dist.	-931 Jan 10 j 20:32	9° 33 41'12	39.09172 AU
	-938 Dec 20 j 02:43	0° 33		morning rise	-931 Jan 20 j 13:55	9° 33 58'25	
				retrograde	-931 Apr 21 j 07:23	11° 33 32'23	
conjunction	-938 Dec 30 j 02:28	0° 33 18'31	-5°44'02	min. Earth dist.	-931 Jul 10 j 00:07	10° 33 25'58	37.24030 AU
minimum elong	-938 Dec 30 j 02:18	0° 33 18'30	5°44'03	opposition	-931 Jul 13 j 03:48	10° 33 21'45	-8°53'13
max. Earth dist.	-937 Jan 02 j 03:37	0° 33 24'11	37.54948 AU	direct	-931 Oct 01 j 19:18	9° 33 12'26	
morning rise	-937 Jan 13 j 06:02	0° 33 44'38		evening set	-931 Dec 27 j 21:36	10° 33 42'39	
retrograde	-937 Apr 12 j 15:52	2° 33 20'05					
min. Earth dist.	-937 Jul 01 j 00:10	1° 33 11'56	35.68927 AU	conjunction	-930 Jan 09 j 10:37	11° 33 04'46	-8°37'18
opposition	-937 Jul 04 j 02:24	1° 33 07'41	-6°17'38	minimum elong	-930 Jan 09 j 10:25	11° 33 04'45	8°37'19
	-937 Sep 06 j 15:04	30° 33 11'20		max. Earth dist.	-930 Jan 12 j 14:22	11° 33 10'21	39.34362 AU
direct	-937 Sep 22 j 16:25	29° 27 56'26		morning rise	-930 Jan 22 j 00:52	11° 33 26'59	
	-937 Oct 08 j 14:54	0° 33		retrograde	-930 Apr 22 j 23:51	13° 33 00'45	
evening set	-937 Dec 18 j 00:16	1° 33 28'25		min. Earth dist.	-930 Jul 11 j 18:34	11° 33 54'33	37.49339 AU
				opposition	-930 Jul 14 j 22:21	11° 33 50'21	-9°16'48
conjunction	-937 Dec 31 j 21:49	1° 33 53'54	-6°10'41	direct	-930 Oct 03 j 14:56	10° 33 41'16	
minimum elong	-937 Dec 31 j 21:38	1° 33 53'54	6°10'41	evening set	-930 Dec 29 j 20:44	12° 33 11'17	
max. Earth dist.	-936 Jan 03 j 23:09	1° 33 59'33	37.80785 AU				
morning rise	-936 Jan 14 j 21:03	2° 33 19'31		conjunction	-929 Jan 11 j 03:13	12° 33 32'47	-8°59'35
retrograde	-936 Apr 13 j 13:16	3° 33 54'39		minimum elong	-929 Jan 11 j 03:00	12° 33 32'46	8°59'36
min. Earth dist.	-936 Jul 01 j 20:45	2° 33 46'51	35.94980 AU	max. Earth dist.	-929 Jan 14 j 06:19	12° 33 38'18	39.59397 AU
opposition	-936 Jul 04 j 23:53	2° 33 42'35	-6°45'16	morning rise	-929 Jan 23 j 11:11	12° 33 54'24	
direct	-936 Sep 23 j 12:49	1° 33 31'42		retrograde	-929 Apr 24 j 18:08	14° 33 28'00	
evening set	-936 Dec 18 j 23:55	3° 33 03'19		min. Earth dist.	-929 Jul 13 j 12:00	13° 33 22'03	37.74545 AU
				opposition	-929 Jul 16 j 16:28	13° 33 17'49	-9°39'43
conjunction	-935 Jan 01 j 16:51	3° 33 28'17	-6°36'41	direct	-929 Oct 05 j 07:57	12° 33 09'00	
minimum elong	-935 Jan 01 j 16:40	3° 33 28'16	6°36'42	evening set	-929 Dec 31 j 19:35	13° 33 38'50	
max. Earth dist.	-935 Jan 04 j 19:52	3° 33 34'00	38.06669 AU				
morning rise	-935 Jan 15 j 11:11	3° 33 53'21		conjunction	-928 Jan 12 j 19:36	13° 33 59'44	-9°21'14
retrograde	-935 Apr 15 j 07:36	5° 33 28'12		minimum elong	-928 Jan 12 j 19:23	13° 33 59'43	9°21'14
min. Earth dist.	-935 Jul 03 j 17:54	4° 33 20'42	36.21032 AU	max. Earth dist.	-928 Jan 16 j 00:11	14° 33 05'19	39.84350 AU
opposition	-935 Jul 06 j 20:49	4° 33 16'27	-7°12'12	morning rise	-928 Jan 24 j 20:50	14° 33 20'43	
direct	-935 Sep 25 j 11:28	3° 33 05'56		retrograde	-928 Apr 25 j 09:12	15° 33 54'11	
evening set	-935 Dec 20 j 23:48	4° 33 37'14		min. Earth dist.	-928 Jul 14 j 06:19	14° 33 48'25	37.99686 AU
				opposition	-928 Jul 17 j 10:16	14° 33 44'14	-10°01'58
conjunction	-934 Jan 03 j 11:33	5° 33 01'39	-7°02'03	direct	-928 Oct 06 j 03:19	13° 33 35'41	
minimum elong	-934 Jan 03 j 11:21	5° 33 01'38	7°02'03	evening set	-927 Jan 01 j 18:22	15° 33 05'21	
max. Earth dist.	-934 Jan 06 j 13:52	5° 33 07'17	38.32512 AU				
morning rise	-934 Jan 17 j 00:53	5° 33 26'11		conjunction	-927 Jan 13 j 11:28	15° 33 25'38	-9°42'15
retrograde	-934 Apr 17 j 03:19	7° 33 00'46		minimum elong	-927 Jan 13 j 11:15	15° 33 25'37	9°42'16
min. Earth dist.	-934 Jul 05 j 12:56	5° 33 53'38	36.47024 AU	max. Earth dist.	-927 Jan 16 j 15:34	15° 33 31'09	40.09261 AU
opposition	-934 Jul 08 j 17:04	5° 33 49'20	-7°38'28	morning rise	-927 Jan 25 j 05:50	15° 33 46'00	
direct	-934 Sep 27 j 07:44	4° 33 39'08		retrograde	-927 Apr 27 j 00:23	17° 33 19'22	
evening set	-934 Dec 22 j 23:27	6° 33 10'09		min. Earth dist.	-927 Jul 15 j 22:11	16° 33 13'55	38.24791 AU
				opposition	-927 Jul 19 j 03:32	16° 33 09'40	-10°23'33
conjunction	-933 Jan 05 j 05:56	6° 33 34'01	-7°26'47	direct	-927 Oct 07 j 21:02	15° 33 01'22	
minimum elong	-933 Jan 05 j 05:44	6° 33 34'00	7°26'49	evening set	-926 Jan 03 j 17:04	16° 33 30'56	
max. Earth dist.	-933 Jan 08 j 09:20	6° 33 39'42	38.58240 AU				
morning rise	-933 Jan 18 j 13:54	6° 33 57'59		conjunction	-926 Jan 15 j 03:07	16° 33 50'35	-10°02'39
retrograde	-933 Apr 18 j 19:03	8° 33 32'21		minimum elong	-926 Jan 15 j 02:55	16° 33 50'34	10°02'39
min. Earth dist.	-933 Jul 07 j 09:59	7° 33 25'26	36.72877 AU	max. Earth dist.	-926 Jan 18 j 08:03	16° 33 56'08	40.34124 AU
opposition	-933 Jul 10 j 13:08	7° 33 21'12	-8°04'03	morning rise	-926 Jan 26 j 14:27	17° 33 10'19	

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 35

Attention, astronomical year style is used: The year -926 in astronomical counting style is the year 927 BCE in historical counting style.

retrograde	-926 Apr 28 j 14:41	18° $\overline{3}$ 43'39		minimum elong	-919 Jan 24 j 08:08	26° $\overline{3}$ 23'58	12°08'57
min. Earth dist.	-926 Jul 17 j 15:44	17° $\overline{3}$ 38'23	38.49854 AU	max. Earth dist.	-919 Jan 27 j 12:02	26° $\overline{3}$ 29'13	42.03884 AU
opposition	-926 Jul 20 j 20:23	17° $\overline{3}$ 34'11	-10°44'28	morning rise	-919 Feb 02 j 11:01	26° $\overline{3}$ 39'05	
direct	-926 Oct 09 j 15:09	16° $\overline{3}$ 26'10		retrograde	-919 May 07 j 21:51	28° $\overline{3}$ 12'46	
evening set	-925 Jan 05 j 15:39	17° $\overline{3}$ 55'39		min. Earth dist.	-919 Jul 27 j 06:04	27° $\overline{3}$ 09'05	40.20260 AU
				opposition	-919 Jul 30 j 09:08	27° $\overline{3}$ 05'05	-12°53'28
conjunction	-925 Jan 16 j 18:28	18° $\overline{3}$ 14'40	-10°22'26	direct	-919 Oct 19 j 03:27	25° $\overline{3}$ 58'55	
minimum elong	-925 Jan 16 j 18:15	18° $\overline{3}$ 14'39	10°22'27	evening set	-918 Jan 17 j 05:04	27° $\overline{3}$ 28'40	
max. Earth dist.	-925 Jan 19 j 23:38	18° $\overline{3}$ 20'12	40.58944 AU				
morning rise	-925 Jan 27 j 22:18	18° $\overline{3}$ 33'47		conjunction	-918 Jan 25 j 21:52	27° $\overline{3}$ 43'01	-12°24'47
retrograde	-925 Apr 30 j 06:19	20° $\overline{3}$ 07'04		minimum elong	-918 Jan 25 j 21:41	27° $\overline{3}$ 43'00	12°24'48
min. Earth dist.	-925 Jul 19 j 07:30	19° $\overline{3}$ 02'06	38.74840 AU	max. Earth dist.	-918 Jan 29 j 01:42	27° $\overline{3}$ 48'14	42.26926 AU
opposition	-925 Jul 22 j 12:51	18° $\overline{3}$ 57'53	-11°04'44	morning rise	-918 Feb 03 j 15:15	27° $\overline{3}$ 57'24	
direct	-925 Oct 11 j 07:26	17° $\overline{3}$ 50'09		retrograde	-918 May 09 j 12:00	29° $\overline{3}$ 31'12	
evening set	-924 Jan 07 j 14:04	19° $\overline{3}$ 19'36		min. Earth dist.	-918 Jul 28 j 20:37	28° $\overline{3}$ 27'40	40.43332 AU
				opposition	-918 Jul 31 j 23:07	28° $\overline{3}$ 23'43	-13°09'36
conjunction	-924 Jan 18 j 09:14	19° $\overline{3}$ 37'58	-10°41'37	direct	-918 Oct 20 j 16:36	27° $\overline{3}$ 17'45	
minimum elong	-924 Jan 18 j 09:01	19° $\overline{3}$ 37'58	10°41'37	evening set	-917 Jan 19 j 03:37	28° $\overline{3}$ 47'37	
max. Earth dist.	-924 Jan 21 j 14:11	19° $\overline{3}$ 43'27	40.83665 AU				
morning rise	-924 Jan 29 j 05:38	19° $\overline{3}$ 56'26		conjunction	-917 Jan 27 j 10:51	29° $\overline{3}$ 01'14	-12°40'06
retrograde	-924 Apr 30 j 23:38	21° $\overline{3}$ 29'45		minimum elong	-917 Jan 27 j 10:39	29° $\overline{3}$ 01'13	12°40'07
min. Earth dist.	-924 Jul 19 j 23:44	20° $\overline{3}$ 25'01	38.99724 AU	max. Earth dist.	-917 Jan 30 j 13:26	29° $\overline{3}$ 06'20	42.49648 AU
opposition	-924 Jul 23 j 05:10	20° $\overline{3}$ 20'49	-11°24'21	morning rise	-917 Feb 04 j 18:46	29° $\overline{3}$ 14'54	
direct	-924 Oct 11 j 21:09	19° $\overline{3}$ 13'22			-917 Mar 06 j 07:21	0° \approx	
evening set	-923 Jan 08 j 12:29	20° $\overline{3}$ 42'49		retrograde	-917 May 11 j 02:30	0° \approx 48'50	
					-917 Jul 18 j 18:36	30° \overline{R} $\overline{3}$	
conjunction	-923 Jan 19 j 00:02	21° $\overline{3}$ 00'33	-11°00'12	min. Earth dist.	-917 Jul 30 j 10:14	29° $\overline{3}$ 45'28	40.66133 AU
minimum elong	-923 Jan 18 j 23:49	21° $\overline{3}$ 00'32	11°00'13	opposition	-917 Aug 02 j 12:57	29° $\overline{3}$ 41'32	-13°25'09
max. Earth dist.	-923 Jan 22 j 05:56	21° $\overline{3}$ 06'04	41.08252 AU	direct	-917 Oct 22 j 05:01	28° $\overline{3}$ 35'46	
morning rise	-923 Jan 29 j 12:30	21° $\overline{3}$ 18'22			-916 Jan 17 j 12:19	0° \approx	
retrograde	-923 May 02 j 14:08	22° $\overline{3}$ 51'42		evening set	-916 Jan 21 j 01:57	0° \approx 05'46	
min. Earth dist.	-923 Jul 21 j 16:09	21° $\overline{3}$ 47'11	39.24425 AU				
opposition	-923 Jul 24 j 20:54	21° $\overline{3}$ 43'03	-11°43'21	conjunction	-916 Jan 28 j 23:30	0° \approx 18'39	-12°54'53
direct	-923 Oct 13 j 13:35	20° $\overline{3}$ 35'53		minimum elong	-916 Jan 28 j 23:20	0° \approx 18'39	12°54'54
evening set	-922 Jan 10 j 11:04	22° $\overline{3}$ 05'22		max. Earth dist.	-916 Feb 01 j 03:03	0° \approx 23'48	42.72122 AU
				morning rise	-916 Feb 05 j 21:34	0° \approx 31'34	
conjunction	-922 Jan 20 j 14:28	22° $\overline{3}$ 22'26	-11°18'13	retrograde	-916 May 11 j 12:53	2° \approx 05'40	
minimum elong	-922 Jan 20 j 14:16	22° $\overline{3}$ 22'25	11°18'14	min. Earth dist.	-916 Jul 31 j 00:52	1° \approx 02'26	40.88702 AU
max. Earth dist.	-922 Jan 23 j 19:06	22° $\overline{3}$ 27'50	41.32629 AU	opposition	-916 Aug 03 j 02:29	0° \approx 58'33	-13°40'09
morning rise	-922 Jan 30 j 18:54	22° $\overline{3}$ 39'35			-916 Sep 29 j 02:07	30° \overline{R} $\overline{3}$	
retrograde	-922 May 04 j 05:11	24° $\overline{3}$ 12'59		direct	-916 Oct 22 j 20:26	29° $\overline{3}$ 52'59	
min. Earth dist.	-922 Jul 23 j 07:07	23° $\overline{3}$ 08'45	39.48890 AU		-916 Nov 15 j 08:01	0° \approx	
opposition	-922 Jul 26 j 12:23	23° $\overline{3}$ 04'36	-12°01'45	evening set	-915 Jan 22 j 00:43	1° \approx 23'10	
direct	-922 Oct 15 j 04:47	21° $\overline{3}$ 57'43					
evening set	-921 Jan 12 j 09:27	23° $\overline{3}$ 27'15		conjunction	-915 Jan 29 j 12:01	1° \approx 35'18	-13°09'08
				minimum elong	-915 Jan 29 j 11:50	1° \approx 35'17	13°09'08
conjunction	-921 Jan 22 j 04:40	23° $\overline{3}$ 43'39	-11°35'40	max. Earth dist.	-915 Feb 01 j 14:34	1° \approx 40'21	42.94407 AU
minimum elong	-921 Jan 22 j 04:27	23° $\overline{3}$ 43'38	11°35'41	morning rise	-915 Feb 05 j 23:44	1° \approx 47'27	
max. Earth dist.	-921 Jan 25 j 09:56	23° $\overline{3}$ 49'04	41.56722 AU	retrograde	-915 May 12 j 23:38	3° \approx 21'45	
morning rise	-921 Feb 01 j 00:47	24° $\overline{3}$ 00'07		min. Earth dist.	-915 Aug 01 j 13:04	2° \approx 18'44	41.11095 AU
retrograde	-921 May 05 j 18:02	25° $\overline{3}$ 33'37		opposition	-915 Aug 04 j 15:30	2° \approx 14'50	-13°54'35
min. Earth dist.	-921 Jul 24 j 23:53	24° $\overline{3}$ 29'32	39.73039 AU	direct	-915 Oct 24 j 10:48	1° \approx 09'27	
opposition	-921 Jul 28 j 03:38	24° $\overline{3}$ 25'29	-12°19'33	evening set	-914 Jan 23 j 23:29	2° \approx 39'52	
direct	-921 Oct 16 j 21:15	23° $\overline{3}$ 18'52					
evening set	-920 Jan 14 j 08:04	24° $\overline{3}$ 48'27		conjunction	-914 Jan 31 j 00:13	2° \approx 51'13	-13°22'51
				minimum elong	-914 Jan 31 j 00:03	2° \approx 51'13	13°22'52
conjunction	-920 Jan 23 j 18:43	25° $\overline{3}$ 04'11	-11°52'34	max. Earth dist.	-914 Feb 03 j 03:01	2° \approx 56'16	43.16515 AU
minimum elong	-920 Jan 23 j 18:32	25° $\overline{3}$ 04'10	11°52'35	morning rise	-914 Feb 07 j 01:23	3° \approx 02'36	
max. Earth dist.	-920 Jan 26 j 23:02	25° $\overline{3}$ 09'30	41.80491 AU	retrograde	-914 May 14 j 11:01	4° \approx 37'09	
morning rise	-920 Feb 02 j 06:08	25° $\overline{3}$ 19'58		min. Earth dist.	-914 Aug 03 j 03:06	3° \approx 34'15	41.33321 AU
retrograde	-920 May 06 j 06:48	26° $\overline{3}$ 53'33		opposition	-914 Aug 06 j 04:26	3° \approx 30'25	-14°08'27
min. Earth dist.	-920 Jul 25 j 14:17	25° $\overline{3}$ 49'44	39.96833 AU	direct	-914 Oct 26 j 00:47	2° \approx 25'15	
opposition	-920 Jul 28 j 18:29	25° $\overline{3}$ 45'40	-12°36'48	evening set	-913 Jan 25 j 22:31	3° \approx 55'55	
direct	-920 Oct 17 j 13:29	24° $\overline{3}$ 39'16					
evening set	-919 Jan 15 j 06:31	26° $\overline{3}$ 08'56		conjunction	-913 Feb 01 j 12:10	4° \approx 06'28	-13°36'02
				minimum elong	-913 Feb 01 j 12:00	4° \approx 06'28	13°36'02
conjunction	-919 Jan 24 j 08:20	26° $\overline{3}$ 23'59	-12°08'57	max. Earth dist.	-913 Feb 04 j 15:08	4° \approx 11'30	43.38470 AU

Planetary Phenomena of Pluto from -1400 through -898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 36

Attention, astronomical year style is used: The year -913 in astronomical counting style is the year 914 BCE in historical counting style.

morning rise	-913 Feb 08 j 02:03	4° \approx 17'04	conjunction	-906 Feb 09 j 18:38	12° \approx 37'32	-14°54'46
retrograde	-913 May 15 j 22:28	5° \approx 51'53	minimum elong	-906 Feb 09 j 18:30	12° \approx 37'31	14°54'47
min. Earth dist.	-913 Aug 04 j 15:17	4° \approx 49'12 41.55364 AU	morning rise	-906 Feb 11 j 11:01	12° \approx 40'09	
opposition	-913 Aug 07 j 16:57	4° \approx 45'22 -14°21'46	max. Earth dist.	-906 Feb 12 j 17:46	12° \approx 42'09	44.84380 AU
direct	-913 Oct 27 j 14:13	3° \approx 40'24	retrograde	-906 May 24 j 06:40	14° \approx 19'38	
evening set	-912 Jan 27 j 21:56	5° \approx 11'23	min. Earth dist.	-906 Aug 13 j 05:49	13° \approx 17'57	43.01227 AU
			opposition	-906 Aug 16 j 02:09	13° \approx 14'28	-15°41'01
			direct	-906 Nov 04 j 22:15	12° \approx 10'51	
conjunction	-912 Feb 02 j 23:50	5° \approx 21'07 -13°48'42				
minimum elong	-912 Feb 02 j 23:40	5° \approx 21'06 13°48'44				
max. Earth dist.	-912 Feb 06 j 01:49	5° \approx 26'03 43.60239 AU	conjunction	-905 Feb 11 j 04:51	13° \approx 48'17	-15°04'14
morning rise	-912 Feb 09 j 02:00	5° \approx 30'52	minimum elong	-905 Feb 11 j 04:45	13° \approx 48'16	15°04'15
retrograde	-912 May 16 j 13:38	7° \approx 06'02	max. Earth dist.	-905 Feb 14 j 02:15	13° \approx 52'46	45.03670 AU
min. Earth dist.	-912 Aug 05 j 03:54	6° \approx 03'32 41.77223 AU		-905 Apr 03 j 14:32	15° \approx	
opposition	-912 Aug 08 j 05:20	5° \approx 59'43 -14°34'34	retrograde	-905 May 25 j 18:12	15° \approx 29'55	
direct	-912 Oct 27 j 23:29	4° \approx 54'58		-905 Jul 18 j 03:36	15° \approx	
evening set	-911 Jan 28 j 21:51	6° \approx 26'20	min. Earth dist.	-905 Aug 14 j 16:18	14° \approx 28'23	43.20493 AU
			opposition	-905 Aug 17 j 12:45	14° \approx 24'54	-15°50'29
			direct	-905 Nov 06 j 07:19	13° \approx 21'26	
conjunction	-911 Feb 03 j 11:25	6° \approx 35'11 -14°00'53				
minimum elong	-911 Feb 03 j 11:16	6° \approx 35'11 14°00'53				
max. Earth dist.	-911 Feb 06 j 14:09	6° \approx 40'09 43.81799 AU	conjunction	-904 Feb 12 j 15:00	14° \approx 58'25	-15°13'17
morning rise	-911 Feb 09 j 01:06	6° \approx 44'04	minimum elong	-904 Feb 12 j 14:53	14° \approx 58'25	15°13'17
retrograde	-911 May 18 j 01:42	8° \approx 19'37		-904 Feb 13 j 15:29	15° \approx	
min. Earth dist.	-911 Aug 06 j 17:10	7° \approx 17'15 41.98823 AU	max. Earth dist.	-904 Feb 15 j 12:43	15° \approx 02'54	45.22627 AU
opposition	-911 Aug 09 j 17:26	7° \approx 13'31 -14°46'50	retrograde	-904 May 26 j 02:34	16° \approx 39'37	
direct	-911 Oct 29 j 11:11	6° \approx 08'59	min. Earth dist.	-904 Aug 15 j 04:21	15° \approx 38'09	43.39455 AU
evening set	-910 Jan 30 j 22:43	7° \approx 40'47	opposition	-904 Aug 17 j 23:09	15° \approx 34'45	-15°59'30
				-904 Sep 17 j 01:30	15° \approx	
			direct	-904 Nov 06 j 18:39	14° \approx 31'27	
				-904 Dec 26 j 02:32	15° \approx	
conjunction	-910 Feb 04 j 22:48	7° \approx 48'44 -14°12'34				
minimum elong	-910 Feb 04 j 22:39	7° \approx 48'43 14°12'35				
max. Earth dist.	-910 Feb 08 j 00:06	7° \approx 53'34 44.03083 AU	conjunction	-903 Feb 13 j 00:58	16° \approx 08'00	-15°21'52
morning rise	-910 Feb 09 j 22:58	7° \approx 56'40	minimum elong	-903 Feb 13 j 00:53	16° \approx 08'00	15°21'53
retrograde	-910 May 19 j 12:35	9° \approx 32'40	max. Earth dist.	-903 Feb 15 j 22:00	16° \approx 12'26	45.41322 AU
min. Earth dist.	-910 Aug 08 j 04:33	8° \approx 30'32 42.20120 AU	retrograde	-903 May 27 j 09:56	17° \approx 48'47	
opposition	-910 Aug 11 j 05:06	8° \approx 26'47 -14°58'36	min. Earth dist.	-903 Aug 16 j 13:56	16° \approx 47'29	43.58154 AU
direct	-910 Oct 30 j 22:42	7° \approx 22'28	opposition	-903 Aug 19 j 09:11	16° \approx 44'05	-16°08'04
evening set	-909 Feb 02 j 00:34	8° \approx 54'48	direct	-903 Nov 08 j 07:16	15° \approx 40'56	
conjunction	-909 Feb 06 j 10:01	9° \approx 01'45 -14°23'47				
minimum elong	-909 Feb 06 j 09:53	9° \approx 01'44 14°23'47	conjunction	-902 Feb 14 j 10:41	17° \approx 17'05	-15°30'01
max. Earth dist.	-909 Feb 09 j 11:16	9° \approx 06'34 44.24024 AU	minimum elong	-902 Feb 14 j 10:34	17° \approx 17'05	15°30'01
morning rise	-909 Feb 10 j 19:30	9° \approx 08'41	max. Earth dist.	-902 Feb 17 j 06:51	17° \approx 21'26	45.59764 AU
retrograde	-909 May 20 j 21:43	10° \approx 45'14	retrograde	-902 May 28 j 20:50	18° \approx 57'28	
min. Earth dist.	-909 Aug 09 j 17:59	9° \approx 43'11 42.41045 AU	min. Earth dist.	-902 Aug 18 j 00:46	17° \approx 56'17	43.76623 AU
opposition	-909 Aug 12 j 16:48	9° \approx 39'32 -15°09'53	opposition	-902 Aug 20 j 19:01	17° \approx 52'55	-16°16'10
direct	-909 Nov 01 j 12:26	8° \approx 35'26	direct	-902 Nov 09 j 17:00	16° \approx 49'57	
evening set	-908 Feb 04 j 04:16	10° \approx 08'25				
conjunction	-908 Feb 07 j 21:01	10° \approx 14'14 -14°34'32	conjunction	-901 Feb 15 j 20:18	18° \approx 25'43	-15°37'44
minimum elong	-908 Feb 07 j 20:53	10° \approx 14'14 14°34'33	minimum elong	-901 Feb 15 j 20:13	18° \approx 25'43	15°37'45
morning rise	-908 Feb 11 j 13:42	10° \approx 20'03	max. Earth dist.	-901 Feb 18 j 16:53	18° \approx 30'05	45.77993 AU
max. Earth dist.	-908 Feb 10 j 21:26	10° \approx 18'59 44.44581 AU	retrograde	-901 May 30 j 07:00	20° \approx 05'43	
retrograde	-908 May 21 j 07:30	11° \approx 57'16	min. Earth dist.	-901 Aug 19 j 10:58	19° \approx 04'40	43.94852 AU
min. Earth dist.	-908 Aug 10 j 05:32	10° \approx 55'24 42.61541 AU	opposition	-901 Aug 22 j 04:41	19° \approx 01'21	-16°23'49
opposition	-908 Aug 13 j 04:10	10° \approx 51'46 -15°20'42	direct	-901 Nov 11 j 02:01	17° \approx 58'34	
direct	-908 Nov 02 j 01:21	9° \approx 47'50				
evening set	-907 Feb 05 j 11:10	11° \approx 21'42	conjunction	-900 Feb 17 j 05:31	19° \approx 33'57	-15°45'02
			minimum elong	-900 Feb 17 j 05:26	19° \approx 33'57	15°45'01
			max. Earth dist.	-900 Feb 20 j 00:40	19° \approx 38'12	45.95988 AU
conjunction	-907 Feb 08 j 07:53	11° \approx 26'10 -14°44'52	retrograde	-900 May 30 j 18:36	21° \approx 13'35	
minimum elong	-907 Feb 08 j 07:45	11° \approx 26'10 14°44'52	min. Earth dist.	-900 Aug 19 j 20:29	20° \approx 12'42	44.12839 AU
morning rise	-907 Feb 11 j 04:31	11° \approx 30'39	opposition	-900 Aug 22 j 14:14	20° \approx 09'24	-16°31'02
max. Earth dist.	-907 Feb 11 j 06:55	11° \approx 30'49 44.64694 AU	direct	-900 Nov 11 j 09:08	19° \approx 06'48	
retrograde	-907 May 22 j 19:50	13° \approx 08'45				
min. Earth dist.	-907 Aug 11 j 17:50	12° \approx 06'58 42.81601 AU	conjunction	-899 Feb 17 j 14:51	20° \approx 41'51	-15°51'54
opposition	-907 Aug 14 j 15:18	12° \approx 03'25 -15°31'05	minimum elong	-899 Feb 17 j 14:47	20° \approx 41'50	15°51'55
direct	-907 Nov 03 j 11:28	10° \approx 59'39	max. Earth dist.	-899 Feb 20 j 10:23	20° \approx 46'06	46.13715 AU
evening set	-906 Feb 08 j 02:02	12° \approx 34'54	retrograde	-899 Jun 01 j 02:28	22° \approx 21'06	
			min. Earth dist.	-899 Aug 21 j 07:26	21° \approx 20'20	44.30526 AU

Attention, astronomical year style is used: The year -899 in astronomical counting style is the year 900 BCE in historical counting style.

opposition	-899 Aug 23 j 23:28	21° \approx 17'07	-16°37'49
direct	-899 Nov 12 j 19:00	20° \approx 14'42	