Attention, astronomical year style is used: The year -11900 in astronomical counting style is the year 11901 BCE in historical counting style. -11900 Feb 20 j 12:14 18° ₹ 17'47 morning rise -11894 Mar 26 j 22:25 25° ₹ 27'46 evening set max. Earth dist. -11900 Mar 02 j 20:07 18°**х** 33'55 46.35415 AU -11894 Jun 20 j 20:49 26° ₹ 41'47 retrograde opposition -11894 Sep 09 j 00:15 25° ₹39'51 -6°35'37 -11894 Sep 11 j 09:02 25°**х** 36′59 43.14137 AU -11900 Mar 05 j 03:08 18° ₹37'12 -8°08'49 min. Earth dist. conjunction -11900 Mar 05 j 03:17 18° ₹ 37'13 8°09'29 -11894 Nov 30 j 19:48 24° ₹35'57 minimum elong direct -11900 Mar 18 j 16:55 18°**⊀** 56'36 -11893 Feb 27 j 00:36 25°**尽** 51'16 morning rise evening set -11900 Jun 13 j 17:38 20° ₹ 10'23 -11893 Mar 11 j 03:55 26° ₹ 09'01 45.02999 AU retrograde max. Earth dist. opposition -11900 Sep 02 j 04:08 19°**尽**09'27 -8°22'29 -11893 Mar 13 j 18:56 26°**х** 12'53 -6°08'56 min. Earth dist. -11900 Sep 04 j 05:52 19° ₹ 06'59 44.28555 AU conjunction direct -11900 Nov 23 j 22:45 18° ₹ 06'48 minimum elong -11893 Mar 13 j 19:04 26° ₹ 12'54 6°09'36 evening set -11899 Feb 20 j 16:29 19° ₹21'25 morning rise -11893 Mar 28 j 11:22 26° ₹34'26 -11899 Mar 04 j 02:05 19°**х** 37'43 46.17533 AU max. Earth dist. retrograde -11893 Jun 22 j 06:02 27°**х** 48'33 opposition -11893 Sep 10 j 08:18 26° ₹ 46'28 -6°16'42 conjunction -11899 Mar 06 j 11:40 19°**х** 41'11 -7°52'33 min. Earth dist. -11893 Sep 12 j 17:37 26°**х** 43'33 42.94190 AU minimum elong -11899 Mar 06 j 11:48 19° ₹ 41'11 7°53'13 direct -11893 Dec 02 j 05:10 25° ₹ 42'21 morning rise -11899 Mar 20 j 05:49 20° ₹ 00'53 evening set -11892 Feb 28 j 07:14 26° ₹ 57'53 retrograde -11899 Jun 15 j 04:35 21°**尽** 14'40 max. Earth dist. -11892 Mar 11 j 11:45 27° ₹ 15'48 44.83062 AU opposition -11899 Sep 03 j 11:06 20° **₹** 13'35 -8°05'26 min. Earth dist. -11899 Sep 05 j 14:50 20° ₹ 11'01 44.10314 AU conjunction -11892 Mar 14 j 04:43 27° ₹ 19'48 -5°50'36 direct -11899 Nov 25 j 03:47 19° ₹ 10'44 minimum elong -11892 Mar 14 j 04:51 27° ₹ 19'49 5°51'18 evening set -11898 Feb 21 j 21:04 20° ₹25'26 morning rise -11892 Mar 29 j 00:32 27° ₹ 41'39 max. Earth dist. -11898 Mar 05 j 10:41 20° **₹** 42'01 45.99211 AU retrograde -11892 Jun 22 j 16:18 28° \$\inf\$755'54 opposition -11892 Sep 10 j 16:32 27° ₹753'40 -5°57'27 conjunction -11898 Mar 07 j 20:36 20° ₹ 45'31 -7°36'01 min. Earth dist. -11892 Sep 13 j 02:32 27° ₹ 50'42 42.74011 AU minimum elong -11898 Mar 07 i 20:46 20° ₹745'31 7°36'42 direct -11892 Dec 02 j 13:57 26° ₹ 49'21 -11898 Mar 21 j 18:43 21° ₹05'32 -11891 Feb 28 j 13:59 28° ₹05'07 morning rise evening set -11898 Jun 16 j 11:06 22° ₹ 19'19 max. Earth dist. -11891 Mar 12 j 21:12 28° ₹ 23'16 44.62840 AU retrograde opposition -11898 Sep 04 j 18:07 21° ₹ 18'05 -7°48'06 -11898 Sep 06 j 22:58 21°**х** 15'26 43.91654 AU -11891 Mar 15 j 14:47 28°**₹**'27'20 -5°31'59 min. Earth dist. conjunction -11898 Nov 26 j 13:08 20° ₹15'01 -11891 Mar 15 j 14:55 28° ₹27'21 5°32'39 direct minimum elong evening set -11897 Feb 23 j 02:08 21° ₹ 29'48 -11891 Mar 30 j 13:31 28° ₹ 49'28 morning rise -11897 Mar 06 j 17:37 21°**х** 46'34 45.80513 AU -11891 Jun 06 j 00:07 0°♂ max. Earth dist. retrograde -11891 Jun 23 j 23:44 0°る03'53 -11897 Mar 09 j 05:33 21° ₹ 50'12 -7°19'11 -11891 Jul 12 j 02:38 30°R ✓ conjunction -11897 Mar 09 j 05:42 21° ₹ 50'12 7°19'51 -11891 Sep 12 j 01:07 29° ₹ 01'29 -5°37'53 minimum elong opposition -11897 Mar 23 j 07:47 22°**х** 10′32 -11891 Sep 14 j 13:01 28° ₹ 58'25 42.53515 AU morning rise min. Earth dist. -11897 Jun 17 j 17:20 23°**尽** 24'20 -11891 Dec 03 j 23:56 27° ₹ 56'58 retrograde direct opposition -11897 Sep 06 j 01:21 22° ₹22'55 -7°30'27 evening set -11890 Mar 01 j 21:27 29° ₹ 12'59 min. Earth dist. -11897 Sep 08 j 06:55 22° ₹20'14 43.72660 AU max. Earth dist. -11890 Mar 14 j 06:29 29°**х** 31'19 44.42281 AU direct -11897 Nov 27 j 22:49 21°**尽** 19'39 -11896 Feb 24 j 07:09 22°**尽** 34'32 conjunction -11890 Mar 17 j 01:10 29° ₹35'29 -5°13'04 evening set max. Earth dist. -11896 Mar 07 j 01:50 22°**₹** 51'32 45.61487 AU minimum elong -11890 Mar 17 j 01:17 29°**х** 35'30 5°13'45 -11890 Apr 01 j 02:52 29° ₹ 57'55 morning rise -11896 Mar 09 j 14:36 22°**₹** 55'14 -7°02'04 -11890 Apr 02 j 13:15 0°**ਰ** conjunction -11896 Mar 09 j 14:45 22° ₹755'15 7°02'45 retrograde -11890 Jun 25 j 09:17 1°**궁**12'30 minimum elong -11896 Mar 23 j 20:31 23° ₹ 15'53 -11890 Sep 13 j 09:44 0°る09'57 -5°18'00 morning rise opposition -11896 Jun 18 i 00:21 24° ₹29'43 -11890 Sep 15 j 22:02 0°る06'51 42.32652 AU retrograde min. Earth dist. opposition -11896 Sep 06 i 08:54 23° ₹ 28'08 -7°12'30 -11890 Sep 21 i 12:06 30°R ✓ min. Earth dist. -11896 Sep 08 j 16:11 23° \$\frac{1}{2}\$25'21 43.53375 AU direct -11890 Dec 05 i 08:47 29° ₹05'12 direct -11896 Nov 28 j 07:29 22° ₹24'39 -11889 Feb 16i00:19 0°る -11895 Feb 24 j 12:38 23° ₹39'39 evening set -11889 Mar 03 j 05:23 0°る21'28 evening set max. Earth dist. -11895 Mar 08 j 10:27 23° ₹ 56'55 45.42213 AU max. Earth dist. -11889 Mar 15 j 14:59 0°る39'57 44.21310 AU conjunction -11895 Mar 10 j 23:48 24° ₹ 00'40 -6°44'40 conjunction -11889 Mar 18 j 11:53 0°₹44'17 -4°53'50 minimum elong -11895 Mar 10 j 23:56 24° ₹ 00'40 6°45'20 minimum elong -11889 Mar 18 j 12:01 0°る44'17 4°54'31 morning rise -11895 Mar 25 j 09:25 24° ₹21'36 morning rise -11889 Apr 02 j 16:18 1°**궁**06'58 -11895 Jun 19 j 09:48 25°**尽** 35'31 retrograde retrograde -11889 Jun 26 j 22:12 2°る21'46 -11895 Sep 07 j 16:22 24° ₹33'46 -6°54'13 -11889 Sep 14 j 18:55 1°**⋜**19'01 -4°57'47 opposition opposition -11895 Sep 09 j 23:29 24° ₹30'59 43.33861 AU -11889 Sep 17 j 09:21 1°る15'48 42.11377 AU min. Earth dist. min. Earth dist. -11895 Nov 29 j 13:40 23° ₹30'04 -11889 Dec 06 j 14:53 0°る14'03 direct direct -11894 Feb 25 j 18:27 24° ₹ 45'12 1°**る**30'35 evening set evening set -11888 Mar 03 j 13:29 max. Earth dist. -11894 Mar 09 j 18:01 25°**尽**02'39 45.22712 AU max. Earth dist. -11888 Mar 16 j 01:31 1°る49'18 43.99920 AU conjunction -11894 Mar 12 j 09:13 25°**₹**06'31 -6°26'57 conjunction -11888 Mar 18 j 22:44 1°♂53'40 -4°34'19

minimum elong

-11888 Mar 18 j 22:50

1°る53'40 4°35'01

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-11894 Mar 12 j 09:21 25° ₹ 06'32 6°27'38

minimum elong

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11888 in astronomical counting style is the year 11889 BCE in historical counting style. -11888 Apr 03 j 05:35 2°る16'38 conjunction -11881 Mar 28 j 09:34 10°る16'39 -2°09'15 morning rise -11888 Jun 27 j 08:28 3°る31'39 minimum elong -11881 Mar 28 j 09:37 10°る16'39 2°09'56 retrograde -11888 Sep 15 j 04:16 2°328'41 -4°37'16 -11881 Apr 13 j 05:02 10°♂41'21 opposition morning rise -11888 Sep 17 j 19:21 2°중25'26 41.89673 AU -11881 Jul 06 j 18:05 11°る58'30 min. Earth dist. retrograde -11888 Dec 07 j 00:47 1°る23'27 -11881 Sep 24 j 04:46 10° 중53'55 -2°04'26 direct opposition evening set -11881 Sep 27 j 02:13 10°정50'13 40.29852 AU -11887 Mar 04 j 22:12 2°**る**40'18 min. Earth dist. -11881 Dec 16 j 02:18 9°**정**46'45 max. Earth dist. -11887 Mar 17 j 10:15 2°중59'07 43.78116 AU direct evening set -11880 Mar 12 j 22:47 11°**궁**06'24 -11880 Mar 25 j 17:16 11°중26'24 42.18043 AU conjunction -11887 Mar 20 j 09:47 3°₹03'39 -4°14'30 max. Earth dist. minimum elong -11887 Mar 20 j 09:54 3°**る**03'39 4°15'12 -11880 Mar 28 j 22:20 11°ਰ31'30 -1°47'18 morning rise -11887 Apr 04 j 19:10 3°**る**26'53 conjunction -11887 Jun 28 j 19:53 -11880 Mar 28 j 22:23 11°ਰ31'30 1°47'59 retrograde 4°る42'07 minimum elong -11887 Sep 16 j 13:40 3°₹38'56 -4°16'25 -11880 Apr 13 j 18:58 11°**⋜**56'26 opposition morning rise min. Earth dist. -11887 Sep 19 j 06:03 3°る35'36 41.67589 AU retrograde -11880 Jul 07 j 05:31 13°**정**14'00 direct -11887 Dec 08 j 10:45 2°**る**33'26 opposition -11880 Sep 24 j 16:20 12°중09'13 -1°41'17 evening set -11886 Mar 06 j 07:11 3°**る**50'35 min. Earth dist. -11880 Sep 27 j 13:50 12°중05'30 40.06381 AU max. Earth dist. -11886 Mar 18 j 21:04 4°정09'37 43.55930 AU direct -11880 Dec 16 j 15:19 11°**궁**01'47 evening set -11879 Mar 14 j 11:13 12°**♂**21'59 conjunction -11886 Mar 21 j 21:15 4°る14'13 -3°54'23 max. Earth dist. -11879 Mar 27 j 05:36 12° ₹42'06 41.94512 AU minimum elong -11886 Mar 21 j 21:21 4°る14'13 3°55'05 morning rise -11886 Apr 06 j 08:42 4°る37'42 conjunction -11879 Mar 30 j 11:44 12°**3**47'18 -1°25'04 retrograde -11886 Jun 30 j 04:34 5°る53'10 minimum elong -11879 Mar 30 j 11:46 12°**3**47'19 1°25'45 opposition -11886 Sep 17 j 23:32 4°정49'46 -3°55'15 morning rise -11879 Apr 15 i 09:02 13°る12'27 min. Earth dist. -11886 Sep 20 j 17:31 4°る46'19 41.45148 AU retrograde -11879 Jul 08 j 18:20 14°る30'31 direct -11886 Dec 09 j 23:15 3°る43'59 opposition -11879 Sep 26 j 04:17 13°₹25'30 -1°17'48 -11885 Mar 07 j 16:42 5°る01'28 -11879 Sep 29 j 03:41 13°る21'40 39.82713 AU evening set min. Earth dist. -11885 Mar 20 j 07:26 5°る20'39 43.33429 AU -11879 Dec 18 j 02:01 12°る17'47 max Farth dist direct -11878 Mar 16 j 00:21 13°る38'34 evening set -11885 Mar 23 j 08:45 5°**3**25'21 -3°33'58 max. Earth dist. -11878 Mar 28 j 19:06 13°중58'51 41.70753 AU conjunction -11885 Mar 23 j 08:51 5°**⋜**25'21 3°34'40 minimum elong -11885 Apr 07 j 22:18 5°**⋜**49'06 -11878 Apr 01 j 01:31 14°る04'06 -1°02'32 morning rise conjunction -11885 Jul 01 j 15:00 7°る04'50 -11878 Apr 01 j 01:33 14°₹04'06 1°03'11 retrograde minimum elong -11885 Sep 19 j 09:30 6°**궁**01'12 -3°33'44 -11878 Apr 16 j 23:23 14°₹29'27 morning rise opposition -11885 Sep 22 j 03:30 5°る57'44 41.22430 AU -11878 Jul 10 j 08:26 15°**⋜**48'01 min. Earth dist. retrograde -11885 Dec 11 j 09:45 4°**궁**55'07 -11878 Sep 27 j 16:41 14°₹42'46 -0°54'00 direct opposition -11884 Mar 08 j 02:35 6°**궁**12'58 -11878 Sep 30 j 16:08 14°중38'55 39.58780 AU evening set min. Earth dist. -11884 Mar 20 j 17:51 6°중32'17 43.10664 AU -11878 Dec 19 j 13:03 13°**궁**34'47 max. Earth dist. direct evening set -11877 Mar 17 j 14:12 14° ₹ 56'09 conjunction -11884 Mar 23 j 20:34 6° **경**37'06 -3°13'15 max. Earth dist. -11877 Mar 30 j 07:05 15°♂16'27 41.46689 AU minimum elong -11884 Mar 23 j 20:38 6°**궁**37'07 3°13'56 -11877 Apr 02 j 15:36 15°ਰ21'53 -0°39'42 morning rise -11884 Apr 08 j 11:53 7°**⋜**01'07 conjunction retrograde -11884 Jul 02 j 03:12 8°쥥17'09 -11877 Apr 02 j 15:37 15°**⋜**21'53 0°40'22 minimum elong -11884 Sep 19 j 19:55 7°♂13'16 -3°11'55 -11877 Apr 18 j 13:49 15°**♂**47'26 opposition morning rise min. Earth dist. -11884 Sep 22 j 15:40 7°**궁**09'42 40.99501 AU retrograde -11877 Jul 12 j 01:08 17°**⋜**06'32 -11884 Dec 11 j 18:21 6°**⋜**06'55 -11877 Sep 29 j 05:33 16°**⋜**01'01 -0°29'52 direct opposition -11883 Mar 09 j 12:42 -11877 Oct 02 j 06:44 15°る57'04 39.34547 AU evening set 7°る25'09 min. Earth dist. -11877 Dec 20 j 23:42 14°중52'44 max. Earth dist. -11883 Mar 22 j 06:04 7°る44'42 42.87716 AU direct evening set -11876 Mar 18 i 04:32 16°중14'44 -11883 Mar 25 j 08:30 7°る49'32 -2°52'13 conjunction max. Earth dist. -11876 Mar 30 j 21:40 16° ₹35'11 41.22300 AU -11883 Mar 25 i 08:34 7°₹49'32 2°52'54 minimum elong -11883 Apr 10 i 01:25 8°**⋜**13'46 conjunction -11876 Apr 03 i 06:14 16°₹40'39 -0°16'35 morning rise minimum elong -11883 Jul 03 j 16:08 9°**ප**30'09 -11876 Apr 03 i 06:14 16° ₹40'39 0°17'14 retrograde -11883 Sep 21 j 06:31 8°る26'01 -2°49'45 -11876 Apr 19 j 04:21 17°る06'22 opposition morning rise -11883 Sep 24 j 02:12 -11876 Jul 12 j 16:25 18°♂26'01 8°る22'27 40.76405 AU min. Earth dist. retrograde -11876 Sep 29 j 18:51 17°**3**20'14 -0°05'25 direct -11883 Dec 13 j 04:22 7°る19'23 opposition -11876 Oct 02 j 20:55 17°중16'13 39.09985 AU -11882 Mar 10 j 23:38 evening set 8°る38'03 min. Earth dist. max. Earth dist. -11882 Mar 23 j 16:29 8°중57'43 42.64616 AU asc. node -11876 Dec 19 j 04:13 16°쥥11'41 direct -11876 Dec 21 j 13:54 16°**⋜**11'37 -11882 Mar 26 j 20:47 9°♂02'41 -2°30'53 -11875 Mar 19 j 19:31 17°る34'16 conjunction evening set -11882 Mar 26 j 20:51 9°**ට**02'41 2°31'33 max. Earth dist. -11875 Apr 01 j 10:31 17° ₹54'43 40.97594 AU minimum elong -11882 Apr 11 j 15:14 9°**る**27'09 morning rise retrograde -11882 Jul 05 j 06:52 10°정43'54 conjunction -11875 Apr 04 j 20:57 18°♂00'21 0°06'55 opposition -11882 Sep 22 j 17:22 9°**る**39'32 -2°27'15 minimum elong -11875 Apr 04 j 20:57 18°**⋜**00'21 0°06'15 min. Earth dist. -11882 Sep 25 j 13:58 9°る35'55 40.53192 AU behind sun begin -11875 Apr 04 j 14:49 17°♂59'58 direct -11882 Dec 14 j 13:49 8°る32'38 behind sun end -11875 Apr 05 j 03:06 18°る00'45 -11881 Mar 12 j 10:56 9°**る**51'47 -11875 Apr 20 j 19:05 18°**♂**26'15 evening set morning rise

retrograde

-11875 Jul 14 j 08:50 19°₹46'27

max. Earth dist.

-11881 Mar 25 j 05:29 10°중11'40 42.41391 AU

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11875 in astronomical counting style is the year 11876 BCE in historical counting style. -11875 Oct 01 j 08:23 18°る40'23 0°19'20 minimum elong -11868 Apr 14 j 15:37 27° **3**45'21 2°57'39 opposition -11875 Oct 04 j 11:02 18°る36'18 38.85125 AU -11868 Apr 30 j 04:39 28°る12'02 min. Earth dist. morning rise -11875 Dec 23 j 03:35 17°る31'24 -11868 Jul 24 j 03:45 29°る37'19 direct retrograde -11874 Mar 21 j 11:08 18°₹54'44 -11868 Oct 10 j 19:52 28°₹28'56 3°20'56 evening set opposition -11874 Apr 03 j 01:06 19°중15'15 40.72578 AU max. Earth dist. -11868 Oct 14 j 02:01 28°중24'30 37.07130 AU min. Earth dist. direct -11867 Jan 01 j 13:34 27°る17'21 -11874 Apr 06 j 12:20 19°♂20'59 0°30'35 conjunction evening set -11867 Mar 31 j 19:41 28°₹46'35 -11874 Apr 06 j 12:19 19°る20'59 minimum elong 0°29'56 max. Earth dist. -11867 Apr 12 j 19:19 29°る07'15 38.93982 AU -11874 Apr 22 j 09:51 19°**♂**47'02 morning rise -11874 Jul 15 j 21:13 21°**⋜**07'50 retrograde conjunction -11867 Apr 16 j 09:54 29°♂13'33 3°23'44 opposition -11874 Oct 02 j 22:24 20°중01'26 0°44'25 minimum elong -11867 Apr 16 j 09:48 29°**궁**13'32 3°23'07 -11867 May 01 j 20:12 29°**♂**40'16 min. Earth dist. -11874 Oct 06 j 02:48 19°중57'14 38.59994 AU morning rise direct -11874 Dec 24 j 19:03 18°**궁**52'06 -11867 May 13 j 18:11 0°≈ evening set -11873 Mar 23 j 03:28 20°중16'07 retrograde -11867 Jul 25 j 21:17 1°≈06'29 max. Earth dist. -11873 Apr 04 j 16:20 20° 중36'43 40.47330 AU -11867 Oct 10 j 22:52 30°R 궁 opposition -11867 Oct 12 j 13:18 29°**궁**57'48 3°47'56 conjunction -11873 Apr 08 j 03:57 20°₹42'31 0°54'33 min. Earth dist. -11867 Oct 15 j 20:56 29°중53'15 36.81586 AU minimum elong -11873 Apr 08 j 03:55 20°**⋜**42'31 direct -11866 Jan 03 j 05:35 28°₹45'52 morning rise -11873 Apr 24 j 00:50 21°る08'43 -11866 Mar 24 j 01:55 retrograde -11873 Jul 17 j 11:22 22°る30'08 evening set -11866 Apr 02 j 17:22 0°≈16'09 opposition -11873 Oct 04 j 12:49 21°る23'25 1°09'48 max. Earth dist. -11866 Apr 14 j 14:29 0°≈36'49 38.68306 AU min. Earth dist. -11873 Oct 07 j 16:59 21°る19'12 38.34668 AU direct -11873 Dec 26 j 10:02 20°る13'41 conjunction -11866 Apr 18 j 04:40 0°**≈**43'09 3°49'23 evening set -11872 Mar 23 j 20:15 21°る38'27 minimum elong -11866 Apr 18 j 04:32 0°≈43'08 3°48'47 max. Earth dist. -11872 Apr 05 j 06:43 21°る59'02 40.21896 AU morning rise -11866 May 03 j 12:03 1°≈09'54 -11866 Jul 27 j 16:21 2°≈37'06 retrograde -11872 Apr 08 j 19:46 22°る04'59 1°18'48 opposition -11866 Oct 14 j 07:12 1°≈28'06 4°15'10 conjunction minimum elong -11872 Apr 08 j 19:44 22°る04'59 -11866 Oct 17 j 14:32 1°≈23'33 36.55957 AU 1°18'09 min. Earth dist. -11872 Apr 24 j 15:39 22°**⋜**31'18 -11865 Jan 04 j 21:59 morning rise direct 0°≈15'49 -11872 Jul 18 j 04:20 23°る53'24 1°≈47'12 evening set -11865 Apr 04 j 16:03 retrograde -11872 Oct 05 j 03:44 22°정46'20 1°35'28 -11865 Apr 16 j 08:11 2°≈07'42 38.42509 AU max. Earth dist. opposition -11872 Oct 08 j 09:23 22°중42'02 38.09217 AU min. Earth dist. -11865 Apr 19 j 24:00 2°≈14'12 4°15'14 -11872 Dec 26 j 21:45 21°♂36'14 conjunction direct -11871 Mar 25 j 13:45 23°**정**01'46 -11865 Apr 19 j 23:51 2°≈14'12 4°14'39 evening set minimum elong -11871 Apr 06 j 23:40 23°중22'28 39.96360 AU -11865 May 05 j 04:10 2°≈40'57 max. Earth dist. morning rise -11865 Jul 29 j 14:04 4°≈09'13 retrograde -11871 Apr 10 j 12:08 23°♂28'25 1°43'18 conjunction opposition -11865 Oct 16 j 01:51 2°≈59'52 4°42'37 minimum elong -11871 Apr 10 j 12:05 23°중28'25 1°42'40 min. Earth dist. -11865 Oct 19 j 10:28 2°≈55'13 36.30218 AU morning rise -11871 Apr 26 j 06:40 23°**궁**54'51 direct -11864 Jan 06 j 12:54 1°≈47'12 retrograde -11871 Jul 19 j 20:32 25°**♂**17'40 evening set -11864 Apr 05 j 15:23 3°≈19'45 opposition -11871 Oct 06 j 18:55 24°중10'16 2°01'26 max. Earth dist. -11864 Apr 17 j 04:30 3°≈40'12 38.16570 AU min. Earth dist. -11871 Oct 10 j 00:24 24°る05'56 37.83693 AU -11871 Dec 28 j 13:11 22°**⋜**59'46 -11864 Apr 20 j 19:50 3°≈46'43 4°41'16 direct conjunction -11870 Mar 27 j 08:10 24°**♂**26'08 -11864 Apr 20 j 19:40 3°≈46'42 4°40'40 evening set minimum elong -11870 Apr 08 j 15:00 24°정46'48 39.70777 AU -11864 May 05 j 20:13 4°≈13'27 max. Earth dist. morning rise -11864 Jul 30 j 11:00 5°≈42'47 retrograde -11870 Apr 12 j 04:51 24°る52'53 2°08'04 -11864 Oct 16 j 21:08 4°≈33'05 5°10'17 conjunction opposition -11870 Apr 12 j 04:47 24°る52'53 2°07'26 -11864 Oct 20 j 06:03 4°≈28'23 36.04335 AU minimum elong min. Earth dist. -11870 Apr 27 j 21:56 25°る19'25 morning rise direct -11863 Jan 07 i 08:24 3°≈20'01 retrograde -11870 Jul 21 i 16:03 26° ₹43'00 evening set -11863 Apr 07 j 15:58 4°≈53'46 -11870 Oct 08 j 10:44 25°る35'16 2°27'40 max. Earth dist. -11863 Apr 18 j 23:30 5°≈14'01 37.90496 AU opposition min. Earth dist. -11870 Oct 11 j 16:39 25°る30'53 37.58165 AU -11870 Dec 30 j 03:41 24°る24'24 direct conjunction -11863 Apr 22 j 16:12 5°≈20'41 5°07'28 evening set -11869 Mar 29 j 03:08 25°**궁**51'40 minimum elong -11863 Apr 22 j 16:02 5°≈20'40 5°06'53 max. Earth dist. -11869 Apr 10 j 08:44 26°정12'24 39.45177 AU morning rise -11863 May 07 j 12:45 5°≈47'21 retrograde -11863 Aug 01 j 10:22 7°≈17'49 conjunction opposition -11863 Oct 18 j 16:42 6°≈07'44 5°38'08 min. Earth dist. -11863 Oct 22 j 01:56 6°≈03'00 35.78344 AU minimum elong -11869 Apr 29 j 13:05 26° ₹45'07 morning rise direct -11862 Jan 09 j 04:06 4°≈54'15 -11869 Jul 23 j 09:35 28°중09'31 retrograde evening set -11862 Apr 09 j 17:23 6°≈29'16 -11869 Oct 10 j 03:09 27°る01'27 2°54'11 opposition max. Earth dist. -11862 Apr 20 j 20:35 6°≈49'22 37.64300 AU min. Earth dist. -11869 Oct 13 j 09:48 26° ₹57'01 37.32637 AU direct -11869 Dec 31 j 20:52 25°**궁**50'14 conjunction -11862 Apr 24 j 13:20 6°≈56'06 5°33'48 evening set -11868 Mar 29 j 23:05 27°♂18'27 minimum elong -11862 Apr 24 j 13:08 6°≈56'05 5°33'14 max. Earth dist. -11868 Apr 11 j 01:51 27° 국39'10 39.19594 AU morning rise -11862 May 09 j 05:17 7°≈22'41 -11862 Aug 03 j 07:53 8°≈54'19 retrograde -11868 Apr 14 j 15:44 27° ₹ 45'21 2°58'17 -11862 Oct 20 j 13:13 7°≈43'51 6°06'09 conjunction opposition

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11862 in astronomical counting style is the year 11863 BCE in historical counting style. min. Earth dist. -11862 Oct 23 j 23:37 7°≈39'00 35.52270 AU evening set -11855 Apr 23 j 07:53 18°≈21'06 -11861 Jan 11 j 00:41 -11855 May 02 j 16:54 18°≈39'13 35.83364 AU direct 6°≈29'55 max Earth dist -11861 Apr 11 j 19:47 evening set 8°≈06'14 -11861 Apr 22 j 17:56 8°≈26'08 37.38057 AU -11855 May 06 j 07:45 18°≈46'17 8°39'42 max. Earth dist. conjunction -11855 May 06 j 07:25 18°≈46'15 minimum elong 8°39'14 -11855 May 19 j 04:04 19°**≈**11'13 -11861 Apr 26 j 10:44 8°≈32'57 conjunction 6°00'16 morning rise -11861 Apr 26 j 10:31 minimum elong 8°**≈**32'56 5°59'43 retrograde -11855 Aug 15 j 09:59 20°≈52'56 morning rise -11861 May 10 j 21:56 8°≈59'24 opposition -11855 Nov 01 j 06:39 19°≈39'32 9°23'58 retrograde -11861 Aug 05 j 04:31 10°≈32'16 min. Earth dist. -11855 Nov 04 j 15:43 19°≈34'34 33.73435 AU opposition -11861 Oct 22 j 10:12 9°≈21'23 6°34'18 direct -11854 Jan 22 j 08:47 18°≈22'30 min. Earth dist. -11861 Oct 25 j 19:51 9°≈16'33 35.26194 AU evening set -11854 Apr 25 j 18:16 20°≈09'51 -11860 Jan 12 j 22:11 -11854 May 04 j 19:31 20°≈27'33 35.58434 AU direct 8°**≈**07'00 max. Earth dist. evening set -11860 Apr 12 j 23:06 9°≈44'40 max. Earth dist. -11860 Apr 23 j 15:17 10°≈04'18 37.11822 AU conjunction -11854 May 08 j 09:36 20°≈34'37 9°06'02 minimum elong -11854 May 08 j 09:15 20°≈34'35 9°05'34 conjunction -11860 Apr 27 j 08:47 10°≈11'14 6°26'50 morning rise -11854 May 20 j 21:43 20°≈59'09 minimum elong -11860 Apr 27 j 08:33 10°≈11'13 6°26'16 retrograde -11854 Aug 17 j 13:29 22°≈42'36 morning rise -11860 May 11 j 14:41 10°≈37'33 opposition -11854 Nov 03 j 08:44 21°≈28'49 retrograde -11860 Aug 06 j 02:17 12°≈11'42 min. Earth dist. -11854 Nov 06 j 16:32 21°≈23'53 33.48869 AU opposition -11860 Oct 23 j 07:51 11°≈00'23 7°02'33 direct -11853 Jan 24 j 11:04 20°≈11'22 min. Earth dist. -11860 Oct 26 j 18:31 10°≈55'27 35.00193 AU evening set -11853 Apr 28 j 05:42 22°≈00'37 direct -11859 Jan 13 j 17:39 9°≈45'32 max. Earth dist. -11853 May 06 j 21:53 22°≈17'45 35.33704 AU evening set -11859 Apr 15 j 03:23 11°≈24'37 max. Earth dist. -11859 Apr 25 j 15:01 11°≈44'05 36.85693 AU conjunction -11853 May 10 j 12:08 22°≈24'54 9°32'13 minimum elong -11853 May 10 j 11:47 22°≈24'52 9°31'48 -11859 Apr 29 j 07:19 11°≈51'00 6°53'26 -11853 May 22 j 15:24 22°≈48'57 conjunction morning rise -11859 Apr 29 j 07:04 11°≈50'59 6°52'55 -11853 Aug 19 j 17:43 24°≈34'16 retrograde minimum elong -11859 May 13 j 07:28 12°≈17'07 -11853 Nov 05 j 11:50 23°≈20'04 10°19'54 morning rise opposition -11859 Aug 08 j 00:50 13°≈52'37 -11853 Nov 08 j 20:22 23°≈15'03 33.24513 AU retrograde min. Earth dist. -11852 Jan 26 j 11:22 22°≈02'11 -11859 Oct 25 j 06:09 12°≈40'53 7°30'52 opposition direct -11859 Oct 28 j 15:51 12°≈35'59 34.74331 AU -11852 Apr 29 j 18:43 23°≈53'24 min. Earth dist. evening set -11852 May 08 j 02:41 24°≈10′02 35.09174 AU -11858 Jan 15 j 14:18 11°≈25'34 max. Earth dist. direct -11858 Apr 17 j 08:52 13°≈06'09 evening set -11858 Apr 27 j 13:24 13°≈25'16 36.59728 AU -11852 May 11 j 15:32 24°≈17'09 9°58'12 max. Earth dist. conjunction -11852 May 11 j 15:10 24°≈17'07 9°57'46 minimum elong -11858 May 01 j 06:25 13°≈32'17 7°20'04 -11852 May 23 j 09:16 24°≈40'39 conjunction morning rise -11858 May 01 j 06:08 13°≈32'16 7°19'33 minimum elong retrograde -11852 Aug 20 j 21:27 26°≈27'53 morning rise -11858 May 15 j 00:26 13°≈58'11 opposition -11852 Nov 06 j 15:36 25°≈13'15 10°47'34 -11858 Jun 21 j 12:53 15°≈ min. Earth dist. -11852 Nov 09 j 22:55 25°≈08'17 33.00351 AU retrograde -11858 Aug 10 j 02:24 15°≈35'07 direct -11851 Jan 27 j 14:17 23°≈54'57 -11858 Sep 30 j 07:45 15°R≈ -11851 May 02 j 09:03 25°≈48'13 evening set -11858 Oct 27 j 05:07 14°≈22'57 7°59'12 max. Earth dist. -11851 May 10 j 06:07 26°≈04'06 34.84831 AU opposition min. Earth dist. -11858 Oct 30 j 15:02 14°≈18'01 34.48695 AU -11857 Jan 17 j 10:30 13°≈07'11 -11851 May 13 j 19:36 26°≈11'20 10°23'57 direct conjunction -11857 Apr 19 j 15:23 14°≈49'20 -11851 May 13 j 19:13 26°≈11'18 10°23'33 evening set minimum elong -11851 May 25 i 03:22 26°≈34'14 -11857 Apr 25 i 07:02 15°≈ morning rise max. Earth dist. -11857 Apr 29 j 14:46 15°≈08'14 36.33998 AU retrograde -11851 Aug 23 i 03:47 28°≈23'28 opposition -11851 Nov 08 j 20:17 27°≈08'24 11°14'59 -11857 May 03 i 06:18 15°≈15'12 7°46'41 conjunction min. Earth dist. -11851 Nov 12 j 03:45 27°≈03'24 32.76401 AU -11857 May 03 i 06:01 15°≈15'11 7°46'11 direct -11850 Jan 29 i 15:26 25°≈49'38 minimum elong -11857 May 16 j 17:29 15°≈40'49 -11850 May 05 j 00:50 27°≈45'02 morning rise evening set -11857 Aug 12 j 04:02 17°≈19'16 max. Earth dist. -11850 May 12 j 12:46 28°≈00'18 34.60700 AU retrograde -11857 Oct 29 j 05:00 16°≈06'41 8°27'32 opposition -11850 May 16 j 00:32 28°**≈**07′28 10°49′23 min. Earth dist. -11857 Nov 01 j 14:26 16°≈01'44 34.23321 AU conjunction -11857 Dec 23 j 23:40 15°R≈ minimum elong -11850 May 16 j 00:08 28°≈07'26 10°49'00 -11856 Jan 19 j 09:38 14°≈50'29 direct morning rise -11850 May 26 j 21:20 28°≈29'41 -11856 Feb 14 j 14:11 15°≈ -11850 Jul 19 j 19:45 0°**∀** -11856 Apr 20 j 23:02 16°≈34'17 -11850 Aug 25 j 09:39 0°**米**21'00 evening set retrograde -11856 Apr 30 j 14:51 16°≈52'47 36.08550 AU max. Earth dist. -11850 Oct 02 j 01:13 30°R≈ -11850 Nov 11 j 01:54 29°≈05'29 11°42'04 opposition -11856 May 04 j 06:31 16°≈59'50 8°13'14 conjunction min. Earth dist. -11850 Nov 14 j 08:44 29°≈00'29 32.52684 AU minimum elong -11856 May 04 j 06:13 16°≈59'48 8°12'44 direct -11849 Jan 31 j 19:23 27°≈46'16 morning rise -11856 May 17 j 10:41 17°≈25'08 evening set -11849 May 07 j 18:08 29°≈43'52 retrograde -11856 Aug 13 j 08:04 19°≈05'11 max. Earth dist. -11849 May 14 j 18:14 29°≈58'18 34.36843 AU opposition -11856 Oct 30 j 05:24 17°≈52'10 8°55'47 -11849 May 15 j 14:01 0°**米** min. Earth dist. -11856 Nov 02 j 13:55 17°≈47'16 33.98246 AU -11855 Jan 20 j 08:34 16°≈35'33 -11849 May 18 j 06:03 0° **米** 05'32 11°14'28 direct conjunction

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11849 in astronomical counting style is the year 11850 BCE in historical counting style. -11849 May 18 j 05:38 0° \(\frac{1}{2}\)(05'30 11°14'07 direct -11842 Feb 14 i 22:42 12° H 18'41 minimum elong -11849 May 28 j 15:29 -11842 May 26 j 18:34 14° **X** 34'58 morning rise 0°**∺**27′00 evening set -11849 Aug 27 j 18:33 max. Earth dist. -11842 May 29 j 16:40 14°**)** 41'26 32.83641 AU retrograde 2°**∺**20′29 -11849 Nov 13 j 08:16 1°**升**04'30 12°08'45 opposition -11849 Nov 16 j 14:04 0° **★** 59'33 32.29293 AU -11842 Jun 01 j 17:14 14°**)** 48'09 13°53'52 min. Earth dist. conjunction -11848 Jan 01 j 10:20 30°R≈ -11842 Jun 01 j 16:48 14° **★** 48'06 13°53'39 minimum elong -11848 Feb 02 j 23:14 29°≈44'49 -11842 Jun 07 j 14:34 15°**米**01'13 direct morning rise -11842 Sep 11 j 21:22 17° **∺** 13'19 -11848 Mar 06 j 01:15 0°**∀** retrograde evening set -11848 May 09 j 12:41 1°**)** 44'43 opposition -11842 Nov 28 j 06:08 15° **★** 54'22 14°57'44 max. Earth dist. -11848 May 16 j 02:03 1°**¥**58'22 34.13321 AU min. Earth dist. -11842 Dec 01 j 01:58 15° ¥ 49'52 30.80307 AU direct -11841 Feb 17 j 07:35 14° **★** 31'56 -11848 May 19 j 12:17 2°**₭**05'32 11°39'08 conjunction evening set -11841 May 30 j 04:30 16° **★** 51'36 -11848 May 19 j 11:52 -11841 Jun 01 j 07:19 16°**米**56'20 32.64297 AU minimum elong 2°**₩**05'30 11°38'47 max. Earth dist. morning rise -11848 May 29 j 09:19 2°\ 26'10 retrograde -11848 Aug 29 j 02:45 4°**)**€21'54 conjunction -11841 Jun 04 j 04:54 17°**米**02'50 14°13'25 opposition -11848 Nov 14 j 15:37 3°**¥**05'27 12°34'59 minimum elong -11841 Jun 04 j 04:28 17°**米**02'48 14°13'15 min. Earth dist. -11848 Nov 17 j 21:06 3°**₭**00′29 32.06277 AU morning rise -11841 Jun 09 j 04:03 17° **∺** 13'58 direct -11847 Feb 04 j 06:12 1°**)** 45'19 retrograde -11841 Sep 14 j 10:46 19° **∺**29'28 evening set -11847 May 12 j 09:02 3°**)**€47'37 opposition -11841 Nov 30 j 20:01 18° \(\) 10'09 15°18'21 max. Earth dist. -11847 May 18 j 10:05 4° \(\) 400'20 33.90229 AU min. Earth dist. -11841 Dec 03 j 14:22 18°\(\cdot\)05'44 30.61573 AU direct -11840 Feb 19 j 18:30 16° **\(47'24** conjunction -11847 May 21 j 19:11 4° \(\frac{1}{2}\) 07'29 12°03'17 evening set -11840 Jun 01 j 19:11 19°**¥** 10′50 minimum elong -11847 May 21 j 18:45 4°**)**€07'26 12°02'59 max. Earth dist. -11840 Jun 02 j 20:46 19°**米** 13'15 32.45592 AU morning rise -11847 May 31 i 03:09 4°**)** 27'10 retrograde -11847 Aug 31 j 13:23 6° **★**25'16 conjunction -11840 Jun 05 i 17:08 19° **X** 19'41 14°31'57 -11847 Nov 16 j 23:33 5° **★** 08'22 13°00'39 minimum elong -11840 Jun 05 j 16:43 19° **★** 19'39 14°31'48 opposition -11847 Nov 20 j 03:00 5° ¥ 03'30 31.83737 AU -11840 Jun 09 j 14:04 19° **X** 28'27 min. Earth dist. morning rise -11846 Feb 06 j 14:06 3°**)** 47'47 -11840 Sep 16 j 03:18 21° **∺**47'46 direct retrograde -11846 May 15 j 06:55 5° ¥ 52'36 -11840 Dec 02 j 10:41 20° **★**28'05 15°37'51 opposition evening set -11846 May 20 j 19:08 6° **H** 04'19 33.67635 AU min. Earth dist. -11840 Dec 05 j 02:43 20° \(\)23'48 30.43462 AU max. Earth dist. -11839 Feb 21 j 06:03 19°**米**05'00 direct -11846 May 24 j 02:57 6° H 11'25 12°26'53 -11839 Jun 05 j 20:08 21° **∺** 33'07 conjunction evening set -11846 May 24 j 02:31 6° **₭** 11'22 12°26'34 -11839 Jun 05 j 12:25 21° **∺** 32'23 32.27498 AU max. Earth dist. minimum elong -11846 Jun 01 j 20:51 6° **★** 30'03 morning rise -11839 Jun 08 j 06:24 21°**米**38'39 14°49'25 -11846 Sep 02 j 22:21 8° **★** 30'39 retrograde conjunction -11846 Nov 19 j 08:44 7° **★** 13'18 13°25'41 -11839 Jun 08 j 05:59 21° **∺** 38'36 14°49'18 opposition minimum elong -11846 Nov 22 j 11:49 7° **★** 08'25 31.61749 AU -11839 Jun 10 j 15:46 21° ¥ 44'06 min. Earth dist. morning rise direct -11845 Feb 08 j 20:50 5° **¥** 52'18 retrograde -11839 Sep 18 j 19:05 24°**米**08'07 evening set -11845 May 18 j 06:36 7° **€** 59'44 opposition -11839 Dec 05 j 02:21 22° ¥ 48'04 15°56'10 max. Earth dist. -11845 May 23 j 05:55 8°**米** 10′25 33.45643 AU min. Earth dist. -11839 Dec 07 j 17:22 22° ₭ 43'49 30.25956 AU direct -11838 Feb 23 j 20:35 21°**∺**24'40 -11845 May 26 j 11:17 8° **X** 17'22 12°49'48 max. Earth dist. -11838 Jun 08 j 04:16 23° **€** 53'27 32.10057 AU conjunction -11845 May 26 j 10:50 8° **H** 17'20 12°49'31 minimum elong -11845 Jun 03 j 14:02 8° **∺** 34'51 -11838 Jun 10 j 20:16 23° ¥ 59'36 15°05'43 morning rise conjunction -11845 Sep 05 j 08:16 10° **★**38'05 -11838 Jun 10 j 19:53 23°**米** 59'33 15°05'36 retrograde minimum elong -11838 Sep 21 j 13:06 26° ¥ 30'25 opposition -11845 Nov 21 j 18:43 9° \(\frac{1}{20}\)'18 13°49'59 retrograde -11838 Dec 07 i 18:55 25° \(\) \(09'58 \) 16°13'13 min. Earth dist. -11845 Nov 24 j 19:11 9°\(\mathbf{t}\) 15'34 31.40385 AU opposition direct -11844 Feb 11 i 06:01 7° **)** 58'54 min. Earth dist. -11838 Dec 10 j 06:53 25° \(\) 05'55 30.09098 AU evening set -11844 May 20 j 08:13 10° **\(\)** 09'07 direct -11837 Feb 26 i 12:21 23° \(\frac{1}{46}\)'15 max. Earth dist. -11844 May 24 j 16:03 10° **X** 18'30 33.24297 AU max. Earth dist. -11837 Jun 10 j 20:57 26° ¥ 16'26 31.93285 AU -11844 May 27 j 20:30 10° \(\frac{1}{2}\)25'27 13°11'59 conjunction -11837 Jun 13 j 10:49 26° \(22'24 \) 15°20'47 conjunction -11844 May 27 j 20:04 10° \(25'24 \) 13°11'43 -11837 Jun 13 j 10:26 26° \(22'22 \) 15°20'43 minimum elong minimum elong -11844 Jun 04 j 07:05 10°**)** 41'37 morning rise retrograde -11837 Sep 24 j 05:51 28° ¥ 54'32 retrograde -11844 Sep 06 j 20:06 12° **€** 47'38 opposition -11837 Dec 10 j 12:27 27° ₭ 33'42 16°28'54 opposition -11844 Nov 23 j 05:30 11° **★**29'27 14°13'29 min. Earth dist. -11837 Dec 12 j 23:22 27° **∺** 29'42 29.92928 AU -11836 Feb 29 j 03:07 26°**米**09'40 min. Earth dist. -11844 Nov 26 j 05:06 11°**米**24'44 31.19696 AU direct -11843 Feb 12 j 12:34 10° **★** 07'40 max. Earth dist. -11836 Jun 12 j 15:11 28° ¥41'14 31.77261 AU direct -11843 May 23 j 12:10 12° **★** 20'50 evening set -11843 May 27 j 05:02 12° **★**28'57 33.03636 AU -11836 Jun 15 j 02:01 28° ¥46'57 15°34'30 max. Earth dist. conjunction -11836 Jun 15 j 01:39 28° ★ 46'55 15°34'27 minimum elong conjunction -11843 May 30 j 06:33 12° **∺** 35'41 13°33'22 -11836 Jul 17 j 14:13 0°**Υ** minimum elong -11843 May 30 j 06:06 12° **★** 35'39 13°33'08 retrograde -11836 Sep 26 j 00:24 1°**Y**20′18 morning rise -11843 Jun 05 j 23:18 12° **€** 50'24 -11836 Dec 11 j 17:11 30°R ★ retrograde -11843 Sep 09 j 07:28 14° **★** 59'22 opposition -11836 Dec 12 j 06:27 29° **★** 59'06 16°43'07 -11843 Nov 25 j 17:21 13° **H** 40'48 14°36'05 min. Earth dist. -11836 Dec 14 j 14:00 29° **€** 55'18 29.77511 AU opposition

direct

min. Earth dist.

-11843 Nov 28 j 14:42 13° **€** 36'13 30.99669 AU

•	omena of Pluto from nical year style is used: The		-				age 6
Attention, astronon	-11835 May 16 j 08:54		in astronomical	conjunction	-11827 Jul 07 j 16:38		
Fauth 4:-4	-11835 Jun 15 j 08:53		31.62038 AU	minimum elong	-11827 Jul 07 j 16:35		
max. Earth dist.	-11655 Juli 15 J 06.55	1 10/33	31.02038 AU	0	-		10 23 17
	11025 1 17:17.47	100012100	15046140	retrograde	-11827 Oct 19 j 14:43		17020155
conjunction	-11835 Jun 17 j 17:47	1°Υ13'08	15°46'49	opposition	-11826 Jan 05 j 07:55		17°30'55
minimum elong	-11835 Jun 17 j 17:27	1°Υ13'06	15°46'49	min. Earth dist.	-11826 Jan 06 j 10:32		28.82803 AU
retrograde	-11835 Sep 28 j 19:21	3° Y 47'39		direct	-11826 Mar 26 j 02:34		
opposition	-11835 Dec 15 j 01:27	2° Y 26′04		max. Earth dist.	-11826 Jul 09 j 10:25	24°\\05'56	30.71300 AU
min. Earth dist.	-11835 Dec 17 j 07:17	-	29.62929 AU		11006 7 1 10:10 00	2.400000000	1.0001100
direct	-11834 Mar 05 j 13:35	1° Y ′01′28		conjunction	-11826 Jul 10 j 12:02		16°21'38
max. Earth dist.	-11834 Jun 18 j 05:05	3°°\7'35'35	31.47717 AU	minimum elong	-11826 Jul 10 j 12:01		16°21'52
		******		retrograde	-11826 Oct 22 j 12:11		
conjunction	-11834 Jun 20 j 10:01	3° Y 40'49	15°57'37	opposition	-11825 Jan 08 j 07:59		17°26'24
minimum elong	-11834 Jun 20 j 09:42	3° Y 40'47	15°57'37	min. Earth dist.	-11825 Jan 09 j 08:14		28.77393 AU
retrograde	-11834 Oct 01 j 12:50	6° Y 16'27		direct	-11825 Mar 28 j 23:46		
opposition	-11834 Dec 17 j 21:11	4° Y 54'31	17°06'44	max. Earth dist.	-11825 Jul 12 j 09:49	26°'Y'43'50	30.66483 AU
min. Earth dist.	-11834 Dec 19 j 23:19		29.49255 AU			• •	
direct	-11833 Mar 08 j 08:36	3° Y 29'40		conjunction	-11825 Jul 13 j 07:41		16°16'19
max. Earth dist.	-11833 Jun 21 j 00:02	6° Y ′04'54	31.34378 AU	minimum elong	-11825 Jul 13 j 07:43		16°16'36
				retrograde	-11825 Oct 25 j 11:08		
conjunction	-11833 Jun 23 j 02:44	6° Ƴ 09'56	16°06'49	opposition	-11824 Jan 11 j 07:57		
minimum elong	-11833 Jun 23 j 02:28	6° Ƴ 09'54	16°06'52	min. Earth dist.	-11824 Jan 12 j 03:45	28° Y 03′27	28.72974 AU
retrograde	-11833 Oct 04 j 08:36	8° Y 46'39		direct	-11824 Mar 30 j 23:47	26° Ƴ 39'26	
opposition	-11833 Dec 20 j 17:34	7° Y ′24′23	17°15'58	max. Earth dist.	-11824 Jul 14 j 08:25	29° Y 21′55	30.62690 AU
min. Earth dist.	-11833 Dec 22 j 16:56	7° Y 21′07	29.36595 AU				
direct	-11832 Mar 10 j 01:35	5° Ƴ 59'19		conjunction	-11824 Jul 15 j 03:16	29° Y 23'50	16°09'07
max. Earth dist.	-11832 Jun 22 j 21:52	8° Y 35'49	31.22104 AU	minimum elong	-11824 Jul 15 j 03:19	29° Ƴ 23'51	16°09'25
					-11824 Jul 29 j 22:42	0°8	
conjunction	-11832 Jun 24 j 20:03	8° Y '40'26	16°14'21	retrograde	-11824 Oct 27 j 10:01	2° 8 06'28	
minimum elong	-11832 Jun 24 j 19:48	8° Y '40'25	16°14'24	opposition	-11823 Jan 13 j 08:11	0° 8 42'42	17°11'14
retrograde	-11832 Oct 06 j 03:33	11° Υ 18'09		min. Earth dist.	-11823 Jan 14 j 01:14	0° 8 41'31	28.69572 AU
opposition	-11832 Dec 22 j 14:37	9° Y ′55'37	17°23'20		-11823 Feb 09 j 00:57	30°R Ƴ	
min. Earth dist.	-11832 Dec 24 j 10:35	9° Υ ′52'34	29.24977 AU	direct	-11823 Apr 02 j 22:32		
direct	-11831 Mar 12 j 20:33	8° Y '30'23			-11823 May 23 j 02:59		
max. Earth dist.	-11831 Jun 25 j 18:00	11° Y '07'53	31.10930 AU		, ,		
	,			conjunction	-11823 Jul 17 j 22:50	2° 8 01'37	16°00'01
conjunction	-11831 Jun 27 j 13:42	11° Υ ′12'16	16°20'08	minimum elong	-11823 Jul 17 j 22:57		16°00'22
minimum elong	-11831 Jun 27 j 13:29			max. Earth dist.	-11823 Jul 17 j 08:23		30.59968 AU
retrograde	-11831 Oct 09 j 00:28			retrograde	-11823 Oct 30 j 06:56		
opposition	-11831 Dec 25 j 12:09		17°28'49	opposition	-11822 Jan 16 j 08:19	•	17°00'35
min. Earth dist.	-11831 Dec 27 j 04:33			min. Earth dist.	-11822 Jan 16 j 21:01		28.67216 AU
direct	-11830 Mar 15 j 15:11		29.11110710	direct	-11822 Apr 05 j 22:57		20.07210710
max. Earth dist.	-11830 Jun 28 j 16:48		31 00867 ATT	direct	11022 Apr 03 j 22.37	1 033 11	
max. Larm dist.	-11030 Juli 20 j 10.40	13 412/	31.00007 AC	conjunction	-11822 Jul 20 j 18:12	4° 8 39'10	15°49'02
conjunction	-11830 Jun 30 j 07:59	1201015	16°24'07	minimum elong	-11822 Jul 20 j 18:19		15°49'24
minimum elong				max. Earth dist.		_	30.58357 AU
retrograde	-11830 Jun 30 j 07:48 -11830 Oct 11 j 20:04		10 24 14	retrograde	-11822 Jul 20 j 06:45 -11822 Nov 02 j 05:07		50.56557 AU
-	-		17922120	-	3		16047154
opposition	-11830 Dec 28 j 10:31 -11830 Dec 29 j 23:58			opposition	-11821 Jan 19 j 08:33		16°47'54
min. Earth dist.			29.04988 AU	min. Earth dist.	-11821 Jan 19 j 17:46		28.65992 AU
direct	-11829 Mar 18 j 11:03		20.01000.177	direct	-11821 Apr 08 j 21:08	4° 8 32'43	
max. Earth dist.	-11829 Jul 01 j 14:02	16~\ Y /16'04	30.91908 AU		11001 1 1 00 110 1	70U1	1502641
	11000 * 1 * * * * * * * * * * * * * * *	1 0000	1.000	conjunction	-11821 Jul 23 j 13:25		
conjunction	-11829 Jul 03 j 02:23			minimum elong	-11821 Jul 23 j 13:36		15°36'35
minimum elong	-11829 Jul 03 j 02:15		16°26'27	max. Earth dist.	-11821 Jul 23 j 07:05		30.57929 AU
retrograde	-11829 Oct 14 j 18:47			retrograde	-11821 Nov 05 j 02:03		
opposition	-11829 Dec 31 j 09:14			opposition	-11820 Jan 22 j 08:34		
min. Earth dist.	-11828 Jan 01 j 18:32		28.96587 AU	min. Earth dist.	-11820 Jan 22 j 13:40		28.65935 AU
direct	-11828 Mar 20 j 06:47	16° Ƴ 11'30		direct	-11820 Apr 10 j 21:38	7° 8 09'50	
conjunction	-11828 Jul 04 j 21:25		16°26'36	conjunction	-11820 Jul 25 j 08:22		15°21'30
minimum elong	-11828 Jul 04 j 21:19	18° Ƴ 55'10	16°26'47	minimum elong	-11820 Jul 25 j 08:34	9° 8 52'57	15°21'54
max. Earth dist.	-11828 Jul 03 j 13:04	18° Y ′51′53	30.84005 AU	max. Earth dist.	-11820 Jul 25 j 05:04	9° 8 52'36	30.58730 AU
retrograde	-11828 Oct 16 j 15:33	21° Y 36'12		retrograde	-11820 Nov 06 j 22:59	12° 8 35'17	
opposition	-11827 Jan 02 j 08:23	20° Y 12'55	17°33'25	opposition	-11819 Jan 24 j 08:10	11° 8 11'18	16°16'31
min. Earth dist.	-11827 Jan 03 j 15:20	20° Y 10'45	28.89197 AU	min. Earth dist.	-11819 Jan 24 j 08:59	11° 8 11'15	28.67116 AU
direct	-11827 Mar 23 j 03:37	18° Ƴ 47'28		direct	-11819 Apr 13 j 19:30	9° 8 46'21	
max. Earth dist.	-11827 Jul 06 j 11:28	21° Y ′28'32	30.77148 AU				
	-			conjunction	-11819 Jul 28 i 03:13	12° 8 28'54	15°05'00

conjunction

-11819 Jul 28 j 03:13 12°**8**28'54 15°05'00

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11819 in astronomical counting style is the year 11820 BCE in historical counting style. -11819 Jul 28 i 03:29 12°828'55 15°05'25 minimum elong -11813 Oct 18 i 17:27 $0^{\circ}\Pi$ max. Earth dist. -11819 Jul 28 j 05:06 12°\(\begin{align*} \begin{align*} 29'05 & 30.60800 \text{ AU} \end{align*} \] -11813 Nov 25 j 11:52 0°**Ⅱ**24′08 retrograde -11819 Oct 15 j 19:50 15°8 -11812 Jan 03 j 19:08 30°R -11819 Nov 09 j 17:47 15°**8**10'56 -11812 Feb 12 j 20:41 29°**8**01'07 13°30'46 retrograde opposition -11819 Dec 05 j 07:13 15°R8 min. Earth dist. -11812 Feb 11 j 19:45 29°**8**02'48 29.08159 AU -11812 May 01 j 23:49 27°**8**38'10 -11818 Jan 27 j 07:46 13°847'00 15°57'54 opposition direct -11818 Jan 27 j 04:51 13°**8**47'12 28.69534 AU min. Earth dist. evening set -11812 Aug 05 j 14:37 29°**8**54'02 -11818 Apr 16 j 18:30 12°**8**22'16 -11812 Aug 08 j 03:20 0°**Ⅱ** direct -11818 Jul 28 j 07:42 14°**8**57'49 evening set -11818 Jul 29 j 05:07 15°8 conjunction -11812 Aug 14 j 04:01 0°**I**14'18 12°25'25 minimum elong -11812 Aug 14 j 04:22 0°**I**14'20 12°25'59 -11818 Jul 30 j 21:29 15°**8**04'07 14°46'45 -11812 Aug 15 j 07:14 0°**I**17'00 31.08017 AU conjunction max. Earth dist. -11818 Jul 30 j 21:45 15°**8**04'08 14°47'12 minimum elong morning rise -11812 Aug 22 j 18:15 0°**Ⅲ**34'40 max. Earth dist. -11818 Jul 31 j 02:28 15°**8**04'37 30.64145 AU retrograde -11812 Nov 27 j 04:51 2°**Ⅲ**51'46 morning rise -11818 Aug 02 j 11:50 15°**8**10'27 min. Earth dist. -11811 Feb 13 j 11:59 1°**Д**30'54 29.18085 AU retrograde -11818 Nov 12 j 15:25 17°**8**45'45 opposition -11811 Feb 14 j 16:43 1°**II**28'57 13°01'18 opposition -11817 Jan 30 j 07:00 16°**8**21'54 15°37'27 direct -11811 May 04 j 20:50 0°**Ⅱ**06′20 min. Earth dist. -11817 Jan 29 j 23:13 16°**8**22'27 28.73200 AU evening set -11811 Aug 07 j 14:03 2°**Ⅱ**19'34 -11817 Apr 07 j 06:42 15°R8 direct -11817 Apr 19 j 15:48 14°857'25 conjunction -11811 Aug 16 j 19:14 2°**II**41'16 11°57'26 -11817 May 01 j 20:12 15°8 minimum elong -11811 Aug 16 j 19:37 2°**II**41'18 11°58'01 evening set -11817 Jul 29 j 13:22 17°**8**28'33 max. Earth dist. -11811 Aug 18 j 01:00 2°**Д**44'12 31.18772 AU morning rise -11811 Aug 26 j 01:32 3°**Д**03'04 conjunction -11817 Aug 02 j 15:41 17°\(38'31 \) 14°26'50 retrograde -11811 Nov 29 i 21:39 5°**Ⅱ**17'47 minimum elong min. Earth dist. -11810 Feb 16 j 04:44 3°**Д**57'17 29.28935 AU max. Earth dist. -11817 Aug 03 j 01:34 17°\(239'31 30.68722 AU opposition -11810 Feb 17 j 12:20 3°**Д**55'09 12°30'42 morning rise -11817 Aug 06 j 18:36 17°**8**48'33 -11810 May 07 j 15:11 2°**Ⅱ**32'52 direct -11817 Nov 15 j 09:22 20°**8**19'40 -11810 Aug 09 j 13:50 4°**Д**43'33 retrograde evening set opposition -11816 Feb 01 j 19:08 18°**8**56'42 28.78052 AU -11810 Aug 19 j 09:50 5° **I**I 06'32 11°28'26 min. Earth dist. conjunction -11816 Apr 21 j 13:18 17°**8**31'45 -11810 Aug 19 j 10:12 5°Д06'34 11°29'03 direct minimum elong -11816 Jul 30 j 03:41 19°**8**59'19 -11810 Aug 20 j 19:44 $\,$ 5°П09'51 31.30449 AU evening set max. Earth dist. -11810 Aug 29 j 06:49 5°**Ц**29'37 morning rise -11816 Aug 04 j 09:23 20°**8**12'00 14°05'20 -11810 Dec 02 j 13:07 7°**Д**42'00 retrograde conjunction -11809 Feb 18 j 20:17 6°**Д**21'56 29.40700 AU -11816 Aug 04 j 09:41 20°812'02 14°05'51 min. Earth dist. minimum elong -11816 Aug 04 j 22:23 20°**8**13'19 30.74487 AU -11809 Feb 20 j 07:06 6°**Д**19'36 11°59'03 max. Earth dist. opposition -11816 Aug 09 j 15:43 20°**8**24'46 -11809 May 10 j 12:02 4°**Д**57'38 morning rise direct retrograde -11816 Nov 17 j 05:02 22°**8**52'35 evening set -11809 Aug 11 j 14:08 7°**Ⅱ**05'52 opposition -11815 Feb 04 j 04:11 21°829'01 14°51'20 min. Earth dist. -11815 Feb 03 j 12:45 21°**8**30'05 28.84037 AU conjunction -11809 Aug 21 j 23:40 7°**II**30'00 10°58'31 direct -11815 Apr 24 j 10:45 20°**8**05'06 minimum elong -11809 Aug 22 j 00:02 7°**Д**30'02 10°59'07 -11815 Jul 31 j 21:40 22°**8**29'30 max. Earth dist. -11809 Aug 23 j 11:48 7°**Д**33'30 31.43055 AU evening set morning rise -11809 Sep 01 j 10:34 7°**Д**54'14 -11815 Aug 07 j 02:41 22°844'27 13°42'21 retrograde -11809 Dec 05 j 04:44 10°**Д**04'23 conjunction -11815 Aug 07 j 03:02 22°844'30 13°42'52 min. Earth dist. -11808 Feb 21 j 10:31 8°Д44'46 29.53432 AU minimum elong -11815 Aug 07 j 19:52 22°846'11 30.81350 AU -11808 Feb 23 i 00:55 8°**II**42'12 11°26'28 max. Earth dist. opposition -11815 Aug 13 j 08:23 22°859'30 morning rise direct -11808 May 12 j 05:27 7°**П**20'34 -11815 Nov 19 j 23:03 25°**8**24'24 retrograde evening set -11808 Aug 12 j 14:33 9°**II**26'27 -11814 Feb 06 j 08:18 24° \(\begin{aligned}
 202'14 28.91085 AU \end{aligned}
 \) min. Earth dist. -11814 Feb 07 i 02:17 24°\(\colon\)01'00 14°25'54 conjunction -11808 Aug 23 j 12:57 9°**I**51'37 10°27'45 opposition direct -11814 Apr 27 j 06:22 22°837'24 minimum elong -11808 Aug 23 i 13:19 9° II 51'39 10°28'23 evening set -11814 Aug 02 j 18:05 24°858'49 max. Earth dist. -11808 Aug 25 j 05:19 9°**II**55'30 31.56624 AU morning rise -11808 Sep 03 j 12:34 10°**Д**16'54 -11808 Dec 06 j 16:39 12°**II**24'53 conjunction -11814 Aug 09 j 19:37 25°**8**15'45 13°17'58 retrograde -11807 Feb 23 j 01:03 11°**Д**05'40 29.67135 AU minimum elong -11814 Aug 09 j 19:58 25°**8**15'47 13°18'31 min. Earth dist. max. Earth dist. -11814 Aug 10 j 16:06 25°**8**17'48 30.89271 AU opposition -11807 Feb 24 j 18:03 11°**I**I02'57 10°53'02 morning rise -11814 Aug 16 j 21:53 25°**8**32'47 direct -11807 May 14 j 23:29 9°**Ⅲ**41'42 retrograde -11814 Nov 22 j 17:55 27°**8**54'57 evening set -11807 Aug 14 j 15:13 11°**Ⅱ**45'17 -11813 Feb 09 j 23:42 26°**8**31'45 13°59'00 opposition min. Earth dist. -11813 Feb 09 j 01:14 26°\(\mathbf{2}33'\)17 28.99143 AU -11807 Aug 26 j 01:16 12°**I** 11'22 9°56'14 conjunction -11813 Apr 30 j 04:02 25°**8**08'28 -11807 Aug 26 j 01:37 12°**I**11'24 9°56'52 direct minimum elong -11813 Aug 04 j 15:46 27°**8**27'03 evening set max. Earth dist. -11807 Aug 27 j 19:52 12°**Ⅲ**15'27 31.71178 AU morning rise -11807 Sep 06 j 12:52 12°**Ⅲ**37'35 conjunction -11813 Aug 12 j 12:01 27°**8**45'45 12°52'18 retrograde -11807 Dec 09 j 06:12 14°**II**43'30 minimum elong -11813 Aug 12 j 12:23 27°**8**45'47 12°52'51 min. Earth dist. -11806 Feb 25 j 13:12 13°**Д**24'50 29.81841 AU max. Earth dist. -11813 Aug 13 j 11:42 27°**8**48'06 30.98170 AU -11806 Feb 27 j 10:23 13°**Д**21'50 10°18'51 opposition

direct

-11806 May 17 j 15:39 12°**Д**00'59

morning rise

-11813 Aug 20 j 09:10 28°**8**04'32

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 8

,	ical year style is used: The		0	· //		, 1	age o
evening set	-11806 Aug 16 j 16:00		ili astrollollileai ee	retrograde	-11800 Dec 24 j 06:26		ic.
evening set	-11600 Aug 10 J 10.00	14 Д02 24		retrograde	-11799 Jan 08 j 06:53		
agniumation	11006 Aug 20: 12:00	1.40Π20110	0924105	min. Earth dist.	,		21 00222 ATT
conjunction minimum elong	-11806 Aug 28 j 13:08			opposition	-11799 Mar 12 j 16:04		
max. Earth dist.	-11806 Aug 28 j 13:28			direct	-11799 Mar 15 j 06:21		0 0/31
	-11806 Aug 30 j 11:47		31.80/09 AU		-11799 Jun 02 j 08:43		
morning rise	-11806 Sep 09 j 11:48			evening set	-11799 Aug 29 j 00:22	29° Ц 14'47	
retrograde	-11806 Dec 11 j 17:30		20.07522 ATT	:	11700 C 12:04.50	200T/5102	5020120
min. Earth dist.	-11805 Feb 28 j 02:46			conjunction	-11799 Sep 12 j 04:59		
opposition	-11805 Mar 02 j 02:00		9°44'02	minimum elong	-11799 Sep 12 j 05:12		
direct	-11805 May 20 j 06:47			max. Earth dist.	-11799 Sep 14 j 20:29		33.1/454 AU
evening set	-11805 Aug 18 j 16:59	16°Щ1/'49			-11799 Sep 19 j 04:36	0.20 0.20	
	11005 1 21:00 12	1 60 TT 1 510 6	0051101	morning rise	-11799 Sep 26 j 11:57	0°515'30	
conjunction	-11805 Aug 31 j 00:13			retrograde	-11799 Dec 26 j 12:23	2° © 07'32	
minimum elong	-11805 Aug 31 j 00:33			min. Earth dist.	-11798 Mar 15 j 00:58		31.28724 AU
max. Earth dist.	-11805 Sep 02 j 01:17		32.03193 AU	opposition	-11798 Mar 17 j 16:22	0°5548'36	5°31'01
morning rise	-11805 Sep 12 j 09:10				-11798 Apr 21 j 03:11		
retrograde	-11805 Dec 14 j 04:42			direct	-11798 Jun 04 j 20:46		
min. Earth dist.	-11804 Mar 01 j 13:23				-11798 Jul 17 j 18:58	0	
opposition	-11804 Mar 03 j 16:40		9°08'42	evening set	-11798 Aug 31 j 01:41	1° © 18'02	
direct	-11804 May 21 j 21:22						
evening set	-11804 Aug 19 j 18:01	18° ∏ 31'33		conjunction	-11798 Sep 14 j 11:24	1° 95 48'28	4°54'18
				minimum elong	-11798 Sep 14 j 11:35	1° 5 48'29	4°54'59
conjunction	-11804 Sep 01 j 10:37			max. Earth dist.	-11798 Sep 17 j 03:38	1° 9 54'10	33.38392 AU
minimum elong	-11804 Sep 01 j 10:56			morning rise	-11798 Sep 28 j 23:48	2° © 19'08	
max. Earth dist.	-11804 Sep 03 j 14:47	19° Ⅱ 04'42	32.20534 AU	retrograde	-11798 Dec 28 j 19:32	4° © 09'42	
morning rise	-11804 Sep 14 j 05:07	19° Ⅱ 28'16		min. Earth dist.	-11797 Mar 17 j 07:22	2° © 55'15	31.49711 AU
retrograde	-11804 Dec 15 j 14:51	21° Ⅱ 28′28		opposition	-11797 Mar 20 j 01:23	2° 9 51'05	4°54'35
min. Earth dist.	-11803 Mar 04 j 01:35	20° Ⅱ 11'15	30.31583 AU	direct	-11797 Jun 07 j 07:05	1° 5 34'00	
opposition	-11803 Mar 06 j 06:36	20° Ⅱ 07'48	8°32'56	evening set	-11797 Sep 02 j 02:45	3° ॐ 19′23	
direct	-11803 May 24 j 09:29	18° Ⅱ 48'15					
evening set	-11803 Aug 21 j 19:11	20° Ⅱ 43'38		conjunction	-11797 Sep 16 j 17:07	3° 5 49'57	4°20'13
				minimum elong	-11797 Sep 16 j 17:18	3° 5 49'57	4°20'53
conjunction	-11803 Sep 03 j 20:26	21° Ⅱ 12'27	7°44'37	max. Earth dist.	-11797 Sep 19 j 12:02	3° 5 55'49	33.59783 AU
minimum elong	-11803 Sep 03 j 20:44	21° Ⅱ 12'29	7°45'17	morning rise	-11797 Oct 01 j 10:12	4°9520'44	
max. Earth dist.	-11803 Sep 06 j 03:13	21° Ⅱ 17'32	32.38680 AU	retrograde	-11797 Dec 30 j 23:41	6°≌09'55	
morning rise	-11803 Sep 16 j 23:33	21° Ⅱ 41′27		min. Earth dist.	-11796 Mar 18 j 15:01	4°955'47	31.71180 AU
retrograde	-11803 Dec 18 j 01:13	23° Ⅱ 39'54		opposition	-11796 Mar 21 j 09:40	4°951'36	4°18'17
min. Earth dist.	-11802 Mar 06 j 11:28	22° Ⅲ 23'15	30.49800 AU	direct	-11796 Jun 08 j 16:18	3° © 34'54	
opposition	-11802 Mar 08 j 19:43	22° Ⅱ 19'36	7°56'50	evening set	-11796 Sep 03 j 03:43	5°918'50	
direct	-11802 May 26 j 22:06	21° Ⅱ 00′29		-			
evening set	-11802 Aug 23 j 20:25			conjunction	-11796 Sep 17 j 22:04	5°9349'27	3°46'16
				minimum elong	-11796 Sep 17 j 22:13	5° 5 49'28	3°46'56
conjunction	-11802 Sep 06 j 05:25	23° Ⅲ 23'19	7°10'48	max. Earth dist.	-11796 Sep 20 j 18:18	5° © 55'25	33.81656 AU
minimum elong	-11802 Sep 06 j 05:42			morning rise	-11796 Oct 02 j 19:11	6°\$20'20	
max. Earth dist.	-11802 Sep 08 j 14:13			retrograde	-11795 Jan 01 j 03:09	8°908'10	
morning rise	-11802 Sep 19 j 16:42			min. Earth dist.	-11795 Mar 20 j 19:26	6°954'32	31.93163 AU
retrograde	-11802 Dec 20 j 11:48			opposition	-11795 Mar 23 j 16:55	6°950'11	3°42'10
min. Earth dist.	-11801 Mar 08 j 22:12		30.68706 AU	direct	-11795 Jun 11 j 00:28	5° © 33'51	
opposition	-11801 Mar 11 j 08:12			evening set	-11795 Sep 05 j 04:36	7°9516'26	
direct	-11801 May 29 j 09:53			C	1 3		
evening set	-11801 Aug 25 j 21:45			conjunction	-11795 Sep 20 j 02:16	7°5547'04	3°12'29
<i>3</i>				minimum elong	-11795 Sep 20 j 02:24	7°9547'05	3°13'09
conjunction	-11801 Sep 08 j 14:04	25° Ⅱ 32'24	6°36'47	max. Earth dist.	-11795 Sep 23 j 00:31		34.04032 AU
minimum elong	-11801 Sep 08 j 14:20			morning rise	-11795 Oct 05 j 02:59	8° © 17'58	
max. Earth dist.	-11801 Sep 11 j 01:44			retrograde	-11794 Jan 03 j 06:42		
morning rise	-11801 Sep 22 j 08:28			min. Earth dist.	-11794 Mar 23 j 01:03		32.15698 AU
retrograde	-11801 Dec 22 j 21:15			opposition	-11794 Mar 25 j 23:38	8°546'54	3°06'19
min. Earth dist.	-11800 Mar 10 j 07:34		30.88195 AII	direct	-11794 Jun 13 j 05:59	7° © 30'57	
opposition	-11800 Mar 10 j 07:34 -11800 Mar 12 j 19:34			evening set	-11794 Sep 07 j 05:12	9° © 12'15	
direct	-11800 Mar 12 j 19.34 -11800 May 30 j 22:45		5 1105	o toming sec	11/7/30p 0/303.12	, -1213	
evening set	-11800 May 30 j 22.43 -11800 Aug 26 j 23:13			conjunction	-11794 Sep 22 j 05:54	9° © 42'52	2°38'56
evening set	11000 Aug 20 J 23.13	∠, <u>π</u> υσ+υ		minimum elong	-11794 Sep 22 j 06:00	9° 9 42'53	2°39'37
conjunction	-11800 Sep 09 j 21:52	27°T 20140	6°02'39	max. Earth dist.	-11794 Sep 22 j 06:00 -11794 Sep 25 j 06:14		34.26946 AU
minimum elong	-11800 Sep 09 j 21.32 -11800 Sep 09 j 22:06		6°03'19	morning rise	-11794 Sep 23 j 06.14 -11794 Oct 07 j 09:27		57.20540 AU
max. Earth dist.	1 2			-	-		
man. Daith Uist.	_ X()() Can / 1 / 1 / 1						
morning rise	-11800 Sep 12 j 10:29		32.96974 AU	retrograde	-11793 Jan 05 j 09:49		22 28762 ATT
morning rise	-11800 Sep 12 j 10:29 -11800 Sep 23 j 23:02 -11800 Dec 09 j 07:23		32.96974 AU	min. Earth dist.	-11793 Jan 05 j 09:49 -11793 Mar 25 j 04:41 -11793 Mar 28 j 05:24	10°5546'20	

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11793 in astronomical counting style is the year 11794 BCE in historical counting style. direct -11793 Jun 15 j 11:55 9°526'17 minimum elong -11787 Oct 04 i 14:42 22°529'36 1°05'28 evening set -11793 Sep 09 j 05:57 11°506'25 -11787 Oct 07 j 23:24 22°536'07 35.97954 AU max Earth dist -11787 Oct 20 j 01:01 22°559'14 morning rise -11793 Sep 24 j 08:51 11°536'57 2°05'40 -11786 Jan 17 j 17:07 24°538'09 conjunction retrograde -11793 Sep 24 j 08:56 11°536'58 2°06'20 -11786 Apr 06 j 18:19 23°\$28'11 34.10578 AU minimum elong min. Earth dist. -11793 Sep 27 j 10:12 11°5543'11 34.50354 AU max. Earth dist. opposition -11786 Apr 10 j 02:17 23°523'25 -1°26'26 -11793 Oct 09 j 15:00 12°507'45 morning rise direct -11786 Jun 28 j 12:11 22°510'40 -11792 Jan 07 j 14:07 13°952'05 retrograde evening set -11786 Sep 21 j 07:35 23°544'13 min. Earth dist. -11792 Mar 26 j 08:06 12°\$39'41 32.62343 AU opposition -11792 Mar 29 j 10:21 12°535'08 1°55'33 conjunction -11786 Oct 06 j 13:44 24°513'17 -1°36'29 direct -11792 Jun 16 j 16:01 11°519'59 minimum elong -11786 Oct 06 j 13:41 24°513'16 1°35'52 -11792 Sep 10 j 06:22 12°558'59 -11786 Oct 09 j 22:23 24°519'44 36.23090 AU evening set max. Earth dist. morning rise -11786 Oct 21 j 23:24 24°5642'36 conjunction -11792 Sep 25 j 11:16 13°\$29'26 1°32'43 retrograde -11785 Jan 19 j 17:41 26°520'46 minimum elong -11792 Sep 25 j 11:19 13°529'26 1°33'23 min. Earth dist. -11785 Apr 08 j 18:22 25°5511'06 34.35805 AU max. Earth dist. -11792 Sep 28 j 15:12 13°\$35'49 34.74230 AU opposition -11785 Apr 12 j 02:45 25°\$06'21 -1°58'18 morning rise -11792 Oct 10 j 19:09 14°500'07 direct -11785 Jun 30 j 10:52 23°553'56 retrograde -11791 Jan 08 j 16:43 15°5543'24 evening set -11785 Sep 23 j 07:17 25°526'43 min. Earth dist. -11791 Mar 28 j 11:25 14°531'25 32.86363 AU opposition -11791 Mar 31 j 14:41 14°526'50 conjunction -11785 Oct 08 j 12:23 25°55'27 -2°06'23 direct -11791 Jun 18 j 21:43 13°512'07 minimum elong -11785 Oct 08 j 12:19 25°\$55'27 2°05'46 evening set -11791 Sep 12 j 06:43 14°550'04 max. Earth dist. -11785 Oct 11 j 22:34 26°501'59 36.48293 AU morning rise -11785 Oct 23 j 20:41 26°\$24'26 conjunction -11791 Sep 27 i 12:50 15°\$20'22 1°00'08 retrograde -11784 Jan 21 j 15:44 28°501'52 -11791 Sep 27 i 12:53 15°520'22 1°00'47 min. Earth dist. -11784 Apr 09 j 17:53 26°552'30 34.61108 AU minimum elong -11791 Sep 30 j 17:10 15°526'44 34.98499 AU -11784 Apr 13 j 02:16 26°547'46 -2°29'35 max. Earth dist. opposition -11791 Oct 12 j 22:16 15°\$50'55 -11784 Jul 01 j 11:04 25°535'40 morning rise direct -11790 Jan 10 j 20:25 17°533'13 evening set -11784 Sep 24 j 06:52 27°507'45 retrograde -11790 Mar 30 j 13:01 16°\$21'44 33.10771 AU min. Earth dist. -11790 Apr 02 j 18:23 16°517'02 0°46'19 -11784 Oct 09 j 10:16 27°536'07 -2°35'45 conjunction opposition -11790 Jun 21 j 00:57 15°502'44 -11784 Oct 09 j 10:10 27°536'07 2°35'08 minimum elong direct -11790 Sep 14 j 07:04 16°539'43 -11784 Oct 12 j 20:08 27°542'34 36.73586 AU max. Earth dist. evening set -11784 Oct 24 j 17:05 28°504'45 morning rise -11790 Sep 29 j 14:08 17°509'50 0°27'56 -11783 Jan 22 j 14:26 29°5541'30 conjunction retrograde -11790 Sep 29 j 14:09 17°509'50 0°28'36 -11783 Apr 11 j 15:26 28°532'28 34.86551 AU minimum elong min. Earth dist. -11790 Oct 02 j 20:38 17°516'19 35.23083 AU -11783 Apr 15 j 01:19 28°527'41 -3°00'18 max. Earth dist. opposition -11790 Oct 15 j 00:25 17°540'12 -11783 Jul 03 j 09:52 27°515'54 morning rise direct retrograde -11789 Jan 12 j 19:38 19°521'35 evening set -11783 Sep 26 j 06:02 28°547'18 min. Earth dist. -11789 Apr 01 j 16:06 18°5010'27 33.35470 AU opposition -11789 Apr 04 j 21:20 18°\$05'48 0°12'23 conjunction -11783 Oct 11 j 07:33 29°515'18 -3°04'34 direct -11789 Jun 23 j 05:22 16°951'55 minimum elong -11783 Oct 11 j 07:26 29°\$15'18 3°03'58 -11789 Aug 17 j 15:52 17°536'18 max. Earth dist. -11783 Oct 14 j 19:16 29°521'50 36.99013 AU desc. node -11789 Sep 16 j 07:23 18°527'58 -11783 Oct 26 j 12:21 29°543'33 evening set morning rise -11783 Nov 04 j 17:06 0°**Ω** -11789 Oct 01 j 14:53 18°957'51 -0°03'57 -11782 Jan 24 j 09:52 1° **Ω**19'39 conjunction retrograde -11789 Oct 01 j 14:53 18°\$57'51 0°03'18 minimum elong min. Earth dist. -11782 Apr 13 j 14:15 $0^{\circ}\Omega$ 10'54 35.12161 AU -11789 Oct 01 j 08:32 18°\$57'22 behind sun begin opposition -11782 Apr 16 j 23:51 $0^{\circ}\Omega$ 06'09 -3°30'24 behind sun end -11789 Oct 01 j 21:14 18°\$58'21 -11782 Apr 21 i 09:21 30°RS max. Earth dist. -11789 Oct 04 j 21:36 19°504'19 35.47908 AU direct -11782 Jul 05 i 11:15 28°554'41 morning rise -11789 Oct 17 j 01:39 19°528'01 -11782 Sep 13 j 15:45 $0^{\circ}\Omega$ -11788 Jan 14 j 19:28 21°508'32 -11782 Sep 28 j 05:14 retrograde evening set 0°**£**25′27 -11788 Apr 02 j 16:34 19°557'51 33.60381 AU min. Earth dist. -11788 Apr 05 j 23:35 19°553'07 -0°21'05 conjunction -11782 Oct 13 j 04:29 0°Ω53'04 -3°32'51 opposition direct -11788 Jun 24 j 08:58 18°539'37 minimum elong -11782 Oct 13 j 04:22 0°Ω53'03 3°32'15 evening set -11788 Sep 17 j 07:37 20°5014'48 max. Earth dist. -11782 Oct 16 j 16:17 0°**Ω**59'34 37.24622 AU 1°**Ω**20'55 morning rise -11782 Oct 28 j 06:58 conjunction -11788 Oct 02 j 15:00 20°544'27 -0°35'14 retrograde -11781 Jan 26 j 06:02 2°**Ω**56′25 -11788 Oct 02 j 14:58 20°544'27 0°34'35 min. Earth dist. -11781 Apr 15 j 10:18 1°**Ω**48'03 35.37963 AU minimum elong -11788 Oct 05 j 22:53 20°550'57 35.72874 AU -11781 Apr 18 j 21:32 1°**Ω**43'13 -3°59'53 max. Earth dist. opposition -11788 Oct 18 j 01:49 21°514'21 -11781 Jul 07 j 10:42 morning rise direct 0°Ω32'04 -11787 Jan 15 j 18:32 22°954'04 retrograde evening set -11781 Sep 30 j 04:20 2°**Ω**02'17 min. Earth dist. -11787 Apr 04 j 18:28 21°543'42 33.85435 AU opposition -11787 Apr 08 j 01:19 21°539'00 -0°54'01 conjunction -11781 Oct 15 j 00:53 2°Ω29'29 -4°00'33 direct -11787 Jun 26 j 10:14 20°525'54 minimum elong -11781 Oct 15 j 00:45 2°Ω29'29 3°59'58 evening set -11787 Sep 19 j 07:38 22°500'14 max. Earth dist. -11781 Oct 18 j 13:40 2°**Ω**36'01 37.50400 AU -11781 Oct 30 j 00:49 2°Ω56'56 morning rise -11787 Oct 04 j 14:44 22°\$29'36 -1°06'06 -11780 Jan 28 j 00:42 4°**Ω**31'54 conjunction retrograde

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Earth dist. -11773 Apr 27 j 22:39 $14^{\circ}\Omega$ 03'24 37.46465 AU -11780 Oct 15 j 20:39 4°Ω04'39 4°27'07 -11773 May 01 j 09:54 $13^{\circ}\Omega$ 58'44 $-7^{\circ}33'15$ minimum elong opposition -11773 Jul 20 j 01:41 12° Ω 50'10 -11780 Oct 19 j 10:36 max. Earth dist. 4°**Ω**11'13 37.76347 AU direct -11773 Oct 13 j 16:13 14° **Ω**17'16 morning rise -11780 Oct 30 j 17:35 4° **Ω**31'41 evening set retrograde -11779 Jan 28 j 18:54 $6^{\circ}\Omega$ 06'10 min. Earth dist. -11779 Apr 18 j 03:33 4° **Ω**58'26 35.90082 AU conjunction -11773 Oct 27 j 05:38 14° Ω40'44 -7°21'36 -11779 Apr 21 j 15:34 -11773 Oct 27 j 05:25 14° Ω 40'43 7°21'04 opposition 4°**Ω**53'36 -4°56'58 minimum elong -11779 Jul 10 j 05:48 max. Earth dist. -11773 Oct 30 j 19:56 14° Ω 47'00 39.57476 AU direct 3°**Ω**43′08 evening set -11779 Oct 03 j 01:50 5° **Ω**12'21 -11773 Nov 07 j 08:05 $15^{\circ}\Omega$ morning rise -11773 Nov 09 j 21:31 15° Ω 04'23 conjunction -11779 Oct 17 j 16:12 $5^{\circ}\Omega 38'41$ -4°54'15 retrograde -11772 Feb 09 j 01:12 $16^{\circ}\Omega 36'20$ minimum elong -11779 Oct 17 j 16:03 5°**Ω**38'40 4°53'40 min. Earth dist. -11772 Apr 28 j 16:19 $15^{\circ}\Omega 30'35$ 37.71962 AU max. Earth dist. -11779 Oct 21 j 05:48 5°**Ω**45'10 38.02404 AU opposition -11772 May 02 j 03:18 15° Ω 25'57 -7°57'10 morning rise -11779 Nov 01 j 09:53 6°**Ω**05'15 -11772 May 22 j 01:03 15°RΩ retrograde -11778 Jan 30 j 16:19 7°**Ω**39'17 direct -11772 Jul 20 j 19:34 $14^{\circ}\Omega$ 17'39 min. Earth dist. -11778 Apr 19 j 23:21 $6^{\circ}\Omega$ 31'54 36.16323 AU -11772 Sep 16 j 02:20 15° Ω opposition -11778 Apr 23 j 11:52 6°Ω27'04 -5°24'34 evening set -11772 Oct 14 i 14:06 15° Ω 44'29 direct -11778 Jul 11 i 23:34 5°Ω16'56 evening set -11778 Oct 05 j 00:22 $6^{\circ}\Omega 45'43$ conjunction -11772 Oct 27 j 22:16 $16^{\circ}\Omega$ 07'26 -7°44'10 minimum elong -11772 Oct 27 j 22:03 $16^{\circ}\Omega$ 07'25 $7^{\circ}43'42$ -11778 Oct 19 j 11:23 $7^{\circ}\Omega$ 11'36 -5°20'13 max. Earth dist. -11772 Oct 31 j 11:30 $16^{\circ}\Omega$ 13'34 39.82711 AU conjunction -11778 Oct 19 j 11:13 $7^{\circ}\Omega$ 11'36 5° 19'40 -11772 Nov 10 j 09:07 16°**Ω**30'33 minimum elong morning rise -11778 Oct 23 j 02:22 $7^{\circ}\Omega$ 18'09 38.28520 AU -11771 Feb 09 j 19:34 $18^{\circ}\Omega$ 02'14 max. Earth dist. retrograde -11778 Nov 03 j 01:21 7°**Ω**37'43 -11771 Apr 30 j 08:59 $16^{\circ}\Omega$ 56'44 37.97319 AU morning rise min. Earth dist. -11771 May 03 j 20:19 $16^{\circ}\Omega$ 52'07 $-8^{\circ}20'27$ -11777 Feb 01 j 10:43 9° Ω 11'20 retrograde opposition -11777 Apr 21 j 19:39 8° **Ω**04'14 36.42575 AU -11771 Jul 22 j 10:31 15° Ω 44'03 min. Earth dist. direct -11777 Apr 25 j 07:36 7°**Ω**59'27 -5°51'32 -11771 Oct 16 j 11:47 17° Ω 10'40 evening set opposition -11777 Jul 13 j 19:50 6°**Ω**49'40 direct -11771 Oct 29 j 14:45 17° Ω 33'05 -8°06'11 -11777 Oct 06 j 23:02 8° **Ω**18'04 evening set conjunction -11771 Oct 29 j 14:32 17° **Ω**33'04 8°05'42 minimum elong -11777 Oct 21 j 06:08 8° Ω 43'29 -5°45'38 -11771 Nov 02 j 05:01 17° Ω 39'15 40.07823 AU conjunction max. Earth dist. -11777 Oct 21 j 05:57 8° **Ω**43'28 5°45'05 -11771 Nov 11 j 20:06 17° **Ω**55'40 minimum elong morning rise max. Earth dist. -11777 Oct 24 j 20:12 $8^{\circ}\Omega$ 49'54 38.54607 AU retrograde -11770 Feb 11 j 10:57 19° Ω 27'07 morning rise -11777 Nov 04 j 16:18 9°**Ω**09'08 min. Earth dist. -11770 May 02 j 02:32 $18^{\circ}\Omega$ 21'47 38.22575 AU retrograde -11776 Feb 03 j 06:43 10°**Ω**42'21 opposition -11770 May 05 j 12:49 $18^{\circ}\Omega$ 17'15 $-8^{\circ}43'08$ min. Earth dist. -11776 Apr 22 j 13:55 9°Ω35'36 36.68781 AU direct -11770 Jul 24 j 04:15 17° Ω 09'26 -11776 Apr 26 j 02:43 9°**Ω**30'48 -6°17'53 -11770 Oct 18 j 09:25 18° **Ω**35'51 opposition evening set -11776 Jul 14 j 15:06 8°**Ω**21'20 direct -11776 Oct 07 j 21:32 9° **Ω**49'23 -11770 Oct 31 j 06:49 18° Ω 57'44 -8°27'37 evening set conjunction -11770 Oct 31 j 06:35 18° Ω 57'43 8°27'10 minimum elong -11776 Oct 22 j 00:34 $10^{\circ}\Omega$ 14'20 $-6^{\circ}10'28$ -11770 Nov 03 j 20:14 19° Ω 03'48 40.32862 AU conjunction max. Earth dist. -11776 Oct 22 j 00:23 $10^{\circ}\Omega$ 14'19 6° 09'57 -11770 Nov 13 j 06:32 19° Ω 19'47 minimum elong morning rise -11776 Oct 25 j 15:30 $10^{\circ}\Omega 20'47$ 38.80592 AU -11769 Feb 13 j 02:34 $20^{\circ}\Omega 51'00$ max. Earth dist. retrograde -11776 Nov 05 i 06:34 $10^{\circ}\Omega$ 39'30 -11769 May 03 j 17:40 19° Ω 45'59 38.47771 AU morning rise min. Earth dist. retrograde -11775 Feb 03 i 24:00 $12^{\circ}\Omega 12'23$ -11769 May 07 i 04:53 $19^{\circ}\Omega 41'24 - 9^{\circ}05'12$ opposition min. Earth dist. -11775 Apr 24 j 10:00 11° Ω 05'51 36.94862 AU direct -11769 Jul 25 j 22:00 18° **Ω**33'51 $-11775 \text{ Apr } 27 \text{ j } 21:37 \quad 11^{\circ} \Omega 01'09 \quad -6^{\circ} 43'37$ evening set -11769 Oct 20 j 06:56 20° **\Oldot**00'06 opposition direct -11775 Jul 16 j 11:40 9°**Ω**52'00 -11775 Oct 09 j 19:46 11° Ω 19'42 evening set conjunction -11769 Nov 01 j 22:31 20° Ω 21'26 -8°48'29 minimum elong -11769 Nov 01 j 22:17 $20^{\circ}\Omega$ 21'25 $8^{\circ}48'02$ conjunction -11775 Oct 23 j 18:33 11° Ω 44'10 -6°34'44 max. Earth dist. -11769 Nov 05 j 12:26 $20^{\circ}\Omega$ 27'31 $40.57834~\mathrm{AU}$ -11775 Oct 23 j 18:21 11° Ω 44'09 6°34'12 minimum elong morning rise -11769 Nov 14 j 16:27 20°**Ω**42'56 -11775 Oct 27 j 08:51 11° Ω 50'32 39.06428 AU retrograde -11768 Feb 14 j 16:36 22° **Ω**14'00 max. Earth dist. -11775 Nov 06 j 20:03 12° Ω 08'50 -11768 May 04 j 10:18 21° Ω 09'11 38.72920 AU morning rise min. Earth dist. -11774 Feb 05 j 16:33 13° Ω 41'23 -11768 May 07 j 20:34 21° Ω 04'40 -9°26'38 retrograde opposition -11774 Apr 26 j 03:44 12° **Ω**35'11 37.20762 AU -11768 Jul 26 j 15:08 19° **Ω**57'23 min. Earth dist. direct -11774 Apr 29 j 15:59 12° Ω 30'28 -7°08'44 opposition evening set -11768 Oct 21 j 04:11 21°Ω23'29 direct -11774 Jul 18 j 07:43 11°**Ω**21'36 evening set -11774 Oct 11 j 18:09 12°**Ω**49'00 conjunction -11768 Nov 02 j 13:56 21°Ω44'17 -9°08'47 minimum elong -11768 Nov 02 j 13:42 21°Ω44'16 9°08'21 -11774 Oct 25 j 12:14 13° Ω 12'58 -6°58'27 max. Earth dist. -11768 Nov 06 j 03:55 21° Ω 50'20 40.82768 AU conjunction

morning rise

-11768 Nov 15 j 01:39 22°**Ω**05'14

-11774 Oct 25 j 12:02 13° Ω 12'58 6°57'56

minimum elong

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Earth dist. 1°My08'58 42.51886 AU -11767 Nov 04 j 04:34 23°**Ω**06'19 9°28'04 minimum elong morning rise -11761 Nov 23 j 05:23 1°m/20'19 -11767 Nov 07 j 18:04 23° Ω 12'18 41.07617 AU max. Earth dist. retrograde -11760 Feb 25 j 05:00 2° m 50'48 morning rise -11767 Nov 16 j 10:25 23° **Ω**26'44 min. Earth dist. -11760 May 15 j 08:07 1° Mp 47'41 40.67527 AU retrograde -11766 Feb 16 j 21:00 24° **Ω**57'33 opposition -11760 May 18 j 13:43 1° Mp 43'33 -11°57'33 -11766 May 07 j 16:32 23° Ω 53'15 39.23000 AU min. Earth dist. direct -11760 Aug 06 j 13:20 0°m/38'12 -11766 May 11 j 02:56 23° Ω 48'47 -10°07'44 -11760 Nov 03 j 04:38 opposition evening set 2° m 04'00 direct -11766 Jul 29 j 21:56 22°**Ω**42'03 evening set -11766 Oct 24 j 22:29 24°**Ω**07'57 conjunction -11760 Nov 13 j 07:03 2° m/20'13 -11°31'58 minimum elong -11760 Nov 13 j 06:48 2° m/20'12 11°31'37 conjunction -11766 Nov 05 j 19:43 24° Ω 27'39 -9°47'42 max. Earth dist. -11760 Nov 16 j 15:41 2° Mp 25'38 42.74741 AU2°m/36'31 minimum elong -11766 Nov 05 j 19:28 24° Ω 27'38 9°47'17 morning rise -11760 Nov 23 j 10:47 retrograde max. Earth dist. -11766 Nov 09 j 09:47 24° Ω 33'38 41.32344 AU -11759 Feb 25 j 19:39 4° m 07'00 morning rise -11766 Nov 17 j 18:44 $24^{\circ}\Omega 47'29$ min. Earth dist. -11759 May 16 j 20:59 3° Mp 04'02 40.90429 AU retrograde -11765 Feb 18 j 12:12 $26^{\circ}\Omega$ 18'12 opposition -11759 May 20 j 02:24 2° m 59'56 -12°14'00 min. Earth dist. -11765 May 09 j 08:04 25° Ω 14'08 39.47829 AU direct -11759 Aug 08 i 00:17 1° m 54'46 -11765 May 12 j 17:27 $25^{\circ}\Omega$ 09'44 $-10^{\circ}27'23$ opposition evening set -11759 Nov 05 j 01:12 3° m 20'36 direct -11765 Jul 31 i 11:39 $24^{\circ}\Omega$ 03'15 evening set -11765 Oct 26 j 19:44 25° **Ω**29'07 conjunction -11759 Nov 14 i 19:54 3° m 36'13 -11°47'36 minimum elong -11759 Nov 14 i 19:40 3° m 36'12 11°47'17 -11765 Nov 07 j 10:14 25° Ω 48'15 -10°06'20 max. Earth dist. -11759 Nov 18 j 05:06 3° Mp 41'37 42.97305 AU conjunction -11765 Nov 07 j 10:01 $25^{\circ}\Omega 48'14 10^{\circ}05'56$ -11759 Nov 24 j 15:41 3° m 51'53 minimum elong morning rise max. Earth dist. -11765 Nov 10 j 22:50 25° Ω 54'05 41.56879 AU -11758 Feb 27 j 08:28 5° Mg 22'23 retrograde -11765 Nov 19 j 02:36 26° **Ω**07'31 -11758 May 18 j 10:59 4° m 19'31 41.13059 AU morning rise min. Earth dist. -11764 Feb 20 j 04:33 27° **Ω**38'10 -11758 May 21 j 14:47 4° mg 15'31 -12°29'56 retrograde opposition -11764 May 09 j 22:02 $26^{\circ}\Omega$ 34'22 39.72442 AU -11758 Aug 09 j 12:38 min. Earth dist. direct 3° m 10'30 -11764 May 13 j 07:44 $26^{\circ}\Omega$ 29'58 $-10^{\circ}46'29$ -11758 Nov 06 j 22:02 4° My 36'25 opposition evening set -11764 Aug 01 j 00:10 25°**\O**23'45 direct -11764 Oct 27 j 16:40 26° **Ω**49'35 -11758 Nov 16 j 08:34 4° m 51'24 -12°02'45 evening set conjunction -11758 Nov 16 j 08:20 4° m 51'23 12°02'26 minimum elong -11764 Nov 08 j 00:26 $27^{\circ}\Omega$ 08'09 -10°24'28 -11758 Nov 19 j 16:31 4° m 56'42 43.19639 AU conjunction max. Earth dist. minimum elong -11764 Nov 08 j 00:11 27° Ω08'08 10°24'04 morning rise -11758 Nov 25 j 20:03 5° Mp 06'27 max. Earth dist. -11764 Nov 11 j 13:15 $27^{\circ}\Omega$ 13'58 41.81145 AU retrograde -11757 Feb 28 j 20:01 6° Mp 36'59 morning rise -11764 Nov 19 j 09:55 27°**\O**26'50 min. Earth dist. -11757 May 19 j 22:19 5° **m** 34'19 41.35479 AU retrograde -11763 Feb 20 j 17:33 28°**Ω**57'26 opposition -11757 May 23 j 02:37 5° m 30'19 -12°45'20 min. Earth dist. -11763 May 11 j 13:54 $27^{\circ}\Omega$ 53'47 39.96758 AU direct -11757 Aug 11 j 01:35 4° m 25'29 -11763 May 14 j 21:49 $27^{\circ}\Omega$ 49'30 -11°05'03 -11757 Nov 08 j 18:42 5° m 51'29 opposition evening set -11763 Aug 02 j 16:06 26°**Ω**43'32 direct -11763 Oct 29 j 13:46 28° **Ω**09'21 conjunction -11757 Nov 17 j 20:53 6° Mp 05'51 -12°17'24 evening set -11757 Nov 17 j 20:40 6° m 05'50 12°17'06 minimum elong -11763 Nov 09 i 14:34 $28^{\circ}\Omega 27'20$ -10°42'05 -11757 Nov 21 i 04:31 conjunction max. Earth dist. 6° m 11'07 43.41774 AU -11763 Nov 09 i 14:20 $28^{\circ}\Omega$ 27'19 $10^{\circ}41'42$ minimum elong morning rise -11757 Nov 27 i 00:05 6° m 20'17 -11763 Nov 13 j 02:15 $28^{\circ}\Omega$ 33'03 42.05101 AU max. Earth dist. retrograde -11756 Mar 01 i 05:59 7° m 50'53 morning rise -11763 Nov 20 j 16:49 $28^{\circ}\Omega 45'26$ min. Earth dist. -11756 May 20 i 11:27 6° m 48'21 41.57724 AU -11762 Jan 16 j 11:56 0° Mp opposition -11756 May 23 j 14:27 6° mp 44'24 -13°00'13 -11762 Feb 22 j 05:41 0° m 15'59 direct -11756 Aug 11 j 15:26 5° m 39'47 retrograde -11762 Mar 31 j 12:27 30°RΩ evening set -11756 Nov 09 j 15:11 7° m 05'55 -11762 May 13 j 03:30 29° Ω 12'34 40.20725 AU min. Earth dist. opposition -11762 May 16 j 11:23 29° Ω 08'18 -11°23'04 conjunction -11756 Nov 18 j 08:54 7° m 19'39 -12°31'33 direct -11762 Aug 04 j 08:14 28°**Ω**02'33 minimum elong -11756 Nov 18 j 08:40 7° m 19'38 12°31'15 evening set -11762 Oct 31 j 10:50 29° **Ω**28'22 max. Earth dist. -11756 Nov 21 j 16:33 7° Mp 24'53 43.63752 AU -11756 Nov 27 j 03:17 7° m 33'26 morning rise -11762 Nov 11 j 04:21 29° Ω 45'46 -10°59'12 9° m 04'09 conjunction retrograde -11755 Mar 02 j 15:13 -11762 Nov 11 j 04:06 29° **Q**45'45 10°58'49 8° Mp 01'49 41.79790 AU minimum elong min. Earth dist. -11755 May 21 j 23:00 max. Earth dist. -11762 Nov 14 j 14:57 29° **Ω**51'22 42.28680 AU 7° **m** $57'53 -13^{\circ}14'35$ opposition -11755 May 25 j 01:52 -11762 Nov 19 j 22:44 0° Mp direct -11755 Aug 13 j 05:02 6° M 53'28 morning rise -11762 Nov 21 j 23:26 0°Mp03'16 evening set -11755 Nov 11 j 11:53 8° m 19'45 retrograde -11761 Feb 23 j 18:09 1° Mp 33'48 min. Earth dist. -11761 May 14 j 18:21 0° Mp 30'31 40.44318 AU conjunction -11755 Nov 19 j 20:40 8° m 32'51 -12°45'13

-11761 May 18 j 00:52

-11761 Jun 08 j 04:17 30°RΩ

opposition

0° m/26'20 -11°40'34

minimum elong

max. Earth dist.

-11755 Nov 19 j 20:26

-11755 Nov 23 j 03:00

8° m/32'50 12°44'56

8°m/37'59 43.85551 AU

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Earth dist. -11747 Jun 03 j 12:51 17° **m** 27'55 -14°52'32 opposition -11754 Nov 21 j 08:25 9° m 45'33 -12°58'24 conjunction direct -11747 Aug 22 j 16:43 16° Mp 24'58 -11754 Nov 21 j 08:12 9° mp 45'32 12°58'07 -11747 Nov 24 j 17:13 17° m 53'39 minimum elong evening set -11754 Nov 24 j 15:11 9° Mp 50'40 44.07149 AU max. Earth dist. morning rise -11754 Nov 29 j 08:47 9° m 58'02 conjunction -11747 Nov 29 j 12:50 18° m 00'57 -14°18'37 -11753 Mar 05 j 15:43 11° m 29'03 -11747 Nov 29 j 12:37 18° m 00'56 14°18'26 retrograde minimum elong -11753 May 24 j 22:57 10° m 27'04 42.23326 AU max. Earth dist. -11747 Dec 02 j 12:08 18° Mp 05'26 45.48478 AU min. Earth dist. opposition -11753 May 28 j 00:01 10° m 23'16 -13°41'48 morning rise -11747 Dec 04 j 08:24 18° Mp 08'13 direct -11753 Aug 16 j 01:42 9° mp 19'16 retrograde -11746 Mar 13 j 16:18 19° Mp 41'12 evening set -11753 Nov 15 j 05:33 10° Mp 45'58 min. Earth dist. -11746 Jun 02 j 04:33 18° **M** 40'06 43.64459 AU opposition -11746 Jun 04 j 22:09 18° **m** 36'46 -15°02'49 conjunction -11753 Nov 22 j 19:51 10° m 57'46 -13°11'08 direct -11746 Aug 24 j 02:58 17° M 33'56 minimum elong -11753 Nov 22 j 19:37 10° m 57'45 13°10'53 evening set -11746 Nov 26 j 17:38 19° Mp 03'08 max. Earth dist. -11753 Nov 26 j 00:54 11° m 02'45 44.28490 AU morning rise -11753 Nov 30 j 10:38 11° mp 09'35 conjunction -11746 Nov 30 j 23:00 19° m 09'31 -14°28'25 retrograde -11752 Mar 06 i 04:57 12° m 40'48 minimum elong -11746 Nov 30 j 22:49 19° m 09'30 14°28'16 min. Earth dist. -11752 May 25 j 09:31 11° m 39'01 42.44688 AU max. Earth dist. -11746 Dec 03 j 21:22 19° mp 13'56 45.67161 AU opposition -11752 May 28 i 10:36 11° m 35'15 -13°54'41 morning rise -11746 Dec 05 i 04:16 19° m 15'52 direct -11752 Aug 16 j 11:15 10° mp 31'27 retrograde -11745 Mar 15 j 00:08 20° m 49'19 -11745 Jun 03 i 13:36 19° Mp 48'22 43.83144 AU evening set -11752 Nov 16 j 02:33 11° m 58'25 min. Earth dist. -11745 Jun 06 j 07:08 19° Mp 45'02 -15°12'40 opposition -11752 Nov 23 j 07:08 12° m 09'32 -13°23'25 -11745 Aug 25 j 14:21 18° mp 42'20 conjunction direct -11752 Nov 23 j 06:55 12° m 09'32 13°23'10 evening set -11745 Nov 28 j 19:21 20° m 12'10 minimum elong -11752 Nov 26 j 11:48 12° mp 14'29 44.49508 AU max. Earth dist. -11752 Nov 30 j 12:10 12° m 20'40 -11745 Dec 02 j 08:45 20° mp 17'31 -14°37'48 morning rise conjunction -11745 Dec 02 j 08:33 20° m 17'30 14°37'39 -11751 Mar 07 j 15:44 13° M 52'07 minimum elong retrograde -11745 Dec 05 j 21:59 20° m/22'51 -11751 May 26 j 22:03 12° m 50'27 42.65703 AU min. Earth dist. morning rise -11751 May 29 j 21:10 12° Mp 46'47 -14°07'07 -11745 Dec 05 j 05:53 20° m 21'51 45.85573 AU max. Earth dist. opposition -11744 Mar 15 j 08:12 21° m 56'54 -11751 Aug 17 j 22:09 11° mp 43'12 direct retrograde -11751 Nov 17 j 23:53 13° Mp 10'27 -11744 Jun 03 j 23:33 20° M 56'02 44.01591 AU evening set min. Earth dist. -11744 Jun 06 j 16:01 20° m 52'46 -15°22'05 opposition conjunction -11751 Nov 24 j 18:19 13° m 20'52 -13°35'16 direct -11744 Aug 26 j 00:25 19° **m** 50'12 minimum elong -11751 Nov 24 j 18:05 13° m 20'51 13°35'03 evening set -11744 Nov 30 j 00:12 21° m 20'53 max. Earth dist. -11751 Nov 27 j 22:03 13° Mp 25'44 44.70159 AU -11744 Dec 02 j 18:31 21° m 25'01 -14°46'47 morning rise -11751 Dec 01 j 12:58 13° Mp 31'17 conjunction retrograde -11750 Mar 08 j 23:08 15° m 02'59 minimum elong -11744 Dec 02 j 18:20 21° m 25'00 14°46'39 min. Earth dist. -11750 May 28 j 08:48 14° Mp 01'30 42.86300 AU morning rise -11744 Dec 05 j 12:36 21° Mp 29'08 -11750 May 31 j 07:24 13° m 57'52 -14°19'07 max. Earth dist. -11744 Dec 05 j 15:53 21° Mp 29'20 46.03768 AU opposition direct -11750 Aug 19 j 11:42 12° m 54'28 -11743 Mar 16 j 14:55 23° m 03'59 retrograde -11750 Nov 19 j 21:37 14° m 22'02 -11743 Jun 05 j 09:03 22° m 03'15 44.19804 AU evening set min. Earth dist. -11743 Jun 08 i 00:38 22° m 00'01 -15°31'04 opposition -11750 Nov 26 i 05:18 14° m 31'42 -13° 46'43 conjunction direct -11743 Aug 27 j 11:15 20° m 57'36 -11750 Nov 26 i 05:06 14° m 31'42 13°46'30 minimum elong evening set -11743 Dec 02 j 12:01 22° m 29'35 -11750 Nov 29 i 07:03 14° Mp 36'26 44.90370 AU max. Earth dist. -11743 Dec 04 i 03:56 22° m 32'03 -14°55'20 morning rise -11750 Dec 02 i 13:18 14° mo 41'25 conjunction minimum elong retrograde -11749 Mar 10 j 09:02 16° m 13'22 -11743 Dec 04 i 03:45 22° m 32'03 14°55'12 min. Earth dist. -11749 May 29 j 20:09 15° mp 12'00 43.06460 AU -11743 Dec 05 j 19:33 22° m 34'31 morning rise -11749 Jun 01 j 17:26 15° Mp 08'27 -14°30'40 opposition max. Earth dist. -11743 Dec 06 j 23:25 22° m 36'15 46.21742 AU direct -11749 Aug 20 j 22:24 14° mp 05'12 retrograde -11742 Mar 18 j 02:24 24° m 10'38 -11749 Nov 21 j 19:39 15° m 33'07 evening set min. Earth dist. -11742 Jun 06 j 17:39 23° Mp 10'03 44.37787 AU opposition -11742 Jun 09 j 09:09 23° **m** 06'51 -15°39'37 -11749 Nov 27 j 16:12 15° Mp 42'02 -13° 57' 45 direct -11742 Aug 28 j 17:42 22° m 04'35 conjunction -11749 Nov 27 j 15:58 15° Mp 42'01 13°57'33 minimum elong -11749 Nov 30 j 17:48 15° m 46'43 45.10143 AU -11742 Dec 05 j 13:26 23° m 38'42 -15°03'30 max. Earth dist. conjunction -11749 Dec 03 j 12:48 15° m 50'59 -11742 Dec 05 j 13:15 23° m 38'41 15°03'24 morning rise minimum elong retrograde -11748 Mar 10 j 18:47 17° m 23'14 max. Earth dist. -11742 Dec 08 j 08:56 23° m 42'52 46.39461 AU min. Earth dist. -11748 May 30 j 07:38 16° m 21'57 43.26168 AU retrograde -11741 Mar 19 j 12:40 25° m 16'54 opposition -11748 Jun 02 j 03:17 16° Mp 18'29 -14°41'49 min. Earth dist. -11741 Jun 08 j 03:55 24° Mp 16'23 44.55491 AU direct -11748 Aug 21 j 08:32 15° Mp 15'23 opposition -11741 Jun 10 j 17:26 24° Mp 13'18 -15°47'46 -11748 Nov 22 j 18:05 16° m 43'39 -11741 Aug 30 j 00:47 23° Mp 11'12

direct

evening set

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11741 in astronomical counting style is the year 11742 BCE in historical counting style. -11741 Dec 06 j 22:45 24° Mp 45'00 -15°11'16 direct -11733 Sep 07 j 23:11 1°**£**51'17 conjunction minimum elong -11741 Dec 06 j 22:35 24° m 44'59 15°11'10 max. Earth dist. -11741 Dec 09 j 16:58 24° mp 49'04 46.56896 AU -11733 Dec 15 j 20:29 3°**£**22'44 -16°01'00 conjunction -11740 Mar 19 j 20:31 26° m 22'49 -11733 Dec 15 j 20:22 3°**£**22'43 16°01'00 retrograde minimum elong -11740 Jun 08 j 12:05 25° m 22'30 44.72870 AU max. Earth dist. -11733 Dec 18 j 03:55 3°**2**26'03 47.80945 AU min. Earth dist. -11740 Jun 11 j 01:31 25° m 19'25 -15°55'31 -11732 Mar 28 j 08:45 4°**£**57'50 opposition retrograde -11740 Aug 30 j 10:22 24° Mp 17'28 3°**♀**58'08 45.96049 AU direct min. Earth dist. -11732 Jun 17 j 09:35 opposition -11732 Jun 19 j 13:07 3°**£**55'35 -16°44'48 -11740 Dec 07 j 07:43 25° m 50'57 -15°18'40 -11732 Sep 08 j 05:38 conjunction direct 2°**£**54'34 minimum elong -11740 Dec 07 j 07:33 25° m 50'57 15°18'36 max. Earth dist. -11740 Dec 10 j 00:29 25° m 54'56 46.73968 AU conjunction -11732 Dec 16 j 04:24 4°**2**5'45 -16°05'41 -11739 Mar 21 j 03:53 27° m 28'26 -11732 Dec 16 j 04:16 4°**2**5'45 16°05'41 retrograde minimum elong -11739 Jun 09 j 22:00 26° Mp 28'11 44.89866 AU -11732 Dec 18 j 11:57 4°**£**29'04 47.94728 AU min. Earth dist. max. Earth dist. opposition -11739 Jun 12 j 09:39 26° m 25'12 -16°02'54 retrograde -11731 Mar 29 j 17:18 6°**£**00'34 direct -11739 Aug 31 j 20:06 25° Mp 23'25 min. Earth dist. -11731 Jun 18 j 18:09 5°**೨**00'54 46.09768 AU opposition -11731 Jun 20 j 19:57 4°**£**58'27 -16°49'22 conjunction -11739 Dec 08 j 16:57 26° m 56'36 -15°25'43 direct -11731 Sep 09 j 11:22 3°**£**57'33 minimum elong -11739 Dec 08 j 16:48 26° m 56'36 15°25'39 max. Earth dist. -11739 Dec 11 j 09:14 27° m 00'32 46.90630 AU conjunction -11731 Dec 17 j 12:20 5°**2**28'29 -16°10'01 retrograde -11738 Mar 22 j 10:09 28° m 33'45 minimum elong -11731 Dec 17 j 12:13 5°**2**28'29 16°10'02 min. Earth dist. -11738 Jun 11 j 07:10 27° mp 33'36 45.06400 AU max. Earth dist. -11731 Dec 19 j 18:21 5°**2**31'42 48.08245 AU opposition -11738 Jun 13 j 17:25 27° m 30'41 -16°09'55 retrograde -11730 Mar 31 i 01:45 7°**₽**03'00 direct -11738 Sep 02 j 06:22 26° m 29'02 min. Earth dist. -11730 Jun 20 j 00:34 6°**2**03'29 46.23207 AU opposition -11730 Jun 22 i 02:24 6° **2**01'02 -16° 53'35 conjunction -11738 Dec 10 i 01:58 28° m 01'56 -15°32'26 direct -11730 Sep 10 j 16:58 5°**♀**00'14 minimum elong -11738 Dec 10 j 01:48 28° m 01'55 15°32'23 max. Earth dist. -11738 Dec 12 j 15:42 28° m 05'41 47.06816 AU -11730 Dec 18 j 20:09 6°**£**30'58 -16°14'01 conjunction -11737 Mar 23 j 19:55 29° m 38'44 minimum elong -11730 Dec 18 j 20:01 6°**2**30'57 16°14'02 retrograde -11737 Jun 12 j 15:47 28° Mp 38'41 45.22448 AU max. Earth dist. -11730 Dec 21 j 00:57 6°**△**34'06 48.21463 AU min. Earth dist. -11737 Jun 15 j 01:11 28° m 35'49 -16°16'36 retrograde -11729 Apr 01 j 08:28 8°**♀**05'12 opposition 7°**2**05'44 46.36339 AU -11737 Sep 03 j 13:13 27° m/34'18 min. Earth dist. -11729 Jun 21 j 09:00 direct 7°**2**03'23 -16°57'27 -11729 Jun 23 j 09:00 opposition 6°**£**02'42 -11737 Dec 11 j 10:48 29° m 06'54 -15°38'49 -11729 Sep 12 j 00:54 conjunction direct -11737 Dec 11 j 10:40 29° m 06'53 15°38'46 minimum elong -11737 Dec 13 j 23:59 29° m 10'36 47.22499 AU max. Earth dist. -11729 Dec 20 j 03:52 7°**2**33'13 -16°17'41 conjunction -11736 Jan 19 j 00:10 0°**♀** -11729 Dec 20 j 03:46 7°**2**33'13 16°17'45 minimum elong -11736 Mar 24 j 04:48 0°**2**43'21 -11729 Dec 22 j 08:16 7°**2**36'20 48.34363 AU retrograde max. Earth dist. -11736 May 29 j 19:34 30°R Mp retrograde -11728 Apr 01 j 12:11 9°**♀**07'12 min. Earth dist. -11736 Jun 13 j 01:35 29° m 43'20 45.37985 AU min. Earth dist. -11728 Jun 21 j 16:09 8°**2**07'50 46.49107 AU opposition -11736 Jun 15 j 08:47 29° Mp 40'35 -16°22'56 opposition -11728 Jun 23 j 15:16 8°**2**05'31 -17°00'59 direct -11736 Sep 03 j 20:32 28° Mp 39'10 direct -11728 Sep 12 j 10:45 7°**♀**04'58 -11736 Dec 03 j 21:46 0°**♀** conjunction -11728 Dec 20 j 11:26 8°**2**35'16 -16°21'02 -11736 Dec 11 j 19:28 0°**2**11'28 -15°44'52 minimum elong -11728 Dec 20 j 11:20 8°**2**35'16 16°21'06 conjunction -11736 Dec 11 j 19:19 0°**2**11'27 15°44'51 max. Earth dist. -11728 Dec 22 j 13:31 8°**2**38'14 48.46883 AU minimum elong -11736 Dec 14 i 06:46 0° **2**15'03 47.37711 AU -11727 Apr 02 j 19:34 10° **2**09'01 max. Earth dist. retrograde -11735 Mar 25 j 13:40 -11727 Jun 22 i 23:27 retrograde 1°**-**47'33 min. Earth dist. 9°**2**09'44 46.61477 AU -11735 Jun 14 j 09:15 0° **2**47'39 45.53063 AU min. Earth dist. opposition -11727 Jun 24 i 21:29 9°**2**07'28 -17°04'13 -11735 Jun 16 j 16:03 0° **2**44'56 -16°28'56 opposition direct -11727 Sep 13 j 17:03 8°**₽**07'02 -11735 Jul 28 i 21:33 30°R Mb direct -11735 Sep 05 j 04:00 29° m 43'37 conjunction -11727 Dec 21 i 19:09 9°**2**37'07 -16°24'06 -11735 Oct 13 j 03:47 0°₽ minimum elong -11727 Dec 21 i 19:03 9°**2**37'07 16°24'12 max. Earth dist. -11727 Dec 23 j 20:43 9° **2**40'03 48.58964 AU conjunction -11735 Dec 13 j 03:54 1°**2**15'37 -15°50'36 retrograde -11726 Apr 04 j 02:34 11° **2**10'37 minimum elong -11735 Dec 13 j 03:46 1°**2**15'37 15°50'35 min. Earth dist. -11726 Jun 24 j 07:53 10° **2**11'21 46.73361 AU max. Earth dist. -11735 Dec 15 j 13:52 1°**2**19'07 47.52480 AU opposition -11726 Jun 26 j 03:43 10°**2**09'12 -17°07'09 retrograde -11734 Mar 26 j 20:28 2°**£**51'22 direct -11726 Sep 14 j 23:53 9°**ഫ**08'51 min. Earth dist. -11734 Jun 15 j 18:26 1°**£**51'29 45.67733 AU -11734 Jun 17 j 23:20 1°**£**48'52 -16°34'35 conjunction -11726 Dec 23 j 02:47 10°**2**38'45 -16°26'53 opposition -11734 Sep 06 j 12:36 0°**ჲ**47'39 -11726 Dec 23 j 02:42 10°**2**38'44 16°26'57 direct minimum elong -11726 Dec 25 j 02:00 10°**2**41'31 48.70551 AU max. Earth dist. conjunction -11734 Dec 14 j 12:23 2°**2**19'22 -15°55'58 retrograde -11725 Apr 05 j 12:04 12°**£**11'58 minimum elong -11734 Dec 14 j 12:14 2°**2**19'21 15°55'58 min. Earth dist. -11725 Jun 25 j 14:24 11°**2**12'47 46.84729 AU max. Earth dist. -11734 Dec 16 j 21:54 2°**£**22'50 47.66876 AU opposition -11725 Jun 27 j 09:39 11°**⊆**10'40 -17°09'47 retrograde -11733 Mar 28 j 00:21 3°**£**54'47 direct -11725 Sep 16 j 04:06 10°**2**10'24 min. Earth dist. -11733 Jun 17 j 02:07 2°**2**54'59 45.82038 AU -11733 Jun 19 j 06:12 2°**2**52'24 -16°39'52 -11725 Dec 24 j 10:15 11° **2**40'05 -16°29'23 opposition conjunction

Planetary Pheno	omena of Pluto fron	n -11900 thro	ough -11398 (UT). Astrodienst	AG 18-Fe	b-2025 1	4:23. p	age 14
•	nical year style is used: The		•	* *				_
minimum elong	-11725 Dec 24 j 10:09	-		min. Earth dist.				47.68535 AU
max. Earth dist.	-11725 Dec 26 j 07:55			opposition		-	20° ⊆ 10'09	
retrograde	-11724 Apr 05 j 19:49		5.01000710	direct		5	19° ⊆ 10′27	17 20 00
min. Earth dist.	-11724 Apr 03 j 19.49 -11724 Jun 25 j 22:51		6 05575 ATT	direct	-11/10 Бер	24 j 13.43	19 = 1027	
				:	11715 I	02:00.02	200 0 20124	1.6920144
opposition	-11724 Jun 27 j 15:44		7-12-09	conjunction		5	20° £ 38'34	
direct	-11724 Sep 16 j 09:31	11°4211'3/		minimum elong		-	20° £ 38'34	
				max. Earth dist.		5		49.63656 AU
conjunction	-11724 Dec 24 j 17:31			retrograde	-		22° △ 09'32	
minimum elong	-11724 Dec 24 j 17:27			min. Earth dist.				47.76162 AU
max. Earth dist.	-11724 Dec 26 j 14:15	12° º 43'42 48	8.92169 AU	opposition	-11715 Jul	06 j 15:56	21° 2 09′12	-17°19'47
retrograde	-11723 Apr 06 j 22:37	14° ≙ 13'46		direct	-11715 Sep	25 j 18:31	20° ≏ 09'34	
min. Earth dist.	-11723 Jun 27 j 05:29	13° ≙ 14'36 47	7.05919 AU					
opposition	-11723 Jun 28 j 21:31	13° £ 12'39 -1′	7°14'13	conjunction	-11714 Jan	03 j 06:42	21° ₽ 37'36	-16°38'19
direct	-11723 Sep 17 j 19:24	12° ≏ 12'29		minimum elong	-11714 Jan	03 j 06:40	21° ≏ 37'36	16°38'31
				max. Earth dist.	-11714 Jan	04 j 15:52	21° △ 39'30	49.71061 AU
conjunction	-11723 Dec 26 j 00:41	13° - 41'44 -10	6°33'32	retrograde	-11714 Apr	16 j 06:48	23° ≙ 08'24	
minimum elong	-11723 Dec 26 j 00:36			opposition	_	-	22° ≙ 08'11	-17°19'10
max. Earth dist.	-11723 Dec 27 j 18:57			min. Earth dist.		-		47.83328 AU
retrograde	-11722 Apr 08 j 03:29			direct		5	21° △ 08'38	17.03320110
min. Earth dist.	-11722 Jun 28 j 12:22		7 15836 ATT	uncet	11/11 Бер	20 j 21.50	21 =0030	
opposition	-11722 Jun 20 j 12:22 -11722 Jun 30 j 03:07			conjunction	11712 Ion	04 ; 12:24	22° ჲ 36'33	16027140
			7 10 00	·		-	22° £ 36'33	
direct	-11722 Sep 19 j 02:58	13-2212/39		minimum elong		3		
	11500 5 05:05.50	140 0 40001 1	CO2 511 1	max. Earth dist.		-		49.77990 AU
conjunction	-11722 Dec 27 j 07:53			retrograde	_	-	24° Ω 07'12	
minimum elong	-11722 Dec 27 j 07:50			min. Earth dist.				47.89977 AU
max. Earth dist.	-11722 Dec 29 j 02:00		9.11946 AU	opposition		5	23° ≏ 07'04	-17°18'18
retrograde	-11721 Apr 09 j 09:04	16° ≏ 14'10		direct	-11713 Sep	28 j 05:32	22° ≏ 07'34	
min. Earth dist.	-11721 Jun 29 j 19:44	15° ≙ 15'00 47	7.25367 AU					
opposition	-11721 Jul 01 j 08:43	15° ≙ 13'12 -1'	7°17'28	conjunction	-11712 Jan	05 j 19:43	23° ♀ 35'23	-16°36'46
direct	-11721 Sep 20 j 09:43	14° ≙ 13′08		minimum elong	-11712 Jan	05 j 19:43	23° ≏ 35'23	16°36'59
				max. Earth dist.	-11712 Jan	07 j 01:00	23° ₽ 37'04	49.84391 AU
conjunction	-11721 Dec 28 j 14:42	15° - 41'58 -10	6°36'31	retrograde		-	25° ≏ 05'52	
minimum elong	-11721 Dec 28 j 14:37			min. Earth dist.	-			47.96106 AU
max. Earth dist.	-11721 Dec 30 j 06:58			opposition		-	24° Ω 05'48	
retrograde	-11720 Apr 09 j 16:46		7.21271110	direct	-11712 Sep			1, 1, 11
min. Earth dist.	-11720 Jun 30 j 01:06		7 3 4 5 Q 3 A I I	uncet	11/12 бер	20 j 12.31	23 =0022	
				conjunction	11711 Ion	06 ; 02:14	24° ≏ 34'03	16025127
opposition	-11720 Jul 01 j 14:05		/ 163/	3				
direct	-11720 Sep 20 j 13:52	15°2212'58		minimum elong		3	24° £ 34'03	
	11700 5 00:01 00	1.60 0 4410 7 1	CO2 512 4	max. Earth dist.				49.90280 AU
conjunction	-11720 Dec 28 j 21:29			retrograde	-11711 Apr	-		
minimum elong	-11720 Dec 28 j 21:26			min. Earth dist.				48.01723 AU
max. Earth dist.	-11720 Dec 30 j 12:47		9.30341 AU	opposition			25° ≏ 04'22	-17°15'49
retrograde	-11719 Apr 10 j 23:15			direct	-11711 Sep	29 j 19:52	24° ≏ 04'57	
min. Earth dist.	-11719 Jul 01 j 08:21	17° ≙ 14'12 47	7.43516 AU					
opposition	-11719 Jul 02 j 19:27	17° ≙ 12'31 -1′	7°19'28	conjunction	-11710 Jan	07 j 08:35	25° △ 32'30	-16°34'14
direct	-11719 Sep 21 j 19:25	16° ≏ 12'33		minimum elong	-11710 Jan	07 j 08:35	25° △ 32'30	16°34'29
				max. Earth dist.	-11710 Jan	08 j 11:00	25° ≏ 34'00	49.95700 AU
conjunction	-11719 Dec 30 j 04:18	17° £ 41'03 -10	6°38'18	retrograde	-11710 Apr	20 j 01:11	27° ≏ 02'38	
minimum elong	-11719 Dec 30 j 04:14	17° ≙ 41'03 10	6°38'27	opposition	-11710 Jul	11 j 16:08	26° ≏ 02'42	-17°14'12
max. Earth dist.	-11719 Dec 31 j 19:05	17° ≏ 43'18 49	9.39128 AU	min. Earth dist.	-11710 Jul	10 j 16:01	26° ♀ 03'51	48.06892 AU
retrograde	-11718 Apr 12 j 02:53			direct		-	25° ≏ 03'17	
min. Earth dist.	-11718 Jul 02 j 14:01		7 52162 AU			j		
opposition	-11718 Jul 04 j 00:41			conjunction	-11709 Jan	08 i 14·52	26° ≏ 30'44	-16°32'35
direct	-11718 Sep 23 j 03:25		7 17 37	minimum elong		-	26° ⊆ 30'44	
direct	-11/16 Sep 25 J 05.25	1/ ==113/		_		5		
a a minus - ti	11710 D 21 : 10 56	100 0 40110 1	6020144	max. Earth dist.		-		50.00684 AU
conjunction	-11718 Dec 31 j 10:56			retrograde	-11709 Apr	-		15010110
minimum elong	-11718 Dec 31 j 10:54			opposition		-	27° Ω 00'47	
max. Earth dist.	-11717 Jan 01 j 23:39		9.47624 AU	min. Earth dist.		-		48.11664 AU
retrograde	-11717 Apr 13 j 08:44			direct	-11709 Oct	02 j 03:16	26° ≏ 01'24	
min. Earth dist.	-11717 Jul 03 j 20:13							
opposition	-11717 Jul 05 j 05:49	19° ≙ 11'02 -1'	7°20'13	conjunction	-11708 Jan	09 j 21:06	27° ≏ 28'44	-16°30'39
direct	-11717 Sep 24 j 09:16	18° ≙ 11'14		minimum elong	-11708 Jan	09 j 21:07	27° ≏ 28'44	16°30'56
				max. Earth dist.				50.05320 AU
conjunction	-11716 Jan 01 j 17:38	19° ≙ 39'29 -10	6°38'52	retrograde	-11708 Apr	21 j 11:48	28° ≏ 58'30	
minimum elong	-11716 Jan 01 j 17:35	19° ≙ 39'28 10	6°39'03	min. Earth dist.				48.16098 AU
max. Earth dist.	-11716 Jan 03 j 06:10			opposition			27° ≏ 58'40	
retrograde	-11716 Apr 13 j 13:42			direct		-	26° ≙ 59'18	
5	rj					J		

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 15 Attention, astronomical year style is used: The year -11707 in astronomical counting style is the year 11708 BCE in historical counting style.

Attention, astronom	ical year style is used:	The year -11707	in astronomical	counting style is the year	ar 11708 BCE in historical	counting sty	le.
conjunction	-11707 Jan 10 j 02	59 28° £ 26'32	-16°28'28	direct	-11700 Oct 10 j 02:39	4°M39'16	
minimum elong	-11707 Jan 10 j 02:	58 28° £ 26'32	16°28'45				
max. Earth dist.	-11707 Jan 11 j 01:		50.09638 AU	conjunction	-11699 Jan 18 j 03:14	6°MJ06'05	-16°01'36
retrograde	-11707 Apr 22 j 16			minimum elong	-11699 Jan 18 j 03:17		16°01'57
min. Earth dist.	-11707 Jul 13 j 09:			max. Earth dist.	-11699 Jan 18 j 14:14		50.31331 AU
opposition	-11707 Jul 14 j 05		-17°07'40	retrograde	-11699 Apr 30 j 10:17	7°M34'54	
direct	-11707 Oct 03 j 15:	40 27° ♀ 57'02		opposition	-11699 Jul 21 j 16:30		-16°38'33
		_		min. Earth dist.	-11699 Jul 21 j 07:35		48.39729 AU
conjunction	-11706 Jan 11 j 09			direct	-11699 Oct 11 j 06:09	5° M 36′29	
minimum elong	-11706 Jan 11 j 09:				11.000 1 10:00 17	50M 02115	15055110
max. Earth dist.	-11706 Jan 12 j 07:		50.13670 AU	conjunction	-11698 Jan 19 j 09:17		-15°57'12
. 1	-11706 Feb 07 j 10:			minimum elong	-11698 Jan 19 j 09:19		15°57'34
retrograde	-11706 Apr 23 j 18:			max. Earth dist.	-11698 Jan 19 j 19:06		50.31878 AU
annagition	-11706 Jul 10 j 03: -11706 Jul 15 j 10:		17904155	retrograde	-11698 May 01 j 14:39	8°M31'58	-16°33'51
opposition min. Earth dist.	-11706 Jul 13 j 10.			opposition min. Earth dist.	-11698 Jul 22 j 20:30 -11698 Jul 22 j 12:21		48.39954 AU
direct	-11706 Oct 04 j 22		46.24073 AU	direct	-11698 Oct 12 j 11:56		40.39934 AU
direct	-11706 Dec 27 j 12			direct	-11098 Oct 12 j 11.30	0 1163333	
	-11/00 Dec 2/ j 12.	04 0 116		conjunction	-11697 Jan 20 j 15:07	8°M.00'19	-15°52'33
conjunction	-11705 Jan 12 j 15	12 0°M.21'42	-16°23'15	minimum elong	-11697 Jan 20 j 15:11		15°52'56
minimum elong	-11705 Jan 12 j 15:		16°23'33	max. Earth dist.	-11697 Jan 20 j 22:29		50.31961 AU
max. Earth dist.	-11705 Jan 13 j 11:		50.17419 AU	retrograde	-11697 May 02 j 18:45	9°M28'55	30.31701710
retrograde	-11705 Apr 25 j 01:		30.17 113 110	opposition	-11697 Jul 24 j 00:42		-16°28'54
opposition	-11705 Jul 16 j 14:		-17°01'54	min. Earth dist.	-11697 Jul 23 j 18:04		48.39761 AU
min. Earth dist.	-11705 Jul 15 j 19:		48.27619 AU	direct	-11697 Oct 13 j 17:47		10.557,01110
	-11705 Sep 09 j 00						
direct	-11705 Oct 06 j 02			conjunction	-11696 Jan 21 j 20:52	8°M57'14	-15°47'40
	-11705 Nov 02 j 00			minimum elong	-11696 Jan 21 j 20:55		15°48'03
	,			max. Earth dist.	-11696 Jan 22 j 03:59		50.31651 AU
conjunction	-11704 Jan 13 j 21:	04 1°ML19'10	-16°20'15	retrograde	-11696 May 02 j 20:58		
minimum elong	-11704 Jan 13 j 21:		16°20'34	opposition	-11696 Jul 24 j 04:49		-16°23'41
max. Earth dist.	-11704 Jan 14 j 16:		50.20843 AU	min. Earth dist.	-11696 Jul 23 j 23:36	9°M26'48	48.39191 AU
retrograde	-11704 Apr 25 j 09	50 2°ML48'27		direct	-11696 Oct 14 j 00:49	8°M27'23	
opposition	-11704 Jul 16 j 18	58 1°M48'52	-16°58'37				
min. Earth dist.	-11704 Jul 16 j 02:	26 1°M49'39	48.30821 AU	conjunction	-11695 Jan 22 j 02:34	9°M54'05	-15°42'31
direct	-11704 Oct 06 j 04	24 0°M49'39		minimum elong	-11695 Jan 22 j 02:39	9°M54'05	15°42'55
				max. Earth dist.	-11695 Jan 22 j 07:45	9°M54'22	50.31010 AU
conjunction	-11703 Jan 14 j 03			retrograde	-11695 May 04 j 02:53		
minimum elong	-11703 Jan 14 j 03:	08 2°M₁6′37	16°17'18	opposition	-11695 Jul 25 j 08:45	10° M23'22	-16°18'13
max. Earth dist.	-11703 Jan 14 j 21:		50.23916 AU	min. Earth dist.	-11695 Jul 25 j 03:53		48.38309 AU
retrograde	-11703 Apr 26 j 14			direct	-11695 Oct 15 j 04:31	9°M24'11	
opposition	-11703 Jul 17 j 23		-16°55'04				
min. Earth dist.	-11703 Jul 17 j 07:		48.33621 AU	conjunction	-11694 Jan 23 j 08:24		
direct	-11703 Oct 07 j 09	51 1°M47'06		minimum elong	-11694 Jan 23 j 08:27		
				max. Earth dist.	-11694 Jan 23 j 12:29		50.30056 AU
conjunction	-11702 Jan 15 j 09:		-16°13'28	retrograde	-11694 May 05 j 10:49		1.0012020
minimum elong	-11702 Jan 15 j 09:		16°13'49	opposition	-11694 Jul 26 j 12:55		
max. Earth dist. retrograde	-11702 Jan 16 j 00: -11702 Apr 27 j 18:		50.26550 AU	min. Earth dist. direct	-11694 Jul 26 j 10:00 -11694 Oct 16 j 06:19		40.3/122 AU
•	-11702 Apr 27 j 18:		16051117	direct	-11094 Oct 10 J 00.19	10 1162038	
opposition min. Earth dist.	-11702 Jul 19 j 03:		-16°51'17 48.35958 AU	conjunction	-11693 Jan 24 j 14:10	11° m /7'/1	-15°31'27
			46.33936 AU	•			
direct	-11702 Oct 08 j 15	J+ 4 11644 34		minimum elong max. Earth dist.	-11693 Jan 24 j 14:16 -11693 Jan 24 j 17:32		
aaniunatian	11701 Ion 16; 15	10 4° m 11'27	16000!44		-11693 May 06 j 16:09		30.28817 AU
conjunction minimum elong	-11701 Jan 16 j 15: -11701 Jan 16 j 15:		-16°09'44 16°10'05	retrograde opposition	-11693 May 06 j 16:09 -11693 Jul 27 j 16:52		-16°06'27
max. Earth dist.	-11701 Jan 10 j 13:		50.28682 AU	min. Earth dist.	-11693 Jul 27 j 14:13		
retrograde	-11701 Jan 17 J 00:		50.20002 AU	direct	-11693 Jul 27 j 14:13 -11693 Oct 17 j 10:05		10.55050 AU
opposition	-11701 Apr 28 j 21:		-16°47'16	anout	110/5 000 1/ j 10.05	11 1101/70	
min. Earth dist.	-11701 Jul 20 j 07:		48.37754 AU	conjunction	-11692 Jan 25 j 19:51	12° M. 44'31	-15°25'32
direct	-11701 Oct 09 j 23:		.0.5,751710	minimum elong	-11692 Jan 25 j 19:55		
******	11,01000 00 123			max. Earth dist.	-11692 Jan 25 j 21:03		
conjunction	-11700 Jan 17 j 21:	19 5°ML08'48	-16°05'47	retrograde	-11692 May 06 j 20:10		,
minimum elong	-11700 Jan 17 j 21:		16°06'08	opposition	-11692 Jul 27 j 20:56		-16°00'11
max. Earth dist.	-11700 Jan 18 j 09:		50.30281 AU	min. Earth dist.	-11692 Jul 27 j 19:49		
retrograde	-11700 Apr 29 j 03:			direct	-11692 Oct 17 j 15:36		
opposition	-11700 Jul 20 j 12		-16°43'02		,		
min. Earth dist.	-11700 Jul 20 j 00:		48.39011 AU	conjunction	-11691 Jan 26 j 01:38	13°M41'25	-15°19'21
	,			-	J.		

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 16

•	nical year style is used: The		•	* * * * * * * * * * * * * * * * * * * *			age 10
minimum elong	-11691 Jan 26 j 01:43	-		evening set	-11684 Jan 29 j 14:45		ie.
_	-11691 Jan 26 j 02:35			evening set	-11004 Jan 29 j 14.43	20 1161443	
max. Earth dist.	3		J.25370 AU		11(04 E-L 02: 10.40	200M 20120	1.4920147
	-11691 Apr 07 j 10:15			conjunction	-11684 Feb 02 j 18:49		
retrograde	-11691 May 07 j 21:36			minimum elong	-11684 Feb 02 j 18:56		
	-11691 Jun 07 j 15:05		5952140	max. Earth dist.	-11684 Feb 02 j 07:53		49.98813 AU
opposition	-11691 Jul 29 j 01:01			morning rise	-11684 Feb 06 j 23:10		
min. Earth dist.	-11691 Jul 29 j 01:29		3.31620 AU	retrograde	-11684 May 14 j 09:49		15901120
direct	-11691 Oct 18 j 23:45	13 1611 34		opposition	-11684 Aug 04 j 05:31		
	11600 1 27:07.20	1.40 7 2012.4 14	5010157	min. Earth dist.	-11684 Aug 04 j 16:06		48.026/4 AU
conjunction	-11690 Jan 27 j 07:30			direct	-11684 Oct 25 j 07:48		
minimum elong	-11690 Jan 27 j 07:35			evening set	-11683 Jan 29 j 08:05	21 11610 48	
max. Earth dist.	-11690 Jan 27 j 06:01		0.23062 AU		11602 E 1 02:00 24	010M 17107	1.400.114.4
	-11690 Feb 12 j 11:22			conjunction	-11683 Feb 03 j 00:34		
retrograde	-11690 May 09 j 03:40		5046154	minimum elong	-11683 Feb 03 j 00:40		
opposition	-11690 Jul 30 j 04:56			max. Earth dist.	-11683 Feb 02 j 12:54		49.93321 AU
min. Earth dist.	-11690 Jul 30 j 06:09		3.28975 AU	morning rise	-11683 Feb 07 j 17:17		
	-11690 Aug 06 j 00:32			retrograde	-11683 May 15 j 15:52		
direct	-11690 Oct 20 j 03:31			opposition	-11683 Aug 05 j 09:32		
	-11689 Jan 01 j 11:54	15°11L		min. Earth dist.	-11683 Aug 05 j 20:18		47.96899 AU
				direct	-11683 Oct 26 j 11:13		
conjunction	-11689 Jan 28 j 13:28			evening set	-11682 Jan 30 j 02:28	22°11L06'57	
minimum elong	-11689 Jan 28 j 13:34						
max. Earth dist.	-11689 Jan 28 j 10:30		0.20265 AU	conjunction	-11682 Feb 04 j 06:23		
retrograde	-11689 May 10 j 10:33			minimum elong	-11682 Feb 04 j 06:30		
opposition	-11689 Jul 31 j 09:11			max. Earth dist.	-11682 Feb 03 j 16:38		49.87525 AU
min. Earth dist.	-11689 Jul 31 j 12:57		3.25821 AU	morning rise	-11682 Feb 09 j 10:38		
direct	-11689 Oct 21 j 06:10	15°M05'37		retrograde	-11682 May 16 j 20:50		
				opposition	-11682 Aug 06 j 13:37		
conjunction	-11688 Jan 29 j 19:17			min. Earth dist.	-11682 Aug 07 j 01:53		47.90847 AU
minimum elong	-11688 Jan 29 j 19:24		4°59'54	direct	-11682 Oct 27 j 15:52		
evening set	-11688 Jan 29 j 13:47			evening set	-11681 Jan 30 j 21:42	23°M03'12	
morning rise	-11688 Jan 30 j 01:03						
max. Earth dist.	-11688 Jan 29 j 15:05		0.16959 AU	conjunction	-11681 Feb 05 j 12:20		
retrograde	-11688 May 10 j 16:06			minimum elong	-11681 Feb 05 j 12:27		
opposition	-11688 Jul 31 j 13:16			max. Earth dist.	-11681 Feb 04 j 22:28	23°M10'00	49.81457 AU
min. Earth dist.	-11688 Jul 31 j 17:42		3.22132 AU	morning rise	-11681 Feb 11 j 03:11		
direct	-11688 Oct 21 j 10:52	16°M02'38		retrograde	-11681 May 17 j 22:33	24°M39'04	
evening set	-11687 Jan 27 j 23:49	17° M 26'49		opposition	-11681 Aug 07 j 17:49	23°M39'57	-14°35'20
				min. Earth dist.	-11681 Aug 08 j 07:09	23°M39'19	47.84508 AU
conjunction	-11687 Jan 30 j 01:09			direct	-11681 Oct 28 j 23:42	22°M40'22	
minimum elong	-11687 Jan 30 j 01:14	17°M29'36 14	4°52'51	evening set	-11680 Jan 31 j 17:25	23°M59'37	
max. Earth dist.	-11687 Jan 29 j 18:10).13118 AU				
morning rise	-11687 Feb 01 j 02:41			conjunction	-11680 Feb 06 j 17:59	24°M07'46	-13°56'06
retrograde	-11687 May 11 j 20:59	18°M57'52		minimum elong	-11680 Feb 06 j 18:08	24°M07'47	13°56'37
opposition	-11687 Aug 01 j 17:18	17°ML58'52 -15	5°25'15	max. Earth dist.	-11680 Feb 06 j 02:13	24°M06'53	49.75112 AU
min. Earth dist.	-11687 Aug 01 j 23:41	17°ML58'34 48	8.17930 AU	morning rise	-11680 Feb 12 j 18:54	24°M15'56	
direct	-11687 Oct 22 j 15:55	16°M59'36		retrograde	-11680 May 18 j 04:09	25°M36'08	
evening set	-11686 Jan 28 j 09:12	18°M22'39		opposition	-11680 Aug 07 j 21:56		
				min. Earth dist.	-11680 Aug 08 j 11:42	24°M36'22	47.77876 AU
conjunction	-11686 Jan 31 j 07:12			direct	-11680 Oct 29 j 03:54		
minimum elong	-11686 Jan 31 j 07:19	18°M26'36 14	4°45'33	evening set	-11679 Jan 31 j 13:46	24°M56'15	
max. Earth dist.	-11686 Jan 30 j 23:38		0.08780 AU	max. Earth dist.	-11679 Feb 06 j 07:10	25°M03'59	49.68435 AU
morning rise	-11686 Feb 03 j 05:28	18°M30'32					
retrograde	-11686 May 12 j 23:09	19°M54'50		conjunction	-11679 Feb 07 j 00:01	25°M04'56	-13°47'02
opposition	-11686 Aug 02 j 21:25	18°ML55'49 -15	5°17'35	minimum elong	-11679 Feb 07 j 00:08	25°M04'57	13°47'33
min. Earth dist.	-11686 Aug 03 j 05:25	18°M55'26 48	3.13237 AU	morning rise	-11679 Feb 13 j 10:32	25°M13'39	
direct	-11686 Oct 23 j 23:25	17°M56'29		retrograde	-11679 May 19 j 11:12	26° M $33'23$	
evening set	-11685 Jan 28 j 22:50	19° ™ 18'39		opposition	-11679 Aug 09 j 02:07	25° M $_34'18$	-14°16'35
				min. Earth dist.	-11679 Aug 09 j 18:10	25°M33'32	47.70886 AU
conjunction	-11685 Feb 01 j 12:59	19°M23'30 -14	4°37'33	direct	-11679 Oct 30 j 06:21	24°M34'39	
minimum elong	-11685 Feb 01 j 13:04	19°M23'30 14	4°38'02	evening set	-11678 Feb 01 j 10:53	25° M $53'08$	
max. Earth dist.	-11685 Feb 01 j 03:11	19°ML22'57 50	0.03994 AU				
morning rise	-11685 Feb 05 j 03:21	19° M 28'21		conjunction	-11678 Feb 08 j 06:11	$26^{\circ}\text{ML}02'20$	-13°37'44
retrograde	-11685 May 14 j 03:21	20°M51'44		minimum elong	-11678 Feb 08 j 06:19	$26^{\circ}\text{ML}02'20$	13°38'16
opposition	-11685 Aug 04 j 01:23	19°ML52'41 -15	5°09'39	max. Earth dist.	-11678 Feb 07 j 12:17	$26^{\circ}\text{NL}01'19$	49.61380 AU
min. Earth dist.	-11685 Aug 04 j 09:59	19°ML52'16 48	3.08135 AU	morning rise	-11678 Feb 15 j 01:43	$26^{\circ}\text{ML}11'34$	
direct	-11685 Oct 25 j 04:37	18°ML53'16		retrograde	-11678 May 20 j 17:19	27° M $_30'52$	

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11678 in astronomical counting style is the year 11679 BCE in historical counting style. -11678 Aug 10 j 06:21 26°M31'47 -14°06'50 direct -11672 Nov 05 j 15:38 1°**х** 19′39 opposition min. Earth dist. -11678 Aug 10 j 22:59 26°M31'00 47.63468 AU -11671 Feb 05 j 23:24 2°×35'56 evening set -11678 Oct 31 j 10:42 25° ML32'06 max. Earth dist. -11671 Feb 13 j 21:31 2°**∡**746'44 48.98549 AU direct -11677 Feb 02 j 08:14 26° ML50'14 evening set 2°**∡**148'22 -12°26'03 -11671 Feb 15 j 02:13 conjunction conjunction -11677 Feb 09 j 12:16 26°ML59'57 -13°28'12 -11671 Feb 15 j 02:22 2°**∡**148'23 12°26'37 minimum elong 3°**х** 00′49 -11671 Feb 24 j 05:03 -11677 Feb 09 j 12:24 26°ML59'57 13°28'43 minimum elong morning rise -11677 Feb 08 j 15:43 26°ML58'47 49.53857 AU 4°**х** 17′29 max. Earth dist. retrograde -11671 May 27 j 05:25 3°**∡**18′07 -12°51′48 morning rise -11677 Feb 16 j 16:40 27° ML09'41 opposition -11671 Aug 16 j 13:42 retrograde -11677 May 21 j 23:23 28° ML 28'34 min. Earth dist. -11671 Aug 17 j 16:20 3°**尽**16'50 46.98106 AU opposition -11677 Aug 11 j 10:45 27° ML29'29 -13°56'51 direct -11671 Nov 07 j 00:26 2°**х** 17′51 -11670 Feb 06 j 22:55 min. Earth dist. -11677 Aug 12 j 05:18 27° M28'36 47.55569 AU evening set 3°**х** 33′54 -11677 Nov 01 j 15:19 26°M29'46 -11670 Feb 15 j 01:54 3°**∡**744′59 48.87987 AU direct max. Earth dist. evening set -11676 Feb 03 j 06:03 27° ML47'33 conjunction -11670 Feb 16 j 08:38 3°**∡**¹46'45 -12°14'49 conjunction -11676 Feb 10 j 18:36 27°ML57'46 -13°18'26 minimum elong -11670 Feb 16 j 08:47 3°**∡**¹46'45 12°15'24 minimum elong -11676 Feb 10 j 18:44 27° ML 57'46 13°18'59 morning rise -11670 Feb 25 j 18:33 3°**х** 59'36 max. Earth dist. -11676 Feb 09 j 21:24 27°M 56'34 49.45832 AU retrograde -11670 May 28 j 09:49 5°**х** 15′59 morning rise -11676 Feb 18 j 07:18 28° ML07'58 opposition -11670 Aug 17 j 18:22 4°**₹**16'33 -12°40'02 retrograde -11676 May 22 j 02:17 29° M26'27 min. Earth dist. -11670 Aug 18 j 21:27 4° **₹**15'15 46.87257 AU opposition -11676 Aug 11 j 15:10 28°M27'21 -13°46'37 direct -11670 Nov 08 j 07:00 3°**х** 16′11 min. Earth dist. -11676 Aug 12 j 11:24 28° ML 26'23 47.47142 AU evening set -11669 Feb 07 i 22:25 4°×32'01 direct -11676 Nov 01 j 23:01 27° ML27'34 max. Earth dist. -11669 Feb 16 i 07:33 4°**₹**43'28 48.77131 AU evening set -11675 Feb 03 j 04:14 28°ML45'02 max. Earth dist. -11675 Feb 10 j 01:05 28°ML54'22 49.37292 AU conjunction -11669 Feb 17 i 15:07 4°**∡**¹45'16 -12°03'20 -11669 Feb 17 j 15:17 4°**х** 45′17 12°03′55 minimum elong -11675 Feb 11 i 00:47 28° ML55'42 -13°08'26 -11669 Feb 27 i 07:52 4°**х** 58'32 conjunction morning rise -11675 Feb 11 j 00:56 28°ML55'43 13°08'58 -11669 May 29 j 16:12 6°**х** 14′38 minimum elong retrograde -11675 Feb 18 j 21:39 29°M 06'24 -11669 Aug 18 j 23:14 5° ₹ 15'10 -12°27'59 morning rise opposition -11675 Apr 04 j 14:28 0° ⊀ -11669 Aug 20 j 04:14 5°**尽** 13'46 46.76118 AU min. Earth dist. -11675 May 23 j 07:03 0° ₹24'29 -11669 Nov 09 j 11:20 4° ₹ 14'43 direct retrograde -11675 Jul 11 j 11:58 30°RML -11668 Feb 08 j 22:20 5°**х** 30′20 evening set opposition -11675 Aug 12 j 19:35 29°M25'22 -13°36'10 min. Earth dist. -11675 Aug 13 j 16:42 29°M24'21 47.38201 AU -11668 Feb 18 j 21:42 5° ₹ 43'59 -11°51'34 conjunction -11675 Nov 03 j 04:33 28°M25'29 -11668 Feb 18 j 21:50 5° ₹ 44'00 11°52'09 direct minimum elong -11674 Feb 04 j 02:40 29°M-42'38 -11668 Feb 17 j 13:21 5° ₹ 42'08 48.66003 AU evening set max. Earth dist. -11674 Feb 11 j 05:56 29°M 52'19 49.28232 AU max. Earth dist. morning rise -11668 Feb 28 j 21:01 5° ₹ 57'40 retrograde -11668 May 29 j 23:05 7° **₹** 13'30 conjunction -11674 Feb 12 j 07:13 29°ML53'46 -12°58'12 opposition -11668 Aug 19 j 03:57 6° ₹ 13'59 -12°15'40 minimum elong -11674 Feb 12 j 07:21 29°M 53'46 12°58'46 min. Earth dist. -11668 Aug 20 j 09:05 6°**尽** 12'35 46.64680 AU -11674 Feb 16 j 21:00 0° ₹ direct -11668 Nov 09 j 15:22 5°**х** 13′27 -11674 Feb 20 j 11:57 0° **₹**04'55 -11667 Feb 08 j 22:24 6°**х** 28′53 morning rise evening set -11674 May 24 j 13:32 1° ₹22'38 max. Earth dist. -11667 Feb 17 j 17:44 6°**∡**740'58 48.54547 AU retrograde -11674 Aug 14 j 00:05 0° ₹23'27 -13°25'28 opposition min. Earth dist. -11674 Aug 14 j 23:33 0°**₹**22'19 47.28766 AU -11667 Feb 19 j 04:18 6° ₹ 42'57 -11°39'32 conjunction -11674 Sep 03 j 23:10 30°RML -11667 Feb 19 i 04:28 minimum elong 6°**∡**¹42'58 11°40'08 -11674 Nov 04 j 08:37 29° ML23'29 direct morning rise -11667 Mar 01 j 10:20 6° ₹ 57'02 -11673 Jan 03 j 22:34 0° ₹ retrograde -11667 May 31 i 07:17 8°**х** 12′38 evening set -11673 Feb 05 i 01:31 0°**∡**¹40'20 opposition -11667 Aug 20 j 08:56 7°**∡**13'04 -12°03'05 max. Earth dist. -11673 Feb 12 j 11:20 0° ₹ 50'24 49.18725 AU min. Earth dist. -11667 Aug 21 j 15:57 7°**₹**11'34 46.52896 AU direct -11667 Nov 10 j 19:06 6°**х** 12′27 evening set conjunction -11673 Feb 13 j 13:36 0° ₹ 51'54 -12° 47'44 -11666 Feb 09 j 22:50 7°**×**27'44 -11673 Feb 13 j 13:46 0°**∡**751'54 12°48'18 max. Earth dist. -11666 Feb 19 j 00:20 7°**∡**740'11 48.42705 AU minimum elong -11673 Feb 22 j 01:50 morning rise 1°**х** 03′29 retrograde -11673 May 25 j 21:23 2°**х** 20′50 conjunction -11666 Feb 20 j 11:16 7°**∡**¹42'12 -11°27'15 -11673 Aug 15 j 04:34 1°**∡**21'36 -13°14'30 opposition minimum elong -11666 Feb 20 j 11:25 7°**х** 42′12 11°27′50 min. Earth dist. -11673 Aug 16 j 04:25 1°**≯**20'27 47.18902 AU morning rise -11666 Mar 02 j 23:28 7°**∡** 56'40 -11673 Nov 05 j 11:24 0°**∡**′21′32 -11666 Jun 01 j 11:37 9°**х** 12′03 direct retrograde -11672 Feb 06 j 00:13 1°**∡**³38′05 -11666 Aug 21 j 13:57 8°**∡**12'26 -11°50'14 evening set opposition 8°**✗**10'52 46.40682 AU min. Earth dist. -11666 Aug 22 j 22:21 -11672 Feb 14 j 19:44 1°**∡**750'06 -12°37'02 7°**∡**11'44 conjunction direct -11666 Nov 12 j 02:53 minimum elong -11672 Feb 14 j 19:52 1°**х** 50′06 12°37′36 evening set -11665 Feb 10 j 23:39 8°**х** 26′53 max. Earth dist. -11672 Feb 13 j 15:14 1°**∡**48'28 49.08809 AU max. Earth dist. -11665 Feb 20 j 04:47 8°**∡**′39'34 48.30416 AU morning rise -11672 Feb 23 j 15:29 2°**₹**02'07 retrograde -11672 May 26 j 03:39 3°**∡**19′07 conjunction -11665 Feb 21 j 18:10 8°**х**⁷41'43 -11°14'43 -11672 Aug 15 j 09:10 2°**х** 19'49 -13°03'17 -11665 Feb 21 j 18:20 8°**∡**141'44 11°15'19 opposition minimum elong

-11665 Mar 04 j 12:41

morning rise

8°**х** 756'34

min. Earth dist.

-11672 Aug 16 j 10:45 2° **₹** 18'35 47.08672 AU

	omena of Pluto from						age 18
			in astronomical co				
retrograde	-11665 Jun 02 j 17:20			conjunction	-11658 Feb 28 j 21:26		
opposition	-11665 Aug 22 j 19:08	9° ∡ 12'05		minimum elong	-11658 Feb 28 j 21:36		9°40'29
min. Earth dist.	-11665 Aug 24 j 04:29	9° ∡ 10′28	46.28001 AU	morning rise	-11658 Mar 13 j 07:12		
direct	-11665 Nov 13 j 08:50	8° ⊀ 11'17		retrograde	-11658 Jun 09 j 14:37	17° ∤ 16'18	
evening set	-11664 Feb 12 j 00:25	9° ∡ ¹26′17		opposition	-11658 Aug 29 j 09:50	16° ₹ 15'56	-9°57'51
max. Earth dist.	-11664 Feb 21 j 10:21	9° ∡ ³39'16	48.17618 AU	min. Earth dist.	-11658 Aug 31 j 03:52	16° х 13′52	45.26342 AU
				direct	-11658 Nov 20 j 02:58	15° ∡ 14′08	
conjunction	-11664 Feb 23 j 01:10	9° ∡ 741'31	-11°01'56	evening set	-11657 Feb 17 j 13:39	16° ∡ 28'32	
minimum elong	-11664 Feb 23 j 01:19		11°02'31	max. Earth dist.	-11657 Feb 28 j 04:14		47.15661 AU
morning rise	-11664 Mar 05 j 01:41						
retrograde	-11664 Jun 02 j 23:04			conjunction	-11657 Mar 02 j 05:05	16° √ 1/6'17	-9°25'14
opposition	-11664 Aug 23 j 00:32		11022145	minimum elong	-11657 Mar 02 j 05:14		
min. Earth dist.	-11664 Aug 24 j 12:13			•			9 23 31
			40.14/93 AU	morning rise	-11657 Mar 14 j 20:01		
direct	-11664 Nov 13 j 14:58	9° ∡ 11'04		retrograde	-11657 Jun 11 j 00:17		
evening set	-11663 Feb 12 j 01:44			opposition	-11657 Aug 30 j 15:54		
max. Earth dist.	-11663 Feb 21 j 16:15	10° ∡ ′39′13	48.04309 AU	min. Earth dist.	-11657 Sep 01 j 11:33		45.10527 AU
				direct	-11657 Nov 21 j 07:04	16° ≯ 15'35	
conjunction	-11663 Feb 23 j 08:23	10° ∡ ¹41'33	-10°48'54	evening set	-11656 Feb 18 j 16:13	17° ∡ ¹29'58	
minimum elong	-11663 Feb 23 j 08:32	10° х 41′33	10°49'31	max. Earth dist.	-11656 Feb 29 j 12:08	17° ∡ ¹45'12	46.99866 AU
morning rise	-11663 Mar 06 j 14:46	10° х 57′09					
retrograde	-11663 Jun 04 j 07:06	12° ∡ 11'57		conjunction	-11656 Mar 02 j 12:49	17° ∡ ¹48'04	-9°10'18
opposition	-11663 Aug 24 i 05:44		-11°10'08	minimum elong	-11656 Mar 02 j 12:59	17° ∡ ′48′05	9°10'56
min. Earth dist.	-11663 Aug 25 j 18:04			morning rise	-11656 Mar 15 j 08:33		
direct	-11663 Nov 14 j 19:14		10.010/1110	retrograde	-11656 Jun 11 j 06:38		
evening set	-11662 Feb 13 j 03:18			opposition	-11656 Aug 30 j 22:02		0°26'53
	•		47 00495 ATT				
max. Earth dist.	-11662 Feb 22 j 21:00	11-×139-19	47.90485 AU	min. Earth dist.	-11656 Sep 01 j 18:25		44.9444 / AU
	11660 E. 1. 04:15.10		1000 5100	direct	-11656 Nov 21 j 15:09		
conjunction	-11662 Feb 24 j 15:42			evening set	-11655 Feb 18 j 19:24		
minimum elong	-11662 Feb 24 j 15:52		10°36'14	max. Earth dist.	-11655 Mar 01 j 17:56	18° ≯' 47'17	46.83801 AU
morning rise	-11662 Mar 08 j 03:57	11° ∡ 757'46					
retrograde	-11662 Jun 05 j 15:29	13° ∡ 12'23		conjunction	-11655 Mar 03 j 20:44	18° ∡ 50′17	-8°55'06
opposition	-11662 Aug 25 j 11:15	12° ∡ 12'27	-10°56'14	minimum elong	-11655 Mar 03 j 20:53	18° ≯ ′50′18	8°55'44
min. Earth dist.	-11662 Aug 27 j 01:41	12° ∡ 10'35	45.86866 AU	morning rise	-11655 Mar 16 j 21:26	19° х 08'43	
direct	-11662 Nov 15 j 23:17	11° ∡ 11'15		retrograde	-11655 Jun 12 j 14:08	20° х 22′34	
evening set	-11661 Feb 14 j 04:51	12° ∡ ¹25'54		opposition	-11655 Sep 01 j 04:07	19° ∡ ¹21'55	-9°10'57
max. Earth dist.	-11661 Feb 24 j 03:54	12° х 39′43	47.76204 AU	min. Earth dist.	-11655 Sep 03 j 01:20		
	J			direct	-11655 Nov 22 j 21:50		
conjunction	-11661 Feb 25 j 23:03	12° √ 42'14	-10°22'05	evening set	-11654 Feb 19 j 22:49		
minimum elong	-11661 Feb 25 j 23:12			max. Earth dist.	-11654 Mar 03 j 01:20		46 67398 ATT
morning rise	-11661 Mar 09 j 16:44		10 22 43	max. Lartii dist.	-11034 Wiai 03 j 01.20	17 🗡 47 33	40.07376 AC
-	·			aamiumatiam	11654 Mar. 05 ; 05:02	100.752150	0020126
retrograde	-11661 Jun 06 j 19:30		10042104	conjunction	-11654 Mar 05 j 05:02		
opposition	-11661 Aug 26 j 16:47			minimum elong	-11654 Mar 05 j 05:12		8°40'15
min. Earth dist.	-11661 Aug 28 j 08:16		45.72223 AU	morning rise	-11654 Mar 18 j 10:18		
direct	-11661 Nov 17 j 08:06			retrograde	-11654 Jun 13 j 19:16		
evening set	-11660 Feb 15 j 06:47			opposition	-11654 Sep 02 j 10:40		
max. Earth dist.	-11660 Feb 25 j 09:05	13° ∡ ¹40'14	47.61530 AU	min. Earth dist.	-11654 Sep 04 j 09:55	20° ≯ 22′28	44.61352 AU
				direct	-11654 Nov 24 j 06:23	19° ₹ 22'28	
conjunction	-11660 Feb 27 j 06:20	13° ∡ ¹42'52	-10°08'17	evening set	-11653 Feb 21 j 02:32	20° х 36′58	
minimum elong	-11660 Feb 27 j 06:31	13° ∡¹ 42'53	10°08'55	max. Earth dist.	-11653 Mar 04 j 08:27	20° х 52′56	46.50612 AU
morning rise	-11660 Mar 10 j 05:39	13° ∡ ¹59'34					
retrograde	-11660 Jun 07 j 00:34	15° ∡ 13'51		conjunction	-11653 Mar 06 j 13:16	20° х 56′05	-8°23'50
opposition	-11660 Aug 26 j 22:16		-10°27'38	minimum elong	-11653 Mar 06 j 13:26		
min. Earth dist.	-11660 Aug 28 j 14:30			morning rise	-11653 Mar 19 j 23:04		
direct	-11660 Nov 17 j 15:46		13.37231710	retrograde	-11653 Jun 15 j 04:04		
evening set	-11659 Feb 15 j 08:43			opposition	-11653 Sep 03 j 17:15		0020112
•			47 46514 ATT	**			
max. Earth dist.	-11659 Feb 25 j 15:44	14 X'41'U2	47.40514 AU	min. Earth dist.	-11653 Sep 05 j 16:54		44.44202 AU
	11660 E. 1. 05 110 5	1.40 7.45	0054113	direct	-11653 Nov 25 j 12:05		
conjunction	-11659 Feb 27 j 13:51			evening set	-11652 Feb 22 j 06:36		
minimum elong	-11659 Feb 27 j 14:00		9°54'51	max. Earth dist.	-11652 Mar 04 j 14:36	21° ≯ 56′21	46.33369 AU
morning rise	-11659 Mar 11 j 18:27						
retrograde	-11659 Jun 08 j 06:51	16° ⊀ 14'56		conjunction	-11652 Mar 06 j 21:48	21° ₹ ′59'39	-8°07'47
opposition	-11659 Aug 28 j 04:05			minimum elong	-11652 Mar 06 j 21:57	21° х 59'40	8°08'27
min. Earth dist.	-11659 Aug 29 j 22:12	15° ∡ 12'37	45.41920 AU	morning rise	-11652 Mar 20 j 12:04	22° ₹ 19'04	
direct	-11659 Nov 18 j 22:05	14° ∡ °13′01		retrograde	-11652 Jun 15 j 15:06	23° ∡ ³32'53	
evening set	-11658 Feb 16 j 11:06	15° ∡ ¹27'27		opposition	-11652 Sep 04 j 00:02	22° ⋌ ³31'54	-8°21'23
max. Earth dist.	-11658 Feb 26 j 22:30		47.31217 AU	min. Earth dist.	-11652 Sep 06 j 01:58		
			-	direct	-11652 Nov 25 i 15:20		_·

direct

-11652 Nov 25 j 15:20 21°**₹**'29'14

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11651 in astronomical counting style is the year 11652 BCE in historical counting style. -11651 Feb 22 j 10:56 22° ₹ 43'51 morning rise -11645 Mar 30 i 06:38 29° ₹ 56'28 evening set max. Earth dist. -11651 Mar 05 j 22:48 23°**₹**00'16 46.15660 AU -11645 Apr 01 j 17:37 0°궁 -11645 Jun 24 j 02:33 1°る10'33 retrograde -11651 Mar 08 j 06:36 23° ₹ 03'37 -7°51'28 0°る08'24 -6°15'15 opposition -11645 Sep 12 j 04:16 conjunction min. Earth dist. -11651 Mar 08 j 06:45 23° ₹ 03'38 7°52'07 -11645 Sep 14 j 13:09 minimum elong 0°る05'31 42.92564 AU -11651 Mar 22 j 00:59 23° ₹23'21 -11645 Sep 19 j 02:04 30°R 🗷 morning rise -11645 Dec 04 j 00:17 29° ₹ 04'14 retrograde -11651 Jun 16 j 22:21 24° ₹37'10 direct opposition -11651 Sep 05 j 07:01 23°₹36'03 -8°04'17 -11644 Feb 15 j 23:23 0°ಕ min. Earth dist. -11651 Sep 07 j 09:52 23°₹33'30 44.08502 AU evening set -11644 Mar 01 j 01:35 0°る19'43 direct -11651 Nov 27 j 00:24 22° ₹33'10 max. Earth dist. -11644 Mar 13 j 07:36 0°る37'42 44.81446 AU evening set -11650 Feb 23 j 15:42 23° ₹47'51 -11650 Mar 07 j 05:07 24°**₹**04'26 45.97482 AU -11644 Mar 15 j 23:34 0°る41'39 -5°49'12 max. Earth dist. conjunction 0°る41'40 5°49'51 minimum elong -11644 Mar 15 j 23:42 conjunction -11650 Mar 09 j 15:24 24° ₹07'57 -7°34'53 morning rise -11644 Mar 30 j 19:36 1°る03'31 minimum elong -11650 Mar 09 j 15:33 24°**尽**07'58 retrograde -11644 Jun 24 j 09:17 2°る17'44 morning rise -11650 Mar 23 j 14:03 24° ₹28'00 opposition -11644 Sep 12 j 12:29 1°る15'26 -5°55'57 retrograde -11650 Jun 18 j 05:57 25° ₹ 41'48 min. Earth dist. -11644 Sep 14 j 22:42 1°る12'28 42.72415 AU opposition -11650 Sep 06 j 14:05 24° ₹ 40'31 -7°46'54 direct -11644 Dec 04 j 10:47 0°る11'04 min. Earth dist. -11650 Sep 08 j 18:09 24° ₹37'55 43.89973 AU evening set -11643 Mar 02 j 08:36 1°る26'47 direct -11650 Nov 28 j 09:20 23° ₹37'26 max. Earth dist. -11643 Mar 14 j 16:36 1°る44'58 44.61309 AU evening set -11649 Feb 24 j 20:34 24° ₹ 52'12 max. Earth dist. -11649 Mar 08 j 13:25 25° ₹ 09'03 45.78874 AU conjunction -11643 Mar 17 j 09:38 1°る49'01 -5°30'32 minimum elong -11643 Mar 17 i 09:47 1°る49'02 5°31'12 conjunction -11649 Mar 11 i 00:29 25° ₹ 12'37 -7°18'00 morning rise -11643 Apr 01 i 08:52 2°る11'10 minimum elong -11649 Mar 11 i 00:38 25° ₹ 12'38 7°18'39 retrograde -11643 Jun 25 j 18:30 3°る25'34 -11649 Mar 25 j 02:57 25° ₹32'59 -11643 Sep 13 j 20:55 2°る23'07 -5°36'20 morning rise opposition -11649 Jun 19 j 12:04 26° ₹ 46'48 min. Earth dist. -11643 Sep 16 j 07:18 2°중20'08 42.52034 AU retrograde opposition -11649 Sep 07 j 21:26 25° ₹ 45'20 -7°29'12 -11643 Dec 05 j 19:37 1°る18'34 direct -11649 Sep 10 j 03:20 25° ₹ 42'38 43.71047 AU evening set -11642 Mar 03 j 16:00 2°₹34'32 min. Earth dist. -11649 Nov 29 j 19:04 24° ₹ 42'02 max. Earth dist. -11642 Mar 16 j 01:22 2° **궁**52'54 44.40887 AU direct evening set -11648 Feb 26 j 01:39 25° ₹ 56'53 -11648 Mar 08 j 21:12 26°**х** 13'57 45.59914 AU -11642 Mar 18 j 20:02 2°₹57'04 -5°11'34 max. Earth dist. conjunction -11642 Mar 18 j 20:09 2°**궁**57'05 5°12'13 minimum elong -11648 Mar 11 j 09:24 26° ₹ 17'37 -7°00'50 -11642 Apr 02 j 22:04 3°**궁**19'31 conjunction morning rise -11648 Mar 11 j 09:33 26° ₹ 17'37 7°01'30 -11642 Jun 27 j 06:27 4°중34'07 minimum elong retrograde -11648 Mar 25 j 15:48 26° ₹38'17 -11642 Sep 15 j 05:43 3°♂31'31 -5°16'24 morning rise opposition -11648 Jun 19 j 19:59 27° ₹ 52'07 -11642 Sep 17 j 18:14 3°중28'25 42.31355 AU retrograde min. Earth dist. opposition -11648 Sep 08 j 04:47 26° ₹ 50'30 -7°11'11 direct -11642 Dec 07 j 01:15 2°중26'46 min. Earth dist. -11648 Sep 10 j 10:45 26° ₹ 47'46 43.51792 AU evening set -11641 Mar 04 j 23:48 3°**⋜**43'01 direct -11648 Nov 30 j 02:58 25°**х** 46'58 max. Earth dist. -11641 Mar 17 j 11:43 4°정01'38 44.20139 AU -11647 Feb 26 j 07:10 27°**尽** 01'55 evening set max. Earth dist. -11647 Mar 10 j 04:44 27°**х** 19'10 45.40636 AU -11641 Mar 20 j 06:43 4°**궁**05'51 -4°52'17 conjunction -11641 Mar 20 j 06:51 4°**궁**05'51 4°52'57 minimum elong -11647 Mar 12 j 18:41 27° ₹22'57 -6°43'23 -11641 Apr 04 j 11:25 4°**♂**28'34 conjunction morning rise -11647 Mar 12 j 18:50 27° ₹22'58 6°44'01 -11641 Jun 28 j 17:12 5°₹43'24 minimum elong retrograde -11647 Mar 27 i 04:46 27° ₹ 43'56 -11641 Sep 16 j 14:47 4°정40'38 -4°56'08 morning rise opposition -11641 Sep 19 j 03:42 4° 중37'30 42.10313 AU retrograde -11647 Jun 21 j 06:16 28° \$757'50 min. Earth dist. -11647 Sep 09 j 12:22 27° ₹ 56'01 -6°52'52 opposition direct -11641 Dec 08 j 10:16 3°る35'41 min. Earth dist. -11647 Sep 11 j 20:13 27° \$\frac{7}{53}\$'12 43.32265 AU evening set -11640 Mar 05 i 08:02 4°る52'15 direct -11647 Dec 01 i 08:52 26° \$\frac{7}{52}\$'16 max. Earth dist. -11640 Mar 17 j 20:02 5°る10'58 43.98996 AU -11646 Feb 27 j 13:00 28° ₹07'22 evening set max. Earth dist. -11646 Mar 11 j 14:23 28°**х** 24'55 45.21113 AU conjunction -11640 Mar 20 j 17:28 5°る15'21 -4°32'43 -11640 Mar 20 j 17:34 5°る15'21 4°33'22 minimum elong conjunction -11646 Mar 14 j 04:14 28° ₹28'42 -6°25'37 morning rise -11640 Apr 05 j 00:50 5°₹38'21 minimum elong -11646 Mar 14 j 04:22 28° ₹28'42 6°26'16 retrograde -11640 Jun 29 j 05:53 6°る53'24 5°**ප්**50'28 -4°35'34 morning rise -11646 Mar 28 j 17:42 28° ₹ 49'58 opposition -11640 Sep 17 j 00:06 -11646 Jun 04 j 08:17 0°ಕ min. Earth dist. -11640 Sep 19 j 14:38 5°る47'14 41.88866 AU -11646 Jun 22 j 16:00 0°♂03'57 -11640 Dec 08 j 19:01 4°**ප**45'17 retrograde direct -11646 Jul 10 j 23:44 30°R ✓ 6°る02'10 evening set -11639 Mar 06 j 16:44 -11646 Sep 10 j 20:14 29° ₹ 01'58 -6°34'13 -11639 Mar 19 j 06:46 6°る21'07 43.77415 AU opposition max. Earth dist. min. Earth dist. -11646 Sep 13 j 04:21 28° ₹ 59'07 43.12507 AU direct -11646 Dec 02 j 16:48 27° ₹ 57'59 conjunction -11639 Mar 22 j 04:48 6°**ට**25'33 -4°12'52 minimum elong evening set -11645 Feb 28 j 19:09 29° ₹ 13'16 -11639 Mar 22 j 04:55 6°**ප**25'33 4°13'31 max. Earth dist. -11645 Mar 12 j 21:54 29° ₹30'59 45.01378 AU morning rise -11639 Apr 06 j 14:22 6°**る**48'49 retrograde -11639 Jun 30 j 15:18 8°**る**04'06 -11645 Mar 15 j 13:39 29° ₹34'54 -6°07'34 -11639 Sep 18 j 09:41 7°る00'59 -4°14'40 conjunction opposition -11645 Mar 15 j 13:48 29° ₹34'55 6°08'13 -11639 Sep 21 j 01:52 6°る57'39 41.66975 AU minimum elong min. Earth dist.

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11639 in astronomical counting style is the year 11640 BCE in historical counting style. direct -11639 Dec 10 j 07:19 5°る55'33 retrograde -11632 Jul 09 i 01:22 16°る37'40 -11638 Mar 08 j 02:02 7°る12'46 -11632 Sep 26 j 12:38 15° ₹32'50 -1°39'13 evening set opposition max. Earth dist. -11638 Mar 20 j 16:24 7°**궁**31'49 43.55415 AU min. Earth dist. -11632 Sep 29 j 11:09 15°る29'04 40.05388 AU -11632 Dec 18 j 11:07 14°₹25'22 direct -11638 Mar 23 j 16:15 7°る36'25 -3°52'42 -11631 Mar 16 j 06:28 15°₹45'32 conjunction evening set -11638 Mar 23 j 16:21 minimum elong 7°る36'25 3°53'20 max. Earth dist. -11631 Mar 29 j 01:35 16°정05'42 41.93471 AU -11638 Apr 08 j 04:08 morning rise 7°**る**59'56 -11638 Jul 02 j 01:31 9°쥥15'29 -11631 Apr 01 j 07:12 16°ਰ10'52 -1°23'05 retrograde conjunction -11638 Sep 19 j 19:31 8° 중12'09 -3°53'26 minimum elong -11631 Apr 01 j 07:14 16°ਰ10'52 1°23'44 opposition min. Earth dist. -11638 Sep 22 j 12:09 8°중08'47 41.44686 AU morning rise -11631 Apr 17 j 04:48 16°₹36'01 -11631 Jul 10 j 13:59 17°₹54'04 direct -11638 Dec 11 j 18:11 7°**정**06'26 retrograde 8°**る**23'59 -11637 Mar 09 j 11:29 -11631 Sep 28 j 00:29 16°₹49'00 -1°15'42 evening set opposition -11637 Mar 22 j 02:31 8°중43'12 43.33010 AU max. Earth dist. min. Earth dist. -11631 Sep 30 j 22:46 16°정45'13 39.81618 AU direct -11631 Dec 19 j 22:50 15°₹41'14 conjunction -11637 Mar 25 j 03:51 8°**정**47'54 -3°32'14 evening set -11630 Mar 17 j 19:41 17°**궁**01'58 minimum elong -11637 Mar 25 j 03:57 8°る47'55 3°32'54 max. Earth dist. -11630 Mar 30 j 13:35 17°₹22'12 41.69640 AU morning rise -11637 Apr 09 j 17:39 9°**궁**11'41 retrograde -11637 Jul 03 j 11:46 10°♂27'31 conjunction -11630 Apr 02 j 20:57 17°**5**27'31 -1°00'30 opposition -11637 Sep 21 j 05:43 9°중23'56 -3°31'53 minimum elong -11630 Apr 02 j 20:59 17°る27'31 1°01'09 min. Earth dist. -11637 Sep 24 j 00:24 9°る20'27 41.22031 AU morning rise -11630 Apr 18 j 19:05 17°る52'53 direct -11637 Dec 13 j 04:00 8°る17'57 retrograde -11630 Jul 12 j 05:47 19°る11'25 evening set -11636 Mar 09 j 21:26 9°る35'51 opposition -11630 Sep 29 j 12:57 18°♂06'07 -0°51'51 max. Earth dist. -11636 Mar 22 j 14:11 9°중55'16 43.10276 AU min. Earth dist. -11630 Oct 02 j 12:54 18°**ठ**02'14 39.57664 AU -11630 Dec 21 j 08:17 16°♂58'04 direct conjunction -11636 Mar 25 j 15:45 10°る00'01 -3°11'28 evening set -11629 Mar 19 j 09:14 18°정19'24 -11636 Mar 25 j 15:51 10°る00'01 3°12'07 max. Earth dist. -11629 Apr 01 j 03:55 18° ₹39'48 41.45584 AU minimum elong -11636 Apr 10 j 07:22 10°る24'03 morning rise -11636 Jul 04 j 00:19 11°**⋜**40'10 -11629 Apr 04 j 10:59 18° ₹45'08 -0°37'38 retrograde conjunction -11636 Sep 21 j 15:55 10°♂36'20 -3°10'01 -11629 Apr 04 j 11:00 18° ₹45'08 0°38'16 opposition minimum elong -11636 Sep 24 j 10:46 10°중32'50 40.99076 AU -11629 Apr 20 j 09:17 19°쥥10'41 min. Earth dist. morning rise -11636 Dec 13 j 13:00 9°る30'03 -11629 Jul 13 j 20:55 20°**궁**29'46 direct retrograde -11629 Oct 01 j 01:49 19°524'12 -0°27'41 -11635 Mar 11 j 07:57 10°**⋜**48'21 opposition evening set -11629 Oct 04 j 02:22 19°중20'16 39.33454 AU -11635 Mar 24 j 00:13 11°중07'51 42.87262 AU max. Earth dist. min. Earth dist. -11629 Dec 22 j 20:41 18°쥥15'51 direct -11635 Mar 27 j 03:53 11°₹12'45 -2°50'24 -11628 Mar 19 j 23:44 19°**궁**37'49 conjunction evening set -11635 Mar 27 j 03:58 11°**⋜**12'46 2°51'03 max. Earth dist. -11628 Apr 01 j 16:21 19°중58'14 41.21250 AU minimum elong -11635 Apr 11 j 21:13 11°る37'02 morning rise retrograde -11635 Jul 05 j 14:36 12°る53'28 conjunction -11628 Apr 05 j 01:26 20°る03'44 -0°14'29 opposition -11635 Sep 23 j 02:37 11°정49'23 -2°47'49 minimum elong -11628 Apr 05 j 01:27 20°중03'44 0°15'07 min. Earth dist. -11635 Sep 25 j 22:52 11°정45'47 40.75890 AU behind sun begin -11628 Apr 04 j 23:28 20°**궁**03'37 direct -11635 Dec 14 j 20:59 10°₹42'47 behind sun end -11628 Apr 05 j 03:26 20°**궁**03'52 -11634 Mar 12 j 18:45 12°**⋜**01'30 morning rise -11628 Apr 20 j 23:56 20°**♂**29'28 evening set max. Earth dist. -11634 Mar 25 j 12:51 12°중21'14 42.64029 AU -11628 Jul 14 j 13:07 21°**⋜**49'06 retrograde -11628 Oct 01 j 14:51 20°₹43'16 -0°03'12 opposition -11634 Mar 28 j 16:20 12°♂26'09 -2°29'01 min. Earth dist. -11628 Oct 04 j 16:21 20° ₹39'17 39.08965 AU conjunction -11634 Mar 28 j 16:24 12°る26'09 2°29'40 -11628 Nov 17 j 22:17 19°る49'31 minimum elong asc. node -11634 Apr 13 j 10:53 12°る50'39 -11628 Dec 23 j 08:45 19°る34'36 morning rise direct -11634 Jul 07 j 01:49 14°る07'27 retrograde evening set -11627 Mar 21 j 14:47 20°る57'14 -11634 Sep 24 j 13:39 13°る03'06 -2°25'16 opposition max. Earth dist. -11627 Apr 03 j 06:42 21°る17'45 40.96593 AU min. Earth dist. -11634 Sep 27 j 10:30 12°る59'27 40.52513 AU direct -11634 Dec 16 j 09:53 11°る56'13 conjunction -11627 Apr 06 i 16:31 21°₹23'20 0°09'03 minimum elong -11633 Mar 14 j 06:13 13°る15'23 -11627 Apr 06 j 16:31 21°₹23'20 0°08'26 evening set max. Earth dist. -11633 Mar 27 j 00:07 13°중35'13 42.40644 AU -11627 Apr 06 j 10:50 21°る22'58 behind sun begin -11627 Apr 06 j 22:12 21°る23'42 behind sun end -11633 Mar 30 j 04:54 13°₹40'15 -2°07'21 -11627 Apr 22 j 14:38 21° ₹ 49'14 conjunction morning rise -11627 Jul 16 j 02:11 23°る09'27 minimum elong -11633 Mar 30 j 04:58 13°₹40'16 2°08'00 retrograde morning rise -11633 Apr 15 j 00:49 14°る04'59 opposition -11627 Oct 03 j 04:37 22°**궁**03'20 0°21'37 -11633 Jul 08 j 13:49 15°**♂**22'09 min. Earth dist. -11627 Oct 06 j 07:45 21°る59'13 38.84152 AU retrograde -11633 Sep 26 j 00:55 14°♂17'34 -2°02'25 -11627 Dec 25 j 00:27 20°**궁**54'19 opposition direct min. Earth dist. -11633 Sep 28 j 21:52 14°중13'53 40.29016 AU -11626 Mar 23 j 06:33 22°**궁**17'39 evening set -11633 Dec 17 j 22:54 13°**⋜**10'22 -11626 Apr 04 j 21:02 22° 38'12 40.71631 AU direct max. Earth dist. evening set -11632 Mar 14 j 17:57 14°♂30'02 max. Earth dist. -11632 Mar 27 j 12:31 14°중50'02 42.17121 AU conjunction -11626 Apr 08 j 07:45 22°♂43'54 0°32'45 minimum elong -11626 Apr 08 j 07:44 22°♂43'54 0°32'08 conjunction -11632 Mar 30 j 17:51 14°♂55'08 -1°45'22 morning rise -11626 Apr 24 j 05:30 23°**궁**09'58 -11632 Mar 30 j 17:55 14°₹55'08 1°46'00 -11626 Jul 17 j 16:29 24° **정**30'47 minimum elong retrograde -11632 Apr 15 j 14:38 15°**♂**20'05 -11626 Oct 04 j 18:37 23°중24'22 0°46'44 morning rise opposition

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Earth dist. conjunction 2°≈36'46 3°26'11 -11619 Apr 18 j 05:30 minimum elong 2°**≈**36'45 3°25'37 -11625 Apr 09 j 23:28 24°る05'26 3°**≈**03'29 conjunction 0°56'46 morning rise -11619 May 03 j 15:52 -11625 Apr 09 j 23:26 24°**궁**05'26 -11619 Jul 27 j 16:13 4°≈29'45 minimum elong 0°56'09 retrograde -11625 Apr 25 j 20:25 24°**궁**31'39 morning rise opposition -11619 Oct 14 j 09:17 3°**≈**21′00 3°50'33 3°≈16'31 36.80012 AU retrograde -11625 Jul 19 j 08:21 25°♂53'07 min. Earth dist. -11619 Oct 17 j 15:46 opposition -11625 Oct 06 j 09:05 24°정46'22 1°12'09 direct -11618 Jan 05 j 01:35 2°≈09'01 min. Earth dist. -11625 Oct 09 j 14:08 24°정42'06 38.33713 AU evening set -11618 Apr 04 j 13:07 3°≈39'20 direct -11625 Dec 28 j 03:19 23°**궁**36'38 max. Earth dist. -11618 Apr 16 j 09:12 3°≈59'56 38.66743 AU evening set -11624 Mar 25 j 15:46 25°**⋜**01'24 max. Earth dist. -11624 Apr 07 j 03:23 25°중22'04 40.20911 AU conjunction -11618 Apr 20 j 00:14 4°≈06'19 3°51'52 minimum elong -11618 Apr 20 j 00:06 4°≈06'19 3°51'17 conjunction -11624 Apr 10 j 15:27 25°♂27'57 1°21'03 morning rise -11618 May 05 j 07:33 4°≈33'04 minimum elong -11624 Apr 10 j 15:25 25°♂27'57 1°20'26 retrograde -11618 Jul 29 j 12:50 6°≈00'20 morning rise -11624 Apr 26 j 11:23 25° ₹54'17 opposition -11618 Oct 16 j 03:14 4°≈51'16 4°17'48 retrograde -11624 Jul 20 j 00:19 27°る16'26 min. Earth dist. -11618 Oct 19 j 10:55 4°≈46'41 36.54455 AU opposition -11624 Oct 06 j 23:55 26°る09'21 1°37'53 direct -11617 Jan 06 j 16:09 3°**≈**38'55 min. Earth dist. -11624 Oct 10 j 04:53 26°る05'04 38.08183 AU evening set -11617 Apr 06 j 11:36 5°≈10'21 direct -11624 Dec 28 j 18:23 24°る59'14 max. Earth dist. -11617 Apr 18 j 05:15 5°≈30'57 38.41059 AU evening set -11623 Mar 27 j 09:32 26°る24'48 max. Earth dist. -11623 Apr 08 j 18:01 26° ₹45'25 39.95277 AU conjunction -11617 Apr 21 j 19:32 5°≈37'20 4°17'44 minimum elong -11617 Apr 21 j 19:23 5°**≈**37'19 4°17'11 -11623 Apr 12 j 07:49 26°る51'28 1°45'36 -11617 May 06 j 23:27 6°≈04'04 conjunction morning rise -11623 Apr 12 j 07:45 26°**궁**51'27 -11617 Jul 31 j 09:33 7°≈32'23 minimum elong 1°45'01 retrograde -11623 Apr 28 j 02:31 27°る17'54 -11617 Oct 17 j 21:44 6°≈22'59 4°45'16 morning rise opposition -11623 Jul 21 j 19:36 28°**⋜**40'46 retrograde min. Earth dist. -11617 Oct 21 j 05:29 6°≈18'23 36.28861 AU -11623 Oct 08 j 15:08 27°る33'21 2°03'53 -11616 Jan 08 j 09:50 opposition direct 5°≈10'16 -11623 Oct 11 j 21:00 27°중29'00 37.82549 AU -11616 Apr 07 j 11:07 min. Earth dist. evening set 6°≈42'52 -11616 Apr 18 j 23:31 -11623 Dec 30 j 07:43 26°**궁**22'51 7°≈03'16 38.15309 AU max. Earth dist. direct -11622 Mar 29 j 03:51 27°**정**49'16 evening set -11622 Apr 10 j 11:28 28°중09'59 39.69550 AU -11616 Apr 22 j 15:13 7°≈09'49 4°43'46 max. Earth dist. conjunction -11616 Apr 22 j 15:03 minimum elong 7°**≈**09'49 4°43'13 -11622 Apr 14 j 00:43 28°중16'02 2°10'24 -11616 May 07 j 15:38 7°≈36'32 conjunction morning rise -11622 Apr 14 j 00:39 28°쥥16'01 2°09'48 minimum elong retrograde -11616 Aug 01 j 09:07 9°≈05'56 morning rise -11622 Apr 29 j 17:38 28°정42'34 opposition -11616 Oct 18 j 16:49 7°≈56'11 5°12'56 -11622 Jul 02 j 01:22 0°≈ min. Earth dist. -11616 Oct 22 j 00:58 7°≈51'32 36.03196 AU retrograde -11622 Jul 23 j 12:49 0°≈06'12 direct -11615 Jan 09 j 03:25 6°**≈**43'04 -11622 Aug 14 j 01:05 30°R궁 -11615 Apr 09 j 11:34 8°≈16'54 evening set -11622 Oct 10 j 07:03 28°る58'26 2°30'10 max. Earth dist. -11615 Apr 20 j 20:07 8°≈37'12 37.89442 AU opposition min. Earth dist. -11622 Oct 13 j 13:28 28°중54'02 37.56864 AU -11621 Jan 01 j 00:06 27°₹47'33 -11615 Apr 24 j 11:45 8°≈43'48 5°09'58 direct conjunction -11621 Mar 30 j 22:53 29°**♂**14'52 -11615 Apr 24 j 11:34 8°≈43'47 5°09'27 evening set minimum elong max. Earth dist. -11621 Apr 12 j 03:46 29°る35'34 39.43810 AU morning rise -11615 May 09 i 07:54 9°≈10'27 retrograde -11615 Aug 03 i 05:51 10°≈40'59 conjunction -11621 Apr 15 j 17:41 29°る41'42 2°35'27 opposition -11615 Oct 20 j 12:40 9°≈30'52 5°40'48 minimum elong -11621 Apr 15 j 17:36 29°る41'42 2°34'52 min. Earth dist. -11615 Oct 23 j 21:57 9°≈26'07 35.77421 AU -11621 Apr 26 j 10:17 direct -11614 Jan 10 j 22:55 8°≈17'21 0°≈≈ -11621 May 01 j 08:50 0°≈08'19 -11614 Apr 11 j 13:11 9°≈52'26 morning rise evening set -11621 Jul 25 j 06:10 max. Earth dist. -11614 Apr 22 j 16:38 10°≈12'33 37.63481 AU retrograde 1°≈32'46 -11621 Oct 11 j 23:16 opposition 0°≈24'41 2°56'43 0°≈20'16 37.31205 AU -11614 Apr 26 j 08:43 10°≈19'14 5°36'19 min. Earth dist. -11621 Oct 15 j 05:17 conjunction -11621 Oct 30 j 12:47 30°R♂ minimum elong -11614 Apr 26 j 08:31 10°≈19'14 5°35'47 direct -11620 Jan 02 j 16:42 29°**궁**13'25 morning rise -11614 May 11 j 00:32 10°≈45'48 -11620 Mar 04 j 23:25 0°≈ retrograde -11614 Aug 05 j 03:01 12°≈17'30 -11620 Mar 31 j 18:44 evening set 0°≈41'40 opposition -11614 Oct 22 j 09:04 11°≈07'01 6°08'48 -11620 Apr 12 j 21:07 max. Earth dist. 1°≈02'22 39.18085 AU min. Earth dist. -11614 Oct 25 j 17:53 11°≈02'16 35.51572 AU direct -11613 Jan 12 j 20:28 9°≈53'04 -11620 Apr 16 j 11:26 conjunction 1°≈08'35 3°00'43 evening set -11613 Apr 13 j 15:30 11°≈29'27 minimum elong -11620 Apr 16 j 11:20 1°**≈**08'35 3°00'07 max. Earth dist. -11613 Apr 24 j 13:16 11°≈49'19 37.37431 AU morning rise -11620 May 02 j 00:12 1°≈35'16 retrograde -11620 Jul 25 j 22:22 3°≈00'36 conjunction -11613 Apr 28 j 06:12 11°≈56'08 6°02'47 opposition -11620 Oct 12 j 15:59 1°≈52'10 3°23'31 minimum elong -11613 Apr 28 j 05:59 11°≈56'07 6°02'16 min. Earth dist. -11620 Oct 15 j 23:10 -11613 May 12 j 17:04 12°≈22'35 1°≈47'40 37.05587 AU morning rise

-11619 Jan 03 j 09:29

direct

0°≈40'33

retrograde

-11613 Aug 07 j 00:25 13°≈55'31

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Earth dist. conjunction -11606 May 10 j 05:36 23°≈57'39 9°08'35 9°08'09 minimum elong -11606 May 10 j 05:16 23°≈57'37 -11612 Apr 29 j 04:20 13°≈34'29 6°29'20 conjunction morning rise -11606 May 22 j 17:02 24°≈22'07 -11612 Apr 29 j 04:06 13°≈34'28 -11606 Aug 19 j 09:30 26°≈05'39 minimum elong 6°28'49 retrograde 9°54'42 -11612 May 13 j 09:52 14°≈00'46 morning rise opposition -11606 Nov 05 j 04:50 24°≈51'49 -11612 Jun 19 j 00:45 15°≈ min. Earth dist. -11606 Nov 08 j 13:22 24°≈46'50 33.48602 AU retrograde -11612 Aug 07 j 22:05 15°≈34'59 direct -11605 Jan 26 j 05:52 23°≈34'20 -11612 Sep 28 j 11:19 15°R≈ evening set -11605 Apr 30 j 02:26 25°≈23'40 -11612 Oct 25 j 03:40 14°≈23'40 7°05'13 -11605 May 08 j 19:01 25°≈40'50 35.33472 AU opposition max. Earth dist. min. Earth dist. -11612 Oct 28 j 13:08 14°≈18'48 34.99794 AU direct -11611 Jan 15 j 13:29 13°≈08'48 conjunction -11605 May 12 j 08:06 25°≈47'53 9°34'44 evening set -11611 Apr 16 j 23:34 14°≈47'57 minimum elong -11605 May 12 j 07:44 25°≈47'51 9°34'21 -11611 Apr 23 j 11:50 15°≈ morning rise -11605 May 24 j 10:35 26°≈11'53 max. Earth dist. -11611 Apr 27 j 09:44 15°≈07'19 36.85321 AU retrograde -11605 Aug 21 j 12:29 27°≈57'16 opposition -11605 Nov 07 j 07:46 26°≈43'03 10°22'33 conjunction -11611 May 01 j 03:01 15°≈14'18 6°55'57 min. Earth dist. -11605 Nov 10 j 14:59 26°≈38'07 33.24368 AU minimum elong -11611 May 01 j 02:46 15°≈14'16 6°55'28 direct -11604 Jan 28 i 07:53 25°≈25'11 morning rise -11611 May 15 i 02:52 15°≈40'23 evening set -11604 May 01 j 15:28 27°≈16'30 retrograde -11611 Aug 09 j 22:23 17°≈15'57 max. Earth dist. -11604 May 09 j 21:47 27°≈32'59 35.09082 AU opposition -11611 Oct 27 i 02:02 16°≈04'12 7°33'32 min. Earth dist. -11611 Oct 30 j 12:12 15°≈59'16 34.74007 AU conjunction -11604 May 13 j 11:28 27°≈40'10 10°00'41 -11611 Dec 19 j 12:34 15°R≈ minimum elong -11604 May 13 j 11:06 27°≈40'09 10°00'19 direct -11610 Jan 17 j 09:06 14°≈48'52 -11604 May 25 j 04:31 28°≈03'37 morning rise -11610 Feb 14 j 22:46 15°≈ -11604 Aug 22 j 18:06 29°≈50'58 retrograde -11610 Apr 19 j 05:01 16°≈29'30 -11604 Nov 08 j 11:27 28°≈36'21 10°50'11 evening set opposition max. Earth dist. -11610 Apr 29 j 10:22 16°≈48'40 36.59392 AU min. Earth dist. -11604 Nov 11 j 19:02 28°≈31'22 33.00370 AU -11603 Jan 29 j 07:27 27°≈18'03 direct -11610 May 03 j 02:15 16°≈55'37 7°22'35 -11603 May 04 j 06:00 29°≈11'28 conjunction evening set -11610 May 03 j 01:59 16°≈55'35 -11603 May 12 j 03:42 29°≈27'24 34.84901 AU max. Earth dist. minimum elong 7°22'07 -11610 May 16 j 19:41 17°≈21'28 morning rise -11610 Aug 11 j 22:41 18°≈58'28 -11603 May 15 j 15:45 29°≈34'31 10°26'24 retrograde conjunction -11610 Oct 29 j 01:12 17°≈46'16 8°01'53 -11603 May 15 j 15:21 29°≈34'29 opposition minimum elong 10°26'02 -11610 Nov 01 j 10:57 17°≈41'20 34.48375 AU -11603 May 26 j 22:28 29°≈57'21 min. Earth dist. morning rise direct -11609 Jan 19 j 07:14 16°≈30'29 -11603 May 28 j 06:10 0°**光** evening set -11609 Apr 21 j 11:45 18°≈12'40 retrograde -11603 Aug 24 j 23:21 1° **∺**46'44 max. Earth dist. -11609 May 01 j 09:40 18°≈31'28 36.33661 AU opposition -11603 Nov 10 j 16:18 0° **★** 31'42 11°17'33 min. Earth dist. -11603 Nov 13 j 23:17 0° **★**26'44 32.76575 AU -11609 May 05 j 02:01 18°≈38'30 7°49'13 -11603 Dec 02 j 06:02 30°R≈ conjunction -11609 May 05 j 01:43 18°≈38'28 7°48'45 direct -11602 Jan 31 j 09:59 29°≈13'00 minimum elong -11609 May 18 j 12:52 19°≈04'04 -11602 Mar 30 j 08:21 0°**米** morning rise -11609 Aug 14 j 01:26 20°≈42'35 evening set -11602 May 06 j 21:54 retrograde 1°**H** 08'34 -11609 Oct 31 i 00:49 19°≈29'57 8°30'13 -11602 May 14 j 08:10 1° # 23'42 34.60930 AU opposition max. Earth dist. -11609 Nov 03 j 09:55 19°≈25'02 34.22996 AU min. Earth dist. -11602 May 17 j 20:31 1° + 30'55 10°51'48 direct -11608 Jan 21 i 04:47 18°≈13'42 conjunction evening set -11608 Apr 22 j 19:27 19°≈57'33 minimum elong -11602 May 17 j 20:08 1°**¥**30'53 10°51'27 max. Earth dist. -11608 May 02 j 11:09 20°≈16'02 36.08177 AU morning rise -11602 May 28 i 16:32 1° ¥ 53'04 retrograde -11602 Aug 27 j 07:52 3°**)** 44'33 -11608 May 06 i 02:33 20°≈23'03 8°15'47 opposition -11602 Nov 12 j 21:54 2° \(\)29'06 11°44'36 conjunction -11608 May 06 j 02:15 20°≈23'02 8°15'20 min. Earth dist. -11602 Nov 16 j 04:14 2°\ 24'08 32.53015 AU minimum elong -11608 May 19 j 06:01 20°≈48'19 morning rise direct -11601 Feb 02 j 13:00 1°**)** 09'57 3°**)**€07'45 retrograde -11608 Aug 15 j 02:50 22°≈28'24 evening set -11601 May 09 j 15:17 opposition -11608 Nov 01 j 01:25 21°≈15'21 8°58'29 max. Earth dist. -11601 May 16 j 15:12 3° **∺** 22'10 34.37186 AU min. Earth dist. -11608 Nov 04 j 10:44 21°≈10'23 33.97891 AU -11607 Jan 22 j 05:00 19°≈58'41 -11601 May 20 j 02:18 3°**¥**29'20 11°16'51 direct conjunction -11607 Apr 25 j 04:35 21°≈44'17 -11601 May 20 j 01:53 3°**¥**29'18 11°16'31 evening set minimum elong -11607 May 04 j 12:57 22°≈02'21 35.82991 AU max. Earth dist. morning rise -11601 May 30 j 10:35 3°**)** € 50'44 retrograde -11601 Aug 29 j 15:48 5°**)** 44'24 conjunction -11607 May 08 j 03:40 22°≈09'24 8°42'15 opposition -11601 Nov 15 j 04:22 4°**★**28'29 12°11'15 minimum elong -11607 May 08 j 03:20 22°≈09'23 8°41'49 min. Earth dist. -11601 Nov 18 j 10:41 4°**∺**23'30 32.29707 AU morning rise -11607 May 20 j 23:26 22°≈34'17 direct -11600 Feb 04 j 19:16 3°**)**€08'54 retrograde -11607 Aug 17 j 06:04 24°≈16'03 evening set -11600 May 11 j 10:19 5°****09'01 -11607 Nov 03 j 02:37 23°≈02'37 9°26'40 max. Earth dist. -11600 May 17 j 22:08 5°**米** 22'33 34.13735 AU opposition

min. Earth dist.

-11607 Nov 06 j 10:33 22°≈57'42 33.73096 AU

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Earth dist. 6°**¥**24'57 32.06722 AU morning rise -11593 Sep 16 j 08:20 22°**米** 54'35 direct -11599 Feb 06 j 02:12 5°**)**€09'48 retrograde -11593 Dec 02 j 16:06 21°**米**35'11 15°20'47 evening set -11599 May 14 j 06:44 7°**)** 12′20 opposition max. Earth dist. -11593 Dec 05 j 10:05 21°**米**30'47 30.61157 AU -11599 May 20 j 06:10 7° **★**24'55 33.90618 AU min. Earth dist. -11592 Feb 21 j 14:49 20° **光** 12'19 direct conjunction -11599 May 23 j 15:46 7° **∺** 32'06 12°05'38 evening set -11592 Jun 03 j 19:51 22°\ 36'07 -11599 May 23 j 15:20 7°**)** € 32'04 -11592 Jun 04 j 17:59 22° ₩ 38'12 32.45132 AU minimum elong 12°05'21 max. Earth dist. -11599 Jun 01 j 22:28 morning rise 7°**₩**51'42 retrograde -11599 Sep 02 j 09:51 9°**¥**50′01 conjunction -11592 Jun 07 j 14:03 22°\ 44'36 14°34'13 opposition -11599 Nov 18 j 19:54 8°**¥**33'11 13°03'07 minimum elong -11592 Jun 07 j 13:38 22° **X** 44'34 14°34'06 min. Earth dist. -11599 Nov 22 j 00:38 8°**∺**28'14 31.84127 AU morning rise -11592 Jun 11 j 07:12 22° **∺**53'01 direct -11598 Feb 08 j 08:38 7°**)** 12′40 retrograde -11592 Sep 17 j 23:17 25° **光** 12'39 9°**)** 17'43 evening set -11598 May 17 j 05:01 opposition -11592 Dec 04 j 06:53 23°\color 52'52 15°40'14 max. Earth dist. -11598 May 22 j 16:01 9°\(\mathbf{2}\)29'20 33.67950 AU min. Earth dist. -11592 Dec 06 j 23:46 23° \(\frac{1}{48} \) 48'31 30.43054 AU direct -11591 Feb 23 j 03:53 22° **★**29'42 conjunction -11598 May 25 j 23:34 9°**)** 36'25 12°29'12 evening set -11591 Jun 07 j 23:07 24° **\(\)** 58'23 -11591 Jun 07 j 08:55 24°**米** 57′03 32.27093 AU minimum elong -11598 May 25 i 23:09 9°**)** € 36′22 12°28'57 max. Earth dist. morning rise -11598 Jun 03 i 16:03 9°**)** 54'56 retrograde -11598 Sep 04 i 19:30 11° **\(\)** 55'45 conjunction -11591 Jun 10 i 03:04 25° \(\) 03'20 14°51'37 opposition -11598 Nov 21 j 05:00 10° **X** 38'27 13°28'09 minimum elong -11591 Jun 10 i 02:38 25°**)** €03'17 14°51'31 min. Earth dist. -11598 Nov 24 j 07:28 10° + 33'37 31.62022 AU morning rise -11591 Jun 12 j 06:07 25° **★** 08'11 -11597 Feb 10 j 17:41 9° **\(1**7'29 retrograde -11591 Sep 20 j 16:26 27° ¥ 32'46 direct -11597 May 20 j 04:46 11° **\(25'09** -11591 Dec 06 j 22:29 26° \(\) 12'38 15°58'28 evening set opposition max. Earth dist. -11597 May 25 j 01:07 11°**米** 35'35 33.45802 AU min. Earth dist. -11591 Dec 09 j 12:27 26° ₩08'28 30.25618 AU -11590 Feb 25 j 18:14 24° **\(\)**49'09 direct -11597 May 28 j 07:58 11° **H** 42'40 12°52'08 max. Earth dist. -11590 Jun 10 j 00:56 27° **∺** 17'57 32.09718 AU conjunction -11597 May 28 j 07:31 11° \(\frac{1}{4}\)2'37 12°51'54 minimum elong -11597 Jun 05 j 09:16 12°**米**00'00 -11590 Jun 12 j 17:02 27° **∺** 24'05 15°07'50 morning rise conjunction -11597 Sep 07 j 06:20 14° **₭** 03'27 -11590 Jun 12 j 16:39 27° **★**24'03 15°07'46 retrograde minimum elong -11597 Nov 23 j 15:01 12° **H** 45'41 13°52'28 -11590 Sep 23 j 08:54 29° **€** 54'54 opposition retrograde -11597 Nov 26 j 16:52 12° ¥ 40'51 31.40491 AU -11590 Dec 09 j 15:07 28° ★34'23 16°15'25 min. Earth dist. opposition -11596 Feb 13 j 00:20 11°**米**24'17 -11590 Dec 12 j 04:08 28° ₭ 30'15 30.08847 AU direct min. Earth dist. evening set -11596 May 22 j 06:49 13°\color 34'43 direct -11589 Feb 28 j 08:03 27° **∺** 10'37 max. Earth dist. -11596 May 26 j 13:16 13°**米**43'59 33.24269 AU max. Earth dist. -11589 Jun 12 j 18:12 29° **∺** 40'51 31.93045 AU conjunction -11596 May 29 j 17:17 13°**米** 50'54 13°14'20 conjunction -11589 Jun 15 j 07:33 29° **∺**46'46 15°22'48 -11596 May 29 j 16:51 13° **米** 50'51 13°14'07 minimum elong -11589 Jun 15 j 07:09 29° **X** 46'44 15°22'45 minimum elong morning rise -11596 Jun 06 j 01:58 14°**₭**06'55 -11589 Jun 21 j 00:30 0°**Υ** retrograde -11596 Sep 08 j 15:55 16°**米** 13'07 retrograde -11589 Sep 26 j 03:08 2°**Υ**18'53 -11596 Nov 25 j 01:50 14°\\$54'55 14°15'59 -11589 Dec 12 j 08:26 0°**Υ**'58'01 16°31'00 opposition opposition -11596 Nov 28 j 01:23 14° ¥ 50'13 31.19597 AU -11589 Dec 14 j 18:20 0° **Y** 54'05 29.92757 AU min. Earth dist. min. Earth dist. -11595 Feb 14 i 10:17 13°\cdot\cdot 33'07 -11588 Jan 20 j 13:14 30°R **)** € direct -11588 Mar 02 j 01:17 29° + 33'57 evening set -11595 May 25 j 10:58 15° \(\frac{1}{46}\)'29 direct max. Earth dist. -11595 May 29 j 00:08 15° ¥ 54'16 33.03415 AU -11588 Apr 11 i 02:56 0°**Υ** max. Earth dist. -11588 Jun 14 j 11:07 2° Υ 05'28 31.77081 AU -11595 Jun 01 i 03:18 16° \(\frac{1}{2} \) 01'09 13°35'43 conjunction -11595 Jun 01 i 02:50 16° ¥ 01'07 13°35'31 conjunction -11588 Jun 16 j 22:49 2°Υ11'17 15°36'26 minimum elong -11595 Jun 07 j 18:06 16° **€** 15'41 minimum elong -11588 Jun 16 j 22:28 2° **Y**11'15 15° 36'25 morning rise -11595 Sep 11 j 04:31 18° **★**24'50 -11588 Sep 27 j 21:15 4°**Υ**44'38 retrograde retrograde -11595 Nov 27 j 13:42 17°**)** 06'13 14°38'35 opposition opposition -11588 Dec 14 j 02:34 3°Y23'25 16°45'07 min. Earth dist. -11595 Nov 30 j 11:40 17°**米**01'36 30.99410 AU min. Earth dist. -11588 Dec 16 j 11:08 3°**Y**19'33 29.77396 AU 1°Y59'03 direct -11594 Feb 16 j 18:05 15° **★**44'02 direct -11587 Mar 04 j 16:38 -11594 May 28 j 17:48 18° **₭** 00'33 max. Earth dist. -11587 Jun 17 j 06:31 4°Υ31'58 31.61903 AU evening set -11594 May 31 j 14:07 18° **₭** 06'51 32.83274 AU max. Earth dist. -11587 Jun 19 j 14:42 4°**Υ**'37'29 15°48'40 conjunction -11594 Jun 03 j 14:05 18° **X** 13'30 13°56'12 4°**Υ**37'27 15°48'41 conjunction minimum elong -11587 Jun 19 j 14:21 7°Υ12'01 minimum elong -11594 Jun 03 j 13:39 18° X 13'28 13°56'02 retrograde -11587 Sep 30 j 14:28 morning rise -11594 Jun 09 j 08:56 18° ¥ 26'21 opposition -11587 Dec 16 j 21:34 5°**Y**50′27 16°57'41 retrograde -11594 Sep 13 j 16:47 20° **★** 38'39 min. Earth dist. -11587 Dec 19 j 02:50 5°**Y**46'47 29.62821 AU opposition -11594 Nov 30 j 02:36 19° **★** 19'38 15°00'13 direct -11586 Mar 07 j 10:58 4°**Y**25′50 min. Earth dist. -11594 Dec 02 j 22:51 19°**米**15'06 30.79926 AU max. Earth dist. -11586 Jun 20 j 00:36 6°**Y**59'53 31.47573 AU -11593 Feb 19 j 04:02 17° **€** 57'06 direct

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11586 in astronomical counting style is the year 11587 BCE in historical counting style. -11586 Jun 22 i 06:53 7°**Υ**05'15 15°59'23 retrograde -11578 Oct 24 i 08:55 0°**8**14'41 conjunction -11586 Jun 22 j 06:35 7°**Υ**'05'13 15°59'26 -11578 Nov 22 j 21:46 30°RΥ minimum elong -11586 Oct 03 j 09:44 9°**Y**40′56 -11577 Jan 10 j 03:26 28° **Y** 51'08 17° 27'19 retrograde opposition -11586 Dec 19 i 17:17 8° \begin{pmatrix} \gamma \gam min. Earth dist. -11577 Jan 11 j 02:25 28°**Y**′49'32 28.77481 AU opposition -11577 Mar 30 j 21:06 27° **Y**25'41 -11586 Dec 21 j 20:10 8°**Υ**'15'29 29.49125 AU min. Earth dist. direct -11585 Mar 10 j 03:17 6°**Y**54'07 -11577 Jul 11 j 01:21 0°8 direct max. Earth dist. -11585 Jun 22 j 21:43 9°**Υ**29'30 31.34179 AU -11577 Jul 14 j 06:02 0°**と**07'51 30.66668 AU max. Earth dist. -11585 Jun 24 j 23:48 9°**Υ**34'28 16°08'31 -11577 Jul 15 j 04:09 0°**8**10'06 16°17'05 conjunction conjunction -11585 Jun 24 j 23:30 9°**Y**34'27 -11577 Jul 15 j 04:11 0°**8**10'07 minimum elong 16°08'36 minimum elong 16°17'23 -11585 Oct 06 j 04:00 12°**Υ**11'12 -11577 Oct 27 j 07:45 2°**8**52'28 retrograde retrograde -11585 Dec 22 j 13:31 10°**Υ**'48'57 17°17'45 -11576 Jan 13 j 03:24 1°**8**28'49 opposition opposition 17°20'34 -11585 Dec 24 j 13:20 10°**Υ**45'39 29.36373 AU -11576 Jan 13 j 23:49 1°**8**27'23 28.73296 AU min. Earth dist. min. Earth dist. direct -11584 Mar 11 j 21:43 9° Υ 23'52 direct -11576 Apr 01 j 19:17 0°**8**03'24 max. Earth dist. -11584 Jun 24 j 17:19 12° $\mathbf{\gamma}$ 00'17 31.21810 AU conjunction -11576 Jul 16 j 23:52 2°**8**47'50 16°09'43 conjunction -11584 Jun 26 j 17:00 12° Υ 05'03 16°15'59 minimum elong -11576 Jul 16 j 23:57 2°**8**47'50 16°10'01 minimum elong -11584 Jun 26 j 16:46 12°Υ05'02 16°16'05 max. Earth dist. -11576 Jul 16 j 05:59 2°**8**46'00 30.63114 AU retrograde -11584 Oct 08 j 00:06 14° Υ 42'47 retrograde -11576 Oct 29 j 05:04 5°**8**30'24 opposition -11584 Dec 24 j 10:29 13° Υ 20'14 17° 25'03 opposition -11575 Jan 15 j 03:36 4°806'40 17°11'46 min. Earth dist. -11584 Dec 26 j 06:47 13°**Υ**17'10 29.24665 AU min. Earth dist. -11575 Jan 15 j 19:47 4°**8**05'32 28.70106 AU direct -11583 Mar 14 j 16:02 11° Υ 54'58 direct -11575 Apr 04 i 19:18 2°**8**41'19 max. Earth dist. -11583 Jun 27 j 15:32 14°**Υ**'32'35 31.10533 AU conjunction -11575 Jul 19 j 19:21 5°**8**25'35 16°00'27 conjunction -11583 Jun 29 i 10:44 14° γ 36'55 16°21'42 minimum elong -11575 Jul 19 i 19:28 5°825'36 16°00'48 -11583 Jun 29 j 10:31 14°**Υ**'36'54 minimum elong 16°21'50 max. Earth dist. -11575 Jul 19 j 04:12 5°**8**24'02 30.60595 AU -11583 Oct 10 j 18:58 17°**Υ**15'35 retrograde -11575 Nov 01 j 03:52 8°**8**08'16 retrograde opposition -11583 Dec 27 j 08:13 15°**Υ**'52'47 17°30'28 opposition -11574 Jan 18 j 03:56 6°844'27 17°00'57 -11583 Dec 29 j 01:32 15°**Υ**49'55 29.14042 AU min. Earth dist. -11574 Jan 18 j 16:56 6°**8**43'32 28.67947 AU min. Earth dist. -11582 Mar 17 j 11:14 14°**Υ**27'23 -11574 Apr 07 j 17:46 5°**8**19'10 direct direct max. Earth dist. -11582 Jun 30 j 12:33 17°**Υ**05'57 31.00414 AU -11574 Jul 22 j 14:58 8°803'10 15°49'20 conjunction -11574 Jul 22 j 15:07 8°**8**03'11 15°49'41 -11582 Jul 02 j 04:48 17°**Υ**10'01 16°25'37 conjunction minimum elong -11582 Jul 02 j 04:39 17°**Υ**10'00 16°25'45 -11574 Jul 22 j 04:33 8°**8**02'06 30.59149 AU max. Earth dist. minimum elong -11582 Oct 13 j 17:08 19°**Y**49'32 -11574 Nov 04 j 00:46 10°**8**45'49 retrograde retrograde -11582 Dec 30 j 06:15 18°**Υ**26'31 17°33'53 -11573 Jan 21 j 04:01 9°**8**21'56 16°48'07 opposition opposition -11573 Jan 21 j 13:15 9°**8**21'17 28.66835 AU -11582 Dec 31 j 19:11 18° **Y** 23'57 29.04557 AU min. Earth dist. min. Earth dist. direct -11581 Mar 20 j 06:04 17°**Υ**'01'02 direct -11573 Apr 10 j 18:10 7°**8**56'45 max. Earth dist. -11581 Jul 03 j 11:14 19°**Υ**40'36 30.91448 AU -11573 Jul 25 j 10:11 10°**8**40'21 15°36'21 conjunction -11581 Jul 04 j 23:20 19°**Υ**'44'15 16°27'40 -11573 Jul 25 j 10:22 10°**8**40'22 15°36'46 conjunction minimum elong minimum elong -11581 Jul 04 j 23:11 19°**Υ**'44'14 16°27'52 max. Earth dist. -11573 Jul 25 j 02:33 10°**8**39'34 30.58809 AU retrograde -11581 Oct 16 j 13:32 22°**Υ**24'33 retrograde -11573 Nov 06 j 22:06 13°**8**22'52 -11580 Jan 02 j 04:58 21°**Υ**'01'22 17°35'18 -11572 Jan 24 j 03:59 11°**8**58'56 16°33'17 opposition opposition min. Earth dist. -11580 Jan 03 j 15:20 20°**Υ** 58'58 28.96182 AU min. Earth dist. -11572 Jan 24 j 09:14 11°**8**58'34 28.66838 AU -11580 Mar 22 j 02:47 19°**Υ**35'51 -11572 Apr 12 j 16:25 10°\(\delta 33'51 direct direct -11580 Jul 05 j 09:26 22°**Υ**′16'13 30.83627 AU max. Earth dist. -11572 Jul 27 i 05:14 13°8 16'57 15°21'33 conjunction -11580 Jul 06 j 18:05 22°**Y**19'33 16°27'52 -11572 Jul 27 i 05:27 13°8 16'59 15°21'58 conjunction minimum elong -11580 Jul 06 i 18:00 22°**Y**19'32 16°28'04 -11572 Jul 27 j 02:39 13°**8**16'42 30.59624 AU minimum elong max. Earth dist. -11572 Sep 10 j 17:00 15°℃ -11580 Oct 18 i 12:15 25° Υ 00'31 retrograde opposition -11572 Nov 08 j 17:08 15°**8**59'13 -11579 Jan 04 i 03:57 23°**Y**'37'11 17°34'41 retrograde min. Earth dist. -11579 Jan 05 j 09:47 23°**Υ**35'07 28.88899 AU -11571 Jan 11 j 02:47 15°R8 -11579 Mar 25 i 00:49 22°**Y**11'41 direct opposition max. Earth dist. -11579 Jul 08 j 08:17 24°**Υ**'52'47 30.76903 AU min. Earth dist. direct -11571 Apr 15 j 15:49 13°**8**10'21 -11579 Jul 09 j 13:16 24°Υ 55'45 16°26'10 conjunction -11571 Jul 07 j 23:49 15°**8** minimum elong -11579 Jul 09 j 13:13 24° Υ 55'44 16°26'25 retrograde -11579 Oct 21 j 09:48 27°**Y**37'18 conjunction -11571 Jul 29 j 23:56 15°**8**52'51 15°04'58 -11578 Jan 07 j 03:38 26°**Y**°13'51 17°32'02 minimum elong -11571 Jul 30 j 00:11 15°**8**52'53 15°05'25 opposition -11578 Jan 08 j 07:05 26° **Y**11'56 28.82678 AU max. Earth dist. min. Earth dist. -11571 Nov 11 j 14:55 18°**8**34'48 direct -11578 Mar 27 j 21:08 24° Υ 48'22 retrograde -11570 Jan 29 j 03:20 17° \$\begin{align*} \begin{align*} \begin{al max. Earth dist. -11578 Jul 11 j 07:31 27°**Υ**30'06 30.71268 AU opposition -11570 Jan 29 j 00:08 17°**8**11'07 28.70368 AU min. Earth dist. -11578 Jul 12 j 08:34 27°**Y**'32'40 16°22'34 conjunction direct -11570 Apr 18 j 13:34 15°**8**46'08 -11578 Jul 12 j 08:34 27°**Y**32'40 16°22'50 -11570 Jul 30 j 04:17 18°**8**21'39 minimum elong evening set

-11578 Sep 25 j 16:37 0°8

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Earth dist. conjunction -11563 Aug 18 j 15:53 -11569 Apr 21 j 11:34 18°**8**21'10 6°**Ⅲ**05'05 11°57'12 direct minimum elong -11563 Aug 18 j 16:16 -11569 Jul 31 j 09:56 20°**8**52'14 evening set max. Earth dist. -11563 Aug 19 j 22:29 6°**Д**08'03 31.19926 AU 6°**Ⅲ**26'53 morning rise -11563 Aug 27 j 22:29 conjunction -11569 Aug 04 j 12:29 21°**8**02'14 14°26'38 retrograde -11563 Dec 01 j 18:37 8°**Ⅱ**41'31 -11569 Aug 04 j 12:47 21°**8**02'15 14°27'07 -11562 Feb 18 j 00:20 7°**П**21'09 29.30106 AU minimum elong min. Earth dist. -11569 Aug 04 j 21:14 21°**8**03'07 30.69476 AU -11562 Feb 19 j 07:46 7°**Ⅱ**19'02 12°29'45 max. Earth dist. opposition morning rise -11569 Aug 08 j 15:39 21°**8**12'17 direct -11562 May 09 j 12:40 5°**Ⅱ**56'49 retrograde -11569 Nov 17 j 05:13 23°**8**43'16 evening set -11562 Aug 11 j 10:10 8°**耳**07′32 opposition -11568 Feb 04 j 01:12 22°**8**19'34 15°14'57 min. Earth dist. -11568 Feb 03 j 13:53 22°**8**20'21 28.78786 AU conjunction -11562 Aug 21 j 06:27 8°**Д**30'33 11°27'31 direct -11568 Apr 23 j 09:12 20°**8**55'20 minimum elong -11562 Aug 21 j 06:49 8°**II**30'35 11°28'06 evening set -11568 Aug 01 j 00:07 23°\begin{align*} 23°\begin{align*} 22'51 \end{align*} max. Earth dist. -11562 Aug 22 j 15:04 8°**Д**33'44 31.31653 AU morning rise -11562 Aug 31 j 03:58 8°**Д**53'40 conjunction retrograde -11562 Dec 04 j 10:43 11°**Д**06'01 minimum elong -11568 Aug 06 j 06:33 23°**8**35'36 14°05'32 min. Earth dist. -11561 Feb 20 j 15:45 9°**Ц**46'04 29.41902 AU max. Earth dist. -11568 Aug 06 j 19:21 23°**8**36'54 30.75216 AU opposition -11561 Feb 22 i 02:35 9°**II**43'44 11°58'01 morning rise -11568 Aug 11 j 12:58 23°**8**48'22 direct -11561 May 12 і 06:41 8°**Д**21'51 retrograde -11568 Nov 18 j 23:45 26°**8**16'03 evening set -11561 Aug 13 j 10:26 10°**耳**30'07 -11567 Feb 05 j 23:45 24°\(\delta 52'31\) 14°50'58 opposition min. Earth dist. -11567 Feb 05 j 09:36 24°853'29 28.84776 AU -11561 Aug 23 j 20:31 10° **I** 54'17 10° 57'31 conjunction -11567 Apr 26 j 04:49 23°**8**28'36 -11561 Aug 23 j 20:54 10°**Π**54'19 10°58'08 direct minimum elong -11567 Aug 02 j 18:08 25°**8**52'56 max. Earth dist. -11561 Aug 25 j 09:11 10°**Д**57'50 31.44241 AU evening set -11561 Sep 03 j 07:42 11°**Д**18'33 morning rise -11561 Dec 06 j 23:39 13°**II**28'38 -11567 Aug 08 j 23:25 26°807'55 13°41'57 conjunction retrograde -11567 Aug 08 j 23:46 26°807'57 13°42'29 min. Earth dist. -11560 Feb 23 j 07:15 12°**Д**09'04 29.54560 AU minimum elong -11567 Aug 09 j 16:14 26°**8**09'37 30.82125 AU -11560 Feb 24 j 20:30 12°**Д**06'34 11°25'21 max. Earth dist. opposition -11567 Aug 15 j 05:24 26°**8**22'59 -11560 May 14 j 02:01 10°**Ⅲ**45'02 morning rise direct -11567 Nov 21 j 19:19 28°**8**47'46 -11560 Aug 14 j 11:03 12°**I**I50'55 retrograde evening set -11566 Feb 08 j 21:41 27°**8**24'25 14°25'24 opposition -11566 Feb 08 j 02:49 27°**8**25'42 28.91876 AU -11560 Aug 25 j 09:40 13°**II**16'06 10°26'42 min. Earth dist. conjunction direct -11566 Apr 29 j 03:04 26°**8**00'49 minimum elong -11560 Aug 25 j 10:02 13°**Д**16'08 10°27'18 evening set -11566 Aug 04 j 14:18 28°**8**22'12 max. Earth dist. -11560 Aug 27 j 00:22 13°**Д**19'50 31.57713 AU morning rise -11560 Sep 05 j 09:43 13°**Ц**41'25 conjunction -11566 Aug 11 j 16:17 28°**8**39'10 13°17'28 retrograde -11560 Dec 08 j 14:24 15°**Ц**49'20 -11566 Aug 11 j 16:38 28°**8**39'12 13°18'00 min. Earth dist. -11559 Feb 24 j 20:27 14°**Д**30'14 29.68133 AU minimum elong max. Earth dist. -11566 Aug 12 j 12:31 28°**8**41'12 30.90109 AU opposition -11559 Feb 26 j 13:42 14°**Д**27'29 10°51'52 -11566 Aug 18 j 19:04 28°**8**56'14 direct -11559 May 16 j 19:25 13°**Д**06'17 morning rise -11566 Sep 15 j 23:38 0°**П** -11559 Aug 16 j 11:35 15°**Д**09'52 evening set -11566 Nov 24 і 14:08 1°**Д**18'18 retrograde -11565 Feb 08 j 19:51 30°R& -11559 Aug 27 j 22:08 15°**II**35'59 9°55'08 conjunction -11565 Feb 11 i 19:05 29°855'09 13°58'24 -11559 Aug 27 j 22:30 15°**II**36'01 9°55'45 opposition minimum elong -11565 Feb 10 j 21:35 29° 856'37 29.00026 AU -11559 Aug 29 j 16:55 15°**Д**40'04 31.72091 AU min. Earth dist. max. Earth dist. direct -11565 May 01 i 22:52 28° 831'54 morning rise -11559 Sep 08 i 10:04 16° **I**I 02'14 -11565 Jul 15 j 08:27 $0^{\circ}\Pi$ retrograde -11559 Dec 11 i 01:41 18° **II** 08'03 -11565 Aug 06 j 12:05 0°**Ⅱ**50′28 min. Earth dist. -11558 Feb 27 j 10:51 16°**Д**49'19 29.82637 AU evening set -11558 Mar 01 j 06:10 16° **II** 46'27 10°17'39 opposition conjunction -11565 Aug 14 j 08:44 1°П09'12 12°51'41 direct -11558 May 19 j 12:04 15°**Д**25'36 minimum elong -11565 Aug 14 j 09:06 1°**Ⅲ**09'15 12°52'14 evening set -11558 Aug 18 j 12:33 17°**Д**26'58 max. Earth dist. -11565 Aug 15 j 08:44 1°**Д**11'36 30.99118 AU morning rise -11565 Aug 22 j 06:10 1°**Ⅲ**28′02 conjunction -11558 Aug 30 j 09:57 17°**Д**53'54 9°22'55 retrograde -11565 Nov 27 j 07:53 3°**II**47'31 minimum elong -11558 Aug 30 j 10:17 17°**Д**53'56 9°23'32 -11564 Feb 14 j 15:52 2°**II**24'36 13°30'03 -11558 Sep 01 j 07:10 17°**Д**58'11 31.87412 AU opposition max. Earth dist. -11564 Feb 13 j 14:26 2°**Ц**26'19 29.09141 AU -11558 Sep 11 j 08:55 18°**Д**20'58 min. Earth dist. morning rise 1°**Ⅲ**01'42 -11558 Dec 13 j 13:04 20° **I** 24'46 direct -11564 May 03 j 20:03 retrograde evening set -11564 Aug 07 j 10:41 3°**Ⅲ**17'34 min. Earth dist. -11557 Mar 01 j 21:59 19°**Ⅲ**06'35 29.98094 AU opposition -11557 Mar 03 j 21:28 19°**Ⅱ**03'27 9°42'47 conjunction -11564 Aug 16 j 00:28 3°**I**37′53 12°24′42 direct -11557 May 22 j 03:30 17°**Ⅱ**42'59 minimum elong -11564 Aug 16 j 00:50 3°**Ⅲ**37'55 12°25'15 evening set -11557 Aug 20 j 13:28 19°**Ⅲ**42'14 max. Earth dist. -11564 Aug 17 j 03:02 3°**Ц**40'30 31.09066 AU

conjunction

-11557 Sep 01 j 21:01 20°П09'53 8°50'10

-11564 Aug 24 j 15:15 3°**Д**58'17

morning rise

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Attention, astronom	nical year style is used: The	e vear -11557	in astronomical co	unting style is the yea		, .	le.
minimum elong	-11557 Sep 01 j 21:21	-		min. Earth dist.	-11550 Mar 16 j 19:14		31.28897 AU
max. Earth dist.	-11557 Sep 03 j 21:37			opposition	-11550 Mar 19 j 11:28		
morning rise	-11557 Sep 14 j 06:18			direct	-11550 Jun 06 j 17:24		
retrograde	-11557 Dec 15 j 23:34			evening set	-11550 Sep 01 j 21:41		
min. Earth dist.	-11556 Mar 03 j 10:42		30.14487 AU	Č	1 3		
opposition	-11556 Mar 05 j 12:14			conjunction	-11550 Sep 16 j 07:35	5°9510'45	4°52'42
direct	-11556 May 23 j 16:36			minimum elong	-11550 Sep 16 j 07:47	5°9510'46	4°53'20
evening set	-11556 Aug 21 j 14:24			max. Earth dist.	-11550 Sep 19 j 00:34	5° © 16'31	33.38604 AU
Č	Ç Ş			morning rise	-11550 Sep 30 j 20:02	5°5541'25	
conjunction	-11556 Sep 03 j 07:19	22° Ⅱ 24'00	8°16'56	retrograde	-11550 Dec 30 j 13:26	7° © 31'55	
minimum elong	-11556 Sep 03 j 07:37			min. Earth dist.	-11549 Mar 19 j 03:41	6°9517'25	31.49945 AU
max. Earth dist.	-11556 Sep 05 j 10:47	22° Ⅱ 28'48	32.20815 AU	opposition	-11549 Mar 21 j 20:28	6° © 13'19	4°52'50
morning rise	-11556 Sep 16 j 01:57			direct	-11549 Jun 09 j 03:16	4°956'14	
retrograde	-11556 Dec 17 j 10:19			evening set	-11549 Sep 03 j 22:50	6°9541'37	
min. Earth dist.	-11555 Mar 05 j 20:51	23° Ⅲ 35′15	30.31765 AU				
opposition	-11555 Mar 08 j 02:05	23° Ⅲ 31'47	8°31'35	conjunction	-11549 Sep 18 j 13:18	7°512'11	4°18'33
direct	-11555 May 26 j 06:36			minimum elong	-11549 Sep 18 j 13:28	7°5512'12	
evening set	-11555 Aug 23 j 15:32			max. Earth dist.	-11549 Sep 21 j 07:21	7°518'00	33.60051 AU
844				morning rise	-11549 Oct 03 j 06:24	7°542'59	
conjunction	-11555 Sep 05 j 16:56	24° Ⅱ 36'16	7°43'20	retrograde	-11548 Jan 01 j 18:00	9°532'06	
minimum elong	-11555 Sep 05 j 17:14			min. Earth dist.	-11548 Mar 20 j 09:08	8°918'05	31.71440 AU
max. Earth dist.	-11555 Sep 07 j 22:48			opposition	-11548 Mar 23 j 04:38	8°513'51	
morning rise	-11555 Sep 18 j 20:26			direct	-11548 Jun 10 j 12:10	6°957'09	
retrograde	-11555 Dec 19 j 21:14			evening set	-11548 Sep 04 j 23:43	8°5541'06	
min. Earth dist.	-11554 Mar 08 j 07:54		30 49880 AU	evening sec	110 to 50p 0 t j 25.15	0 00	
opposition	-11554 Mar 10 j 15:12			conjunction	-11548 Sep 19 j 18:05	9° © 11'44	3°44'33
direct	-11554 May 28 j 18:41		, 5525	minimum elong	-11548 Sep 19 j 18:14		
evening set	-11554 Aug 25 j 16:36			max. Earth dist.	-11548 Sep 22 j 14:11		33.81917 AU
e venning see	1105 1 11ug 20 j 10.50	20 11/20		morning rise	-11548 Oct 04 j 15:20	9°542'37	33.01717110
conjunction	-11554 Sep 08 j 02:01	26°∏46'44	7°09'27	retrograde	-11547 Jan 02 j 21:58		
minimum elong	-11554 Sep 08 j 02:18			min. Earth dist.	-11547 Mar 22 j 15:49		31 93403 ATT
max. Earth dist.	-11554 Sep 10 j 11:05			opposition	-11547 Mar 25 j 12:11		
morning rise	-11554 Sep 21 j 13:22		32.37377 110	direct	-11547 Jun 12 j 18:33		3 40 20
retrograde	-11554 Dec 22 j 07:04			evening set	-11547 Sep 07 j 00:31		
min. Earth dist.	-11553 Mar 10 j 17:41		30 68723 ATT	evening set	-11547 Sep 07 J 00.51	10 33040	
opposition	-11553 Mar 13 j 03:25			conjunction	-11547 Sep 21 j 22:24	1100000126	3°10'44
direct	-11553 May 31 j 07:51		7 1702	minimum elong	-11547 Sep 21 j 22:32		
evening set	-11553 Aug 27 j 17:55			max. Earth dist.	-11547 Sep 24 j 20:26		
evening set	-11333 Aug 27 J 17.33	20 Щ2545		morning rise	-11547 Oct 06 j 23:02		34.04231 AU
conjunction	-11553 Sep 10 j 10:17	200∏55!26	6025122	retrograde	-11546 Jan 05 j 01:33		
minimum elong	-11553 Sep 10 j 10:17			min. Earth dist.	-11546 Mar 24 j 20:03		32 15854 ATT
max. Earth dist.	-11553 Sep 10 j 10:35 -11553 Sep 12 j 20:45			opposition	-11546 Mar 27 j 18:38		
morning rise	-11553 Sep 12 j 20.45 -11553 Sep 24 j 05:02		32.17009 AU	direct	-11546 Jun 15 j 01:34		3 04 20
morning rise	-11553 Sep 24 j 03.02 -11553 Oct 11 j 02:03	0°95		evening set	-11546 Sep 09 j 01:20		
retrograde	-11553 Dec 24 j 16:48	1°9520'18		evening set	-11340 Sep 09 J 01.20	12 5934 40	
min. Earth dist.	-11552 Mar 12 j 02:39	0°904'30	30.88230 AU	conjunction	-11546 Sep 24 j 01:54	1296205117	2°37'09
	-	0°900'39	6°42'30	minimum elong	-11546 Sep 24 j 02:00		2°37'46
opposition	-11552 Mar 14 j 14:50 -11552 Mar 15 j 01:00		0 72 30	max. Earth dist.	-11546 Sep 24 j 02:00 -11546 Sep 27 j 01:07		
direct	-11552 Jun 01 j 18:09			max. Darui dist.	110 TO BCP 4/ U1.U/	2/11/2	JT.2/000 AU
direct				morning rise		1300636110	
	3			morning rise	-11546 Oct 09 j 05:38		
avanina sat	-11552 Aug 12 j 22:42	0ಂತಾ		retrograde	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24	15° © 21'34	22 28820 AII
evening set	3			retrograde min. Earth dist.	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20	15°©21'34 14°©08'43	
	-11552 Aug 12 j 22:42 -11552 Aug 28 j 19:08	0°ഇ 0°932′20	600110	retrograde min. Earth dist. opposition	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20 -11545 Mar 30 j 00:29	15°©21'34 14°©08'43 14°©04'16	
conjunction	-11552 Aug 12 j 22:42 -11552 Aug 28 j 19:08 -11552 Sep 11 j 18:06	0°532'20 1°502'21	6°01'10	retrograde min. Earth dist. opposition direct	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20 -11545 Mar 30 j 00:29 -11545 Jun 17 j 06:34	15°\$21'34 14°\$08'43 14°\$04'16 12°\$48'43	
conjunction minimum elong	-11552 Aug 12 j 22:42 -11552 Aug 28 j 19:08 -11552 Sep 11 j 18:06 -11552 Sep 11 j 18:20	0°5 0°532'20 1°502'21 1°502'22	6°01'48	retrograde min. Earth dist. opposition	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20 -11545 Mar 30 j 00:29	15°\$21'34 14°\$08'43 14°\$04'16 12°\$48'43	
conjunction minimum elong max. Earth dist.	-11552 Aug 12 j 22:42 -11552 Aug 28 j 19:08 -11552 Sep 11 j 18:06 -11552 Sep 11 j 18:20 -11552 Sep 14 j 07:39	0°\$-0002'21 1°\$-02'22 1°\$-07'54		retrograde min. Earth dist. opposition direct evening set	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20 -11545 Mar 30 j 00:29 -11545 Jun 17 j 06:34 -11545 Sep 11 j 01:49	15°\$21'34 14°\$08'43 14°\$04'16 12°\$48'43 14°\$28'51	2°28'50
conjunction minimum elong max. Earth dist. morning rise	-11552 Aug 12 j 22:42 -11552 Aug 28 j 19:08 -11552 Sep 11 j 18:06 -11552 Sep 11 j 18:20 -11552 Sep 14 j 07:39 -11552 Sep 25 j 19:16	0°S 0°S32'20 1°S02'21 1°S02'22 1°S07'54 1°S32'34	6°01'48	retrograde min. Earth dist. opposition direct evening set conjunction	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20 -11545 Mar 30 j 00:29 -11545 Jun 17 j 06:34 -11545 Sep 11 j 01:49 -11545 Sep 26 j 04:51	15°\$21'34 14°\$08'43 14°\$04'16 12°\$48'43 14°\$28'51 14°\$59'24	2°28'50 2°03'50
conjunction minimum elong max. Earth dist. morning rise retrograde	-11552 Aug 12 j 22:42 -11552 Aug 28 j 19:08 -11552 Sep 11 j 18:06 -11552 Sep 11 j 18:20 -11552 Sep 14 j 07:39 -11552 Sep 25 j 19:16 -11552 Dec 26 j 00:05	0°S 0°S32'20 1°S02'21 1°S02'22 1°S07'54 1°S32'34 3°S25'59	6°01'48 32.97042 AU	retrograde min. Earth dist. opposition direct evening set conjunction minimum elong	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20 -11545 Mar 30 j 00:29 -11545 Jun 17 j 06:34 -11545 Sep 11 j 01:49 -11545 Sep 26 j 04:51 -11545 Sep 26 j 04:56	15°\$21'34 14°\$08'43 14°\$04'16 12°\$48'43 14°\$28'51 14°\$59'24 14°\$59'24	2°28'50 2°03'50 2°04'28
conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist.	-11552 Aug 12 j 22:42 -11552 Aug 28 j 19:08 -11552 Sep 11 j 18:06 -11552 Sep 11 j 18:20 -11552 Sep 14 j 07:39 -11552 Sep 25 j 19:16 -11552 Dec 26 j 00:05 -11551 Mar 14 j 12:01	0°S 0°S32'20 1°S02'21 1°S02'22 1°S07'54 1°S32'34 3°S25'59 2°S10'37	6°01'48 32.97042 AU 31.08306 AU	retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist.	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20 -11545 Mar 30 j 00:29 -11545 Jun 17 j 06:34 -11545 Sep 11 j 01:49 -11545 Sep 26 j 04:51 -11545 Sep 26 j 04:56 -11545 Sep 29 j 06:45	15°\$21'34 14°\$08'43 14°\$04'16 12°\$48'43 14°\$28'51 14°\$59'24 14°\$59'24 15°\$05'40	2°28'50 2°03'50 2°04'28
conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition	-11552 Aug 12 j 22:42 -11552 Aug 28 j 19:08 -11552 Sep 11 j 18:06 -11552 Sep 11 j 18:20 -11552 Sep 14 j 07:39 -11552 Sep 25 j 19:16 -11552 Dec 26 j 00:05 -11551 Mar 14 j 12:01 -11551 Mar 17 j 01:35	0°S 0°S32'20 1°S02'21 1°S02'22 1°S07'54 1°S32'34 3°S25'59 2°S10'37 2°S06'42	6°01'48 32.97042 AU	retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20 -11545 Mar 30 j 00:29 -11545 Jun 17 j 06:34 -11545 Sep 11 j 01:49 -11545 Sep 26 j 04:51 -11545 Sep 26 j 04:56 -11545 Oct 11 j 10:46	15°\$21'34 14°\$08'43 14°\$04'16 12°\$48'43 14°\$28'51 14°\$59'24 14°\$59'24 15°\$05'40 15°\$30'12	2°28'50 2°03'50 2°04'28
conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct	-11552 Aug 12 j 22:42 -11552 Aug 28 j 19:08 -11552 Sep 11 j 18:06 -11552 Sep 11 j 18:20 -11552 Sep 14 j 07:39 -11552 Sep 25 j 19:16 -11552 Dec 26 j 00:05 -11551 Mar 14 j 12:01 -11551 Mar 17 j 01:35 -11551 Jun 04 j 06:50	0°S 0°S32'20 1°S02'21 1°S02'22 1°S07'54 1°S32'34 3°S25'59 2°S10'37 2°S06'42 0°S48'48	6°01'48 32.97042 AU 31.08306 AU	retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20 -11545 Mar 30 j 00:29 -11545 Jun 17 j 06:34 -11545 Sep 11 j 01:49 -11545 Sep 26 j 04:56 -11545 Sep 29 j 06:45 -11545 Oct 11 j 10:46 -11544 Jan 09 j 09:40	15°\$21'34 14°\$08'43 14°\$04'16 12°\$48'43 14°\$28'51 14°\$59'24 14°\$59'24 15°\$05'40 15°\$30'12 17°\$14'29	2°28'50 2°03'50 2°04'28 34.50372 AU
conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition	-11552 Aug 12 j 22:42 -11552 Aug 28 j 19:08 -11552 Sep 11 j 18:06 -11552 Sep 11 j 18:20 -11552 Sep 14 j 07:39 -11552 Sep 25 j 19:16 -11552 Dec 26 j 00:05 -11551 Mar 14 j 12:01 -11551 Mar 17 j 01:35	0°S 0°S32'20 1°S02'21 1°S02'22 1°S07'54 1°S32'34 3°S25'59 2°S10'37 2°S06'42	6°01'48 32.97042 AU 31.08306 AU	retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist.	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20 -11545 Mar 30 j 00:29 -11545 Jun 17 j 06:34 -11545 Sep 11 j 01:49 -11545 Sep 26 j 04:51 -11545 Sep 26 j 04:56 -11545 Oct 11 j 10:46 -11544 Jan 09 j 09:40 -11544 Mar 28 j 03:55	15°S21'34 14°S08'43 14°S04'16 12°S48'43 14°S28'51 14°S59'24 14°S59'24 15°S05'40 15°S30'12 17°S14'29 16°S02'03	2°28'50 2°03'50 2°04'28 34.50372 AU 32.62309 AU
conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set	-11552 Aug 12 j 22:42 -11552 Aug 28 j 19:08 -11552 Sep 11 j 18:06 -11552 Sep 11 j 18:20 -11552 Sep 14 j 07:39 -11552 Sep 25 j 19:16 -11552 Dec 26 j 00:05 -11551 Mar 14 j 12:01 -11551 Jun 04 j 06:50 -11551 Aug 30 j 20:25	0°S 0°S32'20 1°S02'21 1°S02'22 1°S07'54 1°S32'34 3°S25'59 2°S10'37 2°S06'42 0°S48'48 2°S37'12	6°01'48 32.97042 AU 31.08306 AU 6°05'55	retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20 -11545 Mar 30 j 00:29 -11545 Jun 17 j 06:34 -11545 Sep 11 j 01:49 -11545 Sep 26 j 04:51 -11545 Sep 26 j 04:56 -11545 Sep 29 j 06:45 -11545 Oct 11 j 10:46 -11544 Jan 09 j 09:40 -11544 Mar 28 j 03:55 -11544 Mar 31 j 05:26	15°S21'34 14°S08'43 14°S04'16 12°S48'43 14°S28'51 14°S59'24 14°S59'24 15°S05'40 15°S30'12 17°S14'29 16°S02'03 15°S57'33	2°28'50 2°03'50 2°04'28 34.50372 AU 32.62309 AU
conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction	-11552 Aug 12 j 22:42 -11552 Aug 28 j 19:08 -11552 Sep 11 j 18:06 -11552 Sep 11 j 18:20 -11552 Sep 14 j 07:39 -11552 Sep 25 j 19:16 -11552 Dec 26 j 00:05 -11551 Mar 14 j 12:01 -11551 Jun 04 j 06:50 -11551 Aug 30 j 20:25 -11551 Sep 14 j 01:04	0°S 0°S32'20 1°S02'21 1°S02'22 1°S07'54 1°S32'34 3°S25'59 2°S10'37 2°S06'42 0°S48'48 2°S37'12	6°01'48 32.97042 AU 31.08306 AU 6°05'55 5°26'55	retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20 -11545 Mar 30 j 00:29 -11545 Jun 17 j 06:34 -11545 Sep 11 j 01:49 -11545 Sep 26 j 04:51 -11545 Sep 26 j 04:56 -11545 Sep 29 j 06:45 -11545 Oct 11 j 10:46 -11544 Jan 09 j 09:40 -11544 Mar 28 j 03:55 -11544 Mar 31 j 05:26 -11544 Jun 18 j 12:35	15°S21'34 14°S08'43 14°S04'16 12°S48'43 14°S28'51 14°S59'24 14°S59'24 15°S30'12 17°S14'29 16°S02'03 15°S57'33 14°S42'23	2°28'50 2°03'50 2°04'28 34.50372 AU 32.62309 AU
conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong	-11552 Aug 12 j 22:42 -11552 Aug 28 j 19:08 -11552 Sep 11 j 18:06 -11552 Sep 11 j 18:20 -11552 Sep 14 j 07:39 -11552 Sep 25 j 19:16 -11552 Dec 26 j 00:05 -11551 Mar 14 j 12:01 -11551 Jun 04 j 06:50 -11551 Aug 30 j 20:25 -11551 Sep 14 j 01:04 -11551 Sep 14 j 01:18	0°S 0°S32'20 1°S02'21 1°S02'22 1°S07'54 1°S32'34 3°S25'59 2°S10'37 2°S06'42 0°S48'48 2°S37'12 3°S07'28 3°S07'29	6°01'48 32.97042 AU 31.08306 AU 6°05'55 5°26'55 5°27'34	retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20 -11545 Mar 30 j 00:29 -11545 Jun 17 j 06:34 -11545 Sep 11 j 01:49 -11545 Sep 26 j 04:51 -11545 Sep 26 j 04:56 -11545 Sep 29 j 06:45 -11545 Oct 11 j 10:46 -11544 Jan 09 j 09:40 -11544 Mar 28 j 03:55 -11544 Mar 31 j 05:26	15°S21'34 14°S08'43 14°S04'16 12°S48'43 14°S28'51 14°S59'24 14°S59'24 15°S30'12 17°S14'29 16°S02'03 15°S57'33 14°S42'23	2°28'50 2°03'50 2°04'28 34.50372 AU 32.62309 AU
conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist.	-11552 Aug 12 j 22:42 -11552 Aug 28 j 19:08 -11552 Sep 11 j 18:06 -11552 Sep 11 j 18:20 -11552 Sep 14 j 07:39 -11552 Sep 25 j 19:16 -11552 Dec 26 j 00:05 -11551 Mar 14 j 12:01 -11551 Jun 04 j 06:50 -11551 Aug 30 j 20:25 -11551 Sep 14 j 01:04 -11551 Sep 14 j 01:18 -11551 Sep 16 j 15:27	0°S 0°S32'20 1°S02'21 1°S02'22 1°S07'54 1°S32'34 3°S25'59 2°S10'37 2°S06'42 0°S48'48 2°S37'12 3°S07'28 3°S07'29 3°S13'02	6°01'48 32.97042 AU 31.08306 AU 6°05'55 5°26'55	retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20 -11545 Mar 30 j 00:29 -11545 Jun 17 j 06:34 -11545 Sep 11 j 01:49 -11545 Sep 26 j 04:51 -11545 Sep 26 j 04:56 -11545 Sep 29 j 06:45 -11545 Oct 11 j 10:46 -11544 Jan 09 j 09:40 -11544 Mar 28 j 03:55 -11544 Mar 31 j 05:26 -11544 Jun 18 j 12:35 -11544 Sep 12 j 02:21	15°S21'34 14°S08'43 14°S04'16 12°S48'43 14°S59'24 14°S59'24 15°S05'40 15°S30'12 17°S14'29 16°S02'03 15°S57'33 14°S42'23 16°S21'24	2°28'50 2°03'50 2°04'28 34.50372 AU 32.62309 AU 1°53'35
conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong	-11552 Aug 12 j 22:42 -11552 Aug 28 j 19:08 -11552 Sep 11 j 18:06 -11552 Sep 11 j 18:20 -11552 Sep 14 j 07:39 -11552 Sep 25 j 19:16 -11552 Dec 26 j 00:05 -11551 Mar 14 j 12:01 -11551 Jun 04 j 06:50 -11551 Aug 30 j 20:25 -11551 Sep 14 j 01:04 -11551 Sep 14 j 01:18	0°S 0°S32'20 1°S02'21 1°S02'22 1°S07'54 1°S32'34 3°S25'59 2°S10'37 2°S06'42 0°S48'48 2°S37'12 3°S07'28 3°S07'29	6°01'48 32.97042 AU 31.08306 AU 6°05'55 5°26'55 5°27'34	retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct	-11546 Oct 09 j 05:38 -11545 Jan 07 j 06:24 -11545 Mar 27 j 00:20 -11545 Mar 30 j 00:29 -11545 Jun 17 j 06:34 -11545 Sep 11 j 01:49 -11545 Sep 26 j 04:51 -11545 Sep 26 j 04:56 -11545 Sep 29 j 06:45 -11545 Oct 11 j 10:46 -11544 Jan 09 j 09:40 -11544 Mar 28 j 03:55 -11544 Mar 31 j 05:26 -11544 Jun 18 j 12:35	15°S21'34 14°S08'43 14°S04'16 12°S48'43 14°S59'24 14°S59'24 15°S05'40 15°S30'12 17°S14'29 16°S02'03 15°S57'33 14°S42'23 16°S21'24	2°28'50 2°03'50 2°04'28 34.50372 AU 32.62309 AU 1°53'35

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11544 in astronomical counting style is the year 11545 BCE in historical counting style. -11544 Sep 30 j 09:36 16°\$58'06 34.74174 AU opposition -11537 Apr 13 j 21:29 28°528'10 -2°00'25 max. Earth dist. -11544 Oct 12 j 15:00 17°522'32 direct -11537 Jul 02 j 06:26 27°515'46 morning rise -11543 Jan 10 j 13:24 19°505'46 -11537 Sep 25 j 03:03 28°548'35 retrograde evening set min. Earth dist. -11543 Mar 30 j 05:53 17°553'49 32.86295 AU -11543 Apr 02 j 09:47 17°5549'12 1°18'43 -11537 Oct 10 j 07:43 29°517'17 -2°08'23 opposition conjunction -11543 Jun 20 j 15:49 16°534'26 -11537 Oct 10 j 07:39 29°517'17 2°07'47 direct minimum elong -11537 Oct 13 j 17:03 29°\$23'44 36.49175 AU -11543 Sep 14 j 02:36 18°512'25 evening set max. Earth dist. morning rise -11537 Oct 25 j 15:50 29°546'15 -11543 Sep 29 j 08:43 18°9542'42 0°58'14 conjunction -11537 Nov 02 j 04:44 $0^{\circ}\Omega$ -11543 Sep 29 j 08:46 18°542'42 0°58'52 minimum elong retrograde -11536 Jan 23 j 11:30 1°**£**23′40 max. Earth dist. -11543 Oct 02 j 13:51 18°549'08 34.98426 AU min. Earth dist. -11536 Apr 11 j 11:51 0°**Ω**14'23 34.62071 AU -11543 Oct 14 j 17:59 19°513'14 morning rise opposition -11536 Apr 14 j 21:16 0° Ω09'36 -2°31'43 -11542 Jan 12 j 13:33 20°555'30 retrograde -11536 Apr 21 j 16:58 30°Rூ min. Earth dist. -11542 Apr 01 j 09:10 19°543'56 33.10710 AU direct -11536 Jul 03 j 05:59 28°557'32 opposition -11542 Apr 04 j 13:27 19°539'18 0°44'17 -11536 Sep 09 j 06:53 $0^{\circ}\Omega$ direct -11542 Jun 22 j 21:38 18°524'58 evening set -11536 Sep 26 j 02:37 0°Ω29'38 evening set -11542 Sep 16 j 02:55 20°501'57 conjunction -11536 Oct 11 j 05:46 0°**Ω**57'59 -2°37'46 conjunction -11542 Oct 01 j 09:53 20°532'03 0°26'00 minimum elong -11536 Oct 11 j 05:41 0°**Ω**57'59 2°37'11 minimum elong -11542 Oct 01 j 09:54 20°532'03 max. Earth dist. -11536 Oct 14 j 16:43 1°**Ω**04'31 36.74588 AU max. Earth dist. -11542 Oct 04 j 15:27 20°538'28 35.23061 AU morning rise -11536 Oct 26 j 12:11 1°**Ω**26'35 morning rise -11542 Oct 16 j 20:04 21°502'25 retrograde -11535 Jan 24 i 08:27 3°**Ω**03′20 retrograde -11541 Jan 14 j 14:41 22°5643'44 min. Earth dist. -11535 Apr 13 j 11:31 1°**Ω**54'18 34.87589 AU min. Earth dist. -11541 Apr 03 j 09:46 21°532'40 33.35487 AU opposition -11535 Apr 16 j 20:26 1°Ω49'34 -3°02'26 opposition -11541 Apr 06 i 16:10 21°527'56 0°10'19 direct -11535 Jul 05 j 07:20 0°**Ω**37'48 direct -11541 Jun 25 j 01:50 20°514'01 evening set -11535 Sep 28 j 01:59 2°**Ω**09'14 -11541 Jul 27 j 22:05 20°530'12 desc. node -11541 Sep 18 j 03:10 21°550'04 conjunction -11535 Oct 13 j 03:12 $2^{\circ}\Omega$ 37'13 -3°06'36 evening set -11535 Oct 13 j 03:05 $2^{\circ}\Omega$ 37'12 $3^{\circ}06'02$ minimum elong -11541 Oct 03 j 10:27 22°519'57 -0°05'54 max. Earth dist. -11535 Oct 16 j 13:53 2° Ω43'40 37.00060 AU conjunction -11535 Oct 28 j 07:40 3° **Ω**05'26 -11541 Oct 03 j 10:27 22°519'57 0°05'16 minimum elong morning rise -11541 Oct 03 j 04:15 22°519'28 -11534 Jan 26 j 05:56 4°**Ω**41'31 behind sun begin retrograde -11541 Oct 03 j 16:38 22°520'26 -11534 Apr 15 j 08:26 3°**Ω**32'52 35.13193 AU behind sun end min. Earth dist. max. Earth dist. -11541 Oct 06 j 17:43 22°526'27 35.47988 AU -11534 Apr 18 j 18:52 3°Ω28'03 -3°32'33 opposition -11541 Oct 18 j 21:05 22°550'05 -11534 Jul 07 j 07:04 2°Ω16'36 morning rise direct -11540 Jan 16 j 14:08 24°530'34 -11534 Sep 30 j 01:19 $3^{\circ}\Omega 47'25$ retrograde evening set -11540 Apr 04 j 12:08 23°519'50 33.60547 AU min. Earth dist. opposition -11540 Apr 07 j 18:31 23°515'08 -0°23'09 conjunction -11534 Oct 15 j 00:08 $4^{\circ}\Omega$ 15'00 -3°34'54 direct -11540 Jun 26 j 04:13 22°501'38 minimum elong -11534 Oct 15 j 00:01 $4^{\circ}\Omega$ 14'59 $3^{\circ}34'21$ evening set -11540 Sep 19 j 03:06 23°536'47 max. Earth dist. -11534 Oct 18 j 11:54 $4^{\circ}\Omega$ 21'29 37.25611 AU morning rise -11534 Oct 30 j 02:19 4° **Ω**42'49 -11540 Oct 04 j 10:27 24°506'25 -0°37'12 retrograde -11533 Jan 28 j 00:14 6° **Ω**18'19 conjunction -11540 Oct 04 j 10:26 24°\$06'25 0°36'36 min. Earth dist. -11533 Apr 17 j 06:41 5° **Ω**09'55 35.38922 AU minimum elong max. Earth dist. -11540 Oct 07 j 18:42 24°5512'57 35.73144 AU -11533 Apr 20 j 16:42 5°**Ω**05'09 -4°02'03 opposition -11540 Oct 19 j 20:59 24°536'19 -11533 Jul 09 j 05:55 3°**Ω**54'01 morning rise direct -11533 Oct 02 j 00:20 5°Ω24'15 retrograde -11539 Jan 17 j 12:45 26°515'58 evening set -11539 Apr 06 j 12:18 25°\$05'41 33.85795 AU min. Earth dist. -11539 Apr 09 j 20:07 25°\$00'54 -0°56'07 -11533 Oct 16 j 20:38 5° Ω 51'25 -4°02'37 opposition conjunction direct -11539 Jun 28 i 06:36 23°547'47 minimum elong -11533 Oct 16 j 20:30 $5^{\circ}\Omega$ 51'24 4° 02'04 evening set -11539 Sep 21 j 03:19 25°522'08 max. Earth dist. -11533 Oct 20 j 09:12 5° Ω 57'56 37.51302 AU morning rise -11533 Oct 31 j 19:58 $6^{\circ}\Omega$ 18'50 -11539 Oct 06 i 10:03 25°\$51'29 -1°08'05 retrograde -11532 Jan 29 j 18:46 7° **Ω**53'47 conjunction -11539 Oct 06 j 10:01 25°\$51'28 1°07'28 min. Earth dist. -11532 Apr 18 j 02:45 6° **Ω**45'44 35.64796 AU minimum elong -11539 Oct 09 j 18:32 25°557'58 35.98427 AU max. Earth dist. opposition -11532 Apr 21 j 13:58 6°Ω40'56 -4°30'56 morning rise -11539 Oct 21 j 20:17 26°521'05 direct -11532 Jul 10 j 04:16 5°**£**30′07 retrograde -11538 Jan 19 j 13:19 27°559'58 evening set -11532 Oct 02 j 23:12 6°**Ω**59'50 min. Earth dist. -11538 Apr 08 j 13:00 26°\$50'01 34.11174 AU -11538 Apr 11 j 21:08 26°545'16 -1°28'32 conjunction -11532 Oct 17 j 16:23 7°**Ω**26'34 -4°29'47 opposition -11538 Jun 30 j 05:37 25°532'31 -11532 Oct 17 j 16:14 direct minimum elong 7°**Ω**26'34 4°29'15 -11538 Sep 23 j 03:13 27°506'04 -11532 Oct 21 j 05:07 evening set max. Earth dist. 7°**Ω**33'02 37.77127 AU morning rise -11532 Nov 01 j 12:54 7°**£**53′33 conjunction -11538 Oct 08 j 09:17 27°535'07 -1°38'29 retrograde -11531 Jan 30 j 15:52 9°**£**28′02 minimum elong -11538 Oct 08 j 09:14 27°535'06 1°37'54 min. Earth dist. -11531 Apr 19 j 23:07 8°**Ω**20'18 35.90829 AU max. Earth dist. -11538 Oct 11 j 19:06 27°541'39 36.23790 AU opposition -11531 Apr 23 j 10:53 8°**Ω**15'30 -4°59'11 morning rise -11538 Oct 23 j 18:31 28°504'24 direct -11531 Jul 11 j 22:49 7°**Ω**05'01 -11537 Jan 21 j 11:35 29°5042'33 -11531 Oct 04 j 21:55 8°**Ω**34'16 retrograde evening set

min. Earth dist.

-11537 Apr 10 j 13:13 28°532'55 34.36600 AU

•	omena of Pluto from		•				age 28
	nical year style is used: The	-					
conjunction	-11531 Oct 19 j 12:01			max. Earth dist.	-11525 Nov 01 j 14:25		39.58206 AU
minimum elong	-11531 Oct 19 j 11:52	9° Ω 00'33	4°55'49	morning rise	-11525 Nov 11 j 16:25	18° Ω 26'51	
max. Earth dist.	-11531 Oct 23 j 02:14	9° Ω 07'05	38.03086 AU	retrograde	-11524 Feb 10 j 21:56	19° Ω 58'55	
morning rise	-11531 Nov 03 j 05:05	9° Ω 27'06		min. Earth dist.	-11524 Apr 30 j 11:21	18° Ω 53'14	37.72720 AU
retrograde	-11530 Feb 01 j 10:37	11° Ω 01′08		opposition	-11524 May 03 j 22:48	18° Ω 48'36	-7°59'24
min. Earth dist.	-11530 Apr 21 j 19:20	9° Ω 53'43	36.16966 AU	direct	-11524 Jul 22 j 13:03	17° Ω 40'21	
opposition	-11530 Apr 25 j 07:01	9° Ω 48'56	-5°26'48	evening set	-11524 Oct 16 j 10:19		
direct	-11530 Jul 13 j 19:51			8			
evening set	-11530 Oct 06 j 20:38			conjunction	-11524 Oct 29 j 17:56	19°Ω30'12	-7°46'19
evening sec	11000 000 00 00 20.00	10 000757		minimum elong	-11524 Oct 29 j 17:43		
conjunction	-11530 Oct 21 j 07:05	100 022120	5022121	max. Earth dist.	-11524 Nov 02 j 08:02		
	-11530 Oct 21 j 07:05 -11530 Oct 21 j 06:55				·		39.03420 AU
minimum elong				morning rise	-11524 Nov 12 j 03:59		
max. Earth dist.	-11530 Oct 24 j 20:39		38.29123 AU	retrograde	-11523 Feb 11 j 14:26		
morning rise	-11530 Nov 04 j 20:40			min. Earth dist.	-11523 May 02 j 05:34		
retrograde	-11529 Feb 03 j 07:49			opposition	-11523 May 05 j 15:53		-8°22'43
min. Earth dist.	-11529 Apr 23 j 14:04			direct	-11523 Jul 24 j 07:09		
opposition	-11529 Apr 27 j 02:48		-5°53'47	evening set	-11523 Oct 18 j 08:14	20° £ 33′42	
direct	-11529 Jul 15 j 14:52						
evening set	-11529 Oct 08 j 19:04	11° Ω 39'58		conjunction	-11523 Oct 31 j 10:26	20° Ω 56′04	-8°08'21
				minimum elong	-11523 Oct 31 j 10:13		
conjunction	-11529 Oct 23 j 01:42	12° Ω 05'22	-5°47'46	max. Earth dist.	-11523 Nov 03 j 23:17	21° Ω 02'09	40.08445 AU
minimum elong	-11529 Oct 23 j 01:32	12° Ω 05′21	5°47'15	morning rise	-11523 Nov 13 j 15:05	21° Ω 18'37	
max. Earth dist.	-11529 Oct 26 j 16:38	12° Ω 11'51	38.55174 AU	retrograde	-11522 Feb 13 j 08:00	22° Ω 50′09	
morning rise	-11529 Nov 06 j 11:19	12° Ω 30'59		min. Earth dist.	-11522 May 03 j 21:23	21° Ω 44'54	38.23132 AU
retrograde	-11528 Feb 05 j 02:19			opposition	-11522 May 07 j 08:18		
min. Earth dist.	-11528 Apr 24 j 10:20		36 69366 AU	direct	-11522 Jul 26 j 00:01		
opposition	-11528 Apr 27 j 22:10			evening set	-11522 Oct 20 j 05:56		
direct	-11528 Jul 16 j 11:23		0 20 00	evening sec	11022 000 20 , 00.00	21 0000 02	
evening set	-11528 Oct 09 j 17:31			conjunction	-11522 Nov 02 j 02:33	22°Ω20'53	-8°29'48
evening set	11320 Oct 07 j 17.31	13 0011 22		minimum elong	-11522 Nov 02 j 02:39		
conjunction	-11528 Oct 23 j 20:04	120 026117	6012126	max. Earth dist.	-11522 Nov 05 j 16:00		
minimum elong	-11528 Oct 23 j 20.04 -11528 Oct 23 j 19:53				-11522 Nov 15 j 01:34		40.33296 AU
Č	-11528 Oct 25 j 19:35 -11528 Oct 27 j 10:28			morning rise			
max. Earth dist.			38.81183 AU	retrograde	-11521 Feb 14 j 22:58		20 40127 411
morning rise	-11528 Nov 07 j 01:27			min. Earth dist.	-11521 May 05 j 14:47		
	-11528 Dec 15 j 05:46			opposition	-11521 May 09 j 00:30		-9°0'/'30
retrograde	-11527 Feb 05 j 19:31			direct	-11521 Jul 27 j 17:17		
	-11527 Apr 01 j 00:46			evening set	-11521 Oct 22 j 03:18	23° 8 l 23'20	
min. Earth dist.	-11527 Apr 26 j 04:13					_	
opposition	-11527 Apr 29 j 16:55		-6°45'52	conjunction	-11521 Nov 03 j 18:11		
direct	-11527 Jul 18 j 07:25			minimum elong	-11521 Nov 03 j 17:57		
evening set	-11527 Oct 11 j 15:58			max. Earth dist.	-11521 Nov 07 j 07:32		40.58057 AU
	-11527 Oct 22 j 01:12	15° Ω		morning rise	-11521 Nov 16 j 11:09	24° Ω 06′04	
				retrograde	-11520 Feb 16 j 11:00	25° Ω 37'11	
conjunction	-11527 Oct 25 j 14:03	15° Ω 06′15	-6°36'52	min. Earth dist.	-11520 May 06 j 05:41	24° Ω 32'22	38.73038 AU
minimum elong	-11527 Oct 25 j 13:52	15° Ω 06′14	6°36'23	opposition	-11520 May 09 j 16:09	24° Ω 27'50	-9°28'59
max. Earth dist.	-11527 Oct 29 j 04:26	15° Ω 12'37	39.07061 AU	direct	-11520 Jul 28 j 11:45	23° Ω 20′32	
morning rise	-11527 Nov 08 j 15:07	15° Ω 30'53		evening set	-11520 Oct 23 j 00:44	24° Ω 46'40	
retrograde	-11526 Feb 07 j 11:32	17° Ω 03'31					
min. Earth dist.	-11526 Apr 27 j 23:45	15° Ω 57'20	37.21451 AU	conjunction	-11520 Nov 04 j 09:28	25° Ω 07'24	-9°11'01
opposition	-11526 May 01 j 11:26	15° Ω 52'38	-7°10'59	minimum elong	-11520 Nov 04 j 09:13	25° Ω 07'23	9°10'37
**	-11526 Jun 14 j 20:00			max. Earth dist.	-11520 Nov 07 j 22:21		
direct	-11526 Jul 20 j 02:45			morning rise	-11520 Nov 16 j 20:28		
	-11526 Aug 23 j 12:21			retrograde	-11519 Feb 17 j 01:13		
evening set	-11526 Oct 13 j 14:15			min. Earth dist.	-11519 May 07 j 21:26		38 97906 AU
evening sec	11320 000 13 j 1 1.13	10 0011 17		opposition	-11519 May 11 j 07:32		
conjunction	-11526 Oct 27 j 07:52	16°Ω35'15	-7°00'35	direct	-11519 Jul 30 j 03:16) I) JI
minimum elong	-11526 Oct 27 j 07:39			evening set	-11519 Jul 30 J 03.10 -11519 Oct 24 j 21:54		
	_			evening set	-11317 Oct 24 J 21.34	40 060903	
max. Earth dist.	-11526 Oct 30 j 22:21		39.32/32 AU		1151031 06:00.26	260 0 2011 5	0920147
morning rise	-11526 Nov 10 j 04:01			conjunction	-11519 Nov 06 j 00:36		
retrograde	-11525 Feb 09 j 03:35		27 47106 111	minimum elong	-11519 Nov 06 j 00:22		
min. Earth dist.	-11525 Apr 29 j 17:44			max. Earth dist.	-11519 Nov 09 j 14:20		41.0/38/ AU
opposition	-11525 May 03 j 05:12		-/°35'30	morning rise	-11519 Nov 18 j 05:09		
direct	-11525 Jul 21 j 21:18			retrograde	-11518 Feb 18 j 15:10		
evening set	-11525 Oct 15 j 12:30	17 °&2 39'49		min. Earth dist.	-11518 May 09 j 12:51		
		_		opposition	-11518 May 12 j 22:27		-10°10'07
conjunction	-11525 Oct 29 j 01:04			direct	-11518 Jul 31 j 18:28		
minimum elong	11525 Oct 20 i 00:52	180 ()03'14	7073115	evening set	-11518 Oct 26 i 10:00	270 ()201/1	

evening set

-11518 Oct 26 j 19:09 27° **\Omega**30'41

minimum elong $-11525 \text{ Oct } 29 \text{ j } 00:52 \text{ } 18^{\circ}\Omega 03'14 \text{ } 7^{\circ}23'15$

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 29

Attention astronom							age 29
	nical year style is used: The						le.
conjunction	-11518 Nov 07 j 15:15			retrograde	-11511 Feb 27 j 15:05	7° Tp 28'29	10.00156.137
minimum elong	-11518 Nov 07 j 15:01			min. Earth dist.	-11511 May 18 j 17:07		40.90476 AU
max. Earth dist.	-11518 Nov 11 j 03:50		41.31943 AU	opposition	-11511 May 21 j 21:54	6° Tp 21'26	-12°16'14
morning rise	-11518 Nov 19 j 13:21			direct	-11511 Aug 09 j 18:58	5° mp 16'17	
retrograde	-11517 Feb 20 j 07:26		20 47401 411	evening set	-11511 Nov 06 j 21:49	6° Mp 42'14	
min. Earth dist.	-11517 May 11 j 02:50				1151137 16:15.10	60 Wa 5 571 4 6	11040142
opposition	-11517 May 14 j 12:58		-10°29'48	conjunction	-11511 Nov 16 j 15:12	6° m 57'46	
direct	-11517 Aug 02 j 07:31			minimum elong	-11511 Nov 16 j 14:57	6° m 57'45	
evening set	-11517 Oct 28 j 16:07	28° 31 51'32		max. Earth dist.	-11511 Nov 19 j 23:39	~	42.97364 AU
				morning rise	-11511 Nov 26 j 09:39	7° m 13'22	
conjunction	-11517 Nov 09 j 05:41			retrograde	-11510 Mar 01 j 04:08	8° m 43'59	
minimum elong	-11517 Nov 09 j 05:27			min. Earth dist.	-11510 May 20 j 05:13		41.13156 AU
max. Earth dist.	-11517 Nov 12 j 19:04		41.56380 AU	opposition	-11510 May 23 j 10:13	7° TD 37'08	-12°32'08
morning rise	-11517 Nov 20 j 21:03			direct	-11510 Aug 11 j 07:45	6° Mp 32'10	
	-11517 Dec 10 j 04:31	0° m)		evening set	-11510 Nov 08 j 18:32	7° m 58'12	
retrograde	-11516 Feb 21 j 21:43	1° Mp 00'26					
	-11516 May 09 j 01:12			conjunction	-11510 Nov 18 j 03:45	8° Mp 13'06	
min. Earth dist.	-11516 May 11 j 18:32			minimum elong	-11510 Nov 18 j 03:31	8° Mp 13'06	
opposition	-11516 May 15 j 03:17		-10°48'53	max. Earth dist.	-11510 Nov 21 j 12:01	•	43.19703 AU
direct	-11516 Aug 02 j 22:24	28° Ω 45'51		morning rise	-11510 Nov 27 j 14:02	8° m 28'05	
	-11516 Oct 22 j 06:20	0° m)		retrograde	-11509 Mar 02 j 14:43	9° m 58'45	
evening set	-11516 Oct 29 j 13:05	0°Mp11'40		min. Earth dist.	-11509 May 21 j 18:46	8° Mp 56'04	41.35568 AU
				opposition	-11509 May 24 j 22:16	8° Mp 52'06	-12°47'32
conjunction	-11516 Nov 09 j 19:49	0°Mp30′10	-10°26'44	direct	-11509 Aug 12 j 21:59	7° m 47'19	
minimum elong	-11516 Nov 09 j 19:34	0° m ,30′09	10°26'22	evening set	-11509 Nov 10 j 15:14	9° Mp 13′27	
max. Earth dist.	-11516 Nov 13 j 08:10	0° m ,35′57	41.80652 AU				
morning rise	-11516 Nov 21 j 04:09	0°Mp48'46		conjunction	-11509 Nov 19 j 16:07	9° ™ 27'44	-12°19'29
retrograde	-11515 Feb 22 j 11:46	2° Mp 19'23		minimum elong	-11509 Nov 19 j 15:52	9° m 27′43	12°19'14
min. Earth dist.	-11515 May 13 j 08:05	1° Mp 15'43	39.96305 AU	max. Earth dist.	-11509 Nov 23 j 00:00	9° m 33'01	43.41821 AU
opposition	-11515 May 16 j 17:11	1°Mp11'21	-11°07'25	morning rise	-11509 Nov 28 j 17:46	9° ™ 42'04	
direct	-11515 Aug 04 j 13:24	0° ™ 05'19		retrograde	-11508 Mar 02 j 23:46	11° m 12'49	
evening set	-11515 Oct 31 j 10:10	1° m ,31′09		min. Earth dist.	-11508 May 22 j 06:24	10° Mp 10'20	41.57767 AU
				opposition	-11508 May 25 j 09:54	10° Mp 06'22	-13°02'24
conjunction	-11515 Nov 11 j 09:48	1° m 49'04	-10°44'19	direct	-11508 Aug 13 j 12:27	9° m 01'47	
minimum elong	-11515 Nov 11 j 09:34	1° Mp 49'03	10°44'00	evening set	-11508 Nov 11 j 11:52	10° m 28'02	
max. Earth dist.	-11515 Nov 14 j 21:41	1° m) 54'47	42.04665 AU	overming sec	110001101 11111102	•	
max. Earth dist. morning rise	-11515 Nov 14 j 21:41 -11515 Nov 22 j 11:08	1° m 54'47 2° m 07'05		conjunction	-11508 Nov 20 j 04:00		-12°33'37
	·	•		C	-	10° m 41'41	
morning rise	-11515 Nov 22 j 11:08 -11514 Feb 24 j 00:13	2° m 07'05 3° m 37'40	42.04665 AU	conjunction	-11508 Nov 20 j 04:00	10° m/41'41 10° m/41'40	12°33'22
morning rise retrograde	-11515 Nov 22 j 11:08 -11514 Feb 24 j 00:13 -11514 May 14 j 23:14	2° m 07'05 3° m 37'40	42.04665 AU 40.20380 AU	conjunction minimum elong	-11508 Nov 20 j 04:00 -11508 Nov 20 j 03:47	10° m/41'41 10° m/41'40 10° m/46'52	12°33'22
morning rise retrograde min. Earth dist.	-11515 Nov 22 j 11:08 -11514 Feb 24 j 00:13	2° m 07'05 3° m 37'40 2° m 34'10	42.04665 AU 40.20380 AU	conjunction minimum elong max. Earth dist. morning rise	-11508 Nov 20 j 04:00 -11508 Nov 20 j 03:47 -11508 Nov 23 j 10:50	10° Mp 41'41 10° Mp 41'40 10° Mp 46'52 10° Mp 55'23	12°33'22
morning rise retrograde min. Earth dist. opposition	-11515 Nov 22 j 11:08 -11514 Feb 24 j 00:13 -11514 May 14 j 23:14 -11514 May 18 j 06:48 -11514 Aug 06 j 03:55	2° m 07'05 3° m 37'40 2° m 34'10 2° m 29'54	42.04665 AU 40.20380 AU	conjunction minimum elong max. Earth dist.	-11508 Nov 20 j 04:00 -11508 Nov 20 j 03:47 -11508 Nov 23 j 10:50 -11508 Nov 28 j 21:03 -11507 Mar 04 j 11:27	10° m/41'41 10° m/41'40 10° m/46'52 10° m/55'23 12° m/26'15	12°33'22 43.63743 AU
morning rise retrograde min. Earth dist. opposition direct	-11515 Nov 22 j 11:08 -11514 Feb 24 j 00:13 -11514 May 14 j 23:14 -11514 May 18 j 06:48	2° m 07'05 3° m 37'40 2° m 34'10 2° m 29'54 1° m 24'07	42.04665 AU 40.20380 AU	conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist.	-11508 Nov 20 j 04:00 -11508 Nov 20 j 03:47 -11508 Nov 23 j 10:50 -11508 Nov 28 j 21:03 -11507 Mar 04 j 11:27 -11507 May 23 j 18:29	10° m 41'41 10° m 41'40 10° m 46'52 10° m 55'23 12° m 26'15 11° m 23'55	12°33'22 43.63743 AU 41.79794 AU
morning rise retrograde min. Earth dist. opposition direct	-11515 Nov 22 j 11:08 -11514 Feb 24 j 00:13 -11514 May 14 j 23:14 -11514 May 18 j 06:48 -11514 Aug 06 j 03:55	2° m 07'05 3° m 37'40 2° m 34'10 2° m 29'54 1° m 24'07	42.04665 AU 40.20380 AU -11°25'24	conjunction minimum elong max. Earth dist. morning rise retrograde	-11508 Nov 20 j 04:00 -11508 Nov 20 j 03:47 -11508 Nov 23 j 10:50 -11508 Nov 28 j 21:03 -11507 Mar 04 j 11:27	10° m 41'41 10° m 41'40 10° m 46'52 10° m 55'23 12° m 26'15 11° m 23'55 11° m 20'00	12°33'22 43.63743 AU 41.79794 AU
morning rise retrograde min. Earth dist. opposition direct evening set	-11515 Nov 22 j 11:08 -11514 Feb 24 j 00:13 -11514 May 14 j 23:14 -11514 May 18 j 06:48 -11514 Aug 06 j 03:55 -11514 Nov 02 j 07:11	2° m 07'05 3° m 37'40 2° m 34'10 2° m 29'54 1° m 24'07 2° m 49'57	42.04665 AU 40.20380 AU -11°25'24 -11°01'24	conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct	-11508 Nov 20 j 04:00 -11508 Nov 20 j 03:47 -11508 Nov 23 j 10:50 -11508 Nov 28 j 21:03 -11507 Mar 04 j 11:27 -11507 May 23 j 18:29 -11507 May 26 j 21:26	10° m 41'41 10° m 41'40 10° m 46'52 10° m 55'23 12° m 26'15 11° m 23'55 11° m 20'00 10° m 15'36	12°33'22 43.63743 AU 41.79794 AU
morning rise retrograde min. Earth dist. opposition direct evening set conjunction	-11515 Nov 22 j 11:08 -11514 Feb 24 j 00:13 -11514 May 14 j 23:14 -11514 May 18 j 06:48 -11514 Aug 06 j 03:55 -11514 Nov 02 j 07:11 -11514 Nov 12 j 23:42 -11514 Nov 12 j 23:27	2° m 07'05 3° m 37'40 2° m 34'10 2° m 29'54 1° m 24'07 2° m 49'57 3° m 07'17 3° m 07'16	42.04665 AU 40.20380 AU -11°25'24 -11°01'24	conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition	-11508 Nov 20 j 04:00 -11508 Nov 20 j 03:47 -11508 Nov 23 j 10:50 -11508 Nov 28 j 21:03 -11507 Mar 04 j 11:27 -11507 May 23 j 18:29 -11507 May 26 j 21:26 -11507 Aug 14 j 23:43	10° m 41'41 10° m 41'40 10° m 46'52 10° m 55'23 12° m 26'15 11° m 23'55 11° m 20'00 10° m 15'36	12°33'22 43.63743 AU 41.79794 AU
morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist.	-11515 Nov 22 j 11:08 -11514 Feb 24 j 00:13 -11514 May 14 j 23:14 -11514 May 18 j 06:48 -11514 Aug 06 j 03:55 -11514 Nov 02 j 07:11	2° m 07'05 3° m 37'40 2° m 34'10 2° m 29'54 1° m 24'07 2° m 49'57 3° m 07'17 3° m 07'16	42.04665 AU 40.20380 AU -11°25'24 -11°01'24 11°01'04	conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct	-11508 Nov 20 j 04:00 -11508 Nov 20 j 03:47 -11508 Nov 23 j 10:50 -11508 Nov 28 j 21:03 -11507 Mar 04 j 11:27 -11507 May 23 j 18:29 -11507 May 26 j 21:26 -11507 Aug 14 j 23:43 -11507 Nov 13 j 08:36	10° m 41'41 10° m 41'40 10° m 46'52 10° m 55'23 12° m 26'15 11° m 20'00 10° m 15'36 11° m 42'00	12°33'22 43.63743 AU 41.79794 AU -13°16'45
morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong	-11515 Nov 22 j 11:08 -11514 Feb 24 j 00:13 -11514 May 14 j 23:14 -11514 May 18 j 06:48 -11514 Aug 06 j 03:55 -11514 Nov 02 j 07:11 -11514 Nov 12 j 23:42 -11514 Nov 12 j 23:27 -11514 Nov 16 j 11:18	2° m, 07'05 3° m, 37'40 2° m, 34'10 2° m, 29'54 1° m, 24'07 2° m, 49'57 3° m, 07'17 3° m, 07'16 3° m, 12'58	42.04665 AU 40.20380 AU -11°25'24 -11°01'24 11°01'04	conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set	-11508 Nov 20 j 04:00 -11508 Nov 20 j 03:47 -11508 Nov 23 j 10:50 -11508 Nov 28 j 21:03 -11507 Mar 04 j 11:27 -11507 May 23 j 18:29 -11507 May 26 j 21:26 -11507 Aug 14 j 23:43	10° m 41'41 10° m 41'40 10° m 46'52 10° m 55'23 12° m 26'15 11° m 20'00 10° m 15'36 11° m 42'00 11° m 55'00	12°33'22 43.63743 AU 41.79794 AU -13°16'45 -12°47'17
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morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set	-11515 Nov 22 j 11:08 -11514 Feb 24 j 00:13 -11514 May 14 j 23:14 -11514 May 18 j 06:48 -11514 Aug 06 j 03:55 -11514 Nov 02 j 07:11 -11514 Nov 12 j 23:42 -11514 Nov 12 j 23:27 -11514 Nov 16 j 11:18 -11514 Nov 16 j 11:18 -11514 Nov 23 j 17:30 -11513 Feb 25 j 11:23 -11513 May 16 j 13:06 -11513 May 19 j 20:06 -11513 Aug 07 j 19:08 -11513 Nov 04 j 04:05 -11513 Nov 14 j 12:59 -11513 Nov 14 j 12:44 -11513 Nov 17 j 22:48 -11513 Nov 24 j 23:19 -11512 Feb 27 j 02:21 -11512 May 17 j 02:44 -11512 May 20 j 09:13 -11512 Aug 08 j 06:18 -11512 Nov 05 j 00:54	2° m007'05 3° m037'40 2° m034'10 2° m029'54 1° m024'07 2° m049'57 3° m007'17 3° m007'16 3° m024'43 4° m055'18 3° m0424'44 4° m08'05 4° m024'49 4° m030'21 4° m04'40 6° m012'15 5° m004'58 3° m059'37 5° m025'31 5° m041'40 5° m041'40	42.04665 AU 40.20380 AU -11°25'24 -11°01'24 11°01'04 42.28379 AU 40.44107 AU -11°42'52 -11°18'00 11°17'41 42.51729 AU 40.67476 AU -11°59'48	conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. opposition direct evening set	-11508 Nov 20 j 04:00 -11508 Nov 20 j 03:47 -11508 Nov 20 j 03:47 -11508 Nov 23 j 10:50 -11508 Nov 28 j 21:03 -11507 Mar 04 j 11:27 -11507 May 23 j 18:29 -11507 May 26 j 21:26 -11507 Aug 14 j 23:43 -11507 Nov 13 j 08:36 -11507 Nov 21 j 16:00 -11507 Nov 21 j 15:46 -11507 Nov 24 j 23:22 -11507 Nov 29 j 23:59 -11506 Mar 05 j 22:47 -11506 May 25 j 06:36 -11506 May 28 j 08:30 -11506 Aug 16 j 10:57 -11506 Nov 15 j 05:30 -11506 Nov 23 j 03:23 -11506 Nov 23 j 03:23 -11506 Dec 01 j 02:18 -11506 Dec 01 j 02:18 -11505 May 26 j 17:13 -11505 May 29 j 19:27 -11505 Aug 17 j 19:13	10° m 41'41 10° m 41'40 10° m 46'52 10° m 55'23 12° m 26'15 11° m 23'55 11° m 20'00 10° m 15'36 11° m 42'00 11° m 55'00 12° m 00'12 12° m 08'04 13° m 38'03 12° m 36'53 12° m 33'02 11° m 28'50 12° m 55'25 13° m 07'47 13° m 07'46 13° m 12'50 13° m 20'10 14° m 51'19 13° m 49'22 13° m 45'31 12° m 41'31 14° m 98'20	12°33'22 43.63743 AU 41.79794 AU -13°16'45 -12°47'17 12°47'02 43.85498 AU 42.01635 AU -13°30'36 -13°00'27 13°00'13 44.07077 AU 42.23292 AU -13°43'56

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Attention, astronomical year style is used: The year -11505 in astronomical counting style is the year 11506 BCE in historical counting style.
                    -11505 Nov 24 i 14:37 14° m 20'01 13°12'56
 minimum elong
                                                                         evening set
                                                                                             -11498 Nov 28 j 15:46 22° m 25'48
max. Earth dist.
                    -11505 Nov 27 j 20:48 14° m 25'04 44.28443 AU
                    -11505 Dec 02 j 04:02 14° mp 31'44
                                                                                             -11498 Dec 02 j 18:18 22° m 32'00 -14° 30'09
morning rise
                                                                         conjunction
                    -11504 Mar 08 j 00:16 16° mp 03'05
                                                                          minimum elong
                                                                                             -11498 Dec 02 j 18:06 22° m 31'59 14°30'03
retrograde
                    -11504 May 27 j 05:48 15° m 01'16 42.44713 AU
                                                                                             -11498 Dec 06 j 20:44 22° m 38'10
min. Earth dist.
                                                                         morning rise
                    -11504 May 30 j 06:16 14° m 57'31 -13°56'47
                                                                                             -11498 Dec 05 j 16:12 22° m/36'23 45.67914 AU
opposition
                                                                         max. Earth dist.
                                                                                             -11497 Mar 16 j 19:50 24° m 11'50
                    -11504 Aug 18 j 05:45 13° m 53'44
direct
                                                                         retrograde
                    -11504 Nov 17 j 23:21 15° Mp 20'48
                                                                                             -11497 Jun 05 j 10:07 23° M 10'51 43.83891 AU
evening set
                                                                         min. Earth dist.
                                                                         opposition
                                                                                             -11497 Jun 08 j 03:03 23° Mp 07'33 -15°14'29
                    -11504 Nov 25 j 02:11 15° m 31'48 -13°25'24
conjunction
                                                                         direct
                                                                                             -11497 Aug 27 j 09:40 22° m 04'53
 minimum elong
                    -11504 Nov 25 j 01:58 15° m 31'47 13°25'12
                                                                         evening set
                                                                                             -11497 Nov 30 j 18:11 23° m/34'55
                    -11504 Nov 28 j 07:16 15° Mp 36'46 44.49563 AU
max. Earth dist.
                    -11504 Dec 02 j 05:20 15° m 42'49
                                                                                             -11497 Dec 04 j 04:10 23° m 40'03 -14°39'33
morning rise
                                                                         conjunction
                                                                                             -11497 Dec 04 j 03:59 23° m 40'02 14°39'26
retrograde
                    -11503 Mar 09 j 08:48 17° m 14'23
                                                                          minimum elong
min. Earth dist.
                    -11503 May 28 j 16:16 16° Mp 12'47 42.65841 AU
                                                                         morning rise
                                                                                             -11497 Dec 07 j 13:57 23° mp 45'10
opposition
                    -11503 May 31 j 16:36 16° Mp 09'03 -14° 09'10
                                                                         max. Earth dist.
                                                                                             -11497 Dec 07 j 02:02 23° Mp 44'25 45.86234 AU
direct
                    -11503 Aug 19 j 19:17 15° Mp 05'27
                                                                         retrograde
                                                                                             -11496 Mar 17 j 01:58 25° m 19'27
evening set
                    -11503 Nov 19 j 20:46 16° m 32'49
                                                                         min. Earth dist.
                                                                                             -11496 Jun 05 j 19:43 24° Mp 18'35 44.02197 AU
                                                                         opposition
                                                                                             -11496 Jun 08 j 11:58 24° m 15'19 -15°23'54
conjunction
                    -11503 Nov 26 j 13:17 16° m 43'07 -13°37'12
                                                                         direct
                                                                                             -11496 Aug 27 j 21:42 23° m 12'47
 minimum elong
                    -11503 Nov 26 j 13:03 16° m 43'06 13°37'01
                                                                         evening set
                                                                                             -11496 Dec 02 j 00:07 24° mp 43'44
max. Earth dist.
                    -11503 Nov 29 j 16:54 16° mp 47'58 44.70349 AU
morning rise
                    -11503 Dec 03 i 06:09 16° m 53'26
                                                                         conjunction
                                                                                             -11496 Dec 04 i 13:51 24° m 47'34 -14°48'32
retrograde
                    -11502 Mar 10 j 18:15 18° m 25'15
                                                                          minimum elong
                                                                                             -11496 Dec 04 i 13:40 24° m 47'34 14°48'26
min. Earth dist.
                    -11502 May 30 j 04:03 17° m 23'46 42.86616 AU
                                                                         morning rise
                                                                                             -11496 Dec 07 j 03:19 24° m 51'24
                    -11502 Jun 02 j 02:58 17° m 20'07 -14°21'06
                                                                         max. Earth dist.
                                                                                             -11496 Dec 07 j 09:48 24° m 51'49 46.04267 AU
opposition
                    -11502 Aug 21 j 06:59 16° Mp 16'43
                                                                                             -11495 Mar 18 j 12:37 26° m 26'34
direct
                                                                         retrograde
                    -11502 Nov 21 j 18:33 17° m 44'24
                                                                         min. Earth dist.
                                                                                             -11495 Jun 07 j 04:44 25° m 25'49 44.20242 AU
evening set
                                                                                             -11495 Jun 09 j 20:38 25° m 22'35 -15°32'54
                                                                         opposition
                    -11502 Nov 28 j 00:20 17° m 53'58 -13°48'36
                                                                                             -11495 Aug 29 j 05:03 24° Mp 20'11
conjunction
                                                                         direct
                    -11502 Nov 28 j 00:08 17° m 53'57 13°48'26
                                                                                             -11495 Dec 04 j 15:55 25° m 52'40
 minimum elong
                                                                         evening set
                    -11502 Dec 01 j 03:43 17° m 58'47 44.90749 AU
max. Earth dist.
                    -11502 Dec 04 j 06:17 18° Mp 03'32
                                                                                             -11495 Dec 05 j 23:32 25° m 54'37 -14°57'06
morning rise
                                                                         conjunction
                    -11501 Mar 12 j 02:59 19° m 35'38
                                                                                             -11495 Dec 05 j 23:21 25° m 54'37 14°57'00
                                                                          minimum elong
retrograde
                    -11501 May 31 j 15:29 18° mg 34'17 43.06955 AU
                                                                                             -11495 Dec 07 j 06:51 25° m 56'34
min. Earth dist.
                                                                         morning rise
                    -11501 Jun 03 j 12:58 18° Mp 30'43 -14°32'36
                                                                         max. Earth dist.
                                                                                             -11495 Dec 08 j 19:39 25° m 58'51 46.22045 AU
opposition
                    -11501 Aug 22 j 18:44 17° m/27'30
                                                                                             -11494 Mar 19 j 22:05 27° m 33'13
direct
                                                                         retrograde
                                                                                             -11494 Jun 08 j 15:01 26° M 32'33 44.38025 AU
evening set
                    -11501 Nov 23 j 16:46 18° m 55'31
                                                                         min. Earth dist.
                                                                         opposition
                                                                                             -11494 Jun 11 j 05:14 26° m 29'25 -15°41'28
                    -11501 Nov 29 j 11:05 19° Mp 04'18 -13°59'35
conjunction
                                                                         direct
                                                                                             -11494 Aug 30 j 13:19 25° m 27'10
 minimum elong
                    -11501 Nov 29 j 10:52 19° m 04'18 13°59'25
max. Earth dist.
                    -11501 Dec 02 j 12:11 19° Mp 08'58 45.10709 AU
                                                                                             -11494 Dec 07 j 08:52 27° m 01'16 -15°05'16
                                                                         conjunction
morning rise
                    -11501 Dec 05 j 05:33 19° m 13'07
                                                                          minimum elong
                                                                                             -11494 Dec 07 j 08:40 27° m 01'15 15°05'12
retrograde
                    -11500 Mar 12 j 15:08 20° m 45'32
                                                                         max. Earth dist.
                                                                                             -11494 Dec 10 j 03:36 27° m 05'23 46.39579 AU
                    -11500 Jun 01 j 01:51 19° Mp 44'19 43.26849 AU
                                                                         retrograde
                                                                                             -11493 Mar 21 j 07:24 28° m 39'28
min. Earth dist.
                    -11500 Jun 03 i 22:51 19° m 40'47 -14° 43'42
                                                                                             -11493 Jun 09 j 23:05 27° m 39'00 44.55551 AU
opposition
                                                                         min. Earth dist.
                    -11500 Aug 23 i 03:11 18° m 37'43
                                                                                             -11493 Jun 12 i 13:29 27° m 35'51 -15°49'37
direct
                                                                         opposition
                    -11500 Nov 24 j 15:26 20° m 06'08
                                                                                             -11493 Aug 31 j 21:43 26° Mp 33'45
evening set
                                                                         direct
conjunction
                    -11500 Nov 29 i 21:41 20° m 14'07 -14°10'10
                                                                         conjunction
                                                                                             -11493 Dec 08 i 18:01 28° m 07'33 -15°13'03
 minimum elong
                    -11500 Nov 29 i 21:29 20° m 14'07 14°10'02
                                                                          minimum elong
                                                                                             -11493 Dec 08 j 17:52 28° m 07'32 15°12'59
max. Earth dist.
                    -11500 Dec 02 j 22:29 20° mp 18'44 45.30207 AU
                                                                         max. Earth dist.
                                                                                             -11493 Dec 11 j 11:54 28° m 11'36 46.56844 AU
                    -11500 Dec 05 j 03:59 20° m 22'07
                                                                         retrograde
                                                                                             -11492 Mar 21 j 15:27 29° m 45'24
morning rise
retrograde
                    -11499 Mar 14 j 02:10 21° m 54'53
                                                                         min. Earth dist.
                                                                                             -11492 Jun 10 j 08:59 28° m 45'01 44.72799 AU
                    -11499 Jun 02 j 13:45 20° m 53'43 43.46271 AU
min. Earth dist.
                                                                         opposition
                                                                                             -11492 Jun 12 j 21:43 28° m 41'58 -15° 57'22
opposition
                    -11499 Jun 05 j 08:36 20° m 50'18 -14° 54'22
                                                                         direct
                                                                                             -11492 Sep 01 j 07:06 27° m 40'02
                    -11499 Aug 24 j 12:40 19° m 47'22
direct
evening set
                    -11499 Nov 26 j 15:08 21° Mp 16'14
                                                                                             -11492 Dec 09 j 03:12 29° m 13'31 -15°20'27
                                                                         conjunction
                                                                          minimum elong
                                                                                             -11492 Dec 09 j 03:01 29° m 13'31 15°20'24
                    -11499 Dec 01 j 08:11 21° m 23'22 -14°20'22
                                                                         max. Earth dist.
                                                                                             -11492 Dec 11 j 20:39 29° m 17'33 46.73819 AU
conjunction
                    -11499 Dec 01 j 07:59 21° m 23'21 14°20'13
 minimum elong
                                                                                             -11491 Jan 10 j 23:56 0°♀
max. Earth dist.
                    -11499 Dec 04 j 07:16 21° m 27'51 45.49265 AU
                                                                         retrograde
                                                                                             -11491 Mar 22 j 21:30 0°⊆51'03
morning rise
                    -11499 Dec 06 j 01:09 21° m 30'29
                                                                                             -11491 Jun 04 j 00:33 30°R M
retrograde
                    -11498 Mar 15 j 12:12 23° m 03'38
                                                                         min. Earth dist.
                                                                                             -11491 Jun 11 j 17:47 29° m 50'48 44.89703 AU
min. Earth dist.
                    -11498 Jun 03 j 23:11 22° M 02'37 43.65263 AU
                                                                         opposition
                                                                                             -11491 Jun 14 j 05:41 29° Mp 47'48 -16° 04'44
                    -11498 Jun 06 j 17:48 21° m 59'13 -15°04'38
                                                                         direct
                                                                                             -11491 Sep 02 j 17:57 28° mp 46'01
opposition
                    -11498 Aug 25 j 22:39 20° m 56'25
                                                                                             -11491 Nov 27 j 08:00 0°♀
direct
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Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11491 in astronomical counting style is the year 11492 BCE in historical counting style. -11491 Dec 10 i 12:14 0° \(\Omega\) 19'13 -15°27'29 minimum elong -11483 Dec 19 i 07:38 8°**£**51'55 16°11'42 conjunction 8°**≏**55'07 48.07423 AU -11491 Dec 10 j 12:05 0°**£**19'13 15°27'27 max. Earth dist. -11483 Dec 21 j 13:37 minimum elong max. Earth dist. -11491 Dec 13 j 03:33 0°**£**23'06 46.90423 AU -11482 Apr 01 j 21:06 10° \alpha 26'26 retrograde -11490 Mar 24 j 06:33 retrograde 1° £ 56'25 min. Earth dist. -11482 Jun 21 j 21:49 9°**£**26'47 46.22345 AU -11482 Jun 23 j 22:35 -11490 Jun 13 j 02:36 min. Earth dist. 0°**£**56'18 45.06221 AU opposition 9°**£**24'23 -16°55'16 -11482 Sep 12 j 14:03 opposition -11490 Jun 15 j 13:27 0°**£**53'21 -16°11'44 direct 8°**£**23'32 -11490 Aug 08 j 05:16 30°R Mp -11490 Sep 04 j 01:26 29° m 51'44 -11482 Dec 20 j 15:35 9°**2**54'13 -16°15'37 direct conjunction -11490 Sep 30 j 14:14 0∘**ರ** minimum elong -11482 Dec 20 j 15:29 9°**2**54'12 16°15'41 max. Earth dist. -11482 Dec 22 j 20:50 9°**⊆**57'22 48.20506 AU conjunction -11490 Dec 11 j 21:17 1°**2**24'39 -15°34'10 retrograde -11481 Apr 03 j 02:18 11°**≏**28'26 -11490 Dec 11 j 21:07 1°**2**24'38 15°34'08 minimum elong min. Earth dist. -11481 Jun 23 j 04:28 10°**2**28'54 46.35351 AU -11490 Dec 14 j 12:18 max. Earth dist. 1°**£**28'29 47.06605 AU opposition -11481 Jun 25 j 05:01 10°**2**26'31 -16°59'07 retrograde -11489 Mar 25 j 15:54 3°**₽**01'31 direct -11481 Sep 13 j 22:37 9°**2**25'46 min. Earth dist. -11489 Jun 14 j 12:25 2°**♀**01'27 45.22276 AU opposition -11489 Jun 16 j 21:14 1°**2**58'37 -16°18'23 conjunction -11481 Dec 21 j 23:00 10°**⊆**56'13 -16°19'16 direct -11489 Sep 05 j 08:36 0°**£**57'08 minimum elong -11481 Dec 21 j 22:53 10°**2**56'12 16°19'21 max. Earth dist. -11481 Dec 24 j 02:30 10°**£**59'16 48.33316 AU conjunction -11489 Dec 13 j 05:59 2°**£**29'46 -15°40'31 retrograde -11480 Apr 03 j 08:24 12° **△**30'10 minimum elong -11489 Dec 13 j 05:51 2°**2**29'45 15°40'30 min. Earth dist. -11480 Jun 23 j 12:01 11°**2**30'42 46.48081 AU max. Earth dist. -11489 Dec 15 j 18:49 2°**2**33'28 47.22320 AU opposition -11480 Jun 25 j 11:26 11°**2**28'23 -17°02'38 retrograde -11488 Mar 26 i 03:05 4°**₽**06'18 direct -11480 Sep 14 i 05:59 10° \(\Omega\) 27'45 min. Earth dist. -11488 Jun 14 i 20:23 3°**£**06'21 45.37841 AU opposition -11488 Jun 17 i 04:49 3°**2**03'33 -16°24'41 conjunction -11480 Dec 22 i 06:42 11° **2**57'58 -16°22'35 direct -11488 Sep 05 j 14:03 2°**♀**02'11 minimum elong -11480 Dec 22 i 06:38 11° **2**57'58 16°22'40 max. Earth dist. -11480 Dec 24 j 10:12 12°**2**01'01 48.45828 AU -11488 Dec 13 j 14:43 3°**2**34'32 -15°46'32 -11479 Apr 04 j 13:49 13°**2**31'41 conjunction retrograde -11488 Dec 13 j 14:33 3°**2**34'31 15°46'31 -11479 Jun 24 j 19:47 12°**2**32'17 46.60469 AU minimum elong min. Earth dist. max. Earth dist. -11488 Dec 16 j 02:13 3°**♀**38'08 47.37530 AU -11479 Jun 26 j 17:35 12°**2**30'02 -17°05'49 opposition -11479 Sep 15 j 14:07 11°**£**29'31 -11487 Mar 27 j 10:17 5°**△**10'43 retrograde direct -11487 Jun 16 j 06:10 4°**2**10'47 45.52907 AU min. Earth dist. -11487 Jun 18 j 12:15 4°**2**08'06 -16°30'39 -11479 Dec 23 j 14:16 12°**2**59'33 -16°25'35 conjunction opposition -11479 Dec 23 j 14:10 12°**£**59'32 16°25'42 -11487 Sep 06 j 22:27 3°**♀**06'50 direct minimum elong max. Earth dist. -11479 Dec 25 j 15:29 13°**⊆**02'27 48.57986 AU -11487 Dec 14 j 23:24 4°**2**38'53 -15°52'14 -11478 Apr 05 j 23:19 14°**♀**33'00 conjunction retrograde -11487 Dec 14 j 23:16 4°**2**38'52 15°52'15 -11478 Jun 26 j 02:19 13°**⊆**33'43 46.72472 AU minimum elong min. Earth dist. -11487 Dec 17 j 10:00 4°**-**42'25 47.52267 AU -11478 Jun 27 j 23:40 13°**2**31'30 -17°08'40 max. Earth dist. opposition retrograde -11486 Mar 28 j 14:16 6°**△**14'43 direct -11478 Sep 16 j 18:10 12°**2**31'06 min. Earth dist. -11486 Jun 17 j 14:08 5°**2**14'52 45.67497 AU opposition -11486 Jun 19 j 19:25 5°**2**12'13 -16°36'17 conjunction -11478 Dec 24 j 21:40 14°**£**00'56 -16°28'18 direct -11486 Sep 08 j 10:00 4°**£**11'02 minimum elong -11478 Dec 24 j 21:36 14°**£**00'56 16°28'25 max. Earth dist. -11478 Dec 26 j 21:56 14°**2**03'46 48.69711 AU -11486 Dec 16 j 07:36 5°**•**42'47 -15°57'36 retrograde -11477 Apr 07 j 07:13 15°**2**34'09 conjunction -11486 Dec 16 j 07:28 5°**2**42'47 15°57'37 min. Earth dist. -11477 Jun 27 j 10:51 14°**2**34'53 46.84015 AU minimum elong max. Earth dist. -11486 Dec 18 j 15:57 5°**2**46'11 47.66557 AU -11477 Jun 29 j 05:48 14° **2**32'47 -17°11'14 opposition -11485 Mar 29 j 20:50 7°**△**18'17 retrograde direct -11477 Sep 17 j 23:15 13° \(\Omega\) 32'29 min. Earth dist. -11485 Jun 18 j 22:12 6°**£**18'29 45.81687 AU -11477 Dec 26 i 05:10 15° \(\Omega\) 02'08 -16°30'43 opposition -11485 Jun 21 j 02:28 6°**2**15'53 -16°41'34 conjunction direct -11485 Sep 09 j 18:30 5°**♀**14'47 minimum elong -11477 Dec 26 i 05:04 15° \(\Omega\) 02'08 16°30'50 max. Earth dist. -11477 Dec 28 j 04:06 15° **2**04'53 48.80972 AU -11485 Dec 17 i 15:50 6° \(\Omega\)46'15 -16°02'37 retrograde -11476 Apr 07 j 11:58 16° **△**35'06 conjunction minimum elong -11485 Dec 17 i 15:42 6°**2**46'14 16°02'40 min. Earth dist. -11476 Jun 27 j 17:26 15° **2**35'55 46.95054 AU max. Earth dist. -11485 Dec 20 j 00:12 6°**£**49'38 47.80480 AU opposition -11476 Jun 29 j 11:39 15°**2**33'52 -17°13'31 retrograde -11484 Mar 30 j 03:17 8°**£**21'25 direct -11476 Sep 18 j 07:59 14° **△**33'39 min. Earth dist. -11484 Jun 19 j 06:45 7°**2**21'37 45.95525 AU -11476 Dec 26 j 12:27 16°**£**03'07 -16°32'52 opposition -11484 Jun 21 j 09:18 7°**2**19'07 -16°46'30 conjunction direct -11484 Sep 10 j 02:42 6°**£**18′06 minimum elong -11476 Dec 26 j 12:23 16°**2**03'07 16°33'01 -11476 Dec 28 j 08:53 16°**2**05'43 48.91716 AU max. Earth dist. -11484 Dec 17 j 23:50 7°**2**49'17 -16°07'18 -11475 Apr 08 j 17:20 17°**♀**35'51 conjunction retrograde -11484 Dec 17 j 23:43 -11475 Jun 29 j 01:04 16°**2**36'41 47.05580 AU minimum elong 7°**£**49'16 16°07'21 min. Earth dist. max. Earth dist. -11484 Dec 20 j 06:24 7°**2**52'32 47.94096 AU opposition -11475 Jun 30 j 17:35 16°**2**34'43 -17°15'30 retrograde -11483 Mar 31 j 12:40 9°**£**24'06 direct -11475 Sep 19 j 15:45 15°**-**234'34 min. Earth dist. -11483 Jun 20 j 13:24 8°**♀**24'26 46.09071 AU opposition -11483 Jun 22 j 16:00 8°**2**21'56 -16°51'04 conjunction -11475 Dec 27 j 19:51 17°**2**03'50 -16°34'44 direct -11483 Sep 11 j 07:53 7°**£**21′00 minimum elong -11475 Dec 27 j 19:46 17°**2**03'50 16°34'53 max. Earth dist. -11475 Dec 29 j 15:44 17°**2**06'24 49.01953 AU

retrograde

-11474 Apr 09 j 21:55 18° **2**36'20

-11483 Dec 19 j 07:45 8°**2**51'55 -16°11'38

conjunction

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11474 in astronomical counting style is the year 11475 BCE in historical counting style. -11474 Jun 30 j 08:32 17°**2**37'10 47.15597 AU min. Earth dist. conjunction -11465 Jan 06 i 08:29 26° \(\Omega\)00'00 -16°38'32 minimum elong -11474 Jul 01 j 23:14 17°**2**35'17 -17°17'13 -11465 Jan 06 j 08:27 26° **2**00'00 16° 38'47 opposition direct -11474 Sep 20 j 23:45 16°**♀**35'13 max. Earth dist. -11465 Jan 07 j 16:02 26°**2**01'49 49.77645 AU -11465 Apr 19 j 05:28 27° **2**30'41 retrograde -11474 Dec 29 j 02:54 18°**2**04'17 -16°36'20 -11465 Jul 10 j 22:11 26°**2**30'33 -17°19'10 conjunction opposition -11474 Dec 29 j 02:51 18°**2**04'17 16°36'30 -11465 Jul 09 j 17:49 26° **2**31'55 47.89709 AU minimum elong min. Earth dist. -11474 Dec 30 j 20:31 18° **2**06'42 49.11726 AU -11465 Sep 30 j 01:42 25°**2**31'05 max. Earth dist. direct -11473 Apr 11 j 05:59 19°**△**36'32 retrograde -11473 Jul 01 j 14:33 18°**2**37'26 47.25185 AU -11464 Jan 07 j 15:01 26° **2**58'54 -16°37'34 min. Earth dist. conjunction -11464 Jan 07 j 15:01 26°**2**58'54 16°37'49 opposition -11473 Jul 03 j 04:47 18°**2**35'35 -17°18'39 minimum elong -11464 Jan 08 j 22:01 27°**♀**00'40 49.84156 AU direct -11473 Sep 22 j 04:08 17°**♀**35'34 max. Earth dist. -11464 Apr 19 j 08:26 28°**♀**29'25 retrograde -11473 Dec 30 j 09:45 19°**2**04'27 -16°37'38 -11464 Jul 10 j 00:34 27°**2**30'38 47.95927 AU conjunction min. Earth dist. -11473 Dec 30 j 09:41 19° **2**04'26 16°37'48 minimum elong opposition -11464 Jul 11 j 03:09 27°**2**29'21 -17°18'00 max. Earth dist. -11472 Jan 01 j 02:32 19°**2**06'49 49.21087 AU direct -11464 Sep 30 j 10:02 26°**2**29'56 retrograde -11472 Apr 11 j 13:48 20°**♀**36'27 min. Earth dist. -11472 Jul 01 j 22:10 19°**2**37'20 47.34387 AU conjunction -11463 Jan 07 j 21:32 27°**2**57'37 -16°36'23 opposition -11472 Jul 03 j 10:21 19°**2**35'35 -17°19'46 minimum elong -11463 Jan 07 j 21:30 27°**♀**57'37 16°36'38 direct -11472 Sep 22 j 08:43 18°**△**35'37 max. Earth dist. -11463 Jan 09 j 01:45 27°**2**59'14 49.90129 AU retrograde -11463 Apr 20 j 14:39 29° **2**27'59 conjunction -11472 Dec 30 j 16:44 20° **2**04'20 -16°38'39 min. Earth dist. -11463 Jul 11 j 06:13 28°**2**29'13 48.01603 AU minimum elong -11472 Dec 30 i 16:40 20° **2**04'20 16°38'50 opposition -11463 Jul 12 i 07:54 28° **2**27'59 -17°16'35 max. Earth dist. -11471 Jan 01 j 08:33 20°**2**06'39 49.30107 AU direct -11463 Oct 01 j 14:58 27° **2**28'35 retrograde -11471 Apr 12 j 19:22 21°**2**36'06 min. Earth dist. -11471 Jul 03 j 03:44 20° **2**37'04 47.43256 AU conjunction -11462 Jan 09 i 04:03 28° **2**56'09 -16°34'56 -11471 Jul 04 j 15:33 20° **2**35'20 -17°20'35 minimum elong -11462 Jan 09 i 04:03 28° \(\Omega\) 56'09 16°35'13 opposition direct -11471 Sep 23 j 15:05 19°**△**35'25 max. Earth dist. -11462 Jan 10 j 07:01 28°**2**57'41 49.95553 AU -11462 Mar 01 j 19:42 0°M -11471 Dec 31 j 23:30 21° **2**03'59 -16°39'21 retrograde -11462 Apr 21 j 21:33 0°M26'20 conjunction -11471 Dec 31 j 23:27 21° **2**03'59 16°39'32 -11462 Jun 12 j 09:17 30°R € minimum elong -11470 Jan 02 j 13:26 21°**2**06'11 49.38811 AU -11462 Jul 13 j 12:47 29°**£**26'23 -17°14'55 max. Earth dist. opposition -11470 Apr 14 j 00:19 22°**2**35'32 min. Earth dist. -11462 Jul 12 j 13:32 29°**2**27'30 48.06744 AU retrograde -11470 Jul 04 j 10:23 21°**♀**36'32 47.51834 AU -11462 Oct 02 j 19:13 28°**2**27'00 direct min. Earth dist. -11470 Jul 05 j 20:55 21°**2**34'52 -17°21'05 opposition -11461 Jan 10 j 10:16 29°**♀**54'26 -16°33'16 -11470 Sep 24 j 21:48 20°**♀**35'02 conjunction direct -11461 Jan 10 j 10:15 29°**2**54'26 16°33'32 minimum elong -11469 Jan 02 j 06:09 22°**2**03'26 -16°39'46 max. Earth dist. -11461 Jan 11 j 11:50 29°**♀**55'54 50.00485 AU conjunction minimum elong -11469 Jan 02 j 06:06 22°**2**03'25 16°39'58 -11461 Jan 14 j 11:54 0°M max. Earth dist. -11469 Jan 03 j 20:06 22°**2**05'37 49.47233 AU retrograde -11461 Apr 23 j 03:50 1°M24'26 retrograde -11469 Apr 15 j 02:56 23°**♀**34'48 opposition -11461 Jul 14 j 17:21 0°M24'32 -17°13'00 min. Earth dist. -11469 Jul 05 j 16:47 22°**2**35'50 47.60112 AU min. Earth dist. -11461 Jul 13 j 18:37 0°ML25'37 48.11406 AU opposition -11469 Jul 07 j 02:07 22° **2**34'14 -17°21'17 -11461 Aug 05 j 17:46 30°R **≏** direct -11469 Sep 26 j 06:28 21°**2**34'28 direct -11461 Oct 03 j 23:46 29° **2**25'09 -11461 Dec 01 j 12:37 0°M conjunction -11468 Jan 03 j 12:42 23°**♀**02'43 -16°39'52 -11468 Jan 03 i 12:41 23° **2**02'43 16°40'04 -11460 Jan 11 j 16:24 0°ML52'28 -16°31'20 minimum elong conjunction -11468 Jan 05 j 00:33 23°**2**04'48 49.55374 AU -11460 Jan 11 i 16:25 0°ML52'29 16°31'38 max. Earth dist. minimum elong -11468 Apr 15 j 10:58 24° **△**33'55 -11460 Jan 12 j 15:53 0°M53'49 50.04966 AU retrograde max. Earth dist. -11468 Jul 05 j 22:08 23°**2**35'03 47.68098 AU -11460 Apr 23 i 08:43 2°M22'17 min. Earth dist. retrograde opposition -11468 Jul 07 i 07:09 23° **△**33'27 -17°21'10 opposition -11460 Jul 14 i 21:54 1°M22'25 -17°10'49 direct -11468 Sep 26 j 10:02 22° **△**33'46 min. Earth dist. -11460 Jul 14 i 00:57 1°ML23'25 48.15663 AU direct -11460 Oct 04 j 05:19 0°M23'03 conjunction -11467 Jan 03 i 19:20 24° \(\Omega\)01'54 -16°39'42 -11467 Jan 03 i 19:18 24° **2**01'54 16°39'56 minimum elong conjunction -11459 Jan 11 j 22:41 1°ML50'16 -16°29'08 -11459 Jan 11 j 22:42 -11467 Jan 05 j 06:29 24° **2**03'56 49.63190 AU max. Earth dist. minimum elong 1°ML50'16 16°29'26 -11467 Apr 16 j 19:18 25° **2**32'56 retrograde max. Earth dist. -11459 Jan 12 j 21:52 1°ML51'35 50.09073 AU min. Earth dist. -11467 Jul 07 j 05:32 24°**2**34'04 47.75731 AU retrograde -11459 Apr 24 j 10:14 3°M19'56 opposition -11467 Jul 08 j 12:18 24°**2**32'35 -17°20'46 min. Earth dist. -11459 Jul 15 j 06:36 2°M21'03 48.19552 AU direct -11467 Sep 27 j 12:52 23°**♀**32'59 opposition -11459 Jul 16 j 02:24 2°M20'06 -17°08'22 direct -11459 Oct 05 j 13:46 1°M20'45 -11466 Jan 05 j 02:00 25°**2**01'00 -16°39'15 conjunction -11466 Jan 05 j 01:59 25° **2**01'00 16°39'29 -11458 Jan 13 j 04:42 minimum elong conjunction 2°M47'52 -16°26'40 max. Earth dist. -11466 Jan 06 j 11:55 25°**2**02'57 49.70641 AU minimum elong -11458 Jan 13 j 04:43 2°M47'52 16°26'59 retrograde -11466 Apr 18 j 00:33 26° **△**31'51 max. Earth dist. -11458 Jan 14 j 01:41 2°M49'03 50.12848 AU min. Earth dist. -11466 Jul 08 j 10:54 25°**△**33'04 47.82951 AU retrograde -11458 Apr 25 j 15:59 4°**I**ቤ17'23 -11466 Jul 09 j 17:09 25°**2**31'37 -17°20'06 min. Earth dist. -11458 Jul 16 j 11:25 3°M18'32 48.23134 AU opposition -11466 Sep 28 j 19:12 24° **2**32'05 -11458 Jul 17 j 06:46 3°ML17'37 -17°05'37 direct opposition

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 33 Attention, astronomical year style is used: The year -11458 in astronomical counting style is the year 11459 BCE in historical counting style.

Attention, astronom	ical year style is use	ed: The year -11458	in astronomical co	unting style is the year	· 11459 BCE in historical	counting styl	le.
direct		18:18 2°ML18'17		minimum elong	-11449 Jan 22 j 10:39		
				max. Earth dist.	-11449 Jan 22 j 19:19	11°ML24'41	50.30499 AU
conjunction	-11457 Jan 14 j	10:45 3°ML45'19	-16°23'55	retrograde	-11449 May 04 j 13:56	12°M52'54	
minimum elong	-11457 Jan 14 j	10:46 3°M45'20	16°24'14	opposition	-11449 Jul 25 j 21:17	11°ML53'39	-16°29'14
max. Earth dist.	-11457 Jan 15 j		50.16323 AU	min. Earth dist.	-11449 Jul 25 j 14:33		48.38289 AU
retrograde	-11457 Apr 26 j	23:08 5°M14'44		direct	-11449 Oct 15 j 14:21	10°M54'31	
opposition	-11457 Jul 18 j	11:16 4°ML15'01	-17°02'36				
min. Earth dist.	-11457 Jul 17 j	17:49 4°M15'51	48.26421 AU	conjunction	-11448 Jan 23 j 16:15	12°M21'16	-15°47'57
direct	-11457 Oct 07 j	21:07 3°ML15'43		minimum elong	-11448 Jan 23 j 16:18		
				max. Earth dist.	-11448 Jan 23 j 22:36		50.30160 AU
conjunction	-11456 Jan 15 j		-16°20'54	retrograde	-11448 May 04 j 17:45		
minimum elong	-11456 Jan 15 j		16°21'14	opposition	-11448 Jul 26 j 01:21		
max. Earth dist.	-11456 Jan 16 j		50.19524 AU	min. Earth dist.	-11448 Jul 25 j 19:23		48.37668 AU
retrograde	-11456 Apr 27 j			direct	-11448 Oct 15 j 20:22	11°M51'29	
opposition	-11456 Jul 18 j		-16°59'18				
min. Earth dist.	-11456 Jul 17 j		48.29407 AU	conjunction	-11447 Jan 23 j 22:08		
direct	-11456 Oct 08 j	01:38 4°M13'06		minimum elong	-11447 Jan 23 j 22:13		
				max. Earth dist.	-11447 Jan 24 j 03:43		50.29430 AU
conjunction	-11455 Jan 15 j		-16°17'38	retrograde	-11447 May 06 j 00:01		
minimum elong	-11455 Jan 15 j		16°17'58	opposition	-11447 Jul 27 j 05:25		
max. Earth dist.	-11455 Jan 16 j		50.22407 AU	min. Earth dist.	-11447 Jul 27 j 01:32		48.36685 AU
retrograde	-11455 Apr 28 j			direct	-11447 Oct 16 j 23:52	12°M48'19	
opposition	-11455 Jul 19 j		-16°55'44				
min. Earth dist.	-11455 Jul 19 j		48.32067 AU	conjunction	-11446 Jan 25 j 03:56		
direct	-11455 Oct 09 j	07:01 5°ML10'29		minimum elong	-11446 Jan 25 j 04:00		
	111517 15:	0.4.40	1 (01 410 5	max. Earth dist.	-11446 Jan 25 j 08:23		50.28382 AU
conjunction	-11454 Jan 17 j		-16°14'05		-11446 Mar 01 j 01:08		
minimum elong	-11454 Jan 17 j		16°14'27	retrograde	-11446 May 07 j 05:54		
max. Earth dist.	-11454 Jan 17 j		50.24940 AU	•,•	-11446 Jul 14 j 09:50		1.601.0140
retrograde	-11454 Apr 29 j		40.24222.444	opposition	-11446 Jul 28 j 09:26		
min. Earth dist.	-11454 Jul 20 j		48.34332 AU	min. Earth dist.	-11446 Jul 28 j 05:33		48.35392 AU
opposition	-11454 Jul 21 j		-16°51'55	direct	-11446 Oct 18 j 02:54		
direct	-11454 Oct 10 j	14:50 6°ML07'55			-11445 Jan 17 j 15:59	15°11L	
agniunation	11452 Ion 19;	10.20 7° m 24'40	-16°10'18	conjunction	11445 Ion 26;00:25	150 m 11145	15021120
conjunction minimum elong	-11453 Jan 18 j -11453 Jan 18 j		16°10'40	minimum elong	-11445 Jan 26 j 09:25 -11445 Jan 26 j 09:29		
max. Earth dist.	-11453 Jan 19 j		50.27058 AU	max. Earth dist.	-11445 Jan 26 j 12:03		
	-11453 Jan 19 j		30.27038 AU		-11445 May 08 j 11:15		30.27034 AU
retrograde opposition	-11453 Apr 30 j		-16°47'50	retrograde opposition	-11445 Jul 29 j 13:34		16°06'30
min. Earth dist.	-11453 Jul 22 j		48.36156 AU	min. Earth dist.	-11445 Jul 29 j 11:18		
direct	-11453 Oct 11 j		48.30130 AU	iiiii. Latui dist.	-11445 Sep 07 j 05:22		46.33620 AU
direct	-11433 000 11 j	17.03 / 11003.21		direct	-11445 Oct 19 j 07:21		
conjunction	-11452 Jan 19 j	16:33 8°M 32'14	-16°06'18	uncei	-11445 Nov 30 j 07:54		
minimum elong	-11452 Jan 19 j						
max. Earth dist.	-11452 Jan 20 j				-11443 NOV 30 J 07.34	13 116	
retrograde	11752 Juli 20 j	05.59 8°M.32'59		conjunction	Į.		-15°25'40
-	-		50.28692 AU	conjunction	-11444 Jan 27 j 15:12	16°M08'26	
	-11452 May 01 j	00:06 10°M01'13	50.28692 AU	minimum elong	-11444 Jan 27 j 15:12 -11444 Jan 27 j 15:18	16°M08'26 16°M08'26	15°26'06
opposition min Farth dist	-11452 May 01 j -11452 Jul 22 j	00:06 10°M.01'13 08:43 9°M.01'53	50.28692 AU -16°43'32	minimum elong max. Earth dist.	-11444 Jan 27 j 15:12 -11444 Jan 27 j 15:18 -11444 Jan 27 j 17:49	16°M08'26 16°M08'26 16°M08'35	15°26'06
min. Earth dist.	-11452 May 01 j -11452 Jul 22 j -11452 Jul 21 j	00:06 10°ML01'13 08:43 9°ML01'53 21:54 9°ML02'24	50.28692 AU	minimum elong max. Earth dist. retrograde	-11444 Jan 27 j 15:12 -11444 Jan 27 j 15:18 -11444 Jan 27 j 17:49 -11444 May 08 j 12:56	16°ML08'26 16°ML08'26 16°ML08'35 17°ML36'47	15°26'06 50.25417 AU
	-11452 May 01 j -11452 Jul 22 j	00:06 10°ML01'13 08:43 9°ML01'53 21:54 9°ML02'24	50.28692 AU -16°43'32	minimum elong max. Earth dist. retrograde opposition	-11444 Jan 27 j 15:12 -11444 Jan 27 j 15:18 -11444 Jan 27 j 17:49 -11444 May 08 j 12:56 -11444 Jul 29 j 17:30	16°M.08'26 16°M.08'26 16°M.08'35 17°M.36'47 16°M.37'37	15°26'06 50.25417 AU -16°00'20
min. Earth dist. direct	-11452 May 01 j -11452 Jul 22 j -11452 Jul 21 j -11452 Oct 11 j	00:06 10°M01'13 08:43 9°M01'53 21:54 9°M02'24 22:34 8°M02'47	50.28692 AU -16°43'32 48.37468 AU	minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-11444 Jan 27 j 15:12 -11444 Jan 27 j 15:18 -11444 Jan 27 j 17:49 -11444 May 08 j 12:56 -11444 Jul 29 j 17:30 -11444 Jul 29 j 16:13	16°M08'26 16°M08'26 16°M08'35 17°M36'47 16°M37'37	15°26'06 50.25417 AU -16°00'20
min. Earth dist. direct	-11452 May 01 j -11452 Jul 22 j -11452 Jul 21 j -11452 Oct 11 j -11451 Jan 19 j	00:06 10°m.01'13 08:43 9°m.01'53 21:54 9°m.02'24 22:34 8°m.02'47 22:39 9°m.29'38	50.28692 AU -16°43'32 48.37468 AU -16°02'03	minimum elong max. Earth dist. retrograde opposition	-11444 Jan 27 j 15:12 -11444 Jan 27 j 15:18 -11444 Jan 27 j 17:49 -11444 May 08 j 12:56 -11444 Jul 29 j 17:30	16°M08'26 16°M08'26 16°M08'35 17°M36'47 16°M37'37	15°26'06 50.25417 AU -16°00'20
min. Earth dist. direct conjunction minimum elong	-11452 May 01 j -11452 Jul 22 j -11452 Jul 21 j -11452 Oct 11 j -11451 Jan 19 j -11451 Jan 19 j	00:06 10°m.01'13 08:43 9°m.01'53 21:54 9°m.02'24 22:34 8°m.02'47 22:39 9°m.29'38 22:44 9°m.29'39	50.28692 AU -16°43'32 48.37468 AU -16°02'03 16°02'26	minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct	-11444 Jan 27 j 15:12 -11444 Jan 27 j 15:18 -11444 Jan 27 j 17:49 -11444 May 08 j 12:56 -11444 Jul 29 j 17:30 -11444 Jul 29 j 16:13 -11444 Oct 19 j 14:55	16°M08'26 16°M08'26 16°M08'35 17°M36'47 16°M37'37 16°M37'40 15°M38'23	15°26'06 50.25417 AU -16°00'20 48.31954 AU
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min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-11452 May 01 j -11452 Jul 22 j -11452 Jul 21 j -11452 Oct 11 j -11451 Jan 19 j -11451 Jan 20 j -11451 Jan 20 j -11451 Jul 23 j -11451 Jul 23 j -11451 Oct 13 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j	00:06 10°m.01'13 08:43 9°m.01'53 21:54 9°m.02'24 22:34 8°m.02'47 22:39 9°m.29'38 22:44 9°m.29'39 10:28 9°m.30'18 07:23 10°m.58'32 12:56 9°m.59'15 02:50 9°m.59'43 01:43 9°m.00'08 04:35 10°m.26'59 04:38 10°m.26'59 13:53 10°m.26'59 13:53 10°m.26'59 13:63 10°m.56'46 17:10 10°m.56'54	50.28692 AU -16°43'32 48.37468 AU -16°02'03 16°02'26 50.29818 AU -16°39'00 48.38244 AU -15°57'35 15°57'58 50.30402 AU -16°34'14	minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct	-11444 Jan 27 j 15:12 -11444 Jan 27 j 15:18 -11444 Jan 27 j 17:49 -11444 May 08 j 12:56 -11444 Jul 29 j 16:13 -11444 Oct 19 j 14:55 -11443 Jan 27 j 21:50 -11443 Jan 27 j 21:50 -11443 Jan 27 j 21:15 -11443 May 09 j 17:52 -11443 Jul 30 j 21:31 -11443 Jul 30 j 20:52 -11443 Oct 20 j 19:35 -11442 Jan 29 j 02:44 -11442 Jan 29 j 02:51 -11442 Jan 29 j 02:51 -11442 Jan 29 j 02:17 -11442 May 10 j 23:09	16°M.08'26 16°M.08'35 17°M.36'47 16°M.37'37 16°M.37'40 15°M.38'23 17°M.05'08 17°M.05'08 17°M.05'09 18°M.33'28 17°M.34'19 17°M.34'21 16°M.35'06 18°M.01'53 18°M.01'53 18°M.01'51 19°M.30'13	15°26'06 50.25417 AU -16°00'20 48.31954 AU -15°19'27 15°19'54 50.23509 AU -15°53'45 48.29782 AU -15°12'59 15°13'26 50.21253 AU
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-11452 May 01 j -11452 Jul 22 j -11452 Jul 21 j -11452 Oct 11 j -11451 Jan 19 j -11451 Jan 20 j -11451 Jan 20 j -11451 Jul 23 j -11451 Jul 23 j -11451 Oct 13 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j	00:06 10°m.01'13 08:43 9°m.01'53 21:54 9°m.02'24 22:34 8°m.02'47 22:39 9°m.29'38 22:44 9°m.29'39 10:28 9°m.30'18 07:23 10°m.58'32 12:56 9°m.59'15 02:50 9°m.59'43 01:43 9°m.00'08 04:35 10°m.26'59 04:38 10°m.26'59 13:53 10°m.27'30 13:01 11°m.55'46 17:10 10°m.56'31	50.28692 AU -16°43'32 48.37468 AU -16°02'03 16°02'26 50.29818 AU -16°39'00 48.38244 AU -15°57'35 15°57'58 50.30402 AU -16°34'14	minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition	-11444 Jan 27 j 15:12 -11444 Jan 27 j 15:18 -11444 Jan 27 j 17:49 -11444 May 08 j 12:56 -11444 Jul 29 j 16:13 -11444 Oct 19 j 14:55 -11443 Jan 27 j 21:50 -11443 Jan 27 j 21:00 -11443 Jan 27 j 21:15 -11443 May 09 j 17:52 -11443 Jul 30 j 21:31 -11443 Jul 30 j 20:52 -11443 Oct 20 j 19:35 -11442 Jan 29 j 02:44 -11442 Jan 29 j 02:51 -11442 Jan 29 j 02:17 -11442 May 10 j 23:09 -11442 Aug 01 j 01:36	16°M.08'26 16°M.08'35 17°M.36'47 16°M.37'37 16°M.37'40 15°M.38'23 17°M.05'08 17°M.05'09 18°M.31'28 17°M.34'19 17°M.34'19 17°M.35'06 18°M.01'53 18°M.01'51 19°M.30'13 18°M.01'51	15°26'06 50.25417 AU -16°00'20 48.31954 AU -15°19'27 15°19'54 50.23509 AU -15°53'45 48.29782 AU -15°12'59 15°13'26 50.21253 AU -15°46'55
min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist.	-11452 May 01 j -11452 Jul 22 j -11452 Jul 21 j -11452 Oct 11 j -11451 Jan 19 j -11451 Jan 20 j -11451 Jan 20 j -11451 Jul 23 j -11451 Jul 23 j -11451 Jul 23 j -11451 Oct 13 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j -11450 Jan 21 j	00:06 10°m.01'13 08:43 9°m.01'53 21:54 9°m.02'24 22:34 8°m.02'47 22:39 9°m.29'38 22:44 9°m.29'39 10:28 9°m.30'18 07:23 10°m.58'32 12:56 9°m.59'15 02:50 9°m.59'43 01:43 9°m.00'08 04:35 10°m.26'59 04:38 10°m.26'59 13:53 10°m.26'59 13:53 10°m.26'59 13:63 10°m.56'46 17:10 10°m.56'54	50.28692 AU -16°43'32 48.37468 AU -16°02'03 16°02'26 50.29818 AU -16°39'00 48.38244 AU -15°57'35 15°57'58 50.30402 AU -16°34'14 48.38506 AU	minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction minimum elong max. Earth dist. retrograde opposition min. Earth dist. direct conjunction min. Earth dist. direct	-11444 Jan 27 j 15:12 -11444 Jan 27 j 15:18 -11444 Jan 27 j 17:49 -11444 May 08 j 12:56 -11444 Jul 29 j 16:13 -11444 Oct 19 j 14:55 -11443 Jan 27 j 21:50 -11443 Jan 27 j 21:50 -11443 Jan 27 j 21:15 -11443 May 09 j 17:52 -11443 Jul 30 j 21:31 -11443 Jul 30 j 20:52 -11443 Oct 20 j 19:35 -11442 Jan 29 j 02:44 -11442 Jan 29 j 02:51 -11442 Jan 29 j 02:51 -11442 Jan 29 j 02:17 -11442 May 10 j 23:09	16°M.08'26 16°M.08'35 17°M.36'47 16°M.37'37 16°M.37'40 15°M.38'23 17°M.05'08 17°M.05'09 18°M.33'28 17°M.34'19 17°M.34'19 17°M.35'06 18°M.01'53 18°M.01'51 19°M.30'13 18°M.31'07 18°M.31'02	15°26'06 50.25417 AU -16°00'20 48.31954 AU -15°19'27 15°19'54 50.23509 AU -15°53'45 48.29782 AU -15°12'59 15°13'26 50.21253 AU -15°46'55

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11441 in astronomical counting style is the year 11442 BCE in historical counting style. -11441 Jan 30 i 08:36 18° ML58'43 -15°06'17 conjunction conjunction -11434 Feb 06 i 02:05 25°M 37'58 -14°12'59 minimum elong minimum elong -11441 Jan 30 j 08:40 18°ML58'43 15°06'44 -11434 Feb 06 j 02:13 25°MJ37'58 14°13'30 max. Earth dist. -11441 Jan 30 j 06:46 18°M 58'37 50.18609 AU max. Earth dist. -11434 Feb 05 j 13:28 25°M 37'15 49.86380 AU -11441 May 12 j 06:06 20° ML27'03 -11434 Feb 11 j 06:52 25°M44'59 retrograde morning rise -11441 Aug 02 j 05:35 19°M28'00 -15°39'50 -11434 May 18 j 15:00 27° ML06'18 opposition retrograde min. Earth dist. -11441 Aug 02 j 07:41 19°M27'54 48.24251 AU -11434 Aug 08 j 10:29 26°M 07'14 -14°43'49 opposition -11441 Oct 23 j 02:45 18°M28'46 min. Earth dist. -11434 Aug 08 j 22:47 26°M 06'38 47.89614 AU direct $-11434 \ \mathrm{Oct} \ \ 29 \ \mathrm{j} \ 14:19 \ \ 25^{\circ} \mathrm{ML} 07'42$ direct -11440 Jan 31 j 14:24 19°M 55'40 -14°59'20 -11433 Feb 01 j 16:47 26°M27'27 conjunction evening set -11440 Jan 31 j 14:31 19°M 55'40 14°59'48 minimum elong max. Earth dist. -11440 Jan 31 j 10:10 19°M 55'25 50.15491 AU conjunction -11433 Feb 07 j 07:54 26°M235'04 -14°04'24 -11440 May 12 j 12:56 21° M23'59 -11433 Feb 07 j 08:01 26°M 35'05 14°04'54 retrograde minimum elong -11440 Aug 02 j 09:47 20°M24'57 -15°32'32 max. Earth dist. -11433 Feb 06 j 17:03 26°M34'14 49.80160 AU opposition min. Earth dist. -11440 Aug 02 j 14:04 20°M24'45 48.20773 AU morning rise -11433 Feb 12 j 23:21 26°M42'42 direct -11440 Oct 23 j 06:02 19°M25'43 retrograde -11433 May 19 j 19:28 28° ML03'27 -11439 Jan 29 j 18:28 20°M49'52 evening set opposition -11433 Aug 09 j 14:35 27°M 04'22 -14°34'48 min. Earth dist. -11433 Aug 10 j 03:26 27°M03'45 47.83124 AU conjunction -11439 Jan 31 j 20:31 20°M 52'41 -14°52'11 direct -11433 Oct 30 j 19:41 26°Ml04'48 minimum elong -11439 Jan 31 j 20:36 20°ML52'41 14°52'39 evening set -11432 Feb 02 j 12:34 27° ML 24'05 max. Earth dist. -11439 Jan 31 j 15:25 20°M 52'23 50.11854 AU morning rise -11439 Feb 02 j 22:46 20°M 55'30 conjunction -11432 Feb 08 j 13:50 27°MJ32'16 -13°55'34 retrograde -11439 May 13 j 15:21 22° M21'00 minimum elong -11432 Feb 08 i 13:57 27° ML32'16 13°56'05 opposition -11439 Aug 03 i 13:52 21°M21'59 -15°25'01 max. Earth dist. -11432 Feb 07 j 22:20 27° ML31'23 49.73642 AU min. Earth dist. -11439 Aug 03 j 19:36 21°M21'42 48.16747 AU morning rise -11432 Feb 14 j 15:22 27° ML40'28 -11439 Oct 24 j 13:19 20°M22'43 direct retrograde -11432 May 20 j 00:26 29° 1 1 00'43 evening set -11438 Jan 30 j 03:49 21° ML45'45 opposition -11432 Aug 09 j 18:54 28°ML01'37 -14°25'32 min. Earth dist. -11432 Aug 10 j 09:40 28°ML00'55 47.76326 AU -11438 Feb 02 j 02:27 21°ML49'43 -14°44'48 direct -11432 Oct 31 j 00:40 27° ML02'01 conjunction -11438 Feb 02 i 02:34 21°ML49'44 14°45'17 -11431 Feb 02 j 09:08 28°M20'52 minimum elong evening set -11438 Feb 01 j 18:40 21°M 49'17 50.07684 AU max. Earth dist. -11438 Feb 05 j 01:21 21°ML53'43 -11431 Feb 08 j 19:52 28°M29'35 -13°46'28 conjunction morning rise -11438 May 14 j 19:16 23°M 18'03 minimum elong -11431 Feb 08 j 20:01 28°M29'36 13°46'59 retrograde -11438 Aug 04 j 18:01 22°ML19'02 -15°17'16 max. Earth dist. -11431 Feb 08 j 03:18 28°M28'39 49.66830 AU opposition -11438 Aug 05 j 00:53 22°M 18'42 48.12201 AU -11431 Feb 15 j 06:53 28°M38'21 min. Earth dist. morning rise -11438 Oct 25 j 19:11 21°ML19'43 retrograde -11431 May 21 j 07:40 29° ML58'06 direct -11437 Jan 30 j 17:25 22°M41'54 -11431 Aug 10 j 22:59 28°M 59'01 -14°16'00 evening set opposition min. Earth dist. -11431 Aug 11 j 14:01 28°ML58'18 47.69209 AU conjunction -11437 Feb 03 j 08:17 22°M 46'47 -14°37'12 direct -11431 Nov 01 j 03:20 27°M59'22 minimum elong -11437 Feb 03 j 08:24 22°ML46'47 14°37'41 evening set -11430 Feb 03 j 06:00 29°ML17'51 max. Earth dist. -11437 Feb 02 j 23:24 22°M46'17 50.02995 AU max. Earth dist. -11430 Feb 09 j 07:12 29°M26'02 49.59669 AU morning rise -11437 Feb 06 j 23:24 22°M51'41 retrograde -11437 May 16 j 00:58 24° ML15'07 conjunction -11430 Feb 10 j 01:54 29°M27'05 -13°37'08 opposition -11437 Aug 05 j 22:14 23°M 16'05 -15°09'16 minimum elong -11430 Feb 10 j 02:02 29°M27'06 13°37'40 min. Earth dist. -11437 Aug 06 j 07:20 23°ML15'39 48.07157 AU morning rise -11430 Feb 16 j 22:08 29°M36'22 direct -11437 Oct 26 j 23:22 22°M16'44 -11430 Mar 06 j 21:11 0° ⊀ -11436 Jan 31 i 09:34 23°MJ38'11 -11430 May 22 j 16:06 0° ₹ 55'40 evening set retrograde -11430 Aug 09 i 03:38 30°RM -11436 Feb 04 i 14:13 23°ML43'50 -14°29'22 -11430 Aug 12 i 03:23 29°ML56'35 -14°06'12 conjunction opposition -11436 Feb 04 i 14:21 23°ML43'51 14°29'52 minimum elong min. Earth dist. -11430 Aug 12 j 20:22 29°ML55'47 47.61731 AU -11436 Feb 04 i 03:54 23°ML43'16 49.97853 AU max. Earth dist. direct -11430 Nov 02 i 05:16 28°M 56'54 morning rise -11436 Feb 08 i 19:10 23°ML49'31 -11429 Jan 23 j 20:12 0° ₹ retrograde -11436 May 16 j 07:36 25° ML12'10 evening set -11429 Feb 04 j 03:16 0°**∡**15′01 opposition -11436 Aug 06 j 02:09 24°ML13'07 -15°01'03 -11436 Aug 06 j 11:39 24°M 12'40 48.01676 AU -11429 Feb 11 j 07:57 min. Earth dist. conjunction 0°**∡**¹24'46 -13°27'33 -11429 Feb 11 j 08:06 direct -11436 Oct 27 j 01:51 23°ML13'42 minimum elong 0°**∡**¹24'47 13°28'05 -11435 Jan 31 j 03:01 24°M34'32 evening set max. Earth dist. -11429 Feb 10 j 12:54 0°**∡**′23'42 49.52117 AU morning rise -11429 Feb 18 j 12:51 0°**х** 34'33 1°**х** 53′27 -11435 Feb 04 j 20:09 24°ML40'54 -14°21'18 retrograde -11429 May 23 j 19:43 conjunction -11435 Feb 04 j 20:16 24°ML40'54 14°21'47 opposition -11429 Aug 13 j 07:44 0°**х** 54′21 -13°56′09 minimum elong -11435 Feb 04 j 07:42 24° ML40'12 49.92294 AU min. Earth dist. -11429 Aug 14 j 01:54 0°**∡**753'29 47.53811 AU max. Earth dist. -11435 Feb 09 j 13:36 24° ML47'16 morning rise -11429 Oct 12 j 01:30 30°RM -11429 Nov 03 j 12:01 29°M54'37 retrograde -11435 May 17 j 13:14 26° M 09'13 direct opposition -11435 Aug 07 j 06:21 25°M 10'10 -14°52'34 -11429 Nov 25 j 23:15 0°**∡**¹ min. Earth dist. -11435 Aug 07 j 17:46 25°ML09'37 47.95817 AU evening set -11428 Feb 05 j 01:04 1°**∡** 12′23 direct -11435 Oct 28 j 06:23 24°ML10'42 -11434 Jan 31 j 21:33 25°M30'57 conjunction -11428 Feb 12 j 14:07 1° ₹22'38 -13°17'43 evening set

minimum elong

-11428 Feb 12 j 14:15 1° ₹22'38 13°18'15

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11428 in astronomical counting style is the year 11429 BCE in historical counting style. -11428 Feb 11 j 16:26 1° ₹21'24 49.44101 AU max. Earth dist. max. Earth dist. -11421 Feb 18 i 03:29 8° **₹**08'12 48.74560 AU -11428 Feb 20 j 03:29 1°×732'53 morning rise 2°**∡**′51′23 -11428 May 23 j 23:09 -11421 Feb 19 j 10:59 8°**₹**10'00 -12°02'19 retrograde conjunction -11428 Aug 13 j 12:02 1°**≯**52'16 -13°45'52 -11421 Feb 19 j 11:08 8°**∡**10'01 12°02'54 opposition minimum elong -11428 Aug 14 j 07:29 1°**≯**51'20 47.45408 AU -11421 Mar 01 j 04:17 8°×23'19 min. Earth dist. morning rise -11421 May 31 j 12:43 -11428 Nov 03 j 18:33 0°**х** 52′29 9°**∡**39'24 direct retrograde -11427 Feb 04 j 23:18 evening set 2°**х**¹09'56 opposition -11421 Aug 20 j 20:16 8°**х** 39′50 -12°26′57 min. Earth dist. -11421 Aug 22 j 00:28 8°**∡**'38'29 46.73413 AU -11427 Feb 12 j 20:35 conjunction 2°**х** 20′38 -13°07′40 direct -11421 Nov 11 j 08:12 7°**х** 39′20 minimum elong -11427 Feb 12 j 20:45 2°**х** 20'39 13°08'13 evening set -11420 Feb 10 j 17:35 8°**х** 54′53 max. Earth dist. -11427 Feb 11 j 21:36 2°**尽**19'20 49.35562 AU max. Earth dist. -11420 Feb 19 j 08:10 9°**∡**06'40 48.63206 AU morning rise -11427 Feb 20 j 18:06 2°**∡**31'22 -11420 Feb 20 j 17:32 9°**∡**08'35 -11°50'31 retrograde -11427 May 25 j 03:42 3°**х¹**49′28 conjunction opposition -11427 Aug 14 j 16:39 2°**₹**50'19 -13°35'21 minimum elong -11420 Feb 20 j 17:42 9° **₹**08'35 11°51'05 min. Earth dist. -11427 Aug 15 j 14:25 2°**∡**749'17 47.36462 AU morning rise -11420 Mar 01 j 17:38 9°**х** 22′18 direct -11427 Nov 05 j 00:49 1°**х** 50′27 retrograde -11420 May 31 j 21:20 10° ₹ 38'07 evening set -11426 Feb 05 j 21:51 3°**х** 07′35 opposition -11420 Aug 21 j 01:03 9°**∡**38'30 -12°14'35 max. Earth dist. -11426 Feb 13 j 02:13 3°**₹**17'20 49.26498 AU min. Earth dist. -11420 Aug 22 j 07:01 9°**∡**37'04 46.61786 AU direct -11420 Nov 11 j 10:45 8°**∡**37'54 conjunction -11426 Feb 14 j 02:54 3°**∡**18'44 -12°57'23 evening set -11419 Feb 10 j 17:45 9°**х** 53′17 minimum elong -11426 Feb 14 j 03:02 3°**₹**18'45 12°57'56 max. Earth dist. -11419 Feb 19 j 14:52 10° ₹05'28 48.51591 AU morning rise -11426 Feb 22 i 08:09 3°**х** 29′55 retrograde -11426 May 26 i 10:48 4°**∡**°47'39 conjunction -11419 Feb 21 i 00:20 10° ₹07'23 -11°38'27 opposition -11426 Aug 15 j 21:07 3°**∡**148'27 -13°24'36 minimum elong -11419 Feb 21 i 00:30 10° **x** 07'24 11°39'03 min. Earth dist. -11426 Aug 16 j 19:23 3°**₹**47'23 47.26989 AU morning rise -11419 Mar 03 j 06:48 10° × 21'30 -11426 Nov 06 j 04:04 2°**₹**'48'29 retrograde -11419 Jun 02 j 02:31 11° ₹37'05 direct -11425 Feb 06 i 20:33 4°**∡**°05'17 opposition -11419 Aug 22 j 06:00 10° ₹37'26 -12°01'57 evening set max. Earth dist. -11425 Feb 14 i 06:15 4° ₹ 15'22 49.16916 AU min. Earth dist. -11419 Aug 23 j 12:40 10° ₹35'57 46.49869 AU -11419 Nov 12 j 17:17 9° ₹36'45 direct -11425 Feb 15 j 09:16 4° ₹ 16'54 -12°46'52 -11418 Feb 11 j 18:07 10° ₹ 52'00 conjunction evening set -11425 Feb 15 j 09:25 4° ₹ 16'54 12°47'27 max. Earth dist. -11418 Feb 20 j 19:21 11°**х** 04'27 48.39675 AU minimum elong -11425 Feb 23 j 22:15 4°**尽**28'32 morning rise -11425 May 27 j 17:34 5°**⊀**⁷45'53 -11418 Feb 22 j 06:57 11°**₹**06'30 -11°26'07 retrograde conjunction -11418 Feb 22 j 07:07 11°**尽** 06'30 11°26'43 -11425 Aug 17 j 01:40 4° ₹ 46'36 -13°13'35 minimum elong opposition -11425 Aug 18 j 02:13 4° ₹ 45'26 47.17034 AU -11418 Mar 04 j 19:54 11°**尽**21'00 min. Earth dist. morning rise -11425 Nov 07 j 07:50 3°**х** 46'32 -11418 Jun 03 j 07:45 12°**尽** 36'22 direct retrograde -11424 Feb 07 j 19:32 5°**尽**03'03 -11418 Aug 23 j 10:58 11°**尽** 36'42 -11°49'02 evening set opposition min. Earth dist. -11418 Aug 24 j 18:37 11°**⋌**³35′10 46.37639 AU conjunction -11424 Feb 16 j 15:43 5° ₹ 15'05 -12°36'07 direct -11418 Nov 13 j 23:14 10° ₹35'56 minimum elong -11424 Feb 16 j 15:52 5° ₹ 15'06 12°36'41 evening set -11417 Feb 12 j 18:40 11°**尽**51'03 max. Earth dist. -11424 Feb 15 j 12:14 5°**尽** 13'32 49.06879 AU max. Earth dist. -11417 Feb 22 j 01:29 12°**尽**03'50 48.27402 AU morning rise -11424 Feb 25 j 11:59 5° ₹27'09 retrograde -11424 May 27 j 21:17 6° ₹ 44'09 conjunction -11417 Feb 23 j 13:55 12° ₹ 05'56 -11°13'31 -11424 Aug 17 j 06:14 5°**⊀** 44'48 -13°02'20 minimum elong -11417 Feb 23 j 14:04 12°**尽** 05'57 11°14'07 opposition min. Earth dist. -11424 Aug 18 j 07:45 5°**х** 43'35 47.06634 AU -11417 Mar 06 j 09:00 12°**尽** 20'50 morning rise -11424 Nov 07 j 15:22 4° ₹ 44'37 direct retrograde -11417 Jun 04 j 12:17 13° ₹36'01 -11423 Feb 07 i 18:50 6° ₹00'51 evening set opposition -11417 Aug 24 i 16:05 12° 736'18 -11°35'51 min. Earth dist. -11417 Aug 26 i 01:46 12° ₹34'40 46.25018 AU -11423 Feb 16 i 22:08 6° ₹ 13'19 -12°25'07 conjunction direct -11417 Nov 15 j 06:22 11° **x** 35'28 minimum elong -11423 Feb 16 i 22:17 6°**х** 13′20 12°25′41 evening set -11416 Feb 13 i 19:39 12° ₹ 50'27 max. Earth dist. -11423 Feb 15 j 16:13 6° ₹ 11'37 48.96434 AU max. Earth dist. -11416 Feb 23 j 06:59 13° ₹03'32 48.14720 AU -11423 Feb 26 j 01:41 6°**х** 25′48 morning rise -11423 May 29 j 01:52 7° ₹ 42'28 conjunction -11416 Feb 24 j 20:55 13° ₹05'43 -11°00'40 retrograde opposition -11423 Aug 18 j 10:45 6°**х** 43′03 -12°50′49 minimum elong -11416 Feb 24 j 21:06 13° ₹05'44 11°01'16 min. Earth dist. -11423 Aug 19 j 13:11 6°**∡**'41'46 46.95868 AU morning rise -11416 Mar 06 j 22:04 13°**尽**21'00 direct -11423 Nov 08 j 21:44 5°**∡**'42'44 retrograde -11416 Jun 04 j 20:30 14° **₹** 36'01 6°**∡**758'44 evening set -11422 Feb 08 j 18:13 opposition -11416 Aug 24 j 21:17 13°**尽** 36'15 -11°22'24 7°**尽**09'52 48.85638 AU max. Earth dist. -11422 Feb 16 j 22:09 min. Earth dist. -11416 Aug 26 j 07:28 13°**尽** 34'35 46.11944 AU direct -11416 Nov 15 j 10:02 12°**尽** 35'19 -11422 Feb 18 j 04:40 7°**∡**11'37 -12°13'51 -11415 Feb 13 j 20:54 13° ₹ 50'12 conjunction evening set

-11422 Feb 18 j 04:50

-11422 Feb 27 j 15:11

-11422 May 30 j 06:08

-11422 Aug 19 j 15:34

-11422 Aug 20 j 19:45

-11422 Nov 10 j 04:03

-11421 Feb 09 j 17:45

minimum elong

morning rise

retrograde

opposition

evening set

direct

min. Earth dist.

7°**∡**11'37 12°14'25

7°**х** 41′23 -12°39′01

7°**∡**740'01 46.84778 AU

7°**х** 24'31

8°**х** 40′52

6°**∡**¹40'58

7°**х** 756′43

max. Earth dist.

minimum elong

conjunction

morning rise

retrograde

opposition

-11415 Feb 23 j 11:51 14° ₹03'30 48.01544 AU

-11415 Feb 25 j 04:09 14°**₹**105'50 -10°47'34

-11415 Feb 25 j 04:18 14° ₹05'51 10°48'09

-11415 Aug 26 j 02:42 14° ₹36'30 -11°08'42

-11415 Mar 08 j 11:17 14° ₹21'30

-11415 Jun 06 j 05:00 15° **₹** 36'21

Planetary Phenomena of Pluto from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11415 in astronomical counting style is the year 11416 BCE in historical counting style. min. Earth dist. -11415 Aug 27 j 15:17 14° 🗷 34'44 45.98375 AU morning rise -11408 Mar 17 i 05:17 21° ₹31'31 direct -11415 Nov 16 j 13:12 13° ₹35'27 -11408 Jun 13 j 04:20 22° ₹ 45'25 retrograde -11414 Feb 14 j 22:23 14° ₹ 50'14 -11408 Sep 01 j 18:59 21°**х** 44'48 -9°25'00 evening set opposition -11414 Feb 24 j 18:34 15° **₹**03'52 47.87873 AU -11408 Sep 03 j 15:04 21°**x** 42'37 44.91840 AU max. Earth dist. min. Earth dist. -11408 Nov 23 j 10:22 20°**х** 42'40 direct -11414 Feb 26 j 11:31 15°**尽** 06'15 -10°34'12 -11407 Feb 20 j 14:42 21° ₹ 57'03 conjunction evening set -11414 Feb 26 j 11:42 15°**尽** 06'16 10°34'49 minimum elong max. Earth dist. -11407 Mar 03 j 14:49 22°**尽** 12'34 46.81184 AU -11414 Mar 10 j 00:15 15° ₹ 22'16 morning rise -11414 Jun 07 j 10:55 16° **₹** 36'57 -11407 Mar 05 j 16:48 22°**х** 15'32 -8°53'15 retrograde conjunction opposition -11414 Aug 27 j 08:13 15°**尽** 37'01 -10°54'44 minimum elong -11407 Mar 05 j 16:58 22° ₹ 15'32 8°53'52 min. Earth dist. -11414 Aug 28 j 21:42 15°**尽** 35'12 45.84299 AU morning rise -11407 Mar 18 j 18:01 22° ₹34'00 -11414 Nov 17 j 20:52 14° ₹35'50 -11407 Jun 14 j 08:24 23° **₹** 47'49 direct retrograde -11413 Feb 15 j 23:58 15° ₹750'31 evening set opposition -11407 Sep 03 j 01:18 22° ₹ 47'07 -9°09'00 max. Earth dist. -11413 Feb 25 j 23:04 16°**尽** 04'22 47.73716 AU min. Earth dist. -11407 Sep 04 j 22:51 22°**₹** 44'51 44.75451 AU direct -11407 Nov 24 j 20:08 21°**尽** 44'51 conjunction -11413 Feb 27 j 18:39 16°**尽** 06'54 -10°20'36 evening set -11406 Feb 21 j 18:11 22° ₹ 59'15 minimum elong -11413 Feb 27 j 18:48 16°**尽** 06'55 10°21'12 max. Earth dist. -11406 Mar 04 j 21:41 23°**₹** 15'01 46.64813 AU morning rise -11413 Mar 11 j 13:10 16° ₹723'17 retrograde -11413 Jun 08 j 16:38 17° ₹37'47 conjunction -11406 Mar 07 j 00:55 23° ₹ 18'04 -8°37'41 opposition -11413 Aug 28 j 13:44 16° ₹37'46 -10°40'29 minimum elong -11406 Mar 07 j 01:04 23° ₹ 18'05 8°38'20 min. Earth dist. -11413 Aug 30 j 04:28 16° ₹35'52 45.69763 AU morning rise -11406 Mar 20 j 06:53 23° ₹36'52 direct -11413 Nov 19 i 04:24 15° ₹36'26 retrograde -11406 Jun 15 j 15:50 24° \$\frac{7}{50}\$'40 evening set -11412 Feb 17 i 01:47 16° ₹ 51'01 opposition -11406 Sep 04 j 07:42 23° ₹ 49'51 -8°52'42 max. Earth dist. -11412 Feb 27 j 05:50 17° ₹05'11 47.59103 AU min. Earth dist. -11406 Sep 06 j 05:27 23°₹47'35 44.58780 AU direct -11406 Nov 26 j 02:44 22° ₹ 47'27 -11412 Feb 29 i 02:11 17° ₹07'46 -10°06'44 -11405 Feb 22 j 21:45 24° ₹01'53 conjunction evening set -11412 Feb 29 i 02:22 17° ₹07'47 10°07'21 max. Earth dist. -11405 Mar 06 j 04:13 24° 🗷 17'53 46.48107 AU minimum elong -11412 Mar 12 j 02:05 17° ₹24'30 morning rise -11412 Jun 08 j 20:59 18° **₹** 38'51 -11405 Mar 08 j 09:08 24°**尽** 21'03 -8°21'51 retrograde conjunction -11412 Aug 28 j 19:20 17° ₹38'43 -10°25'58 minimum elong -11405 Mar 08 j 09:18 24° ₹21'04 8°22'29 opposition -11412 Aug 30 j 12:03 17° **7**36'43 45.54797 AU -11405 Mar 21 j 19:39 24° ₹ 40'11 min. Earth dist. morning rise -11412 Nov 19 j 12:29 16°**尽** 37'13 -11405 Jun 17 j 01:29 25° ₹753'59 retrograde direct -11405 Sep 05 j 14:22 24°₹753'04 -8°36'06 -11411 Feb 17 j 04:02 17°**尽** 51'44 opposition evening set -11411 Feb 27 j 12:00 18°**х** 06'09 47.44108 AU min. Earth dist. -11405 Sep 07 j 14:24 24° ₹ 50'41 44.41750 AU max. Earth dist. -11405 Nov 27 j 06:56 23°**尽** 50'31 direct -11411 Mar 01 j 09:44 18° ₹ 08'50 -9°52'35 -11404 Feb 24 j 01:51 25° ₹05'01 conjunction evening set -11411 Mar 01 j 09:53 18° ₹ 08'50 9°53'12 -11404 Mar 06 j 12:17 25° ₹21'18 46.31011 AU minimum elong max. Earth dist. morning rise -11411 Mar 13 j 15:00 18° ₹ 25'55 retrograde -11411 Jun 10 j 03:33 19°**х** 40'07 conjunction -11404 Mar 08 j 17:47 25° ₹24'31 -8°05'45 opposition -11411 Aug 30 j 01:01 18°**尽** 39'52 -10°11'10 minimum elong -11404 Mar 08 j 17:56 25°**х** 24'31 8°06'22 min. Earth dist. -11411 Aug 31 j 17:56 18°**х** 37'51 45.39476 AU morning rise -11404 Mar 22 j 08:35 25°**х** 43'58 -11411 Nov 20 j 18:40 17° ₹38'13 retrograde -11404 Jun 17 j 09:59 26° ₹ 57'46 direct -11410 Feb 18 j 06:15 18° ₹ 52'39 -11404 Sep 05 j 21:05 25° ₹756'45 -8°19'13 evening set opposition max. Earth dist. -11410 Feb 28 j 17:42 19°**х** 07'18 47.28767 AU min. Earth dist. -11404 Sep 07 j 21:50 25° ₹754'19 44.24285 AU -11404 Nov 27 j 14:23 24°**尽**54'02 direct -11410 Mar 02 j 17:13 19° ₹ 10'05 -9°38'11 conjunction evening set -11403 Feb 24 i 06:26 26° × 08'38 -11410 Mar 02 j 17:23 19° ₹ 10'06 9°38'48 minimum elong max. Earth dist. -11403 Mar 07 j 18:20 26° ₹25'04 46.13453 AU -11410 Mar 15 i 03:44 19° ₹27'32 morning rise -11403 Mar 10 i 02:33 26° ₹28'27 -7°49'21 retrograde -11410 Jun 11 j 13:09 20° ₹ 41'37 conjunction minimum elong -11410 Aug 31 j 06:57 19° ₹ 41'14 -9°56'05 -11403 Mar 10 i 02:43 26° ₹28'28 7°49'59 opposition min. Earth dist. -11410 Sep 02 j 01:42 19° ₹39'08 45.23851 AU morning rise -11403 Mar 23 j 21:44 26° ₹ 48'14 direct -11410 Nov 21 j 22:05 18° ₹39'25 -11403 Jun 18 j 19:29 28° ₹02'02 retrograde -11409 Feb 19 j 08:46 19° ₹ 53'48 -11403 Sep 07 j 04:08 27° ₹ 00'53 -8°02'02 evening set opposition max. Earth dist. -11409 Mar 02 j 01:27 20° ₹ 08'48 47.13156 AU min. Earth dist. -11403 Sep 09 j 06:29 26° ₹ 58'23 44.06353 AU direct -11403 Nov 28 j 21:25 25°**尽** 58'01 conjunction -11409 Mar 04 j 00:57 20° ₹ 11'36 -9°23'29 evening set -11402 Feb 25 j 11:02 27° ₹ 12'42 minimum elong -11409 Mar 04 j 01:07 20° ₹ 11'37 9°24'06 max. Earth dist. -11402 Mar 09 j 02:32 27°**尽** 29'24 45.95401 AU -11409 Mar 16 j 16:24 20° ₹729'23 morning rise -11409 Jun 12 j 20:50 21° ₹ 43'22 conjunction -11402 Mar 11 j 11:29 27° ₹32'50 -7°32'41 retrograde -11409 Sep 01 j 12:52 20° ₹42'51 -9°40'41 -11402 Mar 11 j 11:38 27° ₹32'51 7°33'19 opposition minimum elong -11409 Sep 03 j 07:58 20° ₹ 40'44 45.07963 AU min. Earth dist. morning rise -11402 Mar 25 j 10:36 27°**х** 52'56 -11409 Nov 23 j 04:00 19° ₹ 40'53 retrograde -11402 Jun 20 j 02:06 29°**尽** 06'46 direct evening set -11408 Feb 20 j 11:38 20° ₹ 55'15 opposition -11402 Sep 08 j 11:26 28° ₹ 05'29 -7°44'34 max. Earth dist. -11408 Mar 02 j 07:06 21°**尽** 10'28 46.97297 AU min. Earth dist. -11402 Sep 10 j 15:36 28° ₹ 02'52 43.87922 AU direct -11402 Nov 30 j 06:59 27°**尽**02'24 -11408 Mar 04 j 08:42 21° ₹ 13'24 -9°08'31 -11401 Feb 26 j 16:09 28° ₹ 17'11 conjunction evening set

max. Earth dist.

-11401 Mar 10 j 09:45 28°**х** 34'05 45.76879 AU

-11408 Mar 04 j 08:52 21° ₹ 13'24 9°09'08

minimum elong

Attention, astronomical year style is used: The year -11401 in astronomical counting style is the year 11402 BCE in historical counting style.

-11401 Mar 12 j 20:32 28° ₹37'39 -7°15'44 conjunction -11401 Mar 12 j 20:41 28° ₹37'39 7°16'23 minimum elong

-11401 Mar 26 j 23:43 28° ₹ 58'03 morning rise -11401 May 20 j 04:33 0°る

-11401 Jun 21 j 09:24 0°る11'54

retrograde -11401 Jul 23 j 21:22 30°R ✓

-11401 Sep 09 j 18:36 29° ₹ 10'28 -7°26'48 opposition -11401 Sep 11 j 23:20 29°**₹**07'49 43.69038 AU min. Earth dist.

-11401 Dec 01 j 15:16 28° ₹07'12 direct -11400 Feb 27 j 21:28 29° ₹22'04 evening set

-11400 Mar 10 j 17:08 29°**х** 39'09 45.57902 AU max. Earth dist.

-11400 Mar 13 j 05:50 29° **₹** 42'51 -6°58'31 conjunction

-11400 Mar 13 j 05:59 29°**х** 42'52 6°59'09 minimum elong

-11400 Mar 25 j 01:03 0°**ਰ**

-11400 Mar 27 j 12:50 0°**⋜**03'34 morning rise -11400 Jun 21 j 19:01 1°る17'29 retrograde

-11400 Sep 10j02:11 0°る15'52 -7°08'44 opposition min. Earth dist. -11400 Sep 12 j 09:06 0°る13'06 43.49732 AU

-11400 Sep 23 j 08:16 30°R ✓

-11400 Dec 01 j 21:35 29° ₹ 12'23 direct

-11399 Feb 07 i 23:11 0°る

evening set -11399 Feb 28 i 03:06 0°る27'23

max. Earth dist. -11399 Mar 12 j 02:14 0°₹44'44 45.38539 AU

conjunction -11399 Mar 14 j 15:15 0°₹48'28 -6°41'00 minimum elong -11399 Mar 14 j 15:24 0°₹48'28 6°41'38

morning rise -11399 Mar 29 j 01:50 1°る09'29 -11399 Jun 23 j 05:15 2°♂23'27 retrograde

-11399 Sep 11 j 09:48 1°ට 21'40 -6°50'21 opposition -11399 Sep 13 j 17:04 1°중18'53 43.30065 AU min. Earth dist.

-11399 Dec 03 j 04:11 0°**3**17'57 direct