Planetary Phenomena of Neptune 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 Jun 29 i 02:59 12° Υ 41'42 1° 23'32 conjunction -11881 Jul 14 j 19:31 27°**Υ**57'32 1°57'55 minimum elong minimum elong -11888 Jul 14 j 08:04 13°**Y**15'51 -11881 Jul 14 j 19:30 27° Υ 57'32 1°58'12 morning rise max. Earth dist. -11888 Oct 09 j 05:15 15° Υ 08'46 -11881 Jul 14 j 07:47 27°**Υ**'56'25 31.27511 AU retrograde -11888 Dec 27 j 00:35 13° \begin{pmatrix} \gamma 46'45 & 1\circ 31'56 \end{pmatrix} -11881 Jul 29 j 21:29 28°**Y**31'28 opposition morning rise -11888 Dec 27 j 15:51 13°**Υ**'45'44 29.27006 AU -11881 Sep 16 j 09:16 0°8 min. Earth dist. -11887 Mar 18 j 09:36 12° \cdot \cdot 22'25 -11881 Oct 25 j 10:05 0°**8**25'14 direct retrograde -11881 Dec 04 j 18:09 30°₹**Υ** -11887 Jun 16 j 05:30 14°**Υ**18'11 evening set -11880 Jan 12 j 17:57 29° $\mathbf{\Upsilon}$ 02'51 2° 08'17 opposition -11880 Jan $\,$ 13 j 04:52 $\,$ 29° ${\bf Y}^{0}$ 02'07 $\,$ 29.27574 AU -11887 Jul 01 j 12:26 14° Υ 52'30 1°28'45 conjunction min. Earth dist. -11880 Apr 02 j 20:23 27°**Y**'38'51 -11887 Jul 01 j 12:25 14°**Υ**'52'30 1°28'54 minimum elong direct max. Earth dist. -11887 Jun 30 j 21:27 14°**Υ**'51'05 31.27152 AU evening set -11880 Jul 01 j 01:21 29°**Υ**34'02 -11887 Jul 16 j 16:50 15°**Υ**26'38 -11880 Jul 12 j 15:14 morning rise -11887 Oct 11 j 14:39 17°**Υ**19'41 retrograde -11880 Jul 16 j 04:26 opposition -11887 Dec 29 j 13:12 15°**Υ**57'40 1°37'35 conjunction 0°808'04 2°02'13 min. Earth dist. -11887 Dec 30 j 04:26 15°**Υ**'56'38 29.27440 AU minimum elong -11880 Jul 16 j 04:25 0°**8**08'03 2°02'33 direct -11886 Mar 20 j 21:53 14°**Y**33'25 max. Earth dist. -11880 Jul 15 j 18:40 0°**8**07'08 31.27367 AU evening set -11886 Jun 18 j 15:33 16°**Y**29'07 morning rise -11880 Jul 31 j 05:56 0°**8**41'59 retrograde -11880 Oct 26 j 19:06 2°**8**35'51 conjunction -11886 Jul 03 j 21:43 17°**Υ**03'23 1°33'59 opposition -11879 Jan 14 j 06:42 1°**8**13'23 2°12'47 minimum elong -11886 Jul 03 j 21:42 17°**Υ**'03'23 1°34'09 min. Earth dist. -11879 Jan 14 j 16:11 1°**8**12'45 29.27461 AU max. Earth dist. -11886 Jul 03 j 06:20 17°**Y**'01'56 31.27528 AU -11879 Mar 10 j 08:37 30°R**Y** morning rise -11886 Jul 19 i 01:47 17°**Υ**37'29 direct -11879 Apr 05 j 10:06 29° γ 49'26 retrograde -11886 Oct 14 j 02:26 19° γ 30'40 -11879 Apr 30 j 19:29 0°8 opposition -11885 Jan 01 i 01:56 18° Υ 08'38 1°43'06 evening set -11879 Jul 03 i 10:48 1°**8**44'32 min. Earth dist. -11885 Jan 01 j 15:50 18° Υ 07'41 29.27763 AU -11885 Mar 23 j 08:39 16°**Y**44'27 conjunction -11879 Jul 18 j 13:12 2°818'31 2°06'20 direct -11885 Jun 21 j 01:18 18° γ 40'05 -11879 Jul 18 j 13:11 2°818'31 2°06'40 evening set minimum elong max. Earth dist. -11879 Jul 18 j 03:31 2°**8**17'36 31.27289 AU -11885 Jul 06 j 07:02 19°Υ 14'19 1°39'04 -11879 Aug 02 j 14:28 2°**8**52'24 conjunction morning rise -11885 Jul 06 j 07:01 19°**Υ**°14'19 1°39'15 -11879 Oct 29 j 06:25 4°846'24 minimum elong retrograde -11885 Jul 05 j 17:05 19°**Υ**°13'00 31.27764 AU -11878 Jan 16 j 19:25 3°**8**23'53 2°17'06 max. Earth dist. opposition -11885 Jul 21 j 10:30 19°**γ**48′23 -11878 Jan 17 j 03:32 3°**8**23'21 29.27449 AU min. Earth dist. morning rise -11885 Oct 16 j 12:55 21°**Υ**41'42 -11878 Apr 07 j 21:03 1°**8**59'59 retrograde direct -11884 Jan 03 j 14:52 20°**Υ**19'37 1°48'28 -11878 Jul 05 j 20:02 3°**8**55'01 opposition evening set -11884 Jan 04 j 05:10 20°**Υ** 18'39 29.27935 AU min. Earth dist. -11878 Jul 20 j 22:09 4°**8**28'58 2°10'17 -11884 Mar 24 j 19:48 18°**Υ**55'30 direct conjunction -11884 Jun 22 j 11:14 20°**Υ**51'03 -11878 Jul 20 j 22:08 4°**8**28'58 2°10'39 evening set minimum elong max. Earth dist. -11878 Jul 20 j 14:42 4°**8**28'16 31.27317 AU conjunction -11884 Jul 07 j 16:18 21°**Υ**25'14 1°44'01 morning rise -11878 Aug 04 j 22:55 5°**8**02'50 minimum elong -11884 Jul 07 j 16:17 21°**Υ**25'14 1°44'14 retrograde -11878 Oct 31 j 15:49 6°856'59 max. Earth dist. -11884 Jul 07 j 02:21 21°**Υ**23'55 31.27863 AU opposition -11877 Jan 19 j 08:22 5°**8**34'26 2°21'13 morning rise -11884 Jul 22 j 19:28 21°**Υ**59'17 min. Earth dist. -11877 Jan 19 j 15:42 5°**8**33'56 29.27529 AU retrograde -11884 Oct 18 j 00:36 23° Υ 52'43 direct -11877 Apr 10 j 09:18 4°**8**10'37 -11883 Jan 05 j 03:26 22°**Y**'30'34 1°53'41 -11877 Jul 08 j 05:17 6°**8**05'33 opposition evening set min. Earth dist. -11883 Jan 05 j 16:06 22°**Υ**29'43 29.27969 AU -11883 Mar 27 j 07:21 21° Υ 06'29 -11877 Jul 23 j 06:49 6°\(\arrow\) 39'28 2°14'02 direct conjunction -11877 Jul 23 j 06:48 6°\(\arrow\) 39'28 2°14'25 evening set -11883 Jun 24 j 20:58 23°**Υ**'01'58 minimum elong -11877 Jul 22 j 23:40 6° \(338'48 \) 31.27441 AU max. Earth dist. -11883 Jul 10 j 01:33 23°**Υ**36'07 1°48'49 conjunction morning rise -11877 Aug 07 i 07:29 7°**8**13'20 minimum elong -11883 Jul 10 i 01:31 23°**Υ**'36'07 1°49'03 retrograde -11877 Nov 03 j 03:06 9°**8**07'38 max. Earth dist. -11883 Jul 09 j 12:18 23°**Υ**'34'52 31.27819 AU opposition -11876 Jan 21 j 21:13 7°845'03 2°25'08 -11883 Jul 25 j 04:14 24° Υ 10'07 min. Earth dist. -11876 Jan 22 j 02:41 7°**と**44'41 29.27692 AU morning rise retrograde -11883 Oct 20 j 11:50 26° Υ 03'40 direct -11876 Apr 11 j 19:29 6°821'19 -11882 Jan 07 j 16:19 24°**Υ**'41'27 1°58'43 -11876 Jul 09 j 14:31 8°**8**16'12 opposition evening set -11882 Jan 08 j 05:19 24°**Υ**'40'34 29.27884 AU min. Earth dist. direct -11882 Mar 29 j 19:45 23°**Y**17'24 conjunction -11876 Jul 24 j 15:45 8°**8**50'06 2°17'36 evening set -11882 Jun 27 j 06:30 25°**Y**12'47 minimum elong -11876 Jul 24 j 15:44 8°850'06 2°18'01 8°**8**49'35 31.27606 AU max. Earth dist. -11876 Jul 24 j 10:23 -11882 Jul 12 j 10:33 25°**Y**46'53 1°53'27 -11876 Aug 08 j 16:02 9°**8**23'56 conjunction morning rise -11882 Jul 12 j 10:32 25°**Υ**46'53 1°53'44 -11876 Nov 04 j 13:30 11°**8**18'24 minimum elong retrograde -11882 Jul 11 j 22:24 25°**Υ**45'44 31.27689 AU max. Earth dist. opposition -11882 Jul 27 j 12:50 26°**Y**20'51 morning rise min. Earth dist. -11875 Jan 23 j 15:35 9°**8**55'26 29.27871 AU retrograde -11882 Oct 22 j 23:27 28° Υ 14'30 direct -11875 Apr 14 j 05:32 8°**8**32'09 opposition -11881 Jan 10 j 05:08 26°**Υ**′52'12 2°03'36 evening set -11875 Jul 11 j 23:50 10°**8**26'59 min. Earth dist. -11881 Jan 10 j 16:26 26°**Υ**51'27 29.27725 AU -11881 Apr 01 j 09:26 25°**Υ**28'11 -11875 Jul 27 j 00:37 11°**8**00'51 2°20'59 direct conjunction -11881 Jun 29 j 16:04 27°**Y**23'28 -11875 Jul 27 j 00:36 11°**8**00'51 2°21'24 evening set minimum elong

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Earth dist. -11868 Aug 25 j 14:29 26°**8**50'52 morning rise -11874 Jul 29 j 09:27 13°**8**11'43 2°24'09 -11868 Nov 22 j 09:15 28°**8**46'24 conjunction retrograde -11874 Jul 29 j 09:26 13°**8**11'43 2°24'36 -11867 Feb 10 j 18:34 27°**8**23'15 2°50'29 minimum elong opposition -11874 Jul 29 j 05:28 13°**&**11'20 31.27873 AU max. Earth dist. min. Earth dist. -11867 Feb 10 j 16:11 27°**8**23'24 29.26171 AU -11874 Aug 13 j 09:17 13°**8**45'32 -11867 May 02 j 03:26 25°859'56 morning rise direct -11874 Sep 20 j 17:38 15°8 -11867 Jul 29 j 01:23 27°**8**54'01 evening set -11874 Nov 09 j 13:49 15°**8**40'20 retrograde -11874 Dec 31 j 23:20 15°R8 conjunction -11867 Aug 13 j 00:10 28°**8**27'44 2°40'21 opposition -11873 Jan 28 j 12:13 14°**8**17'39 2°35'37 minimum elong -11867 Aug 13 j 00:09 28°**8**27'44 2°40'54 min. Earth dist. -11873 Jan 28 j 15:55 14°**8**17'24 29.28088 AU max. Earth dist. -11867 Aug 13 j 02:40 28°**8**27'58 31.25726 AU direct -11873 Apr 19 j 03:40 12°**8**54'11 morning rise -11867 Aug 27 j 23:18 29°**8**01'31 evening set -11873 Jul 16 j 18:24 14°**8**48'52 -11867 Sep 25 j 17:09 $\Pi^{\circ}0$ -11873 Jul 21 j 18:16 15°8 retrograde -11867 Nov 24 j 19:32 0°**耳**57'10 -11866 Jan 27 j 22:01 30°R8 conjunction -11873 Jul 31 j 18:30 15°\(22'41 2°27'06 opposition -11866 Feb 13 i 07:43 29°\(\dagger 33'56 \) 2°52'08 minimum elong -11873 Jul 31 j 18:29 15°\(22'41 2°27'34 min. Earth dist. -11866 Feb 13 j 05:01 29° \(\delta 34'07 \) 29.25780 AU max. Earth dist. -11873 Jul 31 j 15:40 15° \(\frac{1}{2}2'25 \) 31.27881 AU direct -11866 May 04 j 13:57 28° **8**10'40 morning rise -11873 Aug 15 j 18:05 15°**8**56'29 -11866 Jul 29 i 07:31 $0^{\circ}\Pi$ retrograde -11873 Nov 12 j 02:10 17°**8**51'25 -11866 Jul 31 j 10:17 0°**Ⅱ**04'40 evening set -11872 Jan 31 j 01:12 16°\begin{align*} 228'42 2°38'41 \end{align*} opposition min. Earth dist. -11872 Jan 31 j 03:20 16°\(28'33 \) 29.28035 AU conjunction -11866 Aug 15 j 08:55 0°П38'22 2°41'46 -11872 Apr 20 j 15:56 15°**8**05'16 -11866 Aug 15 j 08:55 0°П38'22 2°42'21 direct minimum elong -11872 Jul 18 j 03:47 16°\(259'53\) -11866 Aug 15 j 12:29 max. Earth dist. 0°**Д**38'42 31.25384 AU evening set -11866 Aug 30 j 08:08 1°**Д**12'09 morning rise -11872 Aug 02 j 03:30 17°**8**33'41 2°29'52 -11866 Nov 27 j 07:37 3°**Ц**07'57 conjunction retrograde -11872 Aug 02 j 03:29 17°**8**33'41 2°30'21 -11865 Feb 15 j 20:45 1°**Д**44'40 2°53'32 minimum elong opposition -11872 Aug 02 j 00:38 17°**8**33'25 31.27751 AU -11865 Feb 15 j 15:39 1°**Д**45'01 29.25485 AU max. Earth dist. min. Earth dist. -11872 Aug 17 j 03:02 18°**8**07'29 -11865 May 07 j 00:49 0°**Ц**21'27 morning rise direct -11872 Nov 13 j 13:54 20°**8**02'33 -11865 Aug 02 j 19:17 2°**Д**15'23 retrograde evening set opposition min. Earth dist. -11871 Feb 01 j 16:24 18°\(\mathbf{3}39'37\) 29.27849 AU conjunction -11865 Aug 17 j 17:51 2°**Д**49'05 2°42'57 direct -11871 Apr 23 j 02:37 17°**8**16'22 minimum elong -11865 Aug 17 j 17:50 2°**Д**49'05 2°43'32 evening set -11871 Jul 20 j 12:58 19°**8**10'54 max. Earth dist. -11865 Aug 17 j 22:23 2°**Д**49'31 31.25125 AU morning rise -11865 Sep 01 j 17:11 3°**Ц**22'53 -11871 Aug 04 j 12:32 19°**8**44'40 2°32'24 retrograde -11865 Nov 29 j 19:56 5°**Д**18'51 conjunction -11871 Aug 04 j 12:31 19°**8**44'40 2°32'54 opposition -11864 Feb 18 j 09:48 3°**Д**55'31 2°54'40 minimum elong max. Earth dist. -11871 Aug 04 j 11:20 19°**8**44'33 31.27484 AU min. Earth dist. -11864 Feb 18 j 04:33 3°**Д**55'52 29.25278 AU morning rise -11871 Aug 19 j 11:47 20°**8**18'27 direct -11864 May 08 j 10:51 2°**Д**32'23 -11871 Nov 16 j 00:17 22°**8**13'38 -11864 Aug 04 i 04:12 4°**Д**26'15 retrograde evening set -11870 Feb 04 i 03:25 20°\(\delta 50'46 \) 2°44'07 opposition -11870 Feb 04 i 04:23 20°850'42 29.27515 AU -11864 Aug 19 i 02:51 4°**II**59'57 2°43'54 min. Earth dist. conjunction -11870 Apr 25 j 16:32 19°\(27'25\) -11864 Aug 19 i 02:50 4° \$\mathbb{I}\$59'57 2°44'31 direct minimum elong evening set -11870 Jul 22 j 22:16 21°**8**21'50 max. Earth dist. -11864 Aug 19 i 09:03 5° **II** 00'32 31.24947 AU morning rise -11864 Sep 03 i 02:14 5° **II** 33'46 -11870 Aug 06 j 21:27 21°\(\begin{align*} 255'35 2°34'43 \end{align*} \] retrograde -11864 Dec 01 i 08:40 7° II 29'53 conjunction -11870 Aug 06 j 21:26 21°\(\cup 55'35 \) 2°35'15 opposition -11863 Feb 19 j 22:48 6°Д06'32 2°55'34 minimum elong -11870 Aug 06 j 19:59 21°**8**55'26 31.27100 AU -11863 Feb 19 j 15:38 6°**Д**07'01 29.25109 AU max. Earth dist. min. Earth dist. -11870 Aug 21 j 20:47 22°**8**29'22 4°**∏**43'29 morning rise direct -11863 May 10 j 21:59 -11870 Nov 18 j 12:43 24°**8**24'40 retrograde evening set -11863 Aug 06 j 13:14 6°**Д**37'18 opposition -11869 Feb 06 j 16:35 23°801'42 2°46'29 min. Earth dist. -11869 Feb 06 j 16:32 23°**8**01'42 29.27099 AU conjunction -11863 Aug 21 j 11:43 7°**I**11'01 2°44'37 -11869 Apr 28 j 04:00 21°838'21 minimum elong -11863 Aug 21 j 11:42 7°**Ⅱ**11'01 2°45'14 direct -11869 Jul 25 j 07:14 23°**8**32'39 max. Earth dist. -11863 Aug 21 j 18:11 7°**П**11'38 31.24780 AU evening set -11863 Sep 05 j 11:21 7°**Ⅱ**44'51 morning rise conjunction -11869 Aug 09 j 06:24 24°**8**06'23 2°36'49 retrograde -11863 Dec 03 j 21:17 9°**Ⅱ**41′08 -11869 Aug 09 j 06:23 24°**8**06'23 2°37'21 minimum elong opposition -11862 Feb 22 j 12:00 8°**I**17'46 2°56'12 max. Earth dist. -11869 Aug 09 j 06:54 24°**8**06'26 31.26640 AU min. Earth dist. -11862 Feb 22 j 04:32 8°**П**18'16 29.24945 AU morning rise -11869 Aug 24 j 05:32 24°**8**40'10 direct -11862 May 13 j 07:50 6°**Ⅲ**54'48 retrograde -11869 Nov 20 j 22:07 26°**8**35'35 -11862 Aug 08 j 22:15 8°**Ⅱ**48'34 evening set

-11868 Feb 09 j 05:43 25°**8**12'31 2°48'36

opposition

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Earth dist. morning rise -11855 Dec 21 j 19:22 27°**I**I14'25 direct -11861 May 15 j 21:02 9°**Ⅲ**06'18 retrograde -11854 Mar 12 j 20:49 25° **II**50'27 2° 52'11 -11861 Aug 11 j 07:27 11°**II**00'00 evening set opposition min. Earth dist. -11854 Mar 12 j 06:33 25°**Д**51'25 29.20080 AU conjunction -11861 Aug 26 j 06:03 11°**II**33'44 2°45'20 direct -11854 May 31 j 03:20 24°**Ⅲ**27'39 -11861 Aug 26 j 06:03 11°**Д**33'44 2°45'58 -11854 Aug 25 j 23:34 26°**Д**20'40 minimum elong evening set -11861 Aug 26 j 14:07 11°**Д**34'30 31.24328 AU max. Earth dist. -11861 Sep 10 j 06:07 12°**Д**07'36 morning rise conjunction -11854 Sep 09 j 23:46 26°**Д**54'31 2°40'23 retrograde -11861 Dec 08 j 23:20 14°**Д**04'12 minimum elong -11854 Sep 09 j 23:47 26° II 54'31 2°41'04 opposition -11860 Feb 27 j 14:22 12°**Д**40'46 2°56'43 max. Earth dist. -11854 Sep 10 j 13:27 26°**Д**55'49 31.19450 AU min. Earth dist. -11860 Feb 27 j 04:57 12°**Ц**41'24 29.24408 AU morning rise -11854 Sep 25 j 02:23 27°**Ц**28'36 direct -11860 May 17 j 08:09 11°**Д**17'56 retrograde -11854 Dec 24 j 08:21 29°**Ц**25'52 evening set -11860 Aug 12 j 16:39 13°**Д**11'35 opposition -11853 Mar 15 j 09:47 28° **I**I 01'48 2° 50'32 min. Earth dist. -11853 Mar 14 j 19:09 28°**Д**02'48 29.19340 AU conjunction -11860 Aug 27 j 15:31 13°**II**45'19 2°45'20 direct -11853 Jun 02 j 13:11 26°**Д**39'01 minimum elong -11860 Aug 27 j 15:31 13°**II**45'19 2°45'59 evening set -11853 Aug 28 i 08:34 28° **II** 31'57 max. Earth dist. -11860 Aug 28 j 01:08 13°**Д**46'14 31.23936 AU morning rise -11860 Sep 11 j 15:40 14°**Д**19'13 conjunction -11853 Sep 12 j 09:21 29°**II**05'50 2°38'44 retrograde -11860 Dec 10 j 09:31 16°**Д**15'56 minimum elong -11853 Sep 12 j 09:21 29°П05'50 2°39'24 -11859 Mar 01 j 03:28 14° **II** 52'27 2°56'35 max. Earth dist. -11853 Sep 13 j 01:06 29°Д07'19 31.18757 AU opposition min. Earth dist. -11859 Feb 28 j 17:53 14°Д53'06 29.23943 AU -11853 Sep 27 j 12:19 29°**Д**39'57 morning rise -11859 May 19 j 20:15 13°**Д**29'41 -11853 Oct 06 j 17:53 0°5 direct -11859 Aug 15 j 01:58 15°**Ⅲ**23'14 -11853 Dec 26 j 20:45 1°937'18 evening set retrograde -11852 Mar 16 j 22:39 0°513'11 2°48'39 opposition -11859 Aug 30 j 00:52 15°**Д**57'00 2°45'06 min. Earth dist. -11852 Mar 16 j 06:38 0°5014'16 29.18680 AU conjunction -11859 Aug 30 j 00:52 15°**Д**57'00 2°45'44 -11852 Mar 25 j 01:44 30°RII minimum elong -11859 Aug 30 j 10:22 15°**Д**57'54 31.23408 AU -11852 Jun 04 j 01:39 28°**Ⅲ**50'25 max. Earth dist. direct -11859 Sep 14 j 01:25 16°**Д**30'55 -11852 Aug 09 j 01:32 0°ഇ morning rise -11859 Dec 12 j 21:25 18°**Д**27'45 -11852 Aug 29 j 17:49 0°9543'17 retrograde evening set -11858 Mar 03 j 16:39 17°**Ⅲ**04'12 2°56'12 opposition -11858 Mar 03 j 05:42 17°**Д**04'56 29.23340 AU -11852 Sep 13 j 18:50 1°517'12 2°36'51 min. Earth dist. conjunction direct -11858 May 22 j 07:47 15°**Д**41'26 minimum elong -11852 Sep 13 j 18:51 1°517'12 2°37'32 evening set -11858 Aug 17 j 11:03 17°**Д**34'53 max. Earth dist. -11852 Sep 14 j 10:29 1°5518'41 31.18146 AU morning rise -11852 Sep 28 j 22:29 1°**9**51'21 -11858 Sep 01 j 10:13 18°**Д**08'40 2°44'37 conjunction retrograde -11852 Dec 28 j 10:51 3°548'49 -11858 Sep 01 j 10:13 18°**Д**08'40 2°45'17 opposition -11851 Mar 19 j 11:25 2°524'39 2°46'31 minimum elong max. Earth dist. -11858 Sep 01 j 20:52 18°П09'41 31.22729 AU min. Earth dist. -11851 Mar 18 j 18:26 2°525'48 29.18104 AU -11858 Sep 16 j 11:04 18°**Д**42'37 -11851 Jun 06 j 11:54 1°901'55 morning rise direct -11858 Dec 15 j 08:23 20°**Д**39'34 -11851 Sep 01 j 02:56 2°954'44 retrograde evening set -11857 Mar 06 j 05:57 19° **II** 15'55 2°55'34 opposition -11857 Mar 05 j 19:17 19°**Ц**16'38 29.22598 AU -11851 Sep 16 j 04:32 3°528'41 2°34'44 min. Earth dist. conjunction -11851 Sep 16 j 04:32 3°528'41 2°35'25 direct -11857 May 24 j 19:03 17°**Д**53'09 minimum elong evening set -11857 Aug 19 j 20:15 19°**Ⅲ**46'29 max. Earth dist. -11851 Sep 16 j 22:01 3°530'20 31.17596 AU morning rise -11851 Oct 01 i 08:36 4°502'54 -11857 Sep 03 i 19:41 20° II 20'17 2° 43'55 conjunction retrograde -11851 Dec 30 j 21:58 6°500'28 minimum elong -11857 Sep 03 i 19:41 20° II 20'17 2°44'34 min. Earth dist. -11850 Mar 21 j 06:54 4°537'27 29.17562 AU max. Earth dist. -11857 Sep 04 j 06:58 20°Д21'21 31.21946 AU opposition -11850 Mar 22 j 00:22 4°536'16 2°44'09 -11857 Sep 18 j 20:54 20°**Д**54'16 morning rise direct -11850 Jun 08 j 23:30 3°9513'35 -11857 Dec 17 j 20:04 22° **II**51'17 -11850 Sep 03 j 12:10 retrograde evening set 5°906'20 opposition -11856 Mar 07 j 18:49 21°**II**27'32 2°54'42 -11856 Mar 07 j 06:21 21°**Ц**28'22 29.21770 AU min. Earth dist. conjunction -11850 Sep 18 j 14:10 5°\$40'20 2°32'24 -11856 May 26 j 06:25 20°**Ⅲ**04'45 minimum elong -11850 Sep 18 j 14:10 5°9540'20 2°33'05 direct -11856 Aug 21 j 05:24 21°**Д**57'59 -11850 Sep 19 j 07:53 5°542'00 31.17075 AU evening set max. Earth dist. -11850 Oct 03 j 18:56 morning rise 6°9514'36 -11856 Sep 05 j 05:02 22°**I**31'47 2°42'58 conjunction retrograde -11849 Jan 02 j 11:21 8°9512'16 -11856 Sep 05 j 05:02 22° **I** 31'47 2° 43'39 minimum elong opposition -11849 Mar 24 j 13:14 6°548'02 2°41'31 max. Earth dist. -11856 Sep 05 j 16:48 22°**I**32'54 31.21088 AU min. Earth dist. -11849 Mar 23 j 18:28 6°549'19 29.17026 AU morning rise -11856 Sep 20 j 06:44 23°**Ⅲ**05'48 direct -11849 Jun 11 j 10:49 5°925'25 retrograde -11856 Dec 19 j 07:32 25°**Ⅲ**02'54 evening set -11849 Sep 05 j 21:37 7°9518'07 -11855 Mar 10 j 07:54 23°**Д**39'02 2°53'33 opposition min. Earth dist. -11855 Mar 09 j 19:34 23°**Д**39'52 29.20911 AU -11849 Sep 21 j 00:07 7°552'09 2°29'50 conjunction

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-	nical year style is used: The		_				le.
minimum elong	-11849 Sep 21 j 00:08	7° © 52'09		evening set	-11842 Sep 20 j 16:52		
max. Earth dist.	-11849 Sep 21 j 18:49		31.16512 AU	3	r . ,		
morning rise	-11849 Oct 06 j 05:29	8°\$26'28		conjunction	-11842 Oct 05 j 23:4	23° © 17'09	2°06'00
retrograde	-11848 Jan 04 j 23:16			minimum elong	-11842 Oct 05 j 23:42		
min. Earth dist.	-11848 Mar 25 j 07:45		29.16429 AU	max. Earth dist.	-11842 Oct 06 j 22:23		
opposition	-11848 Mar 26 j 02:03	9°500'00		morning rise	-11842 Oct 21 j 09:50		
direct	-11848 Jun 12 j 21:38	7°537'25		retrograde	-11841 Jan 20 j 15:03		
evening set	-11848 Sep 07 j 07:07	9° © 30'04		opposition	-11841 Apr 11 j 18:5:		2°12'27
Č	1 3			min. Earth dist.	-11841 Apr 10 j 20:52		
conjunction	-11848 Sep 22 j 10:12	10°504'09	2°27'03	direct	-11841 Jun 29 j 00:58		
minimum elong	-11848 Sep 22 j 10:13		2°27'44	evening set	-11841 Sep 23 j 02:42		
max. Earth dist.	-11848 Sep 23 j 05:25			C	1 3		
morning rise	-11848 Oct 07 j 16:10			conjunction	-11841 Oct 08 j 10:09	25°\$29'13	2°01'50
retrograde	-11847 Jan 06 j 11:36			minimum elong	-11841 Oct 08 j 10:10		
opposition	-11847 Mar 28 j 14:51		2°35'34	max. Earth dist.	-11841 Oct 09 j 09:0		
min. Earth dist.	-11847 Mar 27 j 19:03			morning rise	-11841 Oct 23 j 21:14		
direct	-11847 Jun 15 j 08:47			retrograde	-11840 Jan 23 j 05:14		
evening set	-11847 Sep 09 j 16:40			min. Earth dist.	-11840 Apr 12 j 07:40		29.08972 AU
* · · · · · · · · · · · · · · · · · · ·				opposition	-11840 Apr 13 j 07:08		
conjunction	-11847 Sep 24 j 20:11	12°9316'16	2°24'03	direct	-11840 Jun 30 j 12:44		2 0, 05
minimum elong	-11847 Sep 24 j 20:12			evening set	-11840 Sep 24 j 12:32		
max. Earth dist.	-11847 Sep 25 j 15:24			evening sec	110 to 50p 2 t j 12.52	27 - 000 32	
morning rise	-11847 Oct 10 j 02:53		31.13133 AO	conjunction	-11840 Oct 09 j 20:4	1 27°05/11'21	1°57'28
retrograde	-11846 Jan 08 j 23:26			minimum elong	-11840 Oct 09 j 20:42		
min. Earth dist.	-11846 Mar 30 j 08:39		29 14922 ATT	max. Earth dist.	-11840 Oct 10 j 20:32		
opposition	-11846 Mar 31 j 03:52			morning rise	-11840 Oct 10 j 20:32		31.06423 AU
direct	-11846 Jun 17 j 18:29		2 32 13	morning rise	-11840 Oct 25 j 08.32		
evening set	-11846 Sep 12 j 02:16			retrograde	-11840 Dec 23 j 14.4. -11839 Jan 24 j 17:38		
evening set	-11640 Sep 12 J 02.10	13 3934 19		reirograde	-		
	11046 0 27:06:22	1.496-20120	2020150	:	-11839 Feb 24 j 07:04		2002107
conjunction	-11846 Sep 27 j 06:32			opposition	-11839 Apr 15 j 19:33		
minimum elong	-11846 Sep 27 j 06:33			min. Earth dist.	-11839 Apr 14 j 20:20		29.08223 AU
max. Earth dist.	-11846 Sep 28 j 02:54		31.14200 AU	direct	-11839 Jul 02 j 23:39		
morning rise	-11846 Oct 12 j 13:48			evening set	-11839 Sep 26 j 22:14	1 29 2019 02	
retrograde	-11845 Jan 11 j 11:40		2020142		11020 0 . 12:07.0	200553135	1050155
opposition	-11845 Apr 02 j 16:34			conjunction	-11839 Oct 12 j 07:09		
min. Earth dist.	-11845 Apr 01 j 20:06		29.13980 AU	minimum elong	-11839 Oct 12 j 07:10		
direct	-11845 Jun 20 j 05:09			max. Earth dist.	-11839 Oct 13 j 07:53		31.0//4/ AU
evening set	-11845 Sep 14 j 12:01	16°906'30			-11839 Oct 15 j 03:09		
	11045 0 20:16 46	1.60€40144	2017125	morning rise	-11839 Oct 27 j 19:40		
conjunction	-11845 Sep 29 j 16:46			retrograde	-11838 Jan 27 j 05:48		20.05556.433
minimum elong	-11845 Sep 29 j 16:46			min. Earth dist.	-11838 Apr 17 j 07:0		29.07576 AU
max. Earth dist.	-11845 Sep 30 j 12:36		31.13280 AU	opposition	-11838 Apr 18 j 07:5		1°58'10
morning rise	-11845 Oct 15 j 00:56				-11838 May 30 j 16:34		
retrograde	-11844 Jan 14 j 00:58		20.120.16.177	direct	-11838 Jul 05 j 10:48		
min. Earth dist.	-11844 Apr 03 j 09:14				-11838 Aug 09 j 02:40		
opposition	-11844 Apr 04 j 05:22		2°24'57	evening set	-11838 Sep 29 j 08:2	1° Ω 31′22	
direct	-11844 Jun 21 j 15:04						
evening set	-11844 Sep 15 j 21:35	18°5518'39		conjunction	-11838 Oct 14 j 17:53		
				minimum elong	-11838 Oct 14 j 17:54		
conjunction	-11844 Oct 01 j 03:06			max. Earth dist.	-11838 Oct 15 j 18:39		31.07137 AU
minimum elong	-11844 Oct 01 j 03:07			morning rise	-11838 Oct 30 j 07:25		
max. Earth dist.	-11844 Oct 02 j 00:32		31.12217 AU	retrograde	-11837 Jan 29 j 17:42		
morning rise	-11844 Oct 16 j 11:49			opposition	-11837 Apr 20 j 20:1		
retrograde	-11843 Jan 15 j 13:28			min. Earth dist.	-11837 Apr 19 j 20:0:		29.06986 AU
opposition	-11843 Apr 06 j 17:52		2°20'59	direct	-11837 Jul 07 j 20:13		
min. Earth dist.	-11843 Apr 05 j 20:52		29.11855 AU	evening set	-11837 Oct 01 j 18:28	3° Ω 43'52	
direct	-11843 Jun 24 j 03:19					_	
evening set	-11843 Sep 18 j 07:18	20° © 30'45		conjunction	-11837 Oct 17 j 04:5:		
				minimum elong	-11837 Oct 17 j 04:50		
conjunction	-11843 Oct 03 j 13:19		2°10'00	max. Earth dist.	-11837 Oct 18 j 06:53		31.06569 AU
minimum elong	-11843 Oct 03 j 13:20	21° © 05'04	2°10'38	morning rise	-11837 Nov 01 j 19:00		
max. Earth dist.	-11843 Oct 04 j 10:23	21° 5 07'03	31.11148 AU	retrograde	-11836 Feb 01 j 06:1'	6° Ω 52'02	
morning rise	-11843 Oct 18 j 22:56	21° 5 39'42		min. Earth dist.	-11836 Apr 21 j 07:10	5° Ω 28'52	29.06398 AU
retrograde	-11842 Jan 18 j 03:33	23° © 37'54		opposition	-11836 Apr 22 j 08:23		1°47'44
min. Earth dist.	-11842 Apr 08 j 08:45	22°514'41	29.10807 AU	direct	-11836 Jul 09 j 06:4'		
opposition	-11842 Apr 09 j 06:26	22°513'12	2°16'49	evening set	-11836 Oct 03 j 04:53	5° Ω 56'33	
direct	-11842 Jun 26 j 13:25	20° © 50'33					

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11836 in astronomical counting style is the year 11837 BCE in historical counting style. -11836 Oct 18 j 15:52 6° Ω31'15 1°38'18 retrograde -11829 Feb 17 i 02:19 $22^{\circ}\Omega 23'00$ conjunction minimum elong -11836 Oct 18 j 15:53 6°**Ω**31'15 1°38'52 opposition -11829 May 08 j 21:11 $20^{\circ}\Omega$ 57'44 $1^{\circ}06'35$ max. Earth dist. -11836 Oct 19 j 17:08 6°**Ω**33'38 31.05969 AU min. Earth dist. -11829 May 07 j 19:45 $20^{\circ}\Omega$ 59'30 29.00274 AU -11836 Nov 03 j 06:59 -11829 Jul 25 j 11:47 19°**Ω**34'54 7°**Ω**06′20 direct morning rise -11829 Oct 19 j 08:12 21°**Ω**26'46 -11835 Feb 02 j 19:17 9°**Ω**04'53 retrograde evening set -11835 Apr 24 j 20:43 7°**Ω**39'58 1°42'16 opposition -11829 Nov 04 j 00:31 22° Ω 01'51 0°59'23 min. Earth dist. -11835 Apr 23 j 20:07 7°**Ω**41'39 29.05769 AU conjunction -11829 Nov 04 j 00:31 22°**Ω**01'51 0°59'49 direct -11835 Jul 11 j 16:12 6°**£**17′22 minimum elong -11835 Oct 05 j 15:19 -11829 Nov 05 j 02:38 22° Ω 04'18 30.99756 AU evening set 8°**Ω**09′23 max. Earth dist. morning rise -11829 Nov 19 j 21:10 22° Ω 37'21 conjunction -11835 Oct 21 j 03:12 8° Ω44'08 1°33'07 retrograde -11828 Feb 19 j 14:40 24° **Ω**35'56 -11835 Oct 21 j 03:13 8°**Ω**44'09 -11828 May 09 j 08:25 23° Ω 12'20 28.99405 AU minimum elong 1°33'39 min. Earth dist. -11835 Oct 22 j 05:39 max. Earth dist. 8°**Ω**46'38 31.05307 AU opposition -11828 May 10 j 09:05 23° Ω 10'37 1°00'14 morning rise -11835 Nov 05 j 18:57 9° Ω 19'17 direct -11828 Jul 26 j 21:43 21° Ω 47'46 retrograde -11834 Feb 05 j 07:35 11° Ω 17'52 evening set -11828 Oct 20 j 19:07 23°**Ω**39'37 min. Earth dist. -11834 Apr 26 j 08:00 9°**Ω**54'38 29.05048 AU opposition -11834 Apr 27 j 08:57 9°**Ω**52'55 1°36'39 conjunction -11828 Nov 05 j 12:17 24° Ω 14'46 0°53'24 direct -11834 Jul 14 j 03:29 8° **Ω**30'19 minimum elong -11828 Nov 05 j 12:18 24° Ω 14'46 0°53'50 evening set -11834 Oct 08 j 01:58 $10^{\circ}\Omega$ 22'19 max. Earth dist. -11828 Nov 06 j 15:35 $24^{\circ}\Omega$ 17'20 30.98951 AU morning rise -11828 Nov 21 j 09:31 $24^{\circ}\Omega$ 50'18 conjunction -11834 Oct 23 j 14:31 10° Ω57'08 1°27'47 retrograde -11827 Feb 21 j 03:13 $26^{\circ}\Omega 48'54$ minimum elong -11834 Oct 23 j 14:32 $10^{\circ}\Omega$ 57'08 1° 28'19 opposition -11827 May 12 j 20:47 $25^{\circ}\Omega$ 23'35 $0^{\circ}53'48$ -11834 Oct 24 j 15:53 $10^{\circ}\Omega$ 59'31 31.04547 AU max. Earth dist. min. Earth dist. -11827 May 11 j 18:56 $25^{\circ}\Omega 25'23$ 28.98651 AU morning rise -11834 Nov 08 j 07:15 11° Ω 32'20 direct -11827 Jul 29 j 08:37 24° Ω 00'42 -11833 Feb 07 j 21:57 $13^{\circ}\Omega$ 30'57 retrograde evening set -11827 Oct 23 j 06:21 25° Ω52'35 opposition -11833 Apr 29 j 21:15 $12^{\circ}\Omega$ 05'57 $1^{\circ}30'53$ min. Earth dist. -11833 Apr 28 j 20:22 12° Ω 07'40 29.04221 AU conjunction -11827 Nov 08 j 00:05 $26^{\circ}\Omega$ 27'47 $0^{\circ}47'20$ -11833 Jul 16 j 13:11 10°**Ω**43'19 minimum elong -11827 Nov 08 j 00:06 $26^{\circ}\Omega$ 27'47 $0^{\circ}47'44$ direct -11833 Oct 10 j 12:44 12° **Ω**35'17 max. Earth dist. -11827 Nov 09 j 02:40 $26^{\circ}\Omega$ 30'17 30.98266 AU evening set -11827 Nov 23 j 22:13 $27^{\circ}\Omega 03'23$ morning rise -11826 Feb 23 j 15:35 29° **Ω**02'01 -11833 Oct 26 j 02:08 13° Ω 10'09 1°22'20 conjunction retrograde -11833 Oct 26 j 02:09 13° Ω 10'09 1°22'50 -11826 May 14 j 07:16 $27^{\circ}\Omega$ 38'26 28.98025 AU min. Earth dist. minimum elong -11833 Oct 27 j 04:14 13° Ω 12'37 31.03661 AU -11826 May 15 j 08:33 27° Ω 36'41 0°47'16 max. Earth dist. opposition -11833 Nov 10 j 19:33 13°**Ω**45'25 direct -11826 Jul 31 j 17:50 26° **Ω**13'48 morning rise -11833 Dec 19 j 05:55 15°**Ω** -11826 Oct 25 j 17:33 28°**Ω**05'43 evening set -11832 Feb 10 j 10:10 15° **Ω**44'02 retrograde -11832 Apr 05 j 12:34 15°RΩ -11826 Nov 10 j 12:12 28° Ω40'58 0°41'12 conjunction min. Earth dist. -11832 Apr 30 j 08:52 14° Ω 20'40 29.03270 AU minimum elong -11826 Nov 10 j 12:12 28°Ω40'58 0°41'35 opposition -11832 May 01 j 09:19 $14^{\circ}\Omega$ 18'58 1° 24'59 max. Earth dist. -11826 Nov 11 j 16:03 28° Ω 43'35 30.97692 AU direct -11832 Jul 18 j 00:50 12°**Ω**56'18 morning rise -11826 Nov 26 j 10:54 29° Ω 16'37 -11832 Oct 11 j 23:31 14° **Ω**48'14 -11826 Dec 17 j 07:14 0° M evening set -11832 Oct 17 j 06:58 15°**Ω** retrograde -11825 Feb 26 j 03:25 1° Mp 15'16 -11825 May 11 j 19:53 30°R**Ω** -11832 Oct 27 j 13:39 15° Ω 23'10 1°16'45 opposition -11825 May 17 j 20:13 29° Ω 49'58 0°40'40 conjunction -11832 Oct 27 j 13:40 15° Ω 23'10 1°17'15 min. Earth dist. -11825 May 16 j 18:35 $29^{\circ}\Omega$ 51'45 28.97477 AU minimum elong -11832 Oct 28 j 15:15 $15^{\circ}\Omega 25'34$ 31.02690 AU -11825 Aug 03 i 04:33 $28^{\circ}\Omega 27'06$ max. Earth dist. direct morning rise -11832 Nov 12 j 07:56 $15^{\circ}\Omega$ 58'29 -11825 Oct 19 i 08:24 -11831 Feb 12 i 01:04 $17^{\circ}\Omega$ 57'05 -11825 Oct 28 j 05:10 retrograde evening set 0° m 19'04 opposition -11831 May 03 j 21:22 $16^{\circ}\Omega$ 31'57 1° 18'58 min. Earth dist. -11831 May 02 i 20:17 $16^{\circ}\Omega$ 33'41 29.02262 AU conjunction -11825 Nov 13 j 00:21 0° m 54'22 0°34'59 direct -11831 Jul 20 j 12:46 15° Ω 09'13 minimum elong -11825 Nov 13 i 00:21 0° m 54'22 0°35'20 evening set -11831 Oct 14 j 10:13 17°**Ω**01'07 max. Earth dist. -11825 Nov 14 j 03:06 0° Mp 56'53 30.97185 AU -11825 Nov 28 j 23:52 1° m 30'04 morning rise conjunction -11831 Oct 30 j 01:05 17° Ω 36'06 1°11'04 retrograde -11824 Feb 28 j 17:40 3° m 28'45 minimum elong -11831 Oct 30 j 01:06 17° Ω 36'06 1°11'32 min. Earth dist. -11824 May 18 j 06:19 2° Mp 05'15 28.96988 AU max. Earth dist. -11831 Oct 31 j 03:07 17° Ω 38'33 31.01668 AU opposition -11824 May 19 j 07:47 2° Mp 03'28 0°33'59 -11831 Nov 14 j 20:09 18°**Ω**11'29 morning rise direct -11824 Aug 04 j 13:22 0° Mp 40'36retrograde -11830 Feb 14 j 13:15 20° **Ω**10'05 evening set -11824 Oct 29 j 16:48 2°m/32'38 -11830 May 05 j 09:12 $18^{\circ}\Omega$ 46'33 29.01238 AU min. Earth dist. -11830 May 06 j 09:28 18° **Ω**44'52 1°12'50 -11824 Nov 14 j 12:45 3°**m** 08'00 0°28'43 opposition conjunction -11830 Jul 23 j 00:04 17°**Ω**22'05 direct minimum elong -11824 Nov 14 j 12:45 3°**m**08'00 0°29'03 -11830 Oct 16 j 21:06 19° Ω 13'57 evening set max. Earth dist. -11824 Nov 15 j 16:13 3° Mp 10'34 30.96696 AU morning rise -11824 Nov 30 j 12:47 3° Mp 43'45 conjunction -11830 Nov 01 j 12:48 19° € 48'59 1°05'16 retrograde -11823 Mar 02 j 06:09 5° m 42'28 minimum elong -11830 Nov 01 j 12:49 19°**Ω**48'59 1°05'44 opposition -11823 May 21 j 19:26 4° m 17'12 0°27'15 max. Earth dist. -11830 Nov 02 j 15:15 19° Ω 51'28 31.00678 AU min. Earth dist. -11823 May 20 j 18:34 4° TO 18'56 28.96485 AU

direct

-11823 Aug 07 j 00:27

2° m 54'20

-11830 Nov 17 j 08:36 20°**Ω**24'25

morning rise

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 7

•	nical year style is used: The		_	` //			le.
evening set	-11823 Nov 01 j 04:36	-		min. Earth dist.	-11817 Jun 03 j 18:38		
-	·			direct	-11817 Aug 20 j 21:15	16° Mp 17'58	
conjunction	-11823 Nov 17 j 01:11	5° Mp 21'50	0°22'24	evening set	-11817 Nov 15 j 06:34	18° m 10'18	
minimum elong	-11823 Nov 17 j 01:11	5° m/21'50	0°22'42				
max. Earth dist.	-11823 Nov 18 j 03:48	5° Mp 24′20	30.96186 AU	conjunction	-11817 Dec 01 j 06:49	18° m 45'57	-0°15'58
morning rise	-11823 Dec 03 j 01:56	5° m 57′38		minimum elong	-11817 Dec 01 j 06:49	18°M/45'57	0°15'49
retrograde	-11822 Mar 04 j 21:37	7° Mp 56′22		behind sun begin	-11817 Dec 01 j 06:17	18° m 45'54	
min. Earth dist.	-11822 May 23 j 06:03	6° Mg 32′52	28.95936 AU	behind sun end	-11817 Dec 01 j 07:20	18° m 45'59	
opposition	-11822 May 24 j 07:05	6° Mg 31′07	0°20'28	max. Earth dist.	-11817 Dec 02 j 07:29	18° m 48'15	30.91338 AU
direct	-11822 Aug 09 j 12:22	5°Mp08'14		morning rise	-11817 Dec 17 j 10:46	19° m 21'58	
evening set	-11822 Nov 03 j 16:46	7° Mp 00′23		retrograde	-11816 Mar 18 j 01:47		
				min. Earth dist.	-11816 Jun 05 j 05:39	-	
conjunction	-11822 Nov 19 j 13:58	7° m 35'51		opposition	-11816 Jun 06 j 03:35		-0°20'31
minimum elong	-11822 Nov 19 j 13:58	7° m 35'51		direct	-11816 Aug 22 j 08:31		
max. Earth dist.	-11822 Nov 20 j 16:20		30.95581 AU	evening set	-11816 Nov 16 j 19:13	20° Mp 24'03	
morning rise	-11822 Dec 05 j 15:20	8° Mp 11'42					
retrograde	-11821 Mar 07 j 10:03			conjunction	-11816 Dec 02 j 19:50	-	
opposition	-11821 May 26 j 18:41	8° mp 45'10		minimum elong	-11816 Dec 02 j 19:50	-	
min. Earth dist.	-11821 May 25 j 19:09	-	28.95276 AU	max. Earth dist.	-11816 Dec 03 j 19:11		30.90559 AU
direct	-11821 Aug 11 j 23:22	7° m 22'15		morning rise	-11816 Dec 19 j 00:23		
evening set	-11821 Nov 06 j 05:00	9° m , 14′27		retrograde	-11815 Mar 20 j 15:15		
				opposition	-11815 Jun 08 j 14:46	•	
conjunction	-11821 Nov 22 j 02:56	9° m 49'58	0°09'41	min. Earth dist.	-11815 Jun 07 j 17:01		28.90252 AU
minimum elong	-11821 Nov 22 j 02:56	9° m/49'58	0°09'57	direct	-11815 Aug 24 j 17:50		
behind sun begin	-11821 Nov 21 j 21:40	9° m/49'29		evening set	-11815 Nov 19 j 07:45	22° m 37'47	
behind sun end	-11821 Nov 22 j 08:12	9° m 50'26	20.04052.444		11015 05:00 50	220 m 12120	0000100
max. Earth dist.	-11821 Nov 23 j 04:48		30.94873 AU	conjunction	-11815 Dec 05 j 08:59	-•	
morning rise	-11821 Dec 08 j 04:51			minimum elong	-11815 Dec 05 j 08:58		
retrograde	-11820 Mar 09 j 00:34	-	20.04500 441	max. Earth dist.	-11815 Dec 06 j 09:02		30.89904 AU
min. Earth dist.	-11820 May 27 j 06:16			morning rise	-11815 Dec 21 j 13:50		
opposition	-11820 May 28 j 06:14		0°06'49	retrograde	-11814 Mar 23 j 02:19		20.00662.411
direct	-11820 Aug 13 j 11:46	9° Tp 36'18		min. Earth dist.	-11814 Jun 10 j 04:42		
evening set	-11820 Nov 07 j 17:16	11 11/2832		opposition	-11814 Jun 11 j 01:55		-0-34 02
conjunction	-11820 Nov 23 j 15:40	12° m 04'05	0°03'19	direct	-11814 Aug 27 j 05:06 -11814 Nov 21 j 20:38		
minimum elong	-11820 Nov 23 j 15:40			evening set	-11614 NOV 21 J 20.36	24 IIJ 31 33	
behind sun begin	-11820 Nov 23 j 19:40 -11820 Nov 23 j 09:11	-	0 03 33	conjunction	-11814 Dec 07 j 22:18	25°m27'10	-0°34'55
behind sun end	-11820 Nov 23 j 09:11 -11820 Nov 23 j 22:09	-		minimum elong	-11814 Dec 07 j 22:17		
max. Earth dist.	-11820 Nov 24 j 16:27		30 94038 ATT	max. Earth dist.	-11814 Dec 08 j 21:25	-	
morning rise	-11820 Dec 09 j 18:14		30.74030710	morning rise	-11814 Dec 24 j 03:38		30.07307 110
retrograde	-11819 Mar 11 j 14:01			retrograde	-11813 Mar 25 j 16:29	-	
desc. node	-11819 May 29 j 06:44			opposition	-11813 Jun 13 j 12:52		-0°40'44
opposition	-11819 May 30 j 17:51		-0°00'02	min. Earth dist.	-11813 Jun 12 j 15:22		
min. Earth dist.	-11819 May 29 j 19:20			direct	-11813 Aug 29 j 16:21		20.09210710
direct	-11819 Aug 15 j 22:53	-	20.93021110	evening set	-11813 Nov 24 j 09:39		
evening set	-11819 Nov 10 j 05:33						
	1.0. 10 J 00.00			conjunction	-11813 Dec 10 j 11:44	27° m 41'16	-0°41'09
conjunction	-11819 Nov 26 j 04:43	14° m 18'08	-0°03'14	minimum elong	-11813 Dec 10 j 11:44	-	
minimum elong	-11819 Nov 26 j 04:42	-		max. Earth dist.	-11813 Dec 11 j 10:51		
behind sun begin	-11819 Nov 25 j 22:11	-		morning rise	-11813 Dec 26 j 17:23		
behind sun end	-11819 Nov 26 j 11:14			5	-11812 Feb 25 j 02:03		
max. Earth dist.	-11819 Nov 27 j 05:52		30.93140 AU	retrograde	-11812 Mar 27 j 04:36		
morning rise	-11819 Dec 12 j 07:41			-	-11812 Apr 27 j 16:44		
retrograde	-11818 Mar 14 j 02:44	16° m 52'42		min. Earth dist.	-11812 Jun 14 j 03:50		28.88852 AU
min. Earth dist.	-11818 Jun 01 j 06:11		28.92702 AU	opposition	-11812 Jun 15 j 00:01	-•	
opposition	-11818 Jun 02 j 05:07			direct	-11812 Aug 31 j 02:49		
direct	-11818 Aug 18 j 11:12			evening set	-11812 Nov 25 j 22:35		
evening set	-11818 Nov 12 j 18:05	15° m 56'28			-		
	-			conjunction	-11812 Dec 12 j 01:08	29° m 55'22	-0°47'20
conjunction	-11818 Nov 28 j 17:40	16° M 32′05	-0°09'36	minimum elong	-11812 Dec 12 j 01:07	29° m 55'22	0°47'18
minimum elong	-11818 Nov 28 j 17:40	16° M 32′05	0°09'25	max. Earth dist.	-11812 Dec 12 j 23:53		
behind sun begin	-11818 Nov 28 j 12:13	16°My31'36			-11812 Dec 14 j 02:46	0∘ ⊽	
behind sun end	-11818 Nov 28 j 23:07	16° Mp 32′35		morning rise	-11812 Dec 28 j 07:03	0° £ 31'30	
max. Earth dist.	-11818 Nov 29 j 17:29	16°M 34'19	30.92218 AU	retrograde	-11811 Mar 29 j 19:20		
morning rise	-11818 Dec 14 j 21:21	17° m 08'06		opposition	-11811 Jun 17 j 10:59	1° ≏ 04'28	-0°53'56
retrograde	-11817 Mar 16 j 14:35	19° m 06'38		min. Earth dist.	-11811 Jun 16 j 14:23	1° ჲ 05'56	28.88556 AU
opposition	-11817 Jun 04 j 16:30	17° m 41'13	-0°13'42		-11811 Jul 30 j 20:17	30°R, Mp	

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11811 in astronomical counting style is the year 11812 BCE in historical counting style. -11811 Sep 02 j 15:08 29° mp 40'57 direct morning rise -11804 Jan 14 i 10:25 16° **2**13'47 -11811 Oct 05 j 21:48 0° **♀** -11804 Apr 14 j 12:13 18° **△**11'47 retrograde -11811 Nov 28 j 11:59 -11804 Jul 02 j 15:18 16°**2**46'31 -1°37'10 evening set 1°£33'50 opposition min. Earth dist. -11804 Jul 02 j 00:26 16°**2**47'34 28.85296 AU -11811 Dec 14 j 14:47 2°**2**09'40 -0°53'27 -11804 Sep 17 j 21:52 15° **△**22'32 conjunction direct -11804 Dec 14 j 12:20 17°**2**16'10 -11811 Dec 14 j 14:47 2°**2**09'40 0°53'26 minimum elong evening set -11811 Dec 15 j 12:25 2°**2**11'41 30.88364 AU max. Earth dist. -11804 Dec 30 j 17:08 17° **2**52'07 -1°33'29 morning rise -11811 Dec 30 j 21:04 2°**£**45'50 conjunction -11804 Dec 30 j 17:07 17°**2**52'07 1°33'40 retrograde -11810 Apr 01 j 09:09 4°**£**44'11 minimum elong 3°**≏**18'50 -1°00'26 opposition -11810 Jun 19 j 22:02 max. Earth dist. -11804 Dec 31 j 09:10 17°**⊆**53'37 30.84977 AU min. Earth dist. -11810 Jun 19 j 03:08 3°**2**20'10 28.88266 AU morning rise -11803 Jan 16 j 00:25 18°**△**28'19 -11810 Sep 05 j 02:05 1°**£**55'18 -11803 Apr 16 j 23:23 20°**2**26'15 direct retrograde -11810 Dec 01 j 01:27 -11803 Jul 05 j 02:04 19°**2**00'59 -1°42'49 evening set 3°**₽**48'18 opposition min. Earth dist. -11803 Jul 04 j 12:38 19°**♀**01'56 28.84880 AU conjunction -11810 Dec 17 j 04:47 4°**2**24'10 -0°59'29 direct -11803 Sep 20 j 08:12 17°**2**36'54 minimum elong -11810 Dec 17 j 04:46 4°**2**24'10 0°59'30 evening set -11803 Dec 17 j 02:19 19°**2**30'40 max. Earth dist. -11810 Dec 18 j 02:16 4°**2**26'10 30.88052 AU morning rise -11809 Jan 02 j 11:11 5°**♀**00'21 conjunction -11802 Jan 02 j 07:21 20°**2**06'37 -1°38'42 6°**£**58'40 retrograde -11809 Apr 03 j 22:38 minimum elong -11802 Jan 02 j 07:20 20° **2**06'37 1°38'54 5°**2**33'22 -1°06'51 opposition -11809 Jun 22 j 09:00 max. Earth dist. -11802 Jan 02 j 22:43 20°**2**08'03 30.84627 AU min. Earth dist. -11809 Jun 21 j 14:05 5°**2**34'42 28.87919 AU morning rise -11802 Jan 18 j 14:40 20° **△**42'48 direct -11809 Sep 07 i 14:41 4°**£**09'48 retrograde -11802 Apr 19 j 13:05 22° **△**40'40 evening set -11809 Dec 03 j 15:13 6° **2**02'55 opposition -11802 Jul 07 j 12:33 21° **2**15'25 -1°48'19 min. Earth dist. -11802 Jul 06 j 22;43 21°**2**16'24 28.84606 AU conjunction -11809 Dec 19 j 18:40 6° **△**38'49 -1°05'26 direct -11802 Sep 22 j 21:19 19°**♀**51'16 minimum elong -11809 Dec 19 i 18:39 6°**£**38'49 1°05'28 evening set -11802 Dec 19 j 16:30 21° **2**45'09 max. Earth dist. -11809 Dec 20 j 14:12 6°**2**40'38 30.87654 AU -11808 Jan 05 j 01:24 7°**£**15′00 -11801 Jan 04 j 21:36 22° **2**21'07 -1°43'46 morning rise conjunction -11808 Apr 05 j 11:29 9°**2**13'18 -11801 Jan 04 j 21:35 22° **2**21'07 1°44'00 retrograde minimum elong -11808 Jun 23 j 20:03 7°**♀**48'01 -1°13'09 -11801 Jan 05 j 11:58 22°**♀**22'27 30.84412 AU max. Earth dist. opposition min. Earth dist. -11801 Jan 21 j 04:59 22°**♀**57'18 -11808 Jun 23 j 02:42 7°**•**49'15 28.87490 AU morning rise -11808 Sep 09 j 00:58 6°**2**24'24 -11801 Apr 22 j 01:49 24°**♀**55'06 direct retrograde -11808 Dec 05 j 04:52 8°**♀**17'38 -11801 Jul 09 j 23:16 23°**2**29'52 -1°53'40 evening set opposition -11801 Jul 09 j 10:55 23°**♀**30'45 28.84480 AU min. Earth dist. -11801 Sep 25 j 08:55 22°**♀**05'41 -11808 Dec 21 j 08:48 8°**⊆**53'33 -1°11'17 conjunction direct -11808 Dec 21 j 08:47 8°**2**53'33 1°11'21 -11801 Dec 22 j 06:33 23°**♀**59'42 minimum elong evening set -11808 Dec 22 j 04:27 8°**⊆**55'23 30.87173 AU max. Earth dist. morning rise -11807 Jan 06 j 15:33 9°**£**29'45 conjunction -11800 Jan 07 j 11:54 24° **2**35'40 -1°48'41 retrograde -11807 Apr 07 j 23:48 11°**£**27'59 minimum elong -11800 Jan 07 j 11:52 24° **2**35'40 1°48'56 opposition -11807 Jun 26 j 06:58 10° **2**02'43 -1°19'21 max. Earth dist. -11800 Jan 08 j 02:15 24°**2**37'00 30.84351 AU min. Earth dist. -11807 Jun 25 j 14:10 10°**2**03'55 28.86966 AU morning rise -11800 Jan 23 j 19:07 25°**2**11'50 -11807 Sep 11 j 12:40 8°**೨**39'02 retrograde -11800 Apr 23 j 14:59 27°**♀**09'34 direct -11807 Dec 07 j 18:39 10° **2**32'21 opposition -11800 Jul 11 j 09:47 25°**-**244'25 -1°58'49 evening set min. Earth dist. -11800 Jul 10 j 21:09 25°**2**45'19 28.84485 AU conjunction -11807 Dec 23 j 22:45 11°**2**08'17 -1°17'01 -11800 Sep 26 j 21:58 24° \$\oldsymbol{\Omega}\$20'11 direct -11807 Dec 23 j 22:44 11° \(\Omega\)08'17 1°17'07 -11800 Dec 23 i 20:54 26° **2**14'21 minimum elong evening set -11807 Dec 24 j 16:20 11° \(\Omega\) 09'55 30.86619 AU max. Earth dist. -11806 Jan 09 i 05:52 11° **△**44'29 -11799 Jan 09 i 02:10 26° \(\Omega\) 50'19 -1°53'26 morning rise conjunction -11806 Apr 10 j 12:51 13°**£**42'40 -11799 Jan 09 i 02:09 26° **2**50'19 1°53'43 retrograde minimum elong opposition -11806 Jun 28 i 17:53 12° \overline{12} 17'23 -1°25'25 max. Earth dist. -11799 Jan 09 i 14:54 26° 251'30 30.84410 AU min. Earth dist. -11806 Jun 28 j 01:56 12° **2**18'31 28.86397 AU morning rise -11799 Jan 25 j 09:30 27° **2**26'29 direct -11806 Sep 13 j 22:41 10° **△**53'36 retrograde -11799 Apr 26 j 04:31 29° **2**24'10 evening set -11806 Dec 10 j 08:34 12°**£**47'02 -11799 Jul 13 j 20:24 27° **2**59'04 -2°03'49 opposition -11799 Jul 13 j 09:09 27°**2**59'52 28.84609 AU min. Earth dist. -11806 Dec 26 j 13:01 13° \Delta 22'58 -1°22'38 conjunction direct -11799 Sep 29 j 08:25 26° **△**34'49 minimum elong -11806 Dec 26 j 13:00 13°**2**22'58 1°22'46 evening set -11799 Dec 26 j 11:12 28°**♀**29'07 max. Earth dist. -11806 Dec 27 j 06:39 13°**2**24'37 30.86025 AU -11805 Jan 11 j 20:06 13°**♀**59'11 conjunction -11798 Jan 11 j 16:45 29°**2**05'07 -1°58'01 morning rise -11798 Jan 11 j 16:44 29°**2**05'06 1°58'19 -11805 Apr 12 j 23:02 15°**♀**57'16 minimum elong retrograde -11805 Jul 01 j 04:36 14°**2**32'00 -1°31'22 -11798 Jan 12 j 05:43 29°**♀**06'19 30.84558 AU opposition max. Earth dist. -11805 Jun 30 j 13:45 14°**2**33'03 28.85812 AU morning rise -11798 Jan 27 j 23:52 29°**♀**41'16 min. Earth dist. direct -11805 Sep 16 j 10:26 13°**♀**08'07 -11798 Feb 05 j 18:01 0°M evening set -11805 Dec 12 j 22:32 15°**£**01'38 retrograde -11798 Apr 28 j 17:46 1°M38'53 opposition -11798 Jul 16 j 07:00 0°M13'52 -2°08'37 conjunction -11805 Dec 29 j 03:08 15°**△**37'35 -1°28'08 min. Earth dist. -11798 Jul 15 j 20:23 0°ML14'38 28.84774 AU minimum elong -11805 Dec 29 j 03:07 15° **△**37'35 1°28'17 -11798 Jul 24 j 10:36 30°R €

direct

-11798 Oct 01 j 21:02 28° **2**49'36

max. Earth dist.

-11805 Dec 29 j 19:17 15°**2**39'05 30.85465 AU

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 9 Attention, astronomical year style is used: The year -11798 in astronomical counting style is the year 11799 BCE in historical counting style.

Attention, astronomi	ical year style is used: The	year -11798	in astronomical co	unting style is the year	r 11799 BCE in historical	counting sty	le.
	-11798 Dec 07 j 16:05			max. Earth dist.	-11791 Jan 28 j 04:23		30.84548 AU
evening set	-11798 Dec 29 j 01:56	0° M 44′03			-11791 Feb 01 j 09:25		
				morning rise	-11791 Feb 13 j 06:01		
conjunction	-11797 Jan 14 j 07:22	1°M20'03		retrograde	-11791 May 14 j 06:38		
minimum elong	-11797 Jan 14 j 07:20	1°M20'02		opposition	-11791 Jul 31 j 09:02		
max. Earth dist.	-11797 Jan 14 j 18:04		30.84720 AU	min. Earth dist.	-11791 Jul 31 j 05:13		28.84729 AU
morning rise	-11797 Jan 30 j 14:32	1°M56'12		T' 4	-11791 Sep 07 j 00:58		
retrograde	-11797 May 01 j 06:37	3°M53'45 2°M28'49	2012112	direct	-11791 Oct 17 j 08:38		
opposition min. Earth dist.	-11797 Jul 18 j 17:35 -11797 Jul 18 j 07:59		28.84939 AU	evening set	-11791 Nov 26 j 03:46 -11790 Jan 14 j 09:13		
direct	-11797 Oct 04 j 07:40	1°ML04'30	20.04939 AU	evening set	-11/90 Jan 14 J 09.13	10 1162901	
evening set	-11797 Dec 31 j 16:36	2°M59'07		conjunction	-11790 Jan 30 j 14:37	17°M,04'57	-2°27'40
evening sec	11777 Bec 51 j 10.50	2 11037 07		minimum elong	-11790 Jan 30 j 14:36		
conjunction	-11796 Jan 16 j 22:12	3°M35'06	-2°06'38	max. Earth dist.	-11790 Jan 30 j 17:19		
minimum elong	-11796 Jan 16 j 22:11	3°M35'06		morning rise	-11790 Feb 15 j 20:35		
max. Earth dist.	-11796 Jan 17 j 08:42		30.84842 AU	retrograde	-11790 May 16 j 19:43		
morning rise	-11796 Feb 02 j 05:04	4° M ₊11'14		opposition	-11790 Aug 02 j 19:34		-2°39'26
retrograde	-11796 May 02 j 17:38	6°M₀08'42		min. Earth dist.	-11790 Aug 02 j 17:06	18°ML13'19	28.84798 AU
opposition	-11796 Jul 20 j 04:20	4°M43'51	-2°17'37	direct	-11790 Oct 19 j 20:06	16°ML48'17	
min. Earth dist.	-11796 Jul 19 j 20:08	4°M44'26	28.85034 AU	evening set	-11789 Jan 16 j 23:56	18°M43'46	
direct	-11796 Oct 05 j 19:26	3° M 19′29					
evening set	-11795 Jan 02 j 07:16	5° M 14'14		conjunction	-11789 Feb 02 j 05:24		
				minimum elong	-11789 Feb 02 j 05:23	19°M19'42	2°30'55
conjunction	-11795 Jan 18 j 12:48	5°M50′13		max. Earth dist.	-11789 Feb 02 j 08:19		30.84666 AU
minimum elong	-11795 Jan 18 j 12:47	5°M50′12		morning rise	-11789 Feb 18 j 10:58		
max. Earth dist.	-11795 Jan 18 j 21:07		30.84895 AU	retrograde	-11789 May 19 j 08:27		
morning rise	-11795 Feb 03 j 19:41	6°M26′20		opposition	-11789 Aug 05 j 05:57		
retrograde	-11795 May 05 j 07:02	8°M23'43		min. Earth dist.	-11789 Aug 05 j 03:56		28.84984 AU
opposition	-11795 Jul 22 j 14:59	6°M58'54		direct	-11789 Oct 22 j 09:39		
min. Earth dist.	-11795 Jul 22 j 07:15		28.85050 AU	evening set	-11788 Jan 19 j 14:48	20°11L58'31	
direct	-11795 Oct 08 j 06:51	5°M34'28		:	11700 E-L 04: 20:01	210 m 24127	2922157
evening set	-11794 Jan 04 j 22:06	7° M 29′21		conjunction minimum elong	-11788 Feb 04 j 20:01		
agniumation	11704 Ion 21:02:42	00 M 05!10	2014/20	max. Earth dist.	-11788 Feb 04 j 20:00 -11788 Feb 04 j 20:59		
conjunction minimum elong	-11794 Jan 21 j 03:42 -11794 Jan 21 j 03:41	8°ጤ05'19 8°ጤ05'19		morning rise	-11788 Feb 04 j 20.39 -11788 Feb 21 j 01:30		30.84920 AU
max. Earth dist.	-11794 Jan 21 j 11:18		30.84852 AU	retrograde	-11788 May 20 j 20:57		
morning rise	-11794 Feb 06 j 10:21	8°M41'26	30.04032710	opposition	-11788 Aug 06 j 16:26		-2°44'49
retrograde	-11794 May 07 j 17:43			min. Earth dist.	-11788 Aug 06 j 15:00		
opposition	-11794 Jul 25 j 01:36		-2°25'48	direct	-11788 Oct 23 j 20:54		
min. Earth dist.	-11794 Jul 24 j 19:55		28.84978 AU	evening set	-11787 Jan 21 j 05:21		
direct	-11794 Oct 10 j 17:31	7° M 49′25			, and the second		
evening set	-11793 Jan 07 j 12:58	9° M 44′24		conjunction	-11787 Feb 06 j 10:40	23°M49'16	-2°35'13
				minimum elong	-11787 Feb 06 j 10:39	23°M49'16	2°35'45
conjunction	-11793 Jan 23 j 18:35	10° ML $20'22$	-2°18'06	max. Earth dist.	-11787 Feb 06 j 11:54	23°M49'23	30.85307 AU
minimum elong	-11793 Jan 23 j 18:33			morning rise	-11787 Feb 22 j 15:45	24°M25'13	
max. Earth dist.	-11793 Jan 24 j 00:43	10°M20'57	30.84755 AU	retrograde	-11787 May 23 j 08:08	26°M21'45	
morning rise	-11793 Feb 09 j 01:06			opposition	-11787 Aug 09 j 02:55		
retrograde	-11793 May 10 j 06:26			min. Earth dist.	-11787 Aug 09 j 02:39		28.85761 AU
opposition	-11793 Jul 27 j 12:08			direct	-11787 Oct 26 j 08:55		
min. Earth dist.	-11793 Jul 27 j 06:32		28.84868 AU	evening set	-11786 Jan 23 j 20:18	25°11L28'17	
direct	-11793 Oct 13 j 07:12			. ,.	11707 F. L. 00:01.24	260 M 04112	2027117
evening set	-11792 Jan 10 j 03:43	11°11639'22		conjunction	-11786 Feb 09 j 01:24		
agniumation	11702 Ion 26:00:12	120M 25110	2021121	minimum elong max. Earth dist.	-11786 Feb 09 j 01:23		
conjunction minimum elong	-11792 Jan 26 j 09:13 -11792 Jan 26 j 09:12			morning rise	-11786 Feb 09 j 00:38 -11786 Feb 25 j 06:23		30.83797 AU
max. Earth dist.	-11792 Jan 26 j 14:07			retrograde	-11786 May 25 j 21:43		
morning rise	-11792 Feb 11 j 15:32		50.04020 AU	opposition	-11786 May 23 j 21:43		-2°49'11
	-11792 Apr 19 j 10:04			min. Earth dist.	-11786 Aug 11 j 13:14		
retrograde	-11792 May 11 j 17:56			direct	-11786 Oct 28 j 19:56		_0.00200710
5	-11792 Jun 03 j 06:44			evening set	-11785 Jan 26 j 11:16		
opposition	-11792 Jul 28 j 22:43		-2°33'05	- B	20,11110	1	
min. Earth dist.	-11792 Jul 28 j 18:55			conjunction	-11785 Feb 11 j 16:20	28° M 19'17	-2°39'04
direct	-11792 Oct 14 j 19:04			minimum elong	-11785 Feb 11 j 16:19		
evening set	-11791 Jan 11 j 18:23			max. Earth dist.	-11785 Feb 11 j 15:12		
				morning rise	-11785 Feb 27 j 20:54	28°M55'11	
conjunction	-11791 Jan 27 j 23:57				-11785 Apr 01 j 16:28		
minimum elong	-11791 Jan 27 j 23:56	14°M50'11	2°25'10	retrograde	-11785 May 28 j 08:04	0° ≯ 51'32	

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 10 Attention, astronomical year style is used: The year -11785 in astronomical counting style is the year 11786 BCE in historical counting style.

Attention, astronomical year style is used: The year -11785 in astronomical counting style is the year 11786 BCE in historical counting style.							
	-11785 Jul 25 j 08:58	30°RM₊		conjunction	-11778 Feb 27 j 23:31	14° ∡ °04′26	-2°44'50
opposition	-11785 Aug 13 j 23:52	29°M27'21	-2°50'59	minimum elong	-11778 Feb 27 j 23:31	14° ₹ ¹04'26	2°45'27
min. Earth dist.	-11785 Aug 14 j 01:51	29°M27'12	28.86820 AU	max. Earth dist.	-11778 Feb 27 j 14:10	14° ∡ °03'33	30.88495 AU
direct	-11785 Oct 31 j 06:11	28° M $02'22$		morning rise	-11778 Mar 16 j 02:05	14° ≯ ¹40′08	
evening set	-11784 Jan 29 j 02:09	29°M58'33		retrograde	-11778 Jun 12 j 18:57		
	-11784 Jan 29 j 18:03	0° ∡ ¹		opposition	-11778 Aug 29 j 01:31		
				min. Earth dist.	-11778 Aug 29 j 10:32		28.88890 AU
conjunction	-11784 Feb 14 j 07:02			direct	-11778 Nov 16 j 01:37		
minimum elong	-11784 Feb 14 j 07:02			evening set	-11777 Feb 14 j 09:55	15° ∡ ⁴43'00	
max. Earth dist.	-11784 Feb 14 j 04:20		30.86842 AU				
morning rise	-11784 Mar 01 j 11:24	1° ∡ 10′21		conjunction	-11777 Mar 02 j 13:52		
retrograde	-11784 May 29 j 20:04	3° х 706′36	20.52122	minimum elong	-11777 Mar 02 j 13:52		
opposition	-11784 Aug 15 j 10:22	1°×742'31		max. Earth dist.	-11777 Mar 02 j 02:38		30.88815 AU
min. Earth dist.	-11784 Aug 15 j 12:30		28.87312 AU	morning rise	-11777 Mar 18 j 16:17		
direct	-11784 Nov 01 j 19:46	0° ₹ 17'30 2° ₹ 13'49		retrograde	-11777 Jun 15 j 07:48		2055151
evening set	-11783 Jan 30 j 17:10	2° X '13'49		opposition min. Earth dist.	-11777 Aug 31 j 11:57 -11777 Aug 31 j 20:52		
conjunction	-11783 Feb 15 j 21:56	20.71/101/12	2041157	direct	-11777 Nov 18 j 13:53		28.89274 AU
minimum elong	-11783 Feb 15 j 21:55			evening set	-11777 Rov 18 j 13.33 -11776 Feb 17 j 00:10		
max. Earth dist.	-11783 Feb 15 j 17:52		30.87282 AU	evening set	-11//01°C0 1/j 00.10	1/ 🗴 3/ 13	
morning rise	-11783 Nar 04 j 01:59	3°×725'35	30.07202 AC	conjunction	-11776 Mar 04 j 04:05	18° √ 33'03	-2°44'15
retrograde	-11783 Jun 01 j 07:14			minimum elong	-11776 Mar 04 j 04:04		
opposition	-11783 Aug 17 j 20:58	3° × ⁷ 57'42	-2°53'48	max. Earth dist.	-11776 Mar 03 j 17:02		
min. Earth dist.	-11783 Aug 18 j 01:14		28.87718 AU	morning rise	-11776 Mar 20 j 06:03		30.07230710
direct	-11783 Nov 04 j 07:00	2°×32'38	20.07,710110	retrograde	-11776 Jun 16 j 17:20		
evening set	-11782 Feb 02 j 08:10			opposition	-11776 Sep 01 j 22:32		-2°55'20
<i>3</i>	, , , , , , , , , , , , , , , , , , ,			min. Earth dist.	-11776 Sep 02 j 08:55		
conjunction	-11782 Feb 18 j 12:54	5° ∡ 104'58	-2°43'01	direct	-11776 Nov 20 j 01:14		
minimum elong	-11782 Feb 18 j 12:53		2°43'37	evening set	-11775 Feb 18 j 14:34		
max. Earth dist.	-11782 Feb 18 j 07:41	5° ∡ ¹04'28	30.87636 AU	•	v		
morning rise	-11782 Mar 06 j 16:39	5° ∡ ¹40'47		conjunction	-11775 Mar 06 j 18:16	20° х ⁴47′13	-2°43'34
retrograde	-11782 Jun 03 j 19:31	7° ∡ ³36'48		minimum elong	-11775 Mar 06 j 18:16	20° х 47′13	2°44'14
opposition	-11782 Aug 20 j 07:32	6° ∡¹ 12'51	-2°54'49	max. Earth dist.	-11775 Mar 06 j 06:02	20° х¹ 46′05	30.89851 AU
min. Earth dist.	-11782 Aug 20 j 12:08	6° ∡ 12'31	28.88014 AU	morning rise	-11775 Mar 22 j 20:05	21° х¹ 22'52	
direct	-11782 Nov 06 j 20:44	4° ∡ ¹47'42		retrograde	-11775 Jun 19 j 04:49	23° х 17′48	
evening set	-11781 Feb 04 j 23:12	6° ∡ ¹44'14		opposition	-11775 Sep 04 j 08:48	21° ≯ ′54′10	-2°54'29
				min. Earth dist.	-11775 Sep 04 j 18:53		28.90444 AU
conjunction	-11781 Feb 21 j 03:40			direct	-11775 Nov 22 j 14:02		
minimum elong	-11781 Feb 21 j 03:40			evening set	-11774 Feb 21 j 04:59	22° ≯ 25'37	
max. Earth dist.	-11781 Feb 20 j 20:24		30.87883 AU			=	
morning rise	-11781 Mar 09 j 07:12	7° ∡ 755'54		conjunction	-11774 Mar 09 j 08:34		
retrograde	-11781 Jun 06 j 07:47	9° 🗷 51'46	2055124	minimum elong	-11774 Mar 09 j 08:34		
opposition	-11781 Aug 22 j 18:08	8° ₹ 27'51		max. Earth dist.	-11774 Mar 08 j 19:46		30.90566 AU
min. Earth dist.	-11781 Aug 23 j 00:26		28.88236 AU	morning rise	-11774 Mar 25 j 10:01		
direct	-11781 Nov 09 j 09:14	7°× 7 02'37		retrograde	-11774 Jun 21 j 15:31		2952122
evening set	-11780 Feb 07 j 13:59	8° ₰ 59'14		opposition min. Earth dist.	-11774 Sep 06 j 19:25 -11774 Sep 07 j 07:06		
conjunction	-11780 Feb 23 j 18:28	9° ∡ ³35′05	-2°44'25	direct	-11774 Nov 25 j 00:28		28.91212 AU
minimum elong	-11780 Feb 23 j 18:28	9° × ⁷ 35'05		evening set	-11774 Nov 23 j 00:28 -11773 Feb 23 j 19:18		
max. Earth dist.	-11780 Feb 23 j 11:01		30.88081 AU	evening set	11775160 25 17.10	24 7 37 31	
morning rise	-11780 Mar 10 j 21:36		20.00001710	conjunction	-11773 Mar 11 j 22:45	25° ∡ 715'38	-2°41'29
retrograde	-11780 Jun 07 j 19:38			minimum elong	-11773 Mar 11 j 22:45		
opposition	-11780 Aug 24 j 04:38		-2°56'03	max. Earth dist.	-11773 Mar 11 j 09:20		
min. Earth dist.	-11780 Aug 24 j 11:41			morning rise	-11773 Mar 27 j 23:54		
direct	-11780 Nov 10 j 23:59			retrograde	-11773 Jun 24 j 03:01		
evening set	-11779 Feb 09 j 04:40			opposition	-11773 Sep 09 j 05:54		-2°51'59
-				min. Earth dist.	-11773 Sep 09 j 17:34		
conjunction	-11779 Feb 25 j 08:53	11° ∡ ¹49'51	-2°44'45	direct	-11773 Nov 27 j 13:32	24° ∡ ¹56'57	
minimum elong	-11779 Feb 25 j 08:53	11° ∡ 749'51	2°45'24	evening set	-11772 Feb 26 j 09:43		
max. Earth dist.	-11779 Feb 24 j 23:21	11° ∡ ¹48'58	30.88268 AU				
morning rise	-11779 Mar 13 j 11:55	12° ∡ ¹25'36		conjunction	-11772 Mar 13 j 12:54	27° ∡ ¹29'58	-2°40'05
retrograde	-11779 Jun 10 j 07:50	14° × 21'09		minimum elong	-11772 Mar 13 j 12:54	27° ∡ ¹29'58	2°40'45
opposition	-11779 Aug 26 j 15:05	12° ∡ 757'16	-2°56'16	max. Earth dist.	-11772 Mar 12 j 21:58	27° ∡ ¹28'34	30.92216 AU
min. Earth dist.	-11779 Aug 26 j 22:56		28.88627 AU	morning rise	-11772 Mar 29 j 13:48		
direct	-11779 Nov 13 j 12:12				-11772 Jun 22 j 09:39		
evening set	-11778 Feb 11 j 19:16	13° ≯ 28'36		retrograde	-11772 Jun 25 j 14:54		
					-11772 Jun 28 j 20:42	30°R ✓	

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11772 in astronomical counting style is the year 11773 BCE in historical counting style. -11772 Sep 10 j 16:31 28° ₹36'52 -2°50'21 conjunction -11765 Mar 30 j 14:02 13° ₹ 09'15 -2°23'40 opposition minimum elong min. Earth dist. -11772 Sep 11 j 05:39 28° ₹35'56 28.92878 AU -11765 Mar 30 j 14:03 13°る09'15 2°24'20 max. Earth dist. -11772 Nov 29 j 01:21 27° ₹11'17 -11765 Mar 29 j 17:14 13°る07'19 30.96534 AU direct -11771 Feb 27 j 23:54 29° ₹08'37 -11765 Apr 15 j 12:49 13°₹44'40 evening set morning rise -11771 Mar 15 j 11:58 29° ₹ 42'58 30.93033 AU -11765 Jul 11 j 21:39 15°♂38'19 max. Earth dist. retrograde -11765 Sep 26 j 19:21 14°る15'25 -2°31'58 opposition -11771 Mar 16 j 03:04 29° ₹ 44'23 -2°38'25 -11765 Sep 27 j 14:21 14°쥥14'04 28.97061 AU conjunction min. Earth dist. -11771 Mar 16 j 03:05 29° ₹ 44'23 2°39'06 minimum elong direct -11765 Dec 15 j 19:15 12°₹49'34 -11771 Mar 23 j 02:42 0°₹ evening set -11764 Mar 16 j 01:30 14°**⋜**47'06 -11771 Apr 01 j 03:36 morning rise 0°**る**19'56 max. Earth dist. -11764 Mar 31 j 06:14 15°る20'48 30.97205 AU retrograde -11771 Jun 28 j 02:30 2°**る**14'28 -11771 Sep 13 j 03:13 0°₹51'15 -2°48'27 -11764 Apr 01 j 03:20 15°₹22'46 -2°20'27 opposition conjunction -11771 Sep 13 j 17:10 0° 중50'16 28.93644 AU -11764 Apr 01 j 03:21 15°₹22'46 2°21'06 min. Earth dist. minimum elong -11764 Apr 17 j 01:52 15°**⋜**58'10 -11771 Oct 15 j 12:00 30°R ⊀ morning rise -11764 Jul 13 j 07:27 17°る51'40 direct -11771 Dec 01 j 15:45 29° ₹25'39 retrograde -11770 Jan 17 j 00:25 0°궁 opposition -11764 Sep 28 j 05:56 16°₹28'49 -2°28'24 evening set -11770 Mar 02 j 14:21 1°る23'05 min. Earth dist. -11764 Sep 29 j 00:27 16°**궁**27'31 28.97782 AU direct -11764 Dec 17 j 08:35 15°**⋜**02'56 conjunction -11770 Mar 18 j 17:11 1°る58'49 -2°36'32 evening set -11763 Mar 18 j 14:55 17°る00'29 minimum elong -11770 Mar 18 j 17:11 1°る58'49 2°37'11 max. Earth dist. -11770 Mar 17 j 23:53 1°る57'13 30.93760 AU conjunction -11763 Apr 03 j 16:31 17°る36'09 -2°17'01 morning rise -11770 Apr 03 j 17:32 2°る34'22 minimum elong -11763 Apr 03 j 16:32 17°る36'09 2°17'40 retrograde -11770 Jun 30 j 14:55 4°る28'46 max. Earth dist. -11763 Apr 02 j 18:32 17°る34'05 30.97999 AU -11763 Apr 19 j 14:47 18°♂11'31 opposition -11770 Sep 15 i 13:52 3°**る**05'38 -2°46'18 morning rise -11763 Jul 15 j 17:51 20°**궁**04'54 min. Earth dist. -11770 Sep 16 j 04:42 3°중04'35 28.94327 AU retrograde -11770 Dec 04 i 03:46 1°**3**40'01 -11763 Sep 30 j 16:41 18° ₹42'06 -2°24'37 direct opposition -11769 Mar 05 j 04:32 3°る37'29 min. Earth dist. -11763 Oct 01 j 12:02 18°₹40'44 28.98645 AU evening set -11763 Dec 19 j 19:57 17°**⋜**16'13 direct -11769 Mar 21 j 07:22 4°る13'14 -2°34'24 evening set -11762 Mar 21 j 04:12 19°る13'47 conjunction -11769 Mar 21 j 07:23 4°쥥13'14 2°35'05 -11762 Apr 05 j 08:10 19°る47'25 30.98937 AU max. Earth dist. minimum elong -11769 Mar 20 j 14:06 4°る11'37 30.94394 AU max. Earth dist. -11762 Apr 06 j 05:42 19°₹49'26 -2°13'22 -11769 Apr 06 j 07:15 4°₹48'44 morning rise conjunction -11769 Jul 03 j 02:26 6°₹43'00 -11762 Apr 06 j 05:42 19°₹49'26 2°14'01 retrograde minimum elong -11769 Sep 18 j 00:42 5°**⋜**19'56 -2°43'54 -11762 Apr 22 j 03:34 20° ₹24'47 opposition morning rise -11769 Sep 18 j 16:52 5° ₹ 18'47 28.94908 AU -11762 Jul 18 j 04:11 22°쥥18'03 min. Earth dist. retrograde -11762 Oct 03 j 03:25 20°₹55'20 -2°20'38 -11769 Dec 06 j 18:01 3°**궁**54'17 direct opposition -11768 Mar 06 j 18:34 5°**⋜**51'47 -11762 Oct 03 j 22:57 20°중53'58 28.99624 AU evening set min. Earth dist. direct -11762 Dec 22 j 09:14 19°**궁**29'29 conjunction -11768 Mar 22 j 21:04 6°ਰੋ27'31 -2°32'03 evening set -11761 Mar 23 j 17:35 21°**♂**27'05 minimum elong -11768 Mar 22 j 21:05 6°**궁**27'31 2°32'43 -11761 Apr 08 j 18:42 22°정02'42 -2°09'32 max. Earth dist. -11768 Mar 22 j 01:44 6° 중25'43 30.94952 AU conjunction morning rise -11768 Apr 07 j 20:51 7°**⋜**03'00 minimum elong -11761 Apr 08 j 18:43 22°**궁**02'42 2°10'11 retrograde -11768 Jul 04 j 15:08 8°**궁**57'07 max. Earth dist. -11761 Apr 07 j 19:54 22° **중**00'34 30.99984 AU -11768 Sep 19 j 11:20 7°₹34'05 -2°41'16 morning rise -11761 Apr 24 j 16:24 22°₹38'02 opposition min. Earth dist. -11768 Sep 20 j 03:35 7°중32'57 28.95434 AU retrograde -11761 Jul 20 j 16:22 24° **정**31'13 -11768 Dec 08 j 07:15 6°る08'23 -11761 Oct 05 j 14:15 23°る08'35 -2°16'25 direct opposition -11767 Mar 09 j 08:28 8°る05'55 -11761 Oct 06 j 10:00 23°る07'12 29.00711 AU evening set min. Earth dist. -11761 Dec 24 j 20:30 21°중42'46 direct -11767 Mar 25 j 10:57 8°중41'38 -2°29'28 conjunction evening set -11760 Mar 25 j 06:34 23°る40'23 minimum elong -11767 Mar 25 i 10:58 8° ₹ 41'38 2°30'09 max. Earth dist. -11760 Apr 09 j 09:33 24°る13'56 31.01098 AU max. Earth dist. -11767 Mar 24 j 15:39 8°る39'50 30.95459 AU conjunction -11767 Apr 10 j 10:18 9°る17'06 -11760 Apr 10 j 07:38 24°る16'00 -2°05'30 morning rise -11767 Jul 07 j 00:25 11°る11'03 -11760 Apr 10 j 07:39 24°る16'00 2°06'07 retrograde minimum elong -11767 Sep 21 j 21:57 9°₹48'04 -2°38'24 -11760 Apr 26 j 04:53 24°る51'18 opposition morning rise -11767 Sep 22 j 15:58 9°**정**46'48 28.95930 AU -11760 Jul 22 j 03:28 26°정44'24 min. Earth dist. retrograde direct -11767 Dec 10 j 19:40 8°중22'19 opposition -11760 Oct 07 j 01:11 25°る21'52 -2°12'00 evening set -11766 Mar 11 j 22:24 10°♂19'51 min. Earth dist. -11760 Oct 07 j 21:57 25° ₹20'25 29.01815 AU max. Earth dist. -11766 Mar 27 j 03:57 10° ₹53'37 30.95977 AU direct -11760 Dec 26 j 10:43 23°**궁**56'06 -11759 Mar 27 j 19:52 25°**궁**53'44 evening set -11766 Mar 28 j 00:36 10° ₹55'33 -2°26'41 conjunction -11766 Mar 28 j 00:36 10°♂55'33 2°27'20 -11759 Apr 12 j 20:31 26°る29'20 -2°01'17 minimum elong conjunction -11766 Apr 12 j 23:47 11°る30'59 morning rise minimum elong -11759 Apr 12 j 20:32 26°₹29'20 2°01'54 retrograde -11766 Jul 09 j 11:32 13°**정**24'47 max. Earth dist. -11759 Apr 11 j 20:42 26°중27'07 31.02204 AU opposition -11766 Sep 24 j 08:34 12°る01'50 -2°35'18 morning rise -11759 Apr 28 j 17:37 27°る04'37 min. Earth dist. -11766 Sep 25 j 02:13 12°중00'35 28.96456 AU retrograde -11759 Jul 24 j 16:00 28°중57'37 -11766 Dec 13 j 08:50 10°♂36'02 -11759 Oct 09 j 11:59 27° ₹35'11 -2°07'24 direct opposition

min. Earth dist.

-11759 Oct 10 j 08:40 27°る33'44 29.02889 AU

-11765 Mar 14 j 12:00 12°₹33'34

evening set

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11758 in astronomical counting style is the year 11759 BCE in historical counting style. -11759 Dec 28 j 23:52 26°る09'26 direct conjunction -11752 Apr 28 j 12:11 12°≈00'21 -1°27'11 -11758 Mar 30 j 09:03 28°る07'06 minimum elong -11752 Apr 28 j 12:11 12°≈00'21 1°27'42 evening set max. Earth dist. -11758 Apr 14 j 09:59 28°중40'29 31.03237 AU -11752 May 14 j 06:52 12°≈35'28 morning rise -11752 Aug 08 j 16:27 14°≈27'46 retrograde -11752 Oct 24 j 17:55 13°≈05'36 -1°30'24 -11758 Apr 15 j 09:35 28°₹42'41 -1°56'53 conjunction opposition -11752 Oct 25 j 17:57 13°≈03'55 29.08144 AU -11758 Apr 15 j 09:36 28°정42'41 1°57'28 min. Earth dist. minimum elong -11758 May 01 j 06:10 29°る17'57 morning rise direct -11751 Jan 13 j 14:30 11°≈39'50 -11758 May 21 j 13:16 0°≈ evening set -11751 Apr 15 j 01:46 13°≈37'16 -11758 Jul 27 j 02:04 1°≈10'51 retrograde max. Earth dist. -11751 Apr 29 j 22:19 14°≈10'17 31.08429 AU -11758 Oct 05 j 02:09 30°R♂ opposition -11758 Oct 11 j 23:12 29°₹48'30 -2°02'36 conjunction -11751 May 01 j 00:11 14°≈12'42 -1°21'46 min. Earth dist. -11758 Oct 12 j 21:31 29° ₹ 46'56 29.03867 AU -11751 May 01 j 00:12 14°≈12'42 1°22'16 minimum elong -11758 Dec 31 j 12:33 28°₹322'46 direct morning rise -11751 May 16 j 18:20 14°≈47'47 -11757 Mar 23 j 08:36 0°**≈** -11751 May 22 j 10:00 15°≈ evening set -11757 Apr 01 j 22:09 0°**≈**20′26 retrograde -11751 Aug 11 j 02:47 16°≈40'01 opposition -11751 Oct 27 j 05:05 15°≈17'53 -1°24'32 conjunction -11757 Apr 17 j 22:16 0°≈56'00 -1°52'18 min. Earth dist. -11751 Oct 28 j 05:35 15°≈16'11 29.08933 AU minimum elong -11757 Apr 17 j 22:17 0°≈56'00 1°52'54 -11751 Nov 07 j 00:09 15°R≈ max. Earth dist. -11757 Apr 16 j 21:20 0°≈53'40 31.04172 AU direct -11750 Jan 16 j 04:38 13°≈52'09 morning rise -11757 May 03 j 18:39 1°≈31'14 -11750 Mar 24 i 07:59 15°≈ retrograde -11757 Jul 29 j 13:46 3°≈24'02 evening set -11750 Apr 17 j 14:05 15°≈49'34 opposition -11757 Oct 14 i 10:17 2°≈01'44 -1°57'37 max. Earth dist. -11750 May 02 j 09:05 16°≈22'28 31.09288 AU min. Earth dist. -11757 Oct 15 j 08:15 2°≈00'12 29.04732 AU direct -11756 Jan 03 i 02:07 0°≈36'01 conjunction -11750 May 03 j 11:57 16°≈24'58 -1°16'13 evening set -11756 Apr 03 i 11:09 2°≈33'39 minimum elong -11750 May 03 j 11:57 16°≈24'58 1°16'43 max. Earth dist. -11756 Apr 18 j 09:52 3°≈06'51 31.04985 AU -11750 May 19 j 05:52 17°≈00'01 morning rise -11750 Aug 13 j 14:49 18°≈52'12 retrograde -11756 Apr 19 j 11:04 3°≈09'12 -1°47'34 -11750 Oct 29 j 16:18 17°≈30'07 -1°18'33 conjunction opposition -11756 Apr 19 j 11:05 3°≈09'12 1°48'09 min. Earth dist. -11750 Oct 30 j 15:53 17°≈28'29 29.09841 AU minimum elong -11756 May 05 j 07:01 3°≈44'25 -11749 Jan 18 j 17:16 16°≈04'25 morning rise direct -11749 Apr 20 j 01:59 18°≈01'50 -11756 Jul 31 j 00:00 5°≈37'07 retrograde evening set -11756 Oct 15 j 21:23 4°≈14'52 -1°52'29 opposition -11749 May 05 j 23:37 18°≈37'12 -1°10'34 min. Earth dist. -11756 Oct 16 j 20:54 4°≈13'13 29.05494 AU conjunction -11755 Jan 04 j 13:17 2°≈49'08 -11749 May 05 j 23:38 18°≈37'12 1°11'03 direct minimum elong -11755 Apr 05 j 24:00 4°≈46'45 -11749 May 04 j 21:51 18°≈34'48 31.10250 AU evening set max. Earth dist. -11749 May 21 j 16:59 19°≈12'14 morning rise -11755 Apr 21 j 23:39 5°≈22'16 -1°42'41 -11749 Aug 16 j 00:47 21°≈04'23 conjunction retrograde minimum elong -11755 Apr 21 j 23:40 5°≈22'16 1°43'16 opposition -11749 Nov 01 j 03:43 19°≈42'22 -1°12'27 max. Earth dist. -11755 Apr 20 j 21:53 5°≈19'52 31.05713 AU min. Earth dist. -11749 Nov 02 j 04:14 19°≈40'40 29.10838 AU morning rise -11755 May 07 j 19:20 5°≈57'28 direct -11748 Jan 21 j 05:43 18°≈16'44 retrograde -11755 Aug 02 j 09:36 7°≈50'02 evening set -11748 Apr 21 j 14:03 20°≈14'07 -11755 Oct 18 j 08:27 6°≈27'49 -1°47'11 max. Earth dist. -11748 May 06 j 08:49 20°≈47'01 31.11292 AU opposition min. Earth dist. -11755 Oct 19 j 07:42 6°≈26'12 29.06163 AU -11754 Jan 07 j 03:08 5°≈02'05 -11748 May 07 j 11:11 20°≈49'29 -1°04'49 direct conjunction -11754 Apr 08 j 12:45 -11748 May 07 j 11:12 20°≈49'29 1°05'16 evening set 6°≈59'39 minimum elong -11748 May 23 i 04:18 21°≈24'29 max. Earth dist. -11754 Apr 23 j 09:26 7°≈32'40 31.06361 AU morning rise retrograde -11748 Aug 17 j 12:46 23°≈16'35 -11748 Nov 02 j 14:51 21°≈54'39 -1°06'15 conjunction -11754 Apr 24 i 12:03 7°≈35'09 -1°37'39 opposition -11754 Apr 24 j 12:03 minimum elong 7°≈35'09 1°38'12 min. Earth dist. -11748 Nov 03 j 14:30 21°≈53'00 29.11882 AU morning rise -11754 May 10 i 07:22 8°≈10'19 direct -11747 Jan 22 i 19:20 20°≈29'05 retrograde -11754 Aug 04 i 19:31 10°≈02'48 evening set -11747 Apr 24 j 02:00 22°≈26'28 -11754 Oct 20 j 19:37 8°≈40'36 -1°41'43 opposition min. Earth dist. -11754 Oct 21 j 19:44 8°≈38'55 29.06798 AU conjunction -11747 May 09 j 22:49 23°≈01'48 -0°58'57 direct -11753 Jan 09 j 14:15 7°≈14'50 minimum elong -11747 May 09 j 22:50 23°≈01'48 0°59'23 evening set -11753 Apr 11 j 01:15 9°≈12'22 max. Earth dist. -11747 May 08 j 20:46 22°≈59'22 31.12334 AU -11747 May 25 j 15:25 23°≈36'47 max. Earth dist. -11753 Apr 25 j 22:16 9°≈45'25 31.07004 AU morning rise retrograde -11747 Aug 19 j 23:30 25°≈28'52 -11753 Apr 27 j 00:19 9°≈47'51 -1°32'29 -11747 Nov 05 j 02:22 24°≈07'00 -0°59'56 conjunction opposition -11753 Apr 27 j 00:20 9°≈47'51 1°33'01 min. Earth dist. -11747 Nov 06 j 03:10 24°≈05'17 29.12906 AU minimum elong -11753 May 12 j 19:14 10°≈22'59 morning rise direct -11746 Jan 25 j 07:00 22°≈41'30 retrograde -11753 Aug 07 j 05:07 12°≈15'22 evening set -11746 Apr 26 j 13:56 24°≈38'52 opposition -11753 Oct 23 j 06:48 10°≈53'11 -1°36'08 max. Earth dist. -11746 May 11 j 08:07 25°≈11'43 31.13332 AU min. Earth dist. -11753 Oct 24 j 06:57 10°≈51'30 29.07436 AU direct -11752 Jan 12 j 03:08 9°**≈**27'25 conjunction -11746 May 12 j 10:16 25°≈14'10 -0°53'01 evening set -11752 Apr 12 j 13:34 11°≈24'54 minimum elong -11746 May 12 j 10:16 25°≈14'10 0°53'25 max. Earth dist. -11752 Apr 27 j 09:11 11°≈57'49 31.07676 AU -11746 May 28 j 02:29 25°≈49'07 morning rise

retrograde

-11746 Aug 22 j 08:49 27°≈41'11

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11746 in astronomical counting style is the year 11747 BCE in historical counting style. -11746 Nov 07 j 13:55 26°≈19'22 -0°53'33 conjunction -11739 May 27 j 15:19 10° + 37'20 -0°09'56 opposition minimum elong min. Earth dist. -11746 Nov 08 j 14:07 26°≈17'41 29.13844 AU -11739 May 27 j 15:19 10° \(\frac{1}{37} \) 37'20 0°10'11 -11745 Jan 27 j 20:34 24°≈53'55 behind sun begin -11739 May 27 j 10:09 10° \(\frac{1}{36} \) 36'52 direct -11745 Apr 29 j 01:50 26°≈51'14 -11739 May 27 j 20:30 10° **ਮ** 37'47 evening set behind sun end -11739 May 26 j 13:16 10° **★** 34'53 31.17594 AU max. Earth dist. conjunction -11745 May 14 j 21:41 27°≈26'31 -0°47'00 morning rise -11745 May 14 j 21:42 27°≈26'31 0°47'23 -11739 Sep 06 j 09:07 13°**米**03'54 minimum elong retrograde -11745 May 13 j 18:54 27°≈24′01 31.14218 AU max. Earth dist. -11739 Nov 22 j 23:36 11° **★** 42'00 -0°07'19 opposition morning rise -11745 May 30 j 13:27 28°≈01'26 min. Earth dist. -11739 Nov 23 j 23:19 11° **★** 40'22 29.17905 AU retrograde -11745 Aug 24 j 18:50 29°≈53'29 direct -11738 Feb 12 j 11:38 10° **★** 16'38 opposition -11745 Nov 10 j 01:33 28°≈31'41 -0°47'04 evening set -11738 May 14 j 09:21 12° **₭** 13'26 -11745 Nov 11 j 02:27 28°≈29'58 29.14680 AU -11738 May 29 j 00:38 12° **€** 46'05 31.18175 AU min. Earth dist. max. Earth dist. -11744 Jan 30 j 07:14 27°≈06'17 direct evening set -11744 Apr 30 j 13:28 29°≈03'33 conjunction -11738 May 30 j 01:46 12° **€** 48'26 -0°03'42 max. Earth dist. -11744 May 15 j 06:44 29°≈36'20 31.14993 AU minimum elong -11738 May 30 j 01:44 12° **€** 48'26 0°03'56 behind sun begin -11738 May 29 j 19:22 12°**米**47'51 conjunction -11744 May 16 j 08:58 29°≈38'48 -0°40'55 behind sun end -11738 May 30 j 08:07 12° **∺**49'00 minimum elong -11744 May 16 j 08:59 29°≈38'48 0°41'17 morning rise -11738 Jun 14 j 14:12 13°**米**23'06 -11744 May 25 j 19:51 0°**)**€ retrograde -11738 Sep 08 j 19:24 15° **X** 14'59 morning rise -11744 Jun 01 j 00:16 0°**)** 13'41 opposition -11738 Nov 25 j 11:30 13°\ 53'04 -0°00'37 retrograde -11744 Aug 26 j 04:11 2°**)**€05'42 min. Earth dist. -11738 Nov 26 j 11:34 13°\\$51'25 29.18546 AU opposition -11744 Nov 11 j 13:14 0°\ 43'55 -0°40'33 asc. node -11738 Dec 28 j 13:23 13°\cdot\tau02'18 min. Earth dist. -11744 Nov 12 j 14:13 0° **\(\)**42'12 29.15371 AU direct -11737 Feb 14 j 23:38 12° **H** 27'46 -11744 Dec 09 j 11:13 30°R≈ evening set -11737 May 16 j 20:15 14° + 24'29 direct -11743 Jan 31 j 19:51 29°≈18'32 max. Earth dist. -11737 May 31 j 11:43 14° + 57'10 31.18879 AU -11743 Mar 24 i 11:56 0°₩ -11743 May 03 j 01:15 1°) 15'43 -11737 Jun 01 j 12:05 14° **X** 59'27 0°02'43 evening set conjunction -11737 Jun 01 j 12:05 14° **)** 59'27 0°02'30 minimum elong -11743 May 18 j 20:08 1° **★** 50'56 -0°34'47 -11737 Jun 01 j 05:39 14° **€** 58'52 conjunction behind sun begin -11743 May 18 j 20:09 1°**¥**50′56 0°35′08 behind sun end -11737 Jun 01 j 18:31 15°**₭**00'02 minimum elong -11737 Jun 17 j 00:05 15°**)** 34'05 -11743 May 17 j 16:48 1° **\(\frac{1}{4}**8'22 \) 31.15628 AU max. Earth dist. morning rise -11737 Sep 11 j 04:44 17° **∺**26'00 -11743 Jun 03 j 11:05 2° **€** 25'48 morning rise retrograde -11743 Aug 28 j 15:01 4° **∺** 17'46 -11737 Nov 27 j 23:14 16°**米**04'07 0°06'05 opposition retrograde -11737 Nov 28 j 21:56 16°**米**02'33 29.19292 AU -11743 Nov 14 j 00:47 2° **★** 55'59 -0°33'58 min. Earth dist. opposition -11743 Nov 15 j 01:44 2° **★** 54'16 29.15952 AU -11736 Feb 17 j 12:49 14° **★** 38'52 min. Earth dist. direct -11742 Feb 03 j 07:28 1° **∺** 30'36 -11736 May 18 j 07:01 16° **★** 35'33 direct evening set evening set -11742 May 05 j 12:45 3°**米**27'42 max. Earth dist. -11742 May 20 j 05:05 4° \(\tau 00'25 \) 31.16162 AU conjunction -11736 Jun 02 j 22:16 17° **∺** 10'29 0°08'58 minimum elong -11736 Jun 02 j 22:16 17° **∺** 10'29 0°08'47 -11742 May 21 j 07:19 4°\(\mathbf{H}\)02'53 -0°28'36 conjunction behind sun begin -11736 Jun 02 j 16:41 17°**米**09'59 minimum elong -11742 May 21 j 07:19 4°**米**02'53 0°28'56 behind sun end -11736 Jun 03 j 03:51 17°**光** 10'59 -11742 Jun 05 j 21:39 4° **∺** 37'42 max. Earth dist. -11736 Jun 01 j 22:00 17° ¥ 08'13 31.19669 AU morning rise retrograde -11742 Aug 31 j 00:31 6°**米**29'38 morning rise -11736 Jun 18 j 09:50 17° **∺**45'05 -11742 Nov 16 j 12:37 5°**米**07'49 -0°27'20 retrograde -11736 Sep 12 j 14:59 19° **∺** 37'03 opposition min. Earth dist. -11742 Nov 17 j 14:04 5°**米**06'05 29.16439 AU -11736 Nov 29 j 11:06 18° **€** 15'12 0°12'46 opposition -11741 Feb 05 i 20:47 -11736 Nov 30 j 09:48 18° ¥ 13'39 29.20120 AU direct 3°**)** 42′27 min. Earth dist. -11735 Feb 18 j 23:26 16° ¥ 50'03 evening set -11741 May 08 j 00:06 5° **)** (39'28 direct -11735 May 20 i 17:44 18° **★**46'41 evening set -11741 May 23 j 18:00 6° **H** 14'35 -0°22'24 -11735 Jun 04 j 09:30 19° ¥ 19'26 31.20513 AU conjunction max. Earth dist. minimum elong -11741 May 23 i 18:00 6°¥14'36 0°22'42 max. Earth dist. -11741 May 22 j 14:56 6°**)** 12'03 31.16634 AU conjunction -11735 Jun 05 i 08:30 19° \times 21'35 0°15'11 minimum elong -11741 Jun 08 j 08:03 6°¥49'23 -11735 Jun 05 i 08:29 19° **€**21'35 0°15'03 morning rise -11741 Sep 02 j 11:55 8°\(\mathbf{H}\)41'17 -11735 Jun 05 j 06:04 19° **€**21'22 retrograde behind sun begin -11741 Nov 19 j 00:16 opposition 7°**¥**19'26 -0°20'41 behind sun end -11735 Jun 05 j 10:54 19°**米**21'48 min. Earth dist. -11741 Nov 20 j 00:42 7°**升**17'45 29.16897 AU morning rise -11735 Jun 20 j 19:26 19° **€** 56'09 5°**)**₹54′03 -11735 Sep 15 j 00:18 21°**ਮ** 48'11 direct -11740 Feb 08 j 08:48 retrograde evening set -11740 May 09 j 11:15 7°****50'59 opposition -11735 Dec 01 j 23:03 20° **★**26'22 0°19'27 -11735 Dec 02 j 21:18 20°**米**24'51 29.20954 AU max. Earth dist. -11740 May 24 j 02:56 8°**¥**23'39 31.17089 AU min. Earth dist. -11734 Feb 21 j 11:42 19°**₭**01'19 direct -11740 May 25 j 04:48 8°**¥**26'04 -0°16'10 -11734 May 23 j 04:36 20° **★** 57'56 conjunction evening set -11740 May 25 j 04:48 8°**¥**26'04 0°16'27 minimum elong -11740 Jun 09 j 18:14 morning rise 9°**)** 00'49 conjunction -11734 Jun 07 j 18:36 21° **X** 32'47 0°21'25 retrograde -11740 Sep 03 j 21:34 10° ¥ 52'42 minimum elong -11734 Jun 07 j 18:36 21° X 32'47 0°21'17 opposition -11740 Nov 20 j 11:55 9°**)** 30'49 -0°14'00 max. Earth dist. -11734 Jun 06 j 19:06 21° **★**30'34 31.21339 AU min. Earth dist. -11740 Nov 21 j 13:06 9°**¥**29'05 29.17367 AU morning rise -11734 Jun 23 j 05:09 22°**₭**07'20 -11739 Feb 09 j 21:37 8°¥05'26 -11734 Sep 17 j 11:32 23° **ਮ** 59'26 direct retrograde

opposition

-11734 Dec 04 j 11:09 22° ₭ 37'39 0°26'06

-11739 May 11 j 22:26 10°**米**02'17

evening set

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11734 in astronomical counting style is the year 11735 BCE in historical counting style. min. Earth dist. -11734 Dec 05 j 08:51 22° \(\) 36'10 29.21766 AU evening set -11727 Jun 07 j 05:47 6°Υ16'20 direct -11733 Feb 23 j 22:26 21° **光** 12'41 -11733 May 25 j 15:09 23°\mathbf{H}09'15 -11727 Jun 22 j 15:32 6°Υ′50'52 1°03'35 evening set conjunction max. Earth dist. -11733 Jun 09 j 06:41 23°**光**42'00 31.22103 AU -11727 Jun 22 j 15:31 6°Υ50'52 1°03'38 minimum elong -11727 Jun 21 j 19:23 6°**Y**48'58 31.24525 AU max. Earth dist. -11733 Jun 10 j 04:43 23° **X** 44'04 0°27'37 -11727 Jul 07 j 22:26 7°**Y**25′09 conjunction morning rise 9°**Y**17'40 minimum elong -11733 Jun 10 j 04:42 23°**)** 44'04 0°27'30 retrograde -11727 Oct 02 j 13:41 -11733 Jun 25 j 14:35 24°\ 18'34 7°**Y**55'41 morning rise opposition -11727 Dec 20 j 00:50 1°10'56 7°**Υ**54'24 29.24736 AU -11733 Sep 19 j 21:14 26° **₭** 10'46 min. Earth dist. retrograde -11727 Dec 20 j 19:48 6°Y31'01 opposition -11733 Dec 06 j 23:23 24°\dagger449'00 0°32'42 direct -11726 Mar 11 j 13:11 min. Earth dist. -11733 Dec 07 j 21:23 24°\dagger447'30 29.22479 AU evening set -11726 Jun 09 j 15:46 8°**Y**27'02 -11732 Feb 26 j 10:27 23°**米**24'07 -11726 Jun 24 j 06:38 8°**Y**59'47 31.24843 AU direct max. Earth dist. -11732 May 27 j 01:57 25°**米**20'38 evening set -11726 Jun 25 j 01:01 9°**Υ**'01'30 1°09'17 conjunction conjunction -11732 Jun 11 j 14:45 25° ¥ 55'24 0°33'46 minimum elong -11726 Jun 25 j 01:00 9°**Y**01'30 1°09'22 minimum elong -11732 Jun 11 j 14:44 25°**米**55'24 0°33'41 morning rise -11726 Jul 10 j 07:17 9°**Ƴ**35'45 max. Earth dist. -11732 Jun 10 j 15:56 25°**米**53'15 31.22760 AU retrograde -11726 Oct 04 j 22:44 11°**Υ**28'21 morning rise -11732 Jun 27 j 00:16 26°**∺**29'52 opposition -11726 Dec 22 j 13:15 10°**Υ**06'19 retrograde -11732 Sep 21 j 08:55 28° ¥ 22'07 min. Earth dist. -11726 Dec 23 j 07:09 10°**Υ**05'07 29.25097 AU opposition -11732 Dec 08 j 11:22 27°\\$\text{\text{00'21}} 0°39'15 direct -11725 Mar 14 j 02:20 8°**Y**41'42 min. Earth dist. -11732 Dec 09 j 08:18 26° \(\) 58'56 29.23079 AU evening set -11725 Jun 12 j 01:43 10° Υ 37'38 direct -11731 Feb 27 j 21:09 25° ★ 35'32 evening set -11731 May 29 j 12:35 27° + 32'00 conjunction -11725 Jun 27 j 10:12 11° Υ 12'03 1° 14'54 max. Earth dist. -11731 Jun 13 j 03:08 28° **米** 04'40 31.23285 AU minimum elong -11725 Jun 27 j 10:11 11°**Υ**°12'03 1°15'00 max. Earth dist. -11725 Jun 26 j 15:51 11°**Υ**10'19 31.25251 AU -11731 Jun 14 j 00:54 28° **H** 06'43 0°39'52 morning rise -11725 Jul 12 j 16:07 11°**Υ**46'16 conjunction -11731 Jun 14 j 00:53 28° ¥ 06'43 0°39'48 retrograde -11725 Oct 07 j 09:11 13° Υ38'58 minimum elong -11731 Jun 29 j 09:43 28° **\(\)**41'10 -11725 Dec 25 j 01:38 12° Υ 16'54 1° 22'55 morning rise opposition -11731 Aug 10 j 03:02 0°**Υ** min. Earth dist. -11725 Dec 25 j 18:18 12°**Υ**15'46 29.25567 AU -11731 Sep 23 j 19:15 0°**Υ**33'28 -11724 Mar 15 j 12:53 10°**Υ**52'21 retrograde direct -11731 Nov 09 j 07:58 30°R € -11724 Jun 13 j 11:34 12°**γ**48'12 evening set -11731 Dec 10 j 23:44 29°\(\mathbf{H}\)11'41 0°45'45 opposition -11731 Dec 11 j 21:24 29°**米** 10′13 29.23546 AU -11724 Jun 28 j 19:37 13°**Y**22'35 1°20'24 min. Earth dist. conjunction -11730 Mar 02 j 09:46 27° **₭**46'55 -11724 Jun 28 j 19:36 13°**Υ**'22'35 1°20'31 direct minimum elong -11730 May 31 j 23:05 29° **∺**43'18 -11724 Jun 28 j 03:17 13°**Υ**21'03 31.25754 AU max. Earth dist. evening set -11730 Jun 08 j 11:27 0°**Υ** -11724 Jul 14 j 00:52 13°**Υ**56'46 morning rise -11724 Oct 08 j 18:06 15°**Y**49'34 retrograde conjunction -11730 Jun 16 j 10:41 0°Υ17'58 0°45'55 opposition -11724 Dec 26 j 13:59 14° **Y**27'30 1° 28'45 minimum elong -11730 Jun 16 j 10:40 0° Y 17'58 0° 45'52 min. Earth dist. -11724 Dec 27 j 06:22 14° Υ 26'23 29.26108 AU max. Earth dist. -11730 Jun 15 j 12:46 0° **Y** 15'54 31.23697 AU direct -11723 Mar 18 j 00:19 13°**Υ**03'02 morning rise -11730 Jul 01 j 19:06 0°**Y**52'22 evening set -11723 Jun 15 j 21:33 14°**Υ**58'49 retrograde -11730 Sep 26 j 07:22 2°**Υ**44'44 -11730 Dec 13 j 11:59 1° **Y**22'55 0° 52'11 conjunction -11723 Jul 01 j 04:49 15°**Y**33'10 1°25'47 opposition min. Earth dist. -11730 Dec 14 j 08:15 1°**Υ**21'32 29.23904 AU minimum elong -11723 Jul 01 j 04:48 15°**Y**'33'09 1°25'56 -11729 Feb 22 j 07:31 30°R € max. Earth dist. -11723 Jun 30 j 12:25 15°**Y**'31'37 31.26326 AU -11729 Mar 04 j 23:39 29° **H** 58'10 -11723 Jul 16 j 09:45 16°**Υ**07'18 direct morning rise -11723 Oct 11 j 05:59 18° \(\gamma 00' 13 \) -11729 Mar 15 i 14:59 $0^{\circ}\Upsilon$ retrograde -11729 Jun 03 i 09:28 -11723 Dec 29 i 02:29 16° \begin{pmatrix} \gamma \text{38'}10 & 1\circ \text{34'}27 \end{pmatrix} evening set 1°Y54'28 opposition -11723 Dec 29 j 17:07 16° \(\gamma \) 37'10 29.26700 AU min. Earth dist. conjunction -11729 Jun 18 i 20:31 2° Υ 29'06 0° 51'53 direct -11722 Mar 20 i 10:30 15° Υ 13'47 minimum elong -11729 Jun 18 i 20:31 2°Υ29'06 0°51'53 evening set -11722 Jun 18 j 07:15 17°**Υ**09'31 max. Earth dist. -11729 Jun 17 i 23:19 2°**Υ**27'06 31.24005 AU -11729 Jul 04 j 04:22 3°**Y**03'28 conjunction -11722 Jul 03 j 14:02 17°**Υ**43'49 1°31'03 morning rise -11729 Sep 28 j 18:04 4°**Y**55'53 -11722 Jul 03 j 14:01 17°**Υ**43'49 1°31'14 retrograde minimum elong -11722 Jul 02 j 23:14 17° Υ 42'25 31.26904 AU -11729 Dec 16 j 00:15 3°**Y**'34'00 0°58'31 opposition max. Earth dist. 3°**Y**32'36 29.24194 AU min. Earth dist. -11729 Dec 16 j 21:02 morning rise -11722 Jul 18 j 18:21 18° Υ 17'56 2°Y09'17 direct -11728 Mar 06 j 11:31 retrograde -11722 Oct 13 j 16:33 20°**Y**11'00 -11728 Jun 04 j 19:39 4°Y05'30 opposition -11722 Dec 31 j 15:16 18°**Υ**'48'56 1°40'00 evening set 4°**Υ**38'09 31.24273 AU -11728 Jun 19 j 09:45 min. Earth dist. -11721 Jan 01 j 06:12 18°**Υ**'47'55 29.27273 AU max. Earth dist. direct -11721 Mar 22 j 22:10 17°**Υ**24'40 -11728 Jun 20 j 06:07 4°Υ40'04 0°57'46 -11721 Jun 20 j 17:11 19°**Υ**20'20 conjunction evening set minimum elong -11728 Jun 20 j 06:06 4°**Υ**40'04 0°57'48 -11721 Jul 05 j 23:17 19°**Υ**′54'35 1°36'12 morning rise -11728 Jul 05 j 13:30 5°**Y**14′23 conjunction retrograde -11728 Sep 30 j 03:16 7°**Y**06'51 minimum elong -11721 Jul 05 j 23:16 19°**Y**54'35 1°36'24 opposition -11728 Dec 17 j 12:28 5°**Y**44'56 1°04'46 max. Earth dist. -11721 Jul 05 j 08:46 19°**Υ**53'13 31.27445 AU min. Earth dist. -11728 Dec 18 j 07:48 5°**Υ**43'37 29.24447 AU morning rise -11721 Jul 21 j 03:13 20°**Y**28'40

retrograde

-11721 Oct 16 j 04:56 22° γ21'52

-11727 Mar 09 j 01:18 4°**Y**20'14

direct

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11720 in astronomical counting style is the year 11721 BCE in historical counting style. -11720 Jan 03 i 03:46 20° Y 59'47 1° 45'26 conjunction -11714 Jul 20 j 15:08 5°**8**10'16 2°07'54 opposition -11720 Jan 03 j 17:07 20°**Υ** 58'53 29.27775 AU minimum elong min. Earth dist. -11714 Jul 20 j 15:07 5°**8**10'16 2°08'15 max. Earth dist. -11720 Mar 24 j 10:20 19°**Υ**35'36 -11714 Jul 20 j 05:30 5°**8**09'21 31.27930 AU direct -11720 Jun 22 j 03:02 21°**Y**31'14 -11714 Aug 04 j 16:18 5°**8**44'09 evening set morning rise -11714 Oct 31 j 07:17 7°**8**38'11 retrograde -11720 Jul 07 j 08:35 22°**Υ**05'27 1°41'12 -11713 Jan 18 j 21:43 6°**8**15'42 2°18'43 conjunction opposition -11720 Jul 07 j 08:34 22°**Υ**05'27 1°41'25 -11713 Jan 19 j 05:42 6°**8**15'10 29.28029 AU minimum elong min. Earth dist. -11720 Jul 06 j 18:43 22°**Υ**04'08 31.27876 AU 4°**8**51'51 max. Earth dist. direct -11713 Apr 09 j 21:49 -11720 Jul 22 j 12:02 22°**Y**39'30 -11713 Jul 07 j 22:07 6°**8**46'52 morning rise evening set -11720 Oct 17 j 16:23 24°**Y**32'50 retrograde -11719 Jan 04 j 16:37 23°**Υ**10'44 1°50'42 opposition conjunction -11713 Jul 23 j 00:05 7°**8**20'48 2°11'45 -11719 Jan 05 j 06:23 23°**Υ**'09'48 29.28158 AU -11713 Jul 23 j 00:04 7°**8**20'48 2°12'07 min. Earth dist. minimum elong -11719 Mar 26 j 21:18 21°**Y**46'38 -11713 Jul 22 j 16:10 7°**8**20'03 31.27827 AU direct max. Earth dist. -11719 Jun 24 j 12:50 23°**Y**42'12 evening set morning rise -11713 Aug 07 j 00:49 7°**8**54'40 retrograde -11713 Nov 02 j 17:36 9°**8**48'50 conjunction -11719 Jul 09 j 17:50 24°**Υ**16'22 1°46'03 opposition -11712 Jan 21 j 10:31 8°**8**26'18 2°22'44 minimum elong -11719 Jul 09 j 17:49 24°**Υ**16'22 1°46'18 min. Earth dist. -11712 Jan 21 j 18:22 8°**8**25'46 29.27980 AU max. Earth dist. -11719 Jul 09 j 04:52 24°**Υ**°15'08 31.28180 AU direct -11712 Apr 11 j 08:59 7°**8**02'30 morning rise -11719 Jul 24 j 20:47 24° Υ 50'23 evening set -11712 Jul 09 j 07:26 8°**8**57'26 retrograde -11719 Oct 20 j 02:48 26° Υ 43'50 opposition -11718 Jan 07 j 05:26 25° Y 21'42 1° 55'49 conjunction -11712 Jul 24 j 08:56 9°**8**31'21 2°15'24 min. Earth dist. -11718 Jan 07 j 17:47 25°**Υ**20'52 29.28385 AU minimum elong -11712 Jul 24 i 08:55 9°**8**31'21 2°15'47 direct -11718 Mar 29 j 11:03 23° \(\gamma 57'40 \) max. Earth dist. -11712 Jul 24 j 01:53 9°830'41 31.27820 AU evening set -11718 Jun 26 j 22:43 25°**Y** 53'09 morning rise -11712 Aug 08 j 09:26 10°**8**05'12 retrograde -11712 Nov 04 j 05:59 11°**8**59'30 -11718 Jul 12 j 03:04 26° Υ27'17 1°50'46 opposition conjunction -11718 Jul 12 j 03:03 26° Υ 27'17 1° 51'01 min. Earth dist. -11711 Jan 23 j 04:57 10°\(236'33\) 29.28013 AU minimum elong max. Earth dist. -11718 Jul 11 j 13:57 26°**Υ**26'03 31.28326 AU direct -11711 Apr 13 j 20:06 9°**8**13'12 -11718 Jul 27 j 05:41 27°**Y**01'17 -11711 Jul 11 j 16:38 11°**8**08'05 morning rise evening set -11718 Oct 22 j 14:30 28° Υ 54'51 retrograde -11717 Jan 09 j 18:22 27°**Υ**'32'40 2°00'45 -11711 Jul 26 j 17:41 11°**8**41'58 2°18'51 opposition conjunction -11717 Jan 10 j 06:33 27°**Y**31'51 29.28479 AU -11711 Jul 26 j 17:40 11°**8**41'58 2°19'17 min. Earth dist. minimum elong -11717 Mar 31 j 22:54 26°**Y**08'41 -11711 Jul 26 j 11:43 11°**8**41'24 31.27874 AU max. Earth dist. direct -11717 Jun 29 j 08:17 28°**Y**04'05 -11711 Aug 10 j 17:55 12°**8**15'48 evening set morning rise -11711 Nov 06 j 17:46 14°**8**10'17 retrograde -11717 Jul 14 j 12:16 28°**Υ**'38'10 1°55'18 -11710 Jan 25 j 12:23 12°**8**47'40 2°30'07 conjunction opposition -11717 Jul 14 j 12:15 28°**Y**′38'10 1°55'36 -11710 Jan 25 j 17:52 12°847'18 29.28108 AU minimum elong min. Earth dist. -11710 Apr 16 j 05:49 11°**8**24'02 max. Earth dist. -11717 Jul 14 j 00:43 28°**Υ**37'05 31.28343 AU direct morning rise -11717 Jul 29 j 14:23 29° Υ 12'08 evening set -11710 Jul 14 j 01:50 13°**8**18'51 -11717 Aug 21 j 16:21 0°8 -11710 Jul 29 j 02:36 13°**8**52'42 2°22'07 retrograde -11717 Oct 25 j 00:05 1°**8**05'49 conjunction -11716 Jan 02 j 01:41 30°R**Y** minimum elong -11710 Jul 29 j 02:35 13°**8**52'42 2°22'33 -11716 Jan 12 j 07:14 29°**Υ**43'34 2°05'32 max. Earth dist. -11710 Jul 28 j 22:12 13°**8**52'17 31.27982 AU opposition min. Earth dist. -11716 Jan 12 j 18:39 29°**Υ**42'48 29.28432 AU morning rise -11710 Aug 13 j 02:32 14°**8**26'31 direct -11716 Apr 02 j 12:24 28°**Y**19'37 -11710 Aug 28 j 19:25 15°8 -11716 Jun 23 j 21:25 0°8 -11710 Nov 09 i 05:06 16°\(\delta\)21'10 retrograde -11716 Jun 30 j 18:00 0°**8**14'55 -11709 Jan 27 j 03:29 15°R evening set -11709 Jan 28 j 01:20 14°\(258'32\) 2°33'30 opposition -11716 Jul 15 j 21:18 0°848'58 1°59'41 -11709 Jan 28 j 05:00 14° 858'17 29.28216 AU conjunction min. Earth dist. minimum elong -11716 Jul 15 i 21:17 0°848'58 1°59'59 direct -11709 Apr 18 i 19:07 13°**8**34'59 max. Earth dist. -11716 Jul 15 j 09:28 0°847'51 31.28242 AU -11709 Jul 02 j 13:14 15°8 morning rise -11716 Jul 30 j 23:11 1°**8**22'55 -11709 Jul 16 j 11:06 15°**8**29'45 evening set retrograde -11716 Oct 26 j 10:43 3°816'42 -11715 Jan 13 j 19:55 1°**8**54'23 2°10'07 opposition conjunction -11709 Jul 31 j 11:24 16°803'35 2°25'10 -11715 Jan 14 j 06:22 1°853'40 29.28308 AU -11709 Jul 31 j 11:23 16°**8**03'35 2°25'38 min. Earth dist. minimum elong -11709 Jul 31 j 07:08 16°**8**03'11 31.28069 AU direct -11715 Apr 04 j 23:20 0°830'27 max. Earth dist. evening set -11715 Jul 03 j 03:25 2°**8**25'39 morning rise -11709 Aug 15 j 11:16 16°**8**37'24 retrograde -11709 Nov 11 j 18:20 18°\begin{align*} 32'12 \end{align*} -11715 Jul 18 j 06:23 2°**8**59'40 2°03'53 -11708 Jan 30 j 14:25 17°**8**09'32 2°36'40 conjunction opposition -11715 Jul 18 j 06:21 2°**8**59'40 2°04'13 min. Earth dist. -11708 Jan 30 j 17:41 17°**8**09'19 29.28291 AU minimum elong -11715 Jul 17 j 20:32 2°858'44 31.28082 AU -11708 Apr 20 j 06:29 15°**8**46'04 max. Earth dist. direct -11715 Aug 02 j 07:44 -11708 Jul 17 j 20:20 17°**8**40'47 morning rise 3°**8**33'35 evening set -11715 Oct 28 j 19:36 retrograde 5°**8**27'29 opposition -11714 Jan 16 j 08:53 4°**8**05'05 2°14'31 conjunction -11708 Aug 01 j 20:26 18°**8**14'36 2°28'01 min. Earth dist. -11714 Jan 16 j 18:55 4°**8**04'25 29.28147 AU minimum elong -11708 Aug 01 j 20:25 18°**8**14'36 2°28'29 -11714 Apr 07 j 11:21 2°841'12 max. Earth dist. -11708 Aug 01 j 17:56 18°**8**14'22 31.28089 AU direct -11714 Jul 05 j 12:49 4°**8**36'17 morning rise -11708 Aug 16 j 19:55 18°**8**48'24 evening set

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

	nical year style is used: The						le.
retrograde	-11708 Nov 13 j 04:31	•		evening set	-11701 Aug 02 j 12:32		
opposition	-11707 Feb 01 j 03:27	19° 8 20'39	2°39'36	C	<i>C</i> ,		
min. Earth dist.	-11707 Feb 01 j 05:51			conjunction	-11701 Aug 17 j 11:15	3° ∏ 31′21	2°41'51
direct	-11707 Apr 22 j 19:24			minimum elong	-11701 Aug 17 j 11:15		2°42'26
evening set	-11707 Jul 20 j 05:47			max. Earth dist.	-11701 Aug 17 j 14:47		31.25101 AU
C	,			morning rise	-11701 Sep 01 j 10:26	4° Ⅱ 05'08	
conjunction	-11707 Aug 04 j 05:23	20° 8 25'42	2°30'40	retrograde	-11701 Nov 29 j 10:46	6° Ⅱ 00'56	
minimum elong	-11707 Aug 04 j 05:22	20° 8 25'42	2°31'09	opposition	-11700 Feb 17 j 23:19	4° Ⅱ 37'37	2°53'33
max. Earth dist.	-11707 Aug 04 j 02:38	20° 8 25'26	31.27999 AU	min. Earth dist.	-11700 Feb 17 j 18:56	4° Ⅱ 37'55	29.25082 AU
morning rise	-11707 Aug 19 j 04:53	20° 8 59'30		direct	-11700 May 08 j 03:30	3° Ⅱ 14'22	
retrograde	-11707 Nov 15 j 16:09	22° 8 54'35		evening set	-11700 Aug 03 j 21:33	5° Ⅱ 08'16	
opposition	-11706 Feb 03 j 16:40	21° 8 31'51	2°42'18				
min. Earth dist.	-11706 Feb 03 j 18:05	21° 8 31'45	29.28116 AU	conjunction	-11700 Aug 18 j 20:03	5° ∏ 41'58	2°42'55
direct	-11706 Apr 25 j 06:30	20° 8 08'31		minimum elong	-11700 Aug 18 j 20:02	5° ∏ 41'58	2°43'30
evening set	-11706 Jul 22 j 14:57	22° 8 03'04		max. Earth dist.	-11700 Aug 18 j 23:52	5° ∏ 42′20	31.24605 AU
				morning rise	-11700 Sep 02 j 19:26	6° Ⅱ 15'46	
conjunction	-11706 Aug 06 j 14:27	22° 8 36'50	2°33'05	retrograde	-11700 Dec 01 j 00:08	8° Ⅱ 11'42	
minimum elong	-11706 Aug 06 j 14:27	22° 8 36'50	2°33'35	opposition	-11699 Feb 19 j 12:19	6° Ⅱ 48'19	2°54'34
max. Earth dist.	-11706 Aug 06 j 13:25	22° 8 36'44	31.27768 AU	min. Earth dist.	-11699 Feb 19 j 07:09	6° Ⅱ 48'40	29.24650 AU
morning rise	-11706 Aug 21 j 13:41	23° 8 10'38		direct	-11699 May 10 j 14:01	5° Ⅱ 25'07	
retrograde	-11706 Nov 18 j 01:43			evening set	-11699 Aug 06 j 06:26	7° Ⅱ 18'57	
opposition	-11705 Feb 06 j 05:58	23° 8 43'03	2°44'46	-			
min. Earth dist.	-11705 Feb 06 j 07:12	23° 8 42'58	29.27815 AU	conjunction	-11699 Aug 21 j 05:04	7° Ⅱ 52'39	2°43'45
direct	-11705 Apr 27 j 19:14	22° 8 19'45		minimum elong	-11699 Aug 21 j 05:03	7° Ⅱ 52'39	2°44'21
evening set	-11705 Jul 25 j 00:20			max. Earth dist.	-11699 Aug 21 j 11:08	7° Ⅱ 53'14	31.24222 AU
-	·			morning rise	-11699 Sep 05 j 04:24	8° Ⅱ 26′28	
conjunction	-11705 Aug 08 j 23:30	24° 8 47'57	2°35'17	retrograde	-11699 Dec 03 j 10:49		
minimum elong	-11705 Aug 08 j 23:29			opposition	-11698 Feb 22 j 01:22	8° Ⅱ 59'06	2°55'20
max. Earth dist.	-11705 Aug 08 j 22:20			min. Earth dist.	-11698 Feb 21 j 18:47		29.24310 AU
morning rise	-11705 Aug 23 j 22:47			direct	-11698 May 13 j 02:13	7° Ⅱ 35'58	
retrograde	-11705 Nov 20 j 13:54			evening set	-11698 Aug 08 j 15:21	9° Ⅱ 29'44	
opposition	-11704 Feb 08 j 18:55		2°47'01	3			
min. Earth dist.	-11704 Feb 08 j 18:35			conjunction	-11698 Aug 23 j 13:52	10° Ⅱ 03'27	2°44'20
direct	-11704 Apr 29 j 06:20			minimum elong	-11698 Aug 23 j 13:52		
evening set	-11704 Jul 26 j 09:31			max. Earth dist.	-11698 Aug 23 j 20:10		
8				morning rise	-11698 Sep 07 j 13:34		
conjunction	-11704 Aug 10 j 08:35	26° 8 58'59	2°37'16	retrograde	-11698 Dec 05 j 23:24		
minimum elong	-11704 Aug 10 j 08:34			opposition	-11697 Feb 24 j 14:26		2°55'50
max. Earth dist.	-11704 Aug 10 j 08:36			min. Earth dist.	-11697 Feb 24 j 06:33		
morning rise	-11704 Aug 25 j 07:44			direct	-11697 May 15 j 12:54		
retrograde	-11704 Nov 21 j 23:48			evening set	-11697 Aug 11 j 00:19		
opposition	-11703 Feb 10 j 08:09		2°49'01				
min. Earth dist.	-11703 Feb 10 j 07:59			conjunction	-11697 Aug 25 j 23:02	12°∏14'26	2°44'42
direct	-11703 May 01 j 17:37		27:20022110	minimum elong	-11697 Aug 25 j 23:02		
evening set	-11703 Jul 28 j 18:32			max. Earth dist.	-11697 Aug 26 j 07:16		
	,			morning rise	-11697 Sep 09 j 22:47		
conjunction	-11703 Aug 12 j 17:25	29° 8 09'54	2°39'01	retrograde	-11697 Dec 08 j 09:53		
minimum elong	-11703 Aug 12 j 17:24			opposition	-11696 Feb 27 j 03:23		2°56'05
max. Earth dist.	-11703 Aug 12 j 18:19			min. Earth dist.	-11696 Feb 26 j 19:09		
morning rise	-11703 Aug 27 j 16:34		-	direct	-11696 May 17 j 01:00		-
3	-11703 Sep 04 j 03:57			evening set	-11696 Aug 12 j 09:25		
retrograde	-11703 Nov 24 j 11:33	1° Ⅱ 39'16		3			
opposition	-11702 Feb 12 j 21:15	0° Ⅱ 16'09	2°50'46	conjunction	-11696 Aug 27 j 08:06	14° Ⅱ 25'36	2°44'49
min. Earth dist.	-11702 Feb 12 j 19:03		29.26212 AU	minimum elong	-11696 Aug 27 j 08:06		
	-11702 Feb 22 j 22:35			max. Earth dist.	-11696 Aug 27 j 16:34		
direct	-11702 May 04 j 04:49			morning rise	-11696 Sep 11 j 08:11		. 3 . 2 , 110
	-11702 Jul 08 j 13:24	0°II		retrograde	-11696 Dec 09 j 22:55		
evening set	-11702 Jul 31 j 03:37	0° П 46'58		opposition	-11695 Feb 28 j 16:26		2°56'05
	51,05.57	000		min. Earth dist.	-11695 Feb 28 j 06:29		
conjunction	-11702 Aug 15 j 02:19	1° Ⅱ 20'40	2°40'33	direct	-11695 May 19 j 11:41		
minimum elong	-11702 Aug 15 j 02:19	1° I I20'40		evening set	-11695 Aug 14 j 18:24		
max. Earth dist.	-11702 Aug 15 j 04:04		31.25672 AU				
morning rise	-11702 Aug 30 j 01:33	1° II 54'27		conjunction	-11695 Aug 29 j 17:15	16°∏36'59	2°44'41
retrograde	-11702 Nov 26 j 23:15	3° I I50′09		minimum elong	-11695 Aug 29 j 17:15		
opposition	-11701 Feb 15 j 10:22	2° II 26'55	2°52'17	max. Earth dist.	-11695 Aug 30 j 02:52		
min. Earth dist.	-11701 Feb 15 j 08:04		29.25618 AU	morning rise	-11695 Sep 13 j 17:33		
direct	-11701 May 06 j 14:33	1° Ⅱ 03'39		retrograde	-11695 Dec 12 j 09:20		
	5 - 5			J	J		

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Earth dist. -11687 Mar 18 j 09:22 3°506'19 29.18139 AU -11694 Dec 14 j 21:38 21°**Д**19'17 retrograde opposition -11687 Mar 19 j 00:52 3°**©**05'16 2°47'02 opposition -11693 Mar 05 j 18:44 19°**I**55'42 2°55'19 direct -11687 Jun 06 j 04:52 1°5542'29 -11693 Mar 05 j 07:21 19°**Д**56'28 29.22683 AU min. Earth dist. evening set -11687 Aug 31 j 19:33 3°535'20 direct -11693 May 24 j 08:48 18°**Д**32'55 evening set -11693 Aug 19 j 12:53 20°**Д**26'22 conjunction -11687 Sep 15 j 20:46 4°909'17 2°35'17 minimum elong -11687 Sep 15 j 20:46 4°9509'17 2°35'57 conjunction -11693 Sep 03 j 12:04 21°**Д**00'09 2°43'44 max. Earth dist. -11687 Sep 16 j 12:47 4°510'48 31.17589 AU minimum elong -11693 Sep 03 j 12:04 21°**Д**00'09 2°44'23 morning rise -11687 Oct 01 j 00:30 4°9543'27 max. Earth dist. -11693 Sep 03 j 22:37 21°**П**01'09 31.22140 AU retrograde -11687 Dec 30 j 12:53 6°9540'55 morning rise -11693 Sep 18 j 13:05 21°Д34'07 opposition -11686 Mar 21 j 13:44 5°9516'43 2°44'48 retrograde -11693 Dec 17 j 10:00 23° **II**31'05 min. Earth dist. -11686 Mar 20 j 20:20 5°517'54 29.17525 AU opposition -11692 Mar 07 j 07:59 22° \$\mathbb{I}\$ 07'26 2° 54'34 direct -11686 Jun 08 j 15:43 3°953'58 min. Earth dist. -11692 Mar 06 j 20:59 22° Д08'10 29.22073 AU evening set -11686 Sep 03 i 04:45 5°9546'45 direct -11692 May 25 j 18:05 20° **1**44'40 evening set -11692 Aug 20 j 21:59 22°**Ⅲ**38'02 conjunction -11686 Sep 18 i 06:26 6°520'43 2°33'04 minimum elong -11686 Sep 18 i 06:26 6°520'43 2°33'44 -11692 Sep 04 j 21:32 23° II 11'50 2°42'54 max. Earth dist. -11686 Sep 18 j 23:39 6°922'21 31.17018 AU conjunction -11692 Sep 04 j 21:32 23° II 11'50 2° 43'34 morning rise -11686 Oct 03 j 10:44 6°954'57 minimum elong max. Earth dist. -11692 Sep 05 j 09:28 23°**П**12'58 31.21467 AU retrograde -11685 Jan 01 j 23:12 8°952'30 -11692 Sep 19 j 22:46 23°**Д**45'50 -11685 Mar 23 j 09:13 7°529'27 29.16995 AU morning rise min. Earth dist. -11692 Dec 18 j 22:13 25°**Ⅱ**42'53 -11685 Mar 24 j 02:33 7°528'16 2°42'19 retrograde opposition -11691 Mar 09 j 21:01 24°**Д**19'09 2°53'33 -11685 Jun 11 j 02:24 opposition direct 6°905'33 -11691 Mar 09 j 08:30 24°**Ⅲ**20'00 29.21330 AU -11685 Sep 05 j 13:58 min. Earth dist. evening set 7°958'16 -11691 May 28 j 06:54 22°**Ц**56'23 direct -11691 Aug 23 j 07:14 24°**Д**49'39 -11685 Sep 20 j 16:12 8°532'17 2°30'38 evening set conjunction -11685 Sep 20 j 16:12 8°532'17 2°31'18 minimum elong -11691 Sep 07 j 06:54 25°**Ⅲ**23'28 2°41'51 -11685 Sep 21 j 10:30 8°534'01 31.16534 AU conjunction max. Earth dist. -11691 Sep 07 j 06:54 25° **I**I 23'28 2°42'31 -11685 Oct 05 j 21:03 9°506'34 minimum elong morning rise max. Earth dist. -11691 Sep 07 j 18:35 25°**Д**24'35 31.20684 AU retrograde -11684 Jan 04 j 11:41 11°504'13 morning rise -11691 Sep 22 j 08:44 25°**Д**57'30 opposition -11684 Mar 25 j 15:18 9°\$39'57 2°39'35 retrograde -11691 Dec 21 j 12:25 27°**Д**54'39 min. Earth dist. -11684 Mar 24 j 20:09 9°541'16 29.16518 AU opposition -11690 Mar 12 j 10:10 26°**Ⅲ**30'48 2°52'18 direct -11684 Jun 12 j 13:05 8°517'18 min. Earth dist. -11690 Mar 11 j 21:23 26°**Д**31'40 29.20516 AU -11684 Sep 06 j 23:16 10°509'58 evening set -11690 May 30 j 16:56 25°**Д**08'02 direct -11690 Aug 25 j 16:12 27°**Ⅲ**01'11 -11684 Sep 22 j 01:52 10°5544'01 2°27'58 evening set conjunction -11684 Sep 22 j 01:52 10°5544'01 2°28'38 minimum elong -11690 Sep 09 j 16:24 27° **II** 35'02 2°40'33 -11684 Sep 22 j 20:30 10°545'47 31.16065 AU conjunction max. Earth dist. -11690 Sep 09 i 16:24 27° **II** 35'02 2°41'12 -11684 Oct 07 i 07:26 11°518'21 minimum elong morning rise -11690 Sep 10 j 06:01 27° ДЗб'19 31.19849 AU max. Earth dist. retrograde -11683 Jan 06 i 00:03 13°5516'07 morning rise -11690 Sep 24 j 18:32 28° **Д**09'06 min. Earth dist. -11683 Mar 27 j 09:26 11°553'06 29.16047 AU -11690 Dec 04 i 06:38 0°5 opposition -11683 Mar 28 i 04:15 11°951'50 2°36'37 -11690 Dec 23 i 23:11 0°506'19 direct -11683 Jun 14 j 22:11 10°529'13 retrograde -11689 Jan 12 j 23:03 30°R II evening set -11683 Sep 09 j 08:39 12°521'50 -11689 Mar 14 j 23:08 28° II 42'22 2°50'47 opposition -11689 Mar 14 j 09:18 28°**Д**43'18 29.19667 AU -11683 Sep 24 j 11:55 12°555'55 2°25'05 min. Earth dist. conjunction direct -11689 Jun 02 j 05:06 27°**Ⅲ**19'34 minimum elong -11683 Sep 24 j 11:56 12°555'55 2°25'45 evening set -11689 Aug 28 j 01:27 29°**Д**12'38 max. Earth dist. -11683 Sep 25 j 08:02 12°557'50 31.15589 AU morning rise -11683 Oct 09 j 17:59 13°530'19 -11689 Sep 12 j 01:49 29°**I**I46'30 2°39'02 retrograde -11682 Jan 08 j 12:30 15°528'11 conjunction -11689 Sep 12 j 01:49 29°**II**46'30 2°39'41 -11682 Mar 30 j 17:01 14°503'52 2°33'25 minimum elong opposition -11689 Sep 12 j 15:25 29°**Д**47'47 31.19019 AU min. Earth dist. -11682 Mar 29 j 20:52 14°505'15 29.15532 AU max. Earth dist. -11689 Sep 18 j 00:29 0ಂತಾ direct -11682 Jun 17 j 09:49 12°541'18 morning rise -11689 Sep 27 j 04:34 0°9520'36 evening set -11682 Sep 11 j 18:19 14°533'53 retrograde -11689 Dec 26 j 12:33 2°917'53 opposition -11688 Mar 16 j 11:55 0°953'50 2°49'02 conjunction -11682 Sep 26 j 21:59 15°508'01 2°21'59 min. Earth dist. -11688 Mar 15 j 20:59 0°954'50 29.18866 AU minimum elong -11682 Sep 26 j 22:00 15°508'01 2°22'38 -11688 Apr 21 j 10:48 30°R II max. Earth dist. -11682 Sep 27 j 17:33 15°509'52 31.15040 AU

morning rise

-11682 Oct 12 j 04:54 15°5642'27

direct

-11688 Jun 03 j 16:18 29°**Ⅲ**31'02

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Attention, astronomical year style is used: The year -11681 in astronomical counting style is the year 11682 BCE in historical counting style. -11681 Jan 11 i 02:52 17°5040'26 retrograde -11675 Sep 26 j 17:58 min. Earth dist. -11681 Apr 01 j 09:55 16°5017'27 29.14930 AU -11681 Apr 02 j 05:55 16°5016'05 2°30'00 -11675 Oct 11 j 23:01 0°Ω34'12 1°54'48 opposition conjunction -11681 Jun 19 j 18:58 14°553'33 direct -11675 Oct 11 j 23:02 0°Ω34'12 1°55'23 minimum elong -11681 Sep 14 j 03:58 16°546'04 -11675 Oct 12 j 22:13 0°**Ω**36'24 31.08612 AU evening set max. Earth dist. -11675 Oct 27 j 11:08 1°**Ω**09'03 morning rise -11681 Sep 29 j 08:23 17°520'16 2°18'41 -11674 Jan 26 j 18:32 $3^{\circ}\Omega$ 07'23 conjunction retrograde -11681 Sep 29 j 08:23 17°520'16 2°19'19 -11674 Apr 17 j 22:11 1°**Ω**42'32 2°00'13 minimum elong opposition -11681 Sep 30 j 05:19 17°\$22'15 31.14376 AU max. Earth dist. min. Earth dist. -11674 Apr 16 j 23:22 1° **Ω**44'06 29.08330 AU -11681 Oct 14 j 15:48 17°554'45 morning rise direct -11674 Jul 05 j 01:02 0°**Ω**19'54 retrograde -11680 Jan 13 j 14:41 19°552'49 evening set -11674 Sep 29 j 00:37 2°**Ω**11'58 -11680 Apr 03 j 18:35 18°528'26 2°26'21 opposition -11680 Apr 02 j 22:05 18°\$29'49 29.14186 AU -11674 Oct 14 j 09:47 min. Earth dist. conjunction 2°Ω46'31 1°50'11 -11674 Oct 14 j 09:48 direct -11680 Jun 21 j 06:33 17°505'54 minimum elong 2°**Ω**46'31 1°50'45 evening set -11680 Sep 15 j 13:48 18°958'22 max. Earth dist. -11674 Oct 15 j 10:32 2°**Ω**48'51 31.07778 AU morning rise -11674 Oct 29 j 22:34 3°**Ω**21'26 conjunction -11680 Sep 30 j 18:41 19°\$32'37 2°15'10 retrograde -11673 Jan 29 j 06:12 $5^{\circ}\Omega$ 19'48 minimum elong -11680 Sep 30 j 18:42 19°532'37 2°15'48 min. Earth dist. -11673 Apr 19 j 10:14 3° **Ω**56'36 29.07529 AU max. Earth dist. -11680 Oct 01 j 15:01 19°534'32 31.13581 AU opposition -11673 Apr 20 j 10:28 3°**Ω**54'55 1°55'12 morning rise -11680 Oct 16 j 02:58 20°507'10 direct -11673 Jul 07 j 12:21 2°**Ω**32'17 retrograde -11679 Jan 15 j 05:26 22°505'17 evening set -11673 Oct 01 j 10:45 $4^{\circ}\Omega$ 24'20 min. Earth dist. -11679 Apr 05 j 10:28 20°542'16 29.13319 AU opposition -11679 Apr 06 j 07:26 20°540'50 2°22'29 conjunction -11673 Oct 16 j 20:28 4° Ω58'56 1°45'24 direct -11679 Jun 23 j 17:33 19°518'18 minimum elong -11673 Oct 16 j 20:29 4°Ω58'56 1°45'59 evening set -11679 Sep 17 j 23:25 21°510'42 max. Earth dist. -11673 Oct 17 j 20:44 5° Ω 01'14 31.07032 AU -11673 Nov 01 j 10:11 5°**Ω**33'54 morning rise -11679 Oct 03 i 05:04 21°545'00 2°11'28 -11672 Jan 31 j 19:41 $7^{\circ}\Omega$ 32'21 conjunction retrograde -11679 Oct 03 j 05:05 21°545'00 2°12'06 -11672 Apr 21 j 22:46 $6^{\circ}\Omega$ 07'26 1° 50'01 minimum elong opposition max. Earth dist. -11679 Oct 04 j 02:35 21°547'02 31.12654 AU min. Earth dist. -11672 Apr 20 j 22:35 6° **Ω**09'06 29.06821 AU -11679 Oct 18 j 14:00 22°519'36 -11672 Jul 08 j 20:33 4° **Ω**44'49 morning rise direct -11678 Jan 17 j 17:49 24°517'46 -11672 Oct 02 j 20:49 6° **Ω** 36'51 retrograde evening set -11678 Apr 08 j 20:14 22°553'14 2°18'26 opposition -11678 Apr 07 j 23:28 22°\$54'39 29.12327 AU -11672 Oct 18 j 07:25 $7^{\circ}\Omega$ 11'30 $1^{\circ}40'28$ min. Earth dist. conjunction -11672 Oct 18 j 07:26 7° Ω 11'31 1°41'01 -11678 Jun 26 j 06:05 21°530'42 direct minimum elong -11678 Sep 20 j 09:15 23°523'01 -11672 Oct 19 j 09:18 7° **Ω**13'57 31.06362 AU evening set max. Earth dist. -11672 Nov 02 j 21:46 $7^{\circ}\Omega$ 46'32 morning rise -11678 Oct 05 j 15:33 23°557'21 2°07'34 -11671 Feb 02 j 07:53 9° Ω 45'02 conjunction retrograde -11671 Apr 23 j 10:13 8°Ω21'49 29.06159 AU minimum elong -11678 Oct 05 j 15:34 23°557'21 2°08'11 min. Earth dist. max. Earth dist. -11678 Oct 06 j 13:00 23°\$59'23 31.11641 AU opposition -11671 Apr 24 j 11:02 8°**Ω**20'07 1°44'39 morning rise -11678 Oct 21 j 01:18 24°532'01 direct -11671 Jul 11 j 07:33 6°**Ω**57'30 retrograde -11677 Jan 20 j 07:13 26°530'14 evening set -11671 Oct 05 j 07:05 8°**Ω**49'31 min. Earth dist. -11677 Apr 10 j 10:46 25°507'07 29.11278 AU -11677 Apr 11 j 08:42 25°505'37 2°14'10 conjunction -11671 Oct 20 j 18:19 9° Ω 24'14 1°35'23 opposition -11677 Jun 28 j 17:15 23°5643'01 minimum elong -11671 Oct 20 j 18:20 9° Ω 24'15 1°35'55 direct -11677 Sep 22 j 19:06 25°535'17 max. Earth dist. -11671 Oct 21 j 19:41 9° Ω 26'38 31.05729 AU evening set -11671 Nov 05 j 09:38 $9^{\circ}\Omega$ 59'20 morning rise -11677 Oct 08 j 02:02 26°\$09'40 2°03'29 -11670 Feb 04 i 23:03 $11^{\circ}\Omega$ 57'53 conjunction retrograde -11677 Oct 08 j 02:03 26°\$09'40 2°04'06 -11670 Apr 26 j 23:22 $10^{\circ}\Omega$ 32'57 $1^{\circ}39'07$ minimum elong opposition -11677 Oct 09 j 00:06 26°\$11'45 31.10581 AU -11670 Apr 25 j 22:15 $10^{\circ}\Omega$ 34'41 29.05518 AU max. Earth dist. min. Earth dist. morning rise -11677 Oct 23 i 12:34 26°5944'24 direct -11670 Jul 13 j 18:01 9° **Ω**10'21 evening set retrograde -11676 Jan 22 j 17:59 28°542'38 -11670 Oct 07 j 17:36 11° **Ω**02'22 -11676 Apr 12 j 21:18 27°517'56 2°09'42 opposition min. Earth dist. -11676 Apr 11 j 23:47 27°519'24 29.10222 AU conjunction -11670 Oct 23 j 05:39 11° Ω 37'09 1°30'08 -11670 Oct 23 i 05:40 $11^{\circ}\Omega$ 37'09 1° 30'39 direct -11676 Jun 30 j 04:29 25°55'19 minimum elong evening set -11676 Sep 24 j 04:47 27°547'30 max. Earth dist. -11670 Oct 24 j 07:59 11° Ω 39'38 31.05069 AU morning rise -11670 Nov 07 j 21:40 12° Ω 12'18 conjunction -11676 Oct 09 j 12:28 28°521'56 1°59'14 retrograde -11669 Feb 07 j 11:46 14° **Ω**10'54 -11676 Oct 09 j 12:29 28°521'56 1°59'49 min. Earth dist. -11669 Apr 28 j 10:55 12° Ω 47'38 29.04822 AU minimum elong -11676 Oct 10 j 11:33 28°524'07 31.09560 AU -11669 Apr 29 j 11:31 12°**Ω**45'57 1°33'27 max. Earth dist. opposition -11676 Oct 24 j 23:40 28°556'43 direct -11669 Jul 16 j 05:35 11°Ω23'21 morning rise -11676 Nov 25 j 12:18 0°**Ω** -11669 Oct 10 j 04:16 13° Ω 15'21 evening set retrograde -11675 Jan 24 j 06:50 $0^{\circ} \Omega$ 55'00 -11669 Oct 25 j 17:03 13° **Ω**50'11 1°24'46 -11675 Mar 27 j 21:31 30° R 55 conjunction min. Earth dist. -11675 Apr 14 j 10:30 29°531'49 29.09225 AU minimum elong -11669 Oct 25 j 17:03 13° € 50'12 1°25'16 opposition -11675 Apr 15 j 09:43 29°530'13 2°05'03 max. Earth dist. -11669 Oct 26 j 18:56 13° € 52'38 31.04353 AU -11675 Jul 02 j 15:47 28°507'35 morning rise -11669 Nov 10 j 09:53 14° **Ω**25'25 direct -11675 Sep 26 j 14:45 29°559'42 -11669 Nov 26 j 17:50 15°**Ω** evening set

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Earth dist. -11661 May 16 j 09:45 0° Mp 31'56 28.97265 AU opposition -11661 May 17 j 11:02 0° mp 30'11 0°43'47 -11668 Oct 27 j 04:24 16° **Ω**03'19 1°19'15 conjunction -11661 Jun 04 j 22:01 30° R.Ω -11668 Oct 27 j 04:25 $16^{\circ}\Omega$ 03'19 1° 19'44 minimum elong direct -11661 Aug 02 j 20:04 29°**Ω**07'13 max. Earth dist. -11668 Oct 28 j 06:20 $16^{\circ}\Omega$ 05'46 31.03523 AU -11661 Sep 28 j 08:17 0°m -11668 Nov 11 j 22:03 16° **Ω**38'36 -11661 Oct 27 j 20:18 morning rise evening set 0° m 59'07 -11667 Feb 11 j 14:39 18° **Ω**37'15 retrograde min. Earth dist. -11667 May 02 j 11:42 $17^{\circ}\Omega$ 13'54 29.03158 AU conjunction -11661 Nov 12 j 14:58 1° m/34'22 0°37'56 opposition -11667 May 03 j 12:03 $17^{\circ}\Omega$ 12'13 $1^{\circ}21'41$ minimum elong -11661 Nov 12 j 14:59 1° Mp 34'22 0°38'18 direct -11667 Jul 20 j 04:12 15°**Ω**49'35 max. Earth dist. -11661 Nov 13 j 18:13 1° My 36'55 30.96862 AU evening set -11667 Oct 14 j 01:46 17°**Ω**41'32 morning rise -11661 Nov 28 j 13:48 2° m 10'01 retrograde -11660 Feb 28 j 06:19 4° m 08'38 conjunction -11667 Oct 29 j 16:06 18° Ω 16'29 1°13'38 opposition -11660 May 18 j 22:43 2° mp 43'14 0°37'11 minimum elong -11667 Oct 29 j 16:07 $18^{\circ}\Omega$ 16'29 1°14'07 min. Earth dist. -11660 May 17 j 21:46 2° Mp 44'58 28.96592 AU max. Earth dist. -11667 Oct 30 j 18:17 18° Ω 18'57 31.02593 AU direct -11660 Aug 04 j 07:00 1° m 20'16 morning rise -11667 Nov 14 j 10:28 $18^{\circ}\Omega$ 51'49 evening set -11660 Oct 29 i 07:33 3°m/12'12 retrograde -11666 Feb 14 i 04:46 $20^{\circ}\Omega$ 50'28 min. Earth dist. -11666 May 04 j 22:48 19° Ω 27'06 29.02163 AU conjunction -11660 Nov 14 i 02:55 3° mp 47'30 0°31'44 opposition -11666 May 06 j 00:02 19° Ω 25'22 1°15'36 minimum elong -11660 Nov 14 i 02:56 3° mp 47'30 0°32'03 -11666 Jul 22 j 16:21 $18^{\circ}\Omega$ 02'40 max. Earth dist. -11660 Nov 15 i 05:55 3° Mp 50'02 30.96264 AU direct -11666 Oct 16 j 12:46 19° **Ω**54'35 -11660 Nov 30 j 02:29 4° m 23'13 evening set morning rise -11659 Mar 01 j 21:02 6° m 21'51 retrograde -11666 Nov 01 j 03:44 $20^{\circ}\Omega$ 29'36 $1^{\circ}07'54$ -11659 May 20 j 08:34 conjunction min. Earth dist. 4° m 58'15 28.96039 AU -11666 Nov 01 j 03:45 20° Ω29'36 1°08'21 -11659 May 21 j 10:20 4° m 56'28 0°30'30 minimum elong opposition -11659 Aug 06 j 17:39 max. Earth dist. direct 3° m 33'29 -11666 Nov 16 j 23:02 21°**Ω**05'00 -11659 Oct 31 j 19:13 evening set 5° m 25'29 morning rise -11665 Feb 16 j 16:10 23°**Ω**03'38 retrograde -11665 May 08 j 12:08 21° Ω 38'27 1°09'26 -11659 Nov 16 j 15:12 6° m 00'51 0°25'28 opposition conjunction -11665 May 07 j 12:01 $21^{\circ}\Omega 40'07$ 29.01094 AU -11659 Nov 16 j 15:12 6° m 00'51 0°25'47 min. Earth dist. minimum elong -11665 Jul 25 j 02:21 20°**Ω**15'41 -11659 Nov 17 j 18:17 6° Mp 03'23 30.95747 AU direct max. Earth dist. -11665 Oct 18 j 23:39 $22^{\circ}\Omega07'34$ -11659 Dec 02 j 15:27 6° Mp 36'36 evening set morning rise retrograde -11658 Mar 04 j 10:24 8° m 35'16 conjunction -11665 Nov 03 j 15:30 22° Ω42'38 1°02'05 opposition -11658 May 23 j 21:54 7° m 09'54 0°23'47 minimum elong -11665 Nov 03 j 15:31 22°Ω42'38 1°02'30 min. Earth dist. -11658 May 22 j 21:13 7° mp 11'37 28.95551 AU max. Earth dist. -11665 Nov 04 j 17:59 $22^{\circ}\Omega$ 45'07 31.00482 AU direct -11658 Aug 09 j 04:55 5° Mp 46'56 -11665 Nov 19 j 11:22 23°**Ω**18'05 -11658 Nov 03 j 07:00 7°m/38'59 morning rise evening set -11664 Feb 19 j 03:33 25° **Ω**16'41 retrograde -11664 May 09 j 23:53 23° Ω 51'26 1°03'09 -11658 Nov 19 j 03:46 8° m 14'25 0°19'10 opposition conjunction -11664 May 08 j 22:55 23° Ω 53'10 29.00006 AU -11658 Nov 19 j 03:46 8° Mp 14'25 0°19'26 min. Earth dist. minimum elong -11658 Nov 20 j 06:59 8° m 16'58 30.95286 AU direct -11664 Jul 26 j 14:06 $22^{\circ}\Omega 28'37$ max. Earth dist. -11664 Oct 20 j 10:44 24° **Ω**20'28 evening set morning rise -11658 Dec 05 i 04:33 8° m 50'13 retrograde -11657 Mar 07 i 01:26 10° m 48'54 -11664 Nov 05 j 03:08 $24^{\circ}\Omega$ 55'34 0° 56'10 conjunction min. Earth dist. -11657 May 25 j 08:00 9° m 25'20 28.95083 AU minimum elong -11664 Nov 05 i 03:09 $24^{\circ}\Omega$ 55'34 0° 56'33 -11657 May 26 j 09:23 9° m 23'34 0°17'01 opposition max. Earth dist. -11664 Nov 06 j 04:45 $24^{\circ}\Omega$ 57'59 30.99424 AU direct -11657 Aug 11 j 17:02 8° 100'36 -11664 Nov 20 j 23:56 25° Ω31'04 evening set -11657 Nov 05 j 19:02 9° m 52'44 morning rise -11663 Feb 20 j 16:25 27° Ω29'40 retrograde -11663 May 11 j 11:10 $26^{\circ}\Omega$ 06'04 28.98986 AU -11657 Nov 21 j 16:15 10° Mp 28'12 0° 12'50 min. Earth dist. conjunction opposition -11663 May 12 j 11:45 26° **Ω**04'21 0°56'47 minimum elong -11657 Nov 21 j 16:15 10° Mp 28'12 0°13'06 direct -11663 Jul 28 j 22:50 24°**Ω**41'28 behind sun begin -11657 Nov 21 j 12:24 10° m 27'51 evening set -11663 Oct 22 j 21:42 26°**Ω**33'19 behind sun end -11657 Nov 21 j 20:06 10° M 28'33 -11657 Nov 22 j 18:34 10° m 30'40 30.94800 AU max. Earth dist. -11663 Nov 07 j 15:01 27° Ω 08'28 0°50'10 -11657 Dec 07 j 17:44 11° m 04'03 conjunction morning rise -11663 Nov 07 j 15:01 27° Ω08'28 0°50'33 minimum elong retrograde -11656 Mar 08 j 13:29 13° Mp 02'45 max. Earth dist. -11663 Nov 08 j 17:58 27° Ω11'00 30.98449 AU opposition -11656 May 27 j 21:00 11° mp 37'26 0°10'13 morning rise -11663 Nov 23 j 12:23 27° Ω44'01 min. Earth dist. -11656 May 26 j 21:03 11° **m** 39'07 28.94579 AU retrograde -11662 Feb 23 j 04:01 29° Ω 42'37 direct -11656 Aug 13 j 02:51 10° Mp 14'29 opposition -11662 May 14 j 23:28 $28^{\circ}\Omega$ 17'15 $0^{\circ}50'19$ evening set -11656 Nov 07 j 07:07 12° Mp 06'40 min. Earth dist. -11662 May 13 j 22:26 $28^{\circ}\Omega$ 18'59 28.98056 AU -11662 Jul 31 j 10:05 26° **Q**54'19 -11656 Nov 23 j 05:08 12° m 42'10 0°06'30 direct conjunction -11662 Oct 25 j 09:01 $28^{\circ} \Omega 46'11$ -11656 Nov 23 j 05:07 12° mp 42'10 0°06'43 evening set minimum elong

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Earth dist. -11649 Jun 13 j 04:13 27° **m** 15'25 -0°37'15 opposition -11655 May 30 j 08:28 13° **m** 51'28 0°03'24 opposition direct -11655 Aug 15 j 14:40 12° Mp 28'29 direct -11649 Aug 29 j 07:34 25° m 51'59 -11655 Nov 09 j 19:31 14° m/20'43 evening set evening set -11649 Nov 23 j 23:03 27° Mp 44'32 conjunction -11655 Nov 25 j 17:58 14° m 56'17 0°00'04 conjunction -11649 Dec 10 j 00:44 28° m 20'16 -0°37'54 -11655 Nov 25 j 17:58 14° m 56'17 -11649 Dec 10 j 00:43 28° m 20'16 0°37'50 minimum elong 0°00'17 minimum elong -11655 Nov 25 j 11:29 14° m 55'42 -11649 Dec 11 j 00:17 28° m 22'28 30.89331 AU behind sun begin max. Earth dist. behind sun end -11655 Nov 26 j 00:28 14° m 56'51 morning rise -11649 Dec 26 j 05:56 28° m 56'22 max. Earth dist. -11655 Nov 26 j 19:01 14° m 58'37 30.93637 AU -11648 Jan 27 j 06:34 0∘**⊽** desc. node -11655 Nov 28 j 17:18 15° m 02'58 retrograde -11648 Mar 26 j 19:47 0°**£**54'46 morning rise -11655 Dec 11 j 20:38 15° m 32'13 -11648 May 27 j 01:31 30°R M retrograde -11654 Mar 13 j 15:51 17° m 30'54 opposition -11648 Jun 14 j 15:11 29° m 29'17 -0°43'53 opposition -11654 Jun 01 j 20:04 16° Mp 05'35 -0°03'25 min. Earth dist. -11648 Jun 13 j 17:35 29° Mp 30'48 28.89152 AU min. Earth dist. -11654 May 31 j 20:58 16° mp 07'12 28.93317 AU direct -11648 Aug 30 j 20:09 28° m 05'47 direct -11654 Aug 17 j 23:45 14° **m** 42'32 evening set -11648 Nov 25 j 12:04 29° m 58'25 evening set -11654 Nov 12 j 07:56 16° m 34'50 -11648 Nov 26 i 05:22 conjunction -11654 Nov 28 j 07:08 17° m 10'25 -0°06'24 conjunction -11648 Dec 11 j 14:03 0°**£**34'12 -0°44'05 minimum elong -11654 Nov 28 j 07:07 17° m 10'25 0°06'13 minimum elong -11648 Dec 11 i 14:02 0°**2**34'12 0°44'03 behind sun begin -11654 Nov 28 j 00:56 17° mp 09'52 max. Earth dist. -11648 Dec 12 j 12:46 0°**2**36'19 30.88924 AU behind sun end -11654 Nov 28 j 13:19 17° m 10'59 -11648 Dec 27 j 19:43 1°**₽**10'19 morning rise max. Earth dist. -11654 Nov 29 j 08:38 17° Mp 12'48 30.92905 AU retrograde -11647 Mar 29 j 08:31 3°**♀**08'41 -11654 Dec 14 j 10:08 17° m 46'24 -11647 Jun 16 j 06:00 1° **2**44'39 28.88819 AU morning rise min. Earth dist. -11653 Mar 16 j 02:50 19° m 45'02 -11647 Jun 17 j 02:16 1°**2**43'13 -0°50'28 retrograde opposition -11653 Jun 03 j 08:35 18° Mp 21'18 28.92537 AU -11647 Sep 02 j 06:14 0°**₽**19'42 min. Earth dist. direct -11647 Nov 28 j 01:05 -11653 Jun 04 j 07:22 18° Mp 19'42 -0°10'14 2°**₽**12'26 evening set opposition -11653 Aug 20 j 11:33 16° M 56'35 direct -11653 Nov 14 j 20:29 18° m 48'55 -11647 Dec 14 j 03:40 2°**2**48'14 -0°50'12 evening set conjunction -11647 Dec 14 j 03:39 2°**2**48'14 0°50'11 minimum elong -11653 Nov 30 j 20:06 19° m 24'32 -0°12'44 -11647 Dec 15 j 02:52 2°**2**50'24 30.88647 AU conjunction max. Earth dist. -11653 Nov 30 j 20:07 19° m 24'32 0°12'34 -11647 Dec 30 j 09:31 3°**△**24'22 minimum elong morning rise behind sun begin -11653 Nov 30 j 15:58 19° m 24'10 retrograde -11646 Mar 31 j 22:18 5°**♀**22'42 behind sun end -11653 Dec 01 j 00:15 19° m 24'54 opposition -11646 Jun 19 j 13:13 3°**≏**57'17 -0°56'58 max. Earth dist. -11653 Dec 01 j 20:08 19° Mp 26'47 30.92109 AU min. Earth dist. -11646 Jun 18 j 16:39 3°**≏**58'45 28.88582 AU morning rise -11653 Dec 16 j 23:46 20° Mp 00'32 direct -11646 Sep 04 j 18:36 2°**2**33'46 retrograde -11652 Mar 17 j 15:47 21° m 59'08 -11646 Nov 30 j 14:31 4°**£**26'37 evening set -11652 Jun 05 j 18:44 20° m 33'45 -0°17'03 opposition min. Earth dist. -11652 Jun 04 j 20:18 20° m 35'19 28.91731 AU -11646 Dec 16 j 17:16 5°**2**02'27 -0°56'15 conjunction -11652 Aug 21 j 21:44 19° m 10'32 -11646 Dec 16 j 17:16 5°**2**02'26 0°56'17 direct minimum elong -11652 Nov 16 j 08:51 21° m 02'54 -11646 Dec 17 j 14:49 5° **2**04'27 30.88440 AU evening set max. Earth dist. -11645 Jan 01 j 23:32 5°**2**38'36 morning rise -11652 Dec 02 j 09:06 21° m 38'34 -0°19'04 conjunction retrograde -11645 Apr 03 j 11:51 7°**£**36'55 -11652 Dec 02 j 09:06 21° m 38'34 0°18'57 minimum elong min. Earth dist. -11645 Jun 21 i 04:47 6°**£**12'55 28.88409 AU max. Earth dist. -11652 Dec 03 j 09:39 21° mp 40'51 30.91296 AU opposition -11645 Jun 22 i 00:11 6°**£**11'33 -1°03'24 morning rise -11652 Dec 18 i 13:08 22° m 14'35 direct -11645 Sep 07 j 04:09 4°**£**48'00 retrograde -11651 Mar 20 j 03:10 24° mp 13'08 evening set -11645 Dec 03 j 03:55 6°**₽**40'59 min. Earth dist. -11651 Jun 07 j 08:27 22° mp 49'13 28.90934 AU -11651 Jun 08 j 06:01 22° Mp 47'42 -0°23'49 opposition conjunction -11645 Dec 19 j 07:10 7°**2**16'50 -1°02'13 direct -11651 Aug 24 j 08:35 21° m 24'25 minimum elong -11645 Dec 19 j 07:10 7°**2**16'50 1°02'16 evening set -11651 Nov 18 j 21:32 23° Mp 16'49 max. Earth dist. -11645 Dec 20 j 05:07 7°**£**18'53 30.88267 AU morning rise -11644 Jan 04 j 13:29 7°**♀**53'01 -11651 Dec 04 j 22:16 23° m 52'31 -0°25'23 retrograde -11644 Apr 04 j 23:23 9°**£**51'19 conjunction -11651 Dec 04 j 22:16 23° m 52'31 0°25'16 -11644 Jun 23 j 11:10 8°**2**26'01 -1°09'44 minimum elong opposition -11651 Dec 05 j 22:00 23° m 54'43 30.90539 AU min. Earth dist. -11644 Jun 22 j 16:15 8°**£**27'21 28.88231 AU max. Earth dist. morning rise -11651 Dec 21 j 02:48 24° m 28'33 direct -11644 Sep 08 j 15:49 7°**£**02'27 retrograde -11650 Mar 22 j 17:09 26° m 27'03 evening set -11644 Dec 04 j 17:31 8°**£**55'33 opposition -11650 Jun 10 j 17:02 25° m 01'35 -0°30'33 min. Earth dist. -11650 Jun 09 j 19:05 25° Mp 03'08 28.90223 AU conjunction -11644 Dec 20 j 20:59 9°**2**31'26 -1°08'06 direct -11650 Aug 26 j 19:45 23° Mp 38'12 minimum elong -11644 Dec 20 j 20:58 9°**2**31'26 1°08'11 -11650 Nov 21 j 10:22 25° m 30'41 max. Earth dist. -11644 Dec 21 j 17:01 9°**≙**33'18 30.88070 AU evening set

morning rise

-11643 Jan 06 j 03:41 10°**♀**07'37

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Earth dist. -11643 Dec 23 j 11:14 11° **2**46'11 -1°13'53 conjunction direct -11636 Sep 26 j 12:40 24°**♀**59'23 -11643 Dec 23 j 11:13 11°**2**46'11 1°13'58 -11636 Dec 23 j 09:36 26°**♀**53'24 minimum elong evening set -11643 Dec 24 j 07:07 11°**Ω**48'03 30.87784 AU max. Earth dist. morning rise -11642 Jan 08 j 17:59 12°**♀**22'23 conjunction -11635 Jan 08 j 14:54 27°**2**29'22 -1°50'43 retrograde -11642 Apr 10 j 00:28 14° **△**20'37 minimum elong -11635 Jan 08 j 14:52 27°**2**29'21 1°50'59 -11642 Jun 28 j 09:12 12°**♀**55'25 -1°22'06 -11635 Jan 09 j 04:58 27°**♀**30'40 30.84757 AU opposition max. Earth dist. -11642 Jun 27 j 16:35 12°**♀**56'35 28.87674 AU min. Earth dist. morning rise -11635 Jan 24 j 22:02 28°**♀**05'32 direct -11642 Sep 13 j 12:32 11°**△**31'46 -11635 Apr 11 j 19:16 evening set -11642 Dec 09 j 21:23 13°**♀**25'07 retrograde -11635 Apr 25 j 18:27 0°ML03'15 -11635 May 09 j 17:24 30°R **≏** conjunction -11642 Dec 26 j 01:28 14° **2**01'02 -1°19'33 opposition -11635 Jul 13 j 12:30 28°**△**38'06 -2°00'56 minimum elong -11642 Dec 26 j 01:27 14°**2**01'02 1°19'41 min. Earth dist. -11635 Jul 13 j 00:39 28°**♀**38'57 28.84817 AU max. Earth dist. -11642 Dec 26 j 19:36 14° 202'43 30.87399 AU direct -11635 Sep 29 j 01:04 27° **2**13'54 morning rise -11641 Jan 11 j 08:27 14° **△**37'14 evening set -11635 Dec 25 j 23:59 29° **2**08'02 retrograde -11641 Apr 12 j 14:08 16° **△**35'25 opposition -11641 Jun 30 j 20:10 15° **2**10'14 -1°28'06 conjunction -11634 Jan 11 i 05:14 29° **△**44'00 -1°55'22 min. Earth dist. -11641 Jun 30 j 03:46 15°**2**11'23 28.87241 AU minimum elong -11634 Jan 11 i 05:13 29° **2**44'00 1°55'39 direct -11641 Sep 16 j 00:07 13° **2**46'30 max. Earth dist. -11634 Jan 11 j 17:28 29° **2**45'09 30.84667 AU evening set -11641 Dec 12 j 11:16 15° **2**39'58 -11634 Jan 18 j 09:01 0°M -11634 Jan 27 j 12:30 0°M20'10 morning rise -11641 Dec 28 j 15:34 16° **2**15'54 -1°25'06 -11634 Apr 28 j 07:45 2°ML17'49 conjunction retrograde -11641 Dec 28 j 15:33 16° **2**15'54 1°25'14 opposition -11634 Jul 15 j 22:59 0°M52'44 -2°05'49 minimum elong max. Earth dist. -11641 Dec 29 j 08:55 16°**2**17'31 30.86906 AU min. Earth dist. -11634 Jul 15 j 11:40 0°M 53'32 28.84803 AU -11640 Jan 13 j 22:37 16°**♀**52'05 -11634 Aug 18 j 06:52 30°R Ω morning rise -11640 Apr 14 j 02:01 18°**♀**50'13 -11634 Oct 01 j 11:16 29° \$\oldsymbol{\Omega}\$28'28 retrograde direct -11640 Jul 02 j 07:10 17°**2**25'01 -1°33'57 -11634 Nov 13 j 22:35 0°M opposition -11640 Jul 01 j 16:31 17°**2**26'04 28.86723 AU -11634 Dec 28 j 14:20 min. Earth dist. evening set 1°M22'46 -11640 Sep 17 j 12:18 16°**♀**01'13 direct -11640 Dec 14 j 01:13 17°**△**54'47 -11633 Jan 13 j 19:47 1°ML58'45 -1°59'50 evening set conjunction -11633 Jan 13 j 19:45 1°ML58'45 2°00'09 minimum elong -11640 Dec 30 j 05:50 18°**2**30'43 -1°30'31 -11633 Jan 14 j 08:16 1°M 59'55 30.84695 AU conjunction max. Earth dist. minimum elong -11640 Dec 30 j 05:49 18° **△**30'43 1°30'42 morning rise -11633 Jan 30 j 02:49 2°M 34'54 max. Earth dist. -11640 Dec 30 j 22:22 18°**♀**32'16 30.86373 AU retrograde -11633 Apr 30 j 19:05 4°M32'29 morning rise -11639 Jan 15 j 12:58 19°**2**06'54 opposition -11633 Jul 18 j 09:39 3°ML07'28 -2°10'30 retrograde -11639 Apr 16 j 15:35 21°**♀**04'57 min. Earth dist. -11633 Jul 17 j 23:35 3°ML08'11 28.84884 AU -11639 Jul 04 j 17:49 19°**2**39'45 -1°39'41 -11633 Oct 03 j 21:38 1°ML43'11 opposition direct min. Earth dist. -11639 Jul 04 j 03:01 19°**2**40'48 28.86187 AU -11633 Dec 31 j 04:42 3°M37'37 evening set -11639 Sep 20 j 01:30 18°**♀**15'50 direct -11639 Dec 16 j 15:23 20° **2**09'31 conjunction -11632 Jan 16 j 10:07 4°ML13'36 -2°04'08 evening set -11632 Jan 16 j 10:06 4° ML13'35 2°04'28 minimum elong -11638 Jan 01 j 20:06 20° **△**45'28 -1°35'48 conjunction max. Earth dist. -11632 Jan 16 j 21:03 4°ML14'37 30.84814 AU -11638 Jan 01 j 20:04 20° **△**45'28 1°35'59 -11632 Feb 01 i 17:10 4° ML49'44 minimum elong morning rise -11638 Jan 02 j 11:19 20° **△**46'53 30.85832 AU max. Earth dist. retrograde -11632 May 02 i 07:39 6° ML 47'16 opposition morning rise -11638 Jan 18 i 03:23 21° \alpha 21'39 -11632 Jul 19 i 20:11 5°ML22'20 -2°14'59 retrograde -11638 Apr 19 i 04:14 23° \alpha 19'37 min. Earth dist. -11632 Jul 19 i 10:14 5°ML23'02 28.85034 AU -11638 Jul 07 j 04:38 21° **2**54'24 -1°45'14 direct -11632 Oct 05 j 09:09 3°ML58'00 opposition min. Earth dist. -11638 Jul 06 j 15:33 21°**2**55'20 28.85684 AU evening set -11631 Jan 01 j 19:20 5°M52'36 direct -11638 Sep 22 j 12:26 20° **△**30'24 evening set -11638 Dec 19 j 05:25 22° **2**24'11 conjunction -11631 Jan 18 j 00:48 6°M28'35 -2°08'14 minimum elong -11631 Jan 18 j 00:47 6°ML28'35 2°08'36 conjunction -11637 Jan 04 j 10:25 23°**2**00'08 -1°40'55 max. Earth dist. -11631 Jan 18 j 11:03 6°M29'32 30.84952 AU -11637 Jan 04 j 10:24 23°**♀**00'08 1°41'10 -11631 Feb 03 j 07:40 7°**ጤ**04'43 minimum elong morning rise -11637 Jan 05 j 01:45 23°**♀**01'34 30.85357 AU -11631 May 04 j 18:44 9°MJ02'11 max. Earth dist. retrograde -11637 Jan 20 j 17:35 23°**△**36'19 -11631 Jul 22 j 06:46 7°M37'19 -2°19'17 morning rise opposition -11637 Apr 21 j 18:06 25° **△**34'11 -11631 Jul 21 j 22:48 7°M37'53 28.85176 AU retrograde min. Earth dist. opposition -11637 Jul 09 j 15:12 24° **2**08'59 -1°50'39 direct -11631 Oct 07 j 20:31 6°ML12'57 min. Earth dist. -11637 Jul 09 j 01:58 24°**2**09'55 28.85261 AU evening set -11630 Jan 04 j 10:08 8° 1 ቢ07'42 direct -11637 Sep 25 j 01:59 22° **2**44'54 evening set -11637 Dec 21 j 19:37 24°**△**38'48 conjunction -11630 Jan 20 j 15:40 8°M43'40 -2°12'09 minimum elong -11630 Jan 20 j 15:39 8°M43'40 2°12'31

max. Earth dist.

-11630 Jan 21 j 00:32

8°M44'30 30.85068 AU

-11636 Jan 07 j 00:35 25°**2**14'45 -1°45'54

conjunction

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11630 in astronomical counting style is the year 11631 BCE in historical counting style. -11630 Feb 05 i 22:25 9°ML19'47 direct -11624 Oct 23 j 10:57 21°M 56'18 morning rise -11630 May 07 j 08:17 11° 11.17'10 evening set -11623 Jan 20 j 17:34 23°M51'52 retrograde opposition -11630 Jul 24 j 17:22 9°M 52'22 -2°23'21 -11630 Jul 24 j 09:31 9°ML52'56 28.85260 AU -11623 Feb 05 j 22:49 24°M27'47 -2°33'35 min. Earth dist. conjunction -11630 Oct 10 j 09:16 8°M27'56 -11623 Feb 05 j 22:48 24°M27'47 2°34'05 direct minimum elong -11629 Jan 07 j 01:01 10° M22'51 -11623 Feb 05 j 23:37 24°M27'52 30.84788 AU evening set max. Earth dist. morning rise -11623 Feb 22 j 04:15 25°ML03'45 conjunction -11629 Jan 23 j 06:26 10°M 58'48 -2°15'51 retrograde -11623 May 22 j 22:01 27° ML00'18 -11629 Jan 23 j 06:25 10°M 58'48 2°16'16 minimum elong opposition -11623 Aug 08 j 18:42 25°M 35'44 -2°45'26 -11629 Jan 23 j 13:39 10°M 59'29 30.85092 AU max. Earth dist. min. Earth dist. -11623 Aug 08 j 17:24 25°M 35'50 28.85119 AU morning rise -11629 Feb 08 j 13:02 11°M 34'54 direct -11623 Oct 25 j 22:49 24°M 10'44 -11629 May 09 j 20:23 13°M32'12 -11622 Jan 23 j 08:20 26°ML06'26 retrograde evening set -11629 Jul 27 j 04:05 12°ML07'26 -2°27'12 opposition min. Earth dist. -11629 Jul 26 j 22:19 12°ML07'51 28.85256 AU conjunction -11622 Feb 08 j 13:34 26°ML42'21 -2°35'44 direct -11629 Oct 12 j 20:41 10°M42'56 minimum elong -11622 Feb 08 j 13:32 26°ML42'21 2°36'15 evening set -11628 Jan 09 j 15:47 12° ML37'57 max. Earth dist. -11622 Feb 08 j 14:04 26°ML42'24 30.85044 AU morning rise -11622 Feb 24 j 18:38 27° ML 18'17 conjunction -11628 Jan 25 j 21:20 13°M 13'55 -2°19'21 retrograde -11622 May 25 j 08:28 29°M14'44 minimum elong -11628 Jan 25 j 21:19 13°M 13'55 2°19'46 opposition -11622 Aug 11 j 05:13 27° ML50'16 -2°47'37 max. Earth dist. -11628 Jan 26 j 03:56 13°M 14'32 30.85044 AU min. Earth dist. -11622 Aug 11 j 05:28 27° ML50'14 28.85459 AU morning rise -11628 Feb 11 j 03:40 13°ML49'59 direct -11622 Oct 28 j 09:50 26°M25'13 -11628 Mar 18 j 01:41 15° ML evening set -11621 Jan 25 j 22:58 28°M21'03 retrograde -11628 May 11 j 09:41 15° ML47'10 -11628 Jul 05 j 20:21 15°RML conjunction -11621 Feb 11 i 04:05 28° ML 56'58 -2°37'39 opposition -11628 Jul 28 j 14:35 14°M22'26 -2°30'50 minimum elong -11621 Feb 11 i 04:04 28°ML56'58 2°38'12 min. Earth dist. -11628 Jul 28 j 09:11 14°M22'49 28.85172 AU max. Earth dist. -11621 Feb 11 j 03:34 28°M 56'55 30.85458 AU -11628 Oct 14 j 10:59 12°M57'51 -11621 Feb 27 j 08:57 29°M32'52 direct morning rise evening set -11627 Jan 11 j 06:38 14°ML52'59 -11621 Mar 12 j 04:28 0° ₹ -11627 Jan 14 j 11:46 15°M -11621 May 27 j 21:12 1°**₹** 29'14 retrograde -11621 Aug 13 j 15:31 0° ₹04'52 -2°49'32 opposition -11627 Jan 27 j 12:03 15°M28'56 -2°22'39 min. Earth dist. -11621 Aug 13 j 15:29 0°**尽**04'52 28.85937 AU conjunction -11627 Jan 27 j 12:02 15° ML 28'56 2°23'06 -11621 Aug 16 j 11:37 30°RM minimum elong -11627 Jan 27 j 16:27 15°ML29'21 30.84927 AU -11621 Oct 30 j 21:48 28°M39'48 max. Earth dist. direct -11627 Feb 12 j 18:22 16°ML04'59 -11620 Jan 11 j 09:52 0° ₹ morning rise -11627 May 13 j 22:19 18° ML02'02 -11620 Jan 28 j 13:44 0°**∡**³35'47 retrograde evening set -11627 Jul 31 j 01:11 16° M 37'19 -2°34'14 opposition -11627 Jul 30 j 21:20 16°M 37'36 28.85051 AU -11620 Feb 13 j 18:42 1° ₹ 11'41 -2°39'20 min. Earth dist. conjunction direct -11627 Oct 16 j 22:53 15°Ml2'38 minimum elong -11620 Feb 13 j 18:42 1° ₹ 11'41 2°39'53 evening set -11626 Jan 13 j 21:26 17° ML07'53 max. Earth dist. -11620 Feb 13 j 17:08 1°**尽** 11'32 30.85986 AU morning rise -11620 Feb 29 j 23:19 1°**х** 47'35 conjunction -11626 Jan 30 j 02:59 17° ML43'49 -2°25'43 retrograde -11620 May 29 j 08:33 3° **₹**43'52 -11626 Jan 30 j 02:58 17°ML43'49 2°26'10 opposition -11620 Aug 15 j 01:57 2° ₹ 19'35 -2°51'12 minimum elong max. Earth dist. -11626 Jan 30 j 07:17 17°ML44'13 30.84790 AU min. Earth dist. -11620 Aug 15 j 03:42 2°**尽** 19'28 28.86522 AU -11626 Feb 15 j 08:55 18°M 19'51 -11620 Nov 01 j 08:55 0° ₹ 54'31 morning rise direct -11626 May 16 j 10:04 20°M 16'46 -11619 Jan 30 j 04:27 2°**х** 50′40 retrograde evening set -11626 Aug 02 j 11:33 18°M 52'05 -2°37'24 opposition -11619 Feb 15 i 09:27 3° ₹26'33 -2°40'46 min. Earth dist. -11626 Aug 02 j 08:28 18°ML52'18 28.84924 AU conjunction -11619 Feb 15 i 09:26 3° \$\frac{1}{2}6'33 2°41'21 direct -11626 Oct 19 j 12:08 17° ML27'18 minimum elong evening set -11625 Jan 16 j 12:19 19°M22'38 max. Earth dist. -11619 Feb 15 i 07:24 3° ₹26'22 30.86599 AU morning rise -11619 Mar 03 i 13:46 4° ₹ 02'25 conjunction -11625 Feb 01 i 17:38 19°ML58'35 -2°28'34 retrograde -11619 May 31 j 21:26 5° ₹ 58'37 minimum elong -11625 Feb 01 j 17:37 19° ML58'35 2°29'03 opposition -11619 Aug 17 j 12:20 4° ₹34'27 -2°52'36 -11619 Aug 17 j 14:25 4°**₹**'34'18 28.87139 AU max. Earth dist. -11625 Feb 01 j 19:48 19°ML58'47 30.84688 AU min. Earth dist. morning rise -11625 Feb 17 j 23:32 20°M 34'35 direct -11619 Nov 03 j 23:07 3°**₹**09'22 retrograde -11625 May 18 j 23:26 22°M31'22 evening set -11618 Feb 01 j 19:28 5°**х** 05'40 opposition -11625 Aug 04 j 22:01 21°ML06'42 -2°40'20 5°**∡**¹41'33 -2°41'57 min. Earth dist. -11625 Aug 04 j 19:32 21°ML06'53 28.84874 AU conjunction -11618 Feb 18 j 00:11 -11625 Oct 21 j 23:33 19°M41'50 minimum elong -11618 Feb 18 j 00:11 5°**х**¹41'33 2°42'32 direct -11624 Jan 19 j 02:49 21°M37'17 -11618 Feb 17 j 20:06 5°**∡**'41'10 30.87204 AU evening set max. Earth dist. -11618 Mar 06 j 04:18 6°**х** 17′24 morning rise -11624 Feb 04 j 08:13 22°M 13'13 -2°31'11 8°**х** 13′30 conjunction retrograde -11618 Jun 03 j 10:03 minimum elong -11624 Feb 04 j 08:12 22°ML13'13 2°31'40 opposition -11618 Aug 19 j 22:52 6°**х** 49'27 -2°53'44 max. Earth dist. -11624 Feb 04 j 10:40 22°ML13'27 30.84671 AU min. Earth dist. -11618 Aug 20 j 02:30 6°**∡**′49'11 28.87740 AU morning rise -11624 Feb 20 j 13:44 22°M 49'12 direct -11618 Nov 06 j 10:55 5°**х** 24′20 retrograde -11624 May 20 j 09:59 24°M 45'52 evening set -11617 Feb 04 j 10:20 7°**∡**120'47 -11624 Aug 06 j 08:28 23°M21'15 -2°43'00 opposition

conjunction

-11617 Feb 20 j 15:05 7° ₹756'39 -2°42'54

min. Earth dist.

-11624 Aug 06 j 07:14 23°M21'20 28.84922 AU

Attention, astronomical year style is used: The year -11617 in astronomical counting style is the year 11618 BCE in historical counting style. -11617 Feb 20 i 15:05 7° ₹ 56'39 2°43'29 evening set -11610 Feb 20 j 16:54 23° ₹03'45 minimum elong max. Earth dist. -11617 Feb 20 j 10:41 7° ₹ 56'15 30.87767 AU -11617 Mar 08 j 18:46 8° ₹32'28 -11610 Mar 08 j 20:43 23° ₹39'32 -2°42'35 morning rise conjunction -11617 Jun 05 j 22:29 10° ₹728'27 -11610 Mar 08 j 20:43 23° ₹39'32 2°43'14 retrograde minimum elong -11617 Aug 22 j 09:28 9°**×**104'29 -2°54'37 -11610 Mar 08 j 08:42 23° ₹38'25 30.90604 AU opposition max. Earth dist. -11610 Mar 24 j 22:29 24°**⊀**15'10 min. Earth dist. -11617 Aug 22 j 14:02 9°**尽**04'10 28.88261 AU morning rise direct -11617 Nov 09 j 00:24 7°**∡**³39'22 retrograde -11610 Jun 21 j 05:41 26° ₹ 10'04 -11610 Sep 06 j 10:49 24°**х** 46'28 -2°53'22 -11616 Feb 07 j 01:09 evening set 9°**∡**³35'54 opposition min. Earth dist. -11610 Sep 06 j 21:18 24° ₹ 45'43 28.91167 AU conjunction -11616 Feb 23 j 05:38 10° ₹ 11'46 -2°43'36 direct -11610 Nov 24 j 15:50 23°**尽**20'52 minimum elong -11616 Feb 23 j 05:37 10° ₹ 11'46 2°44'12 evening set -11609 Feb 23 j 07:19 25° ₹ 17'53 -11616 Feb 22 j 22:45 10° **₹**11'07 30.88245 AU max. Earth dist. -11616 Mar 10 j 09:13 10° **₹** 47'33 -11609 Mar 11 j 10:52 25° ₹753'39 -2°41'33 morning rise conjunction retrograde -11616 Jun 07 j 12:27 12° ₹ 43'25 minimum elong -11609 Mar 11 j 10:52 25° ₹ 53'39 2°42'12 opposition -11616 Aug 23 j 20:01 11° ₹ 19'31 -2°55'14 max. Earth dist. -11609 Mar 10 j 21:30 25°**₹** 52'25 30.91272 AU min. Earth dist. -11616 Aug 24 j 01:31 11°**₹** 19'07 28.88702 AU morning rise -11609 Mar 27 j 12:25 26° ₹29'16 direct -11616 Nov 10 j 13:09 9° ₹ 54'19 retrograde -11609 Jun 23 j 17:30 28°**尽**24'03 evening set -11615 Feb 08 j 15:59 11° ₹ 50'57 opposition -11609 Sep 08 j 21:22 27° ₹ 00'31 -2°52'07 min. Earth dist. -11609 Sep 09 j 08:50 26° ₹ 59'43 28.91909 AU conjunction -11615 Feb 24 j 20:30 12° ₹26'48 -2°44'03 direct -11609 Nov 27 j 03:07 25° ₹34'54 minimum elong -11615 Feb 24 j 20:30 12° ₹26'48 2°44'39 evening set -11608 Feb 25 j 21:23 27° ₹32'00 max. Earth dist. -11615 Feb 24 i 13:24 12° ₹26'09 30.88636 AU max. Earth dist. -11608 Mar 12 j 11:52 28° ₹ 06'33 30.92076 AU morning rise -11615 Mar 12 j 23:39 13° ₹ 02'35 retrograde -11615 Jun 09 j 22:41 14° ₹ 58'17 conjunction -11608 Mar 13 i 00:58 28° ₹ 07'46 -2°40'17 opposition -11615 Aug 26 j 06:31 13° ₹34'26 -2°55'35 minimum elong -11608 Mar 13 j 00:58 28° ₹ 07'46 2°40'56 min. Earth dist. -11615 Aug 26 j 13:44 13° ₹33'55 28.89053 AU morning rise -11608 Mar 29 i 02:09 28° ₹ 43'22 -11615 Nov 13 j 01:57 12° ₹ 09'10 -11608 May 08 j 08:52 0°る direct evening set -11614 Feb 11 j 06:54 14° ₹05'52 -11608 Jun 25 j 05:07 0°**る**38'01 retrograde -11608 Aug 13 j 02:42 30°R **✗** -11614 Feb 27 j 11:10 14° ₹ 41'43 -2°44'15 -11608 Sep 10 j 07:53 29°**х** 14'36 -2°50'38 conjunction opposition -11614 Feb 27 j 11:09 14° ₹ 41'43 2°44'52 min. Earth dist. -11608 Sep 10 j 19:54 29°**х** 13'45 28.92745 AU minimum elong -11614 Feb 27 j 01:55 14° ₹ 40'51 30.88970 AU -11608 Nov 28 j 16:51 27° ₹ 48'59 max. Earth dist. direct -11614 Mar 15 j 14:11 15° ₹ 17'28 -11607 Feb 27 j 11:47 29° ₹ 46'11 morning rise evening set -11607 Mar 05 j 18:57 0°**ਰ** -11614 Jun 12 j 10:54 17° ₹ 12'59 retrograde -11614 Aug 28 j 16:59 15° ₹ 49'12 -2°55'40 opposition -11614 Aug 29 j 00:26 15° ₹ 48'40 28.89373 AU -11607 Mar 15 j 15:03 0°♂21'56 -2°38'45 min. Earth dist. conjunction -11614 Nov 15 j 14:38 14° ₹23'51 -11607 Mar 15 j 15:04 0°♂21'56 2°39'24 direct minimum elong evening set -11613 Feb 13 j 21:27 16° ₹20'36 max. Earth dist. -11607 Mar 14 j 23:59 0°**궁**20'32 30.92956 AU morning rise -11607 Mar 31 j 16:06 0°**⋜**57'30 -11613 Mar 02 j 01:40 16° ₹ 56'27 -2°44'12 conjunction retrograde -11607 Jun 27 j 18:34 2°**⋜**52'03 minimum elong -11613 Mar 02 j 01:40 16°**₹** 56'27 2°44'50 opposition max. Earth dist. -11613 Mar 01 j 16:08 16°**₹** 55'33 30.89278 AU min. Earth dist. -11607 Sep 13 j 06:56 1°♂27'51 28.93647 AU morning rise -11613 Mar 18 j 04:15 17° ₹32'09 direct -11607 Dec 01 j 05:34 0°♂03'09 -11613 Jun 14 j 21:05 19° ₹27'32 -11606 Mar 02 j 02:03 2°**⋜**00'26 retrograde evening set -11613 Aug 31 j 03:34 18°**х** 03'46 -2°55'29 opposition -11606 Mar 18 j 05:19 2°る36'11 -2°36'59 min. Earth dist. -11613 Aug 31 j 12:46 18° × 03'07 28.89697 AU conjunction -11606 Mar 18 j 05:19 2°る36'11 2°37'39 direct -11613 Nov 18 i 02:01 16° ₹38'21 minimum elong evening set -11612 Feb 16 j 12:00 18° ₹35'09 max. Earth dist. -11606 Mar 17 j 14:26 2°る34'48 30.93860 AU morning rise -11606 Apr 03 i 05:53 3°る11'44 -11612 Mar 03 i 16:03 19° ₹10'58 -2°43'55 retrograde -11606 Jun 30 i 05:09 5°₹06'11 conjunction -11612 Mar 03 i 16:02 19° ₹10'58 2°44'33 opposition -11606 Sep 15 j 05:05 3°정42'59 -2°46'51 minimum elong max. Earth dist. -11612 Mar 03 j 05:13 19° ₹ 09'58 30.89633 AU min. Earth dist. -11606 Sep 15 j 19:12 3°정41'59 28.94532 AU -11612 Mar 19 j 18:27 19° ₹ 46'40 direct -11606 Dec 03 j 18:33 2°**궁**17'24 morning rise retrograde -11612 Jun 16 j 08:44 21° ₹ 41'52 evening set -11605 Mar 04 j 16:16 4°**정**14'46 opposition -11612 Sep 01 j 13:50 20° ₹ 18'09 -2°55'02 min. Earth dist. -11612 Sep 01 j 22:49 20° ₹ 17'30 28.90084 AU conjunction -11605 Mar 20 j 19:12 4°**궁**50'31 -2°34'59 direct -11612 Nov 19 j 14:16 18° ₹ 52'39 minimum elong -11605 Mar 20 j 19:12 4°る50'31 2°35'38 -11611 Feb 18 j 02:30 20° **₹** 49'31 max. Earth dist. -11605 Mar 20 j 02:21 4°る48'56 30.94728 AU evening set -11605 Apr 05 j 19:38 5°る26'02 morning rise -11611 Mar 06 j 06:26 21° ₹25'19 -2°43'22 -11605 Jul 02 j 17:55 7°る20'22 conjunction retrograde -11611 Mar 06 j 06:26 21° ₹25'19 2°44'01 minimum elong opposition -11605 Sep 17 j 15:45 5°**る**57'17 -2°44'35 max. Earth dist. -11611 Mar 05 j 18:44 21° ₹24'14 30.90058 AU min. Earth dist. -11605 Sep 18 j 06:01 5°る56'16 28.95361 AU morning rise -11611 Mar 22 j 08:31 22° ₹ 00'59 direct -11605 Dec 06 j 07:16 4°る31'42 retrograde -11611 Jun 18 j 18:27 23° ₹ 56'02 evening set -11604 Mar 06 j 06:25 6°る29'08 opposition -11611 Sep 04 j 00:24 22° ₹32'22 -2°54'20 min. Earth dist. -11611 Sep 04 j 10:58 22° ₹31'37 28.90567 AU -11604 Mar 22 j 09:19 7°る04'52 -2°32'45 conjunction

-11604 Mar 22 j 09:19

minimum elong

7°る04'52 2°33'25

-11611 Nov 22 j 02:06 21° ₹ 06'48

direct

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 24

•	omena of Neptune fi		-	* **			page 24
	nical year style is used: The	-					
max. Earth dist.	-11604 Mar 21 j 16:10		30.95503 AU	max. Earth dist.	-11597 Apr 07 j 10:04	22° 0 39'43	30.99565 AU
morning rise	-11604 Apr 07 j 09:19	7°る40'23					
retrograde	-11604 Jul 04 j 04:36	9° る 34'35		conjunction	-11597 Apr 08 j 07:58		
opposition	-11604 Sep 19 j 02:28	8° ප 11'35		minimum elong	-11597 Apr 08 j 07:59		2°11'39
min. Earth dist.	-11604 Sep 19 j 18:42		28.96082 AU	morning rise	-11597 Apr 24 j 05:54		
direct	-11604 Dec 07 j 18:53	6°₹45'59		retrograde	-11597 Jul 20 j 07:27		
evening set	-11603 Mar 08 j 20:38	8° る 43'28		opposition	-11597 Oct 05 j 05:40		
				min. Earth dist.	-11597 Oct 06 j 02:01		29.00148 AU
conjunction	-11603 Mar 24 j 23:18	9° ರ 19'11		direct	-11597 Dec 24 j 12:25		
minimum elong	-11603 Mar 24 j 23:18	9° る 19'12		evening set	-11596 Mar 24 j 19:40	24°る19'21	
max. Earth dist.	-11603 Mar 24 j 04:28		30.96180 AU				
morning rise	-11603 Apr 09 j 23:08	9° ප 54'41		conjunction	-11596 Apr 09 j 20:54		
retrograde	-11603 Jul 06 j 16:11	11° る 48'45		minimum elong	-11596 Apr 09 j 20:55	24°る54'58	2°07'45
opposition	-11603 Sep 21 j 13:12	10°る25'49	-2°39'20	max. Earth dist.	-11596 Apr 08 j 21:41		31.00414 AU
min. Earth dist.	-11603 Sep 22 j 05:22	10°る24'40	28.96691 AU	morning rise	-11596 Apr 25 j 18:43	25° る 30'18	
direct	-11603 Dec 10 j 07:33	9° ට 00'11		retrograde	-11596 Jul 21 j 20:06	27° る 23'25	
evening set	-11602 Mar 11 j 10:39	10°る57'42		opposition	-11596 Oct 06 j 16:14	26° ට 00'48	-2°13'48
				min. Earth dist.	-11596 Oct 07 j 12:06	25° る 59'24	29.01047 AU
conjunction	-11602 Mar 27 j 13:09	11° る 33'25	-2°27'37	direct	-11596 Dec 26 j 01:35	24° る 34'57	
minimum elong	-11602 Mar 27 j 13:10	11° る 33'25	2°28'16	evening set	-11595 Mar 27 j 08:50	26° る 32'32	
max. Earth dist.	-11602 Mar 26 j 17:24	11° ට 31'34	30.96741 AU	max. Earth dist.	-11595 Apr 11 j 11:18	27° පි 06'02	31.01367 AU
morning rise	-11602 Apr 12 j 12:37	12° る 08'53					
retrograde	-11602 Jul 09 j 01:24	14° ට 02'48		conjunction	-11595 Apr 12 j 09:59	27° ට 08'09	-2°03'01
opposition	-11602 Sep 24 j 00:01	12° る 39'55	-2°36'21	minimum elong	-11595 Apr 12 j 10:00	27° පි 08'09	2°03'37
min. Earth dist.	-11602 Sep 24 j 17:58			morning rise	-11595 Apr 28 j 07:19	27° る 43'27	
direct	-11602 Dec 12 j 19:30			retrograde	-11595 Jul 24 j 06:50		
evening set	-11601 Mar 14 j 00:30			opposition	-11595 Oct 09 j 03:10		-2°09'19
max. Earth dist.	-11601 Mar 29 j 06:32		30.97252 AU	min. Earth dist.	-11595 Oct 10 j 00:24		
	,			direct	-11595 Dec 28 j 14:02		
conjunction	-11601 Mar 30 j 02:51	13° る 47'28	-2°24'43	evening set	-11594 Mar 29 j 21:57		
minimum elong	-11601 Mar 30 j 02:52			8	,		
morning rise	-11601 Apr 15 j 02:03			conjunction	-11594 Apr 14 j 22:44	29° පි 21'20	-1°58'44
retrograde	-11601 Jul 11 j 11:55			minimum elong	-11594 Apr 14 j 22:45		
opposition	-11601 Sep 26 j 10:41		-2°33'08	max. Earth dist.	-11594 Apr 13 j 23:06		
min. Earth dist.	-11601 Sep 27 j 04:42			morning rise	-11594 Apr 30 j 19:52		31.02371110
direct	-11601 Dec 15 j 08:45		20.5 / 05 / 110	morning rise	-11594 May 02 j 09:16		
evening set	-11600 Mar 15 j 14:10			retrograde	-11594 Jul 26 j 18:01	1° ≈ 49'32	
e venning see	11000 1141 10 j 1 1.10	02000		opposition	-11594 Oct 11 j 14:02		-2°04'38
conjunction	-11600 Mar 31 j 16:17	16°₹01'20	-2°21'36	min. Earth dist.	-11594 Oct 12 j 10:42		29.03050 AU
minimum elong	-11600 Mar 31 j 16:17			iiiii. Lartii dist.	-11594 Oct 27 j 23:40		27.03030710
max. Earth dist.	-11600 Mar 30 j 18:42			direct	-11594 Dec 31 j 03:08		
morning rise	-11600 Apr 16 j 15:16		30.57730710	ancer	-11593 Mar 03 j 00:14	0°≈	
retrograde	-11600 Jul 12 j 22:49			evening set	-11593 Apr 01 j 11:01	0°≈58'56	
opposition	-11600 Sep 27 j 21:24		-2°20'42	max. Earth dist.	-11593 Apr 01 j 11:01 -11593 Apr 16 j 11:37		31.03407 AU
min. Earth dist.	-11600 Sep 27 j 21:24 -11600 Sep 28 j 16:28			max. Earth dist.	-11373 Apr 10 j 11.37	1 ~32 17	31.03407 AC
direct	-11600 Sep 28 j 10:28 -11600 Dec 16 j 19:51		20.70171 AU	conjunction	-11593 Apr 17 j 11:35	1°≈34'32	1054115
evening set	-11599 Mar 18 j 03:42			minimum elong	-11593 Apr 17 j 11:36	1°≈34'32	
max. Earth dist.	-11599 Apr 02 j 08:29		30 08256 ATT	morning rise	-11593 May 03 j 08:18	2°≈09'47	1 3430
max. Earm uist.	-11377 Apr 02 J 00.29	10 013 00	50.70230 AU	retrograde	-11593 Jul 29 j 03:33	2 ≈0947 4°≈02'38	
agniunation	-11599 Apr 03 j 05:44	100=714150	2010117	_	-11593 Jul 29 J 03:33 -11593 Oct 14 j 01:02		1050145
conjunction minimum elong	-11599 Apr 03 j 05:45			opposition min. Earth dist.	-11593 Oct 14 j 01:02 -11593 Oct 14 j 23:13	2°≈40'16 2°≈38'43	29.04048 AU
_			2 16 34		-		29.04048 AU
morning rise	-11599 Apr 19 j 04:19			direct	-11592 Jan 02 j 14:14	1°≈14'32	
retrograde	-11599 Jul 15 j 09:15		202702	evening set	-11592 Apr 02 j 23:58	3°≈12'08	21 04270 ATT
opposition	-11599 Sep 30 j 08:03			max. Earth dist.	-11592 Apr 17 j 23:53	3°≈45°26	31.04378 AU
min. Earth dist.	-11599 Oct 01 j 03:31		28.98729 AU	. ,.	11502 4 10:00 17	2047142	1040127
direct	-11599 Dec 19 j 10:17			conjunction	-11592 Apr 19 j 00:17	3°≈47'43	
evening set	-11598 Mar 20 j 17:16	19-002/48		minimum elong	-11592 Apr 19 j 00:18	3°≈47'43	1-20,11
	11500 4 05:40 55	2007200	201.414.6	morning rise	-11592 May 04 j 20:44	4°≈22'57	
conjunction	-11598 Apr 05 j 18:55			retrograde	-11592 Jul 30 j 14:00	6°≈15'42	1054142
minimum elong	-11598 Apr 05 j 18:56			opposition	-11592 Oct 15 j 12:04	4°≈53'24	
max. Earth dist.	-11598 Apr 04 j 20:11		30.98850 AU	min. Earth dist.	-11592 Oct 16 j 10:14		29.04953 AU
morning rise	-11598 Apr 21 j 17:20			direct	-11591 Jan 04 j 03:00	3°≈27'40	
retrograde	-11598 Jul 17 j 21:46		202215.0	evening set	-11591 Apr 05 j 13:01	5°≈25'17	21.05222 :-:
opposition	-11598 Oct 02 j 18:49			max. Earth dist.	-11591 Apr 20 j 11:22	5°≈58'27	31.05235 AU
min. Earth dist.	-11598 Oct 03 j 14:17		28.99380 AU				
direct	-11598 Dec 21 j 23:25			conjunction	-11591 Apr 21 j 12:58	6°≈00'50	
evening set	-11597 Mar 23 j 06:21	22° 5 06'07		minimum elong	-11591 Apr 21 j 12:59	6° ≈ 00'50	1°45'21

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11591 in astronomical counting style is the year 11592 BCE in historical counting style. opposition -11591 May 07 j 09:04 6°≈36'03 -11585 Oct 31 j 17:54 20°≈21'06 -1°15'18 morning rise -11591 Aug 02 j 00:33 8°≈28'42 min. Earth dist. -11585 Nov 01 j 17:44 20°≈19'27 29.09719 AU retrograde opposition -11591 Oct 17 j 23:10 -11584 Jan 20 j 21:21 18°≈55'21 7°≈06'28 -1°49'30 direct -11584 Apr 21 j 03:37 20°≈52'41 -11591 Oct 18 j 22:20 7°≈04'51 29.05758 AU min. Earth dist. evening set -11590 Jan 06 j 13:56 -11584 May 05 j 22:53 21°≈25'35 31.10077 AU direct 5°≈40'44 max. Earth dist. evening set -11590 Apr 08 j 01:51 7°≈38'19 max. Earth dist. -11584 May 07 j 01:18 21°≈28'04 -1°07'31 -11590 Apr 23 j 00:18 8°≈11'28 31.05994 AU conjunction minimum elong -11584 May 07 j 01:19 21°≈28'04 1°07'58 conjunction -11590 Apr 24 j 01:37 8°≈13'50 -1°39'52 morning rise -11584 May 22 j 18:47 22°≈03'05 minimum elong -11590 Apr 24 j 01:38 8°≈13'51 1°40'25 retrograde -11584 Aug 17 j 01:52 23°≈55'09 morning rise -11590 May 09 j 21:18 8°**≈**49'02 opposition -11584 Nov 02 j 05:11 22°≈33'04 -1°09'11 -11590 Aug 04 j 10:17 10°≈41'35 -11584 Nov 03 j 05:46 22°≈31'22 29.10626 AU retrograde min. Earth dist. -11590 Oct 20 j 10:22 9°≈19'22 -1°44'08 opposition direct -11583 Jan 22 j 08:35 21°≈07'22 min. Earth dist. -11590 Oct 21 j 09:58 9°≈17'44 29.06451 AU evening set -11583 Apr 23 j 15:32 23°≈04'40 direct -11589 Jan 09 j 03:59 7°≈53'38 max. Earth dist. -11583 May 08 j 10:45 23°≈37'36 31.11054 AU evening set -11589 Apr 10 j 14:30 9°≈51'10 max. Earth dist. -11589 Apr 25 j 11:00 10°≈24'10 31.06657 AU conjunction -11583 May 09 j 12:48 23°≈40'02 -1°01'45 minimum elong -11583 May 09 j 12:48 23°≈40'02 1°02'09 conjunction -11589 Apr 26 j 13:50 10°≈26'41 -1°34'47 morning rise -11583 May 25 j 05:54 24°≈15'01 minimum elong -11589 Apr 26 j 13:51 10°≈26'41 1°35'18 retrograde -11583 Aug 19 j 11:54 26°≈07'03 morning rise -11589 May 12 j 09:18 11°≈01'51 opposition -11583 Nov 04 j 16:26 24°≈45'03 -1°02'57 retrograde -11589 Aug 06 j 22:04 12°≈54'18 min. Earth dist. -11583 Nov 05 j 16:16 24°≈43'24 29.11633 AU opposition -11589 Oct 22 j 21:26 11°≈32'06 -1°38'38 direct -11582 Jan 24 i 20:57 23°≈19'25 min. Earth dist. -11589 Oct 23 j 21:09 11°≈30'27 29.07079 AU evening set -11582 Apr 26 i 03:27 25°≈16'43 direct -11588 Jan 11 j 16:17 10°≈06'20 max. Earth dist. -11582 May 10 j 21:52 25°≈49'35 31.12110 AU -11588 Apr 12 j 02:58 12°≈03'50 evening set max. Earth dist. -11588 Apr 27 j 00:04 12°≈36'53 31.07265 AU -11582 May 12 j 00:14 25°≈52'03 -0°55'53 conjunction -11582 May 12 j 00:14 25°≈52'03 0°56'17 minimum elong -11588 Apr 28 j 02:10 12°≈39'19 -1°29'34 -11582 May 27 j 16:56 26°≈27'01 conjunction morning rise -11582 Aug 21 j 22:23 28°≈19'02 -11588 Apr 28 j 02:11 12°≈39'19 1°30'05 minimum elong retrograde -11588 May 13 j 21:08 13°≈14'27 -11582 Nov 07 j 03:51 26°≈57'06 -0°56'38 opposition morning rise -11588 Jul 19 j 14:02 15°≈ -11582 Nov 08 j 03:59 26°≈55'26 29.12719 AU min. Earth dist. -11588 Aug 08 j 07:28 15°≈06'49 -11581 Jan 27 j 07:14 25°≈31'33 retrograde direct -11588 Aug 28 j 07:55 15°R≈ -11581 Apr 28 j 15:04 27°≈28'50 evening set -11588 Oct 24 j 08:28 13°≈44'37 -1°32'59 -11581 May 13 j 10:09 28°≈01'45 31.13208 AU opposition max. Earth dist. -11588 Oct 25 j 09:14 13°≈42'54 29.07661 AU min. Earth dist. -11587 Jan 13 j 05:14 12°≈18'51 -11581 May 14 j 11:32 28°≈04'08 -0°49'56 direct conjunction evening set -11587 Apr 14 j 15:29 14°≈16'18 minimum elong -11581 May 14 j 11:33 28°≈04'08 0°50'17 max. Earth dist. -11587 Apr 29 j 10:52 14°≈49'12 31.07863 AU morning rise -11581 May 30 j 03:45 28°≈39'05 -11581 Jul 12 j 12:36 0°**米** conjunction -11587 Apr 30 j 14:10 14°≈51'45 -1°24'13 retrograde -11581 Aug 24 j 07:39 0° **∺**31'06 -11587 Apr 30 j 14:11 14°≈51'45 1°24'42 -11581 Oct 07 j 14:25 30°R≈ minimum elong -11587 May 04 j 06:24 15°≈ -11581 Nov 09 j 15:20 29°≈09'14 -0°50'14 opposition -11587 May 16 j 08:56 15°≈26'52 min. Earth dist. -11581 Nov 10 j 15:33 29°≈07'34 29.13791 AU morning rise -11587 Aug 10 j 19:41 17°≈19'07 -11580 Jan 29 j 20:11 27°≈43'46 retrograde direct -11587 Oct 26 j 19:33 15°≈56'56 -1°27'13 opposition evening set -11580 Apr 30 i 02:58 29°≈41'01 -11587 Oct 27 j 19:37 15°≈55'16 29.08267 AU min. Earth dist. -11580 May 08 i 16:34 0°₩ -11587 Dec 03 i 03:33 15°R≈ -11580 May 15 j 22:49 0° \(\) 16'18 -0°43'54 direct -11586 Jan 15 j 18:56 14°≈31'09 conjunction -11586 Feb 27 j 12:41 15°≈ minimum elong -11580 May 15 i 22:50 0° \(\overline{\pi} \) 16'18 0°44'16 -11586 Apr 17 j 03:34 16°≈28'34 max. Earth dist. -11580 May 14 j 20:16 0° **X** 13'49 31.14260 AU evening set max. Earth dist. -11586 May 01 j 23:41 17°≈01'32 31.08496 AU -11580 May 31 j 14:43 0° **\(\)** 51'13 morning rise -11580 Aug 25 j 19:23 2°**)** 43'14 retrograde conjunction -11586 May 03 j 02:01 17°≈03'59 -1°18'46 opposition -11580 Nov 11 j 02:43 1°\(\frac{1}{2}\)21'25 -0°43'46 minimum elong -11586 May 03 j 02:02 17°≈03'59 1°19'15 min. Earth dist. -11580 Nov 12 j 02:47 1°**升**19'46 29.14807 AU -11579 Jan 15 j 12:07 30°R≈ morning rise -11586 May 18 j 20:14 17°≈39'04 retrograde -11586 Aug 13 j 05:55 19°≈31'15 direct -11579 Jan 31 j 06:54 29°≈56'01 -11586 Oct 29 j 06:52 18°≈09'05 -1°21'19 -11579 Feb 16 j 01:51 0°**)**€ opposition -11586 Oct 30 j 07:52 18°≈07'21 29.08937 AU 1°**¥**53'15 min. Earth dist. evening set -11579 May 02 j 14:42 -11585 Jan 18 j 08:03 16°≈43'18 -11579 May 17 j 08:36 direct max. Earth dist. 2°**₭**26'06 31.15224 AU evening set -11585 Apr 19 j 15:42 18°≈40'40 max. Earth dist. -11585 May 04 j 10:55 19°≈13'34 31.09230 AU conjunction -11579 May 18 j 10:14 2° **★** 28'30 -0°37'49 minimum elong -11579 May 18 j 10:15 2°\(\mathbf{X}\)28'30 0°38'08 conjunction -11585 May 05 j 13:41 19°≈16'04 -1°13'12 morning rise -11579 Jun 03 j 01:30 3°**∺**03′23 minimum elong -11585 May 05 j 13:41 19°≈16'04 1°13'39 retrograde -11579 Aug 28 j 05:07 4°**¥**55'24 -11585 May 21 j 07:38 19°≈51'07 -11579 Nov 13 j 14:31 3°**)** 33'37 -0°37'13 morning rise opposition

min. Earth dist.

-11579 Nov 14 j 15:27 3°**米** 31'54 29.15705 AU

-11585 Aug 15 j 16:33 21°≈43'14

retrograde

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11578 in astronomical counting style is the year 11579 BCE in historical counting style. -11578 Feb 02 i 19:09 2° **★** 08'16 direct direct -11572 Feb 17 i 00:53 15° **)** 18'27 evening set -11578 May 05 j 02:24 4°\color=05'27 evening set -11572 May 17 j 21:40 17° **∺** 15'10 -11578 May 20 j 21:16 4° \(\frac{1}{4}\)40'39 -0°31'41 -11572 Jun 02 j 13:31 17°**米** 50'07 0°05'46 conjunction conjunction 4°**)** 40′39 0°32′00 -11578 May 20 j 21:17 -11572 Jun 02 j 13:31 17°**)** 50'07 0°05'35 minimum elong minimum elong -11578 May 19 j 18:31 4°**₭**38'09 31.16068 AU -11572 Jun 02 j 07:18 17°**)** 49'34 max. Earth dist. behind sun begin -11578 Jun 05 j 12:14 -11572 Jun 02 j 19:43 17° **∺** 50'40 morning rise 5°**∺**15'31 behind sun end -11572 Jun 01 j 13:17 17° ¥ 47'51 31.19541 AU retrograde -11578 Aug 30 j 17:38 7°**米**07'30 max. Earth dist. opposition -11578 Nov 16 j 02:11 5° **★** 45'45 -0°30'38 morning rise -11572 Jun 18 j 01:25 18° **★** 24'45 min. Earth dist. -11578 Nov 17 j 02:23 5° **★** 44'05 29.16482 AU retrograde -11572 Sep 12 j 04:24 20° **₭** 16'39 direct -11577 Feb 05 j 08:55 4°**升**20′25 opposition -11572 Nov 29 j 00:40 18° **X** 54'47 0°09'20 -11577 May 07 j 13:57 -11572 Nov 30 j 00:03 18°**米**53'11 29.19905 AU evening set 6°**)** 17′33 min. Earth dist. max. Earth dist. -11577 May 22 j 06:29 6°**¥**50'17 31.16780 AU direct -11571 Feb 18 j 13:39 17°**米** 29'33 evening set -11571 May 20 j 08:37 19°**米**26'12 conjunction -11577 May 23 j 08:28 6°¥52'43 -0°25'30 minimum elong -11577 May 23 j 08:29 6°**¥**52'43 0°25'47 conjunction -11571 Jun 04 j 23:44 20°**米**01'07 0°11'58 morning rise -11577 Jun 07 j 22:48 7°**升**27'32 minimum elong -11571 Jun 04 j 23:44 20°**米**01'07 0°11'50 retrograde -11577 Sep 02 j 04:03 9°**)** 19'31 behind sun begin -11571 Jun 04 j 19:12 20°**米**00'43 opposition -11577 Nov 18 j 13:52 7°**)** 57'45 -0°24'01 behind sun end -11571 Jun 05 j 04:16 20° **★** 01'31 min. Earth dist. -11577 Nov 19 j 15:13 7°**¥**56′00 29.17136 AU max. Earth dist. -11571 Jun 03 j 23:05 19°\\$58'48 31.20238 AU direct -11576 Feb 07 j 21:56 6°**)** €32'26 morning rise -11571 Jun 20 j 11:16 20° ₩ 35'43 evening set -11576 May 09 j 01:27 8° **\(29**'30 retrograde -11571 Sep 14 j 15:43 22° \(\mathbf{x}\)27'39 opposition -11571 Dec 01 j 12:35 21° \(\)05'47 0°16'00 conjunction -11576 May 24 j 19:23 9°\ 04'37 -0°19'17 min. Earth dist. -11571 Dec 02 j 10:55 21°\(\mathbf{H}\)04'16 29.20654 AU minimum elong -11576 May 24 j 19:23 9°**)** 04'37 0°19'34 direct -11570 Feb 20 j 23:43 19° **★** 40'38 max. Earth dist. -11576 May 23 j 16:50 9°\(\mathbf{H}\)02'08 31.17390 AU -11570 May 22 j 19:11 21° ¥ 37'14 evening set -11576 Jun 09 j 09:24 9° **** 39'24 max. Earth dist. -11570 Jun 06 j 10:57 22° ₩ 09'58 31.21023 AU morning rise -11576 Sep 03 j 14:46 11°\mathbf{3}1'20 retrograde -11576 Nov 20 j 01:31 10°**米**09'34 -0°17'22 -11570 Jun 07 j 09:53 22° \times 12'07 0°18'11 opposition conjunction -11576 Nov 21 j 01:50 10°**米**07'54 29.17691 AU -11570 Jun 07 j 09:53 22° **€** 12'06 0°18'02 minimum elong min. Earth dist. -11570 Jun 22 j 20:45 22°**ਮ** 46'40 -11575 Feb 09 j 11:39 8°**)** 44'15 direct morning rise evening set -11575 May 11 j 12:43 10° **★**41'14 -11570 Sep 17 j 01:10 24° **★** 38'41 retrograde -11575 May 26 j 03:56 11°**米** 13'52 31.17908 AU -11570 Dec 04 j 00:38 23° **₭** 16'51 0°22'38 max. Earth dist. opposition min. Earth dist. -11570 Dec 04 j 23:11 23°\mathbf{1}5'18 29.21463 AU -11569 Feb 23 j 11:33 21° **★** 51'47 conjunction direct -11575 May 27 j 06:10 11° **X** 16'19 0°13'18 minimum elong evening set -11575 May 27 j 02:24 11°**米** 15'59 behind sun begin behind sun end -11575 May 27 j 09:56 11°**米** 16'39 conjunction -11569 Jun 09 j 19:55 24°\\$23'10 0°24'22 morning rise -11575 Jun 11 j 19:36 11°\ 51'03 minimum elong -11569 Jun 09 j 19:55 24°**∺**23'10 0°24'16 retrograde -11575 Sep 06 j 00:33 13°**米**42'58 max. Earth dist. -11569 Jun 08 j 20:35 24° **€** 20'59 31.21854 AU opposition -11575 Nov 22 j 13:22 12°**∺**21'10 -0°10'41 morning rise -11569 Jun 25 j 06:27 24° **∺** 57'42 min. Earth dist. -11575 Nov 23 j 14:24 12° **€** 19'27 29.18195 AU retrograde -11569 Sep 19 j 13:30 26° **ਮ** 49'46 -11574 Feb 12 j 00:07 10° **∺** 55'52 -11569 Dec 06 j 12:27 25° **★** 27'59 0°29'14 direct opposition -11574 May 13 j 23:52 12° **€** 52'44 min. Earth dist. -11569 Dec 07 j 09:46 25° **¥** 26'32 29.22295 AU evening set -11568 Feb 25 j 23:36 24° **光** 03'01 direct -11574 May 29 i 16:46 13° \tag{27'47} -0°06'51 conjunction evening set -11568 May 26 j 16:37 25° + 59'33 -11574 May 29 j 16:47 13°\cong 27'47 0°07'05 minimum elong max. Earth dist. -11568 Jun 10 j 07:58 26° ¥ 32'16 31.22659 AU -11574 May 29 i 10:48 13°\cdot\cdot 27'15 behind sun begin -11574 May 29 j 22:45 13° **H** 28'19 -11568 Jun 11 i 06:06 26° \ 34'20 0°30'31 behind sun end conjunction minimum elong max. Earth dist. -11574 May 28 j 15:08 13°\(\mathbf{2}\)5'23 31.18414 AU -11568 Jun 11 i 06:06 26° ₩ 34'20 0°30'26 morning rise -11574 Jun 14 i 05:45 14° \(\text{0}}}} 02'29}}} morning rise -11568 Jun 26 j 15:57 27° **₭**08'50 retrograde -11574 Sep 08 j 10:25 15° **\(\)** 54'22 retrograde -11568 Sep 21 j 00:21 29°\mathbf{H}01'00 -11574 Nov 25 j 01:08 14° + 32'32 -0°04'01 -11568 Dec 08 j 00:42 27° \(\) 39'13 0°35'48 opposition opposition -11568 Dec 08 j 22:44 27° ¥ 37'43 29.23074 AU min. Earth dist. -11574 Nov 26 j 01:11 14° **★** 30'53 29.18700 AU min. Earth dist. -11573 Feb 14 j 13:54 13°**米**07'15 direct direct -11567 Feb 27 j 11:26 26° **★** 14'21 -11573 May 16 j 10:48 15°**米** 04'02 evening set evening set -11567 May 29 j 03:17 28° **₭** 10'51 max. Earth dist. -11573 May 31 j 01:27 15°**米** 36'38 31.18938 AU -11567 Jun 13 j 16:02 28° ¥45'36 0°36'38 conjunction -11573 Jun 01 j 03:08 15°**¥** 39'02 -0°00'34 -11567 Jun 13 j 16:02 28° ¥45'36 0°36'36 conjunction minimum elong -11573 Jun 01 j 03:07 15° ¥39'02 0°00'45 -11567 Jun 12 j 17:50 28° ¥43'31 31.23395 AU minimum elong max. Earth dist. -11573 May 31 j 20:41 15° **∺** 38'27 -11567 Jun 29 j 01:26 29° ₩ 20'03 behind sun begin morning rise behind sun end -11573 Jun 01 j 09:34 15° ★39'36 -11567 Jul 18 j 03:28 0° Y morning rise -11573 Jun 16 j 15:39 16° **★** 13'42 retrograde -11567 Sep 23 j 11:37 1°**Y**12'18 asc. node -11573 Jul 03 j 20:40 16° **★**49'50 -11567 Dec 04 j 17:45 30°R ★ retrograde -11573 Sep 10 j 20:06 18° **★** 05'35 opposition -11567 Dec 10 j 12:55 29° ₹ 50'33 0°42'18 -11573 Nov 27 j 12:55 16°**)** 43'43 0°02'40 min. Earth dist. -11567 Dec 11 j 09:36 29° ¥49'08 29.23753 AU opposition

direct

-11566 Mar 02 j 00:29 28°**∺**25'46

min. Earth dist.

-11573 Nov 28 j 12:51 16° **€** 42'05 29.19266 AU

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11566 in astronomical counting style is the year 11567 BCE in historical counting style. -11566 May 21 j 05:36 0°**Υ** retrograde $-11560 \text{ Oct } 08 \text{ i } 10:36 \ 16^{\circ} \Upsilon 30'07$ opposition -11566 May 31 j 13:57 0°Y22'13 -11560 Dec 26 j 03:23 15° Υ 08'04 1°25'33 evening set max. Earth dist. -11566 Jun 15 j 04:13 0°**Υ**'54'52 31.24003 AU min. Earth dist. -11560 Dec 26 j 20:21 15° \(\gamma \) 06'55 \quad 29.25659 AU -11559 Mar 17 j 13:21 13°**Υ**43'31 direct -11566 Jun 16 j 02:06 0°**Υ**56'55 0°42'42 -11559 Jun 15 j 13:25 15°**γ**'39'22 conjunction evening set minimum elong -11566 Jun 16 j 02:06 0°**Y**56′55 0°42'40 -11566 Jul 01 j 10:55 1°**Y**31'21 -11559 Jun 30 j 21:16 16°**Υ**13'45 1°22'49 morning rise conjunction 3°**Y**23'40 -11559 Jun 30 j 21:15 16°**Υ**13'45 1°22'58 retrograde -11566 Sep 25 j 22:28 minimum elong 2°**Υ**01'55 0°48'45 -11559 Jun 30 j 04:13 16°**Υ**°12'08 31.25718 AU opposition -11566 Dec 13 j 01:18 max. Earth dist. 2°**Υ**00'28 29.24310 AU min. Earth dist. -11566 Dec 13 j 22:36 morning rise -11559 Jul 16 j 02:25 16°**Υ**47'55 direct -11565 Mar 04 j 12:48 0°**Y**37'12 retrograde -11559 Oct 10 j 21:00 18°**Υ**40'45 -11565 Jun 03 j 00:26 2°Y33'35 -11559 Dec 28 j 15:59 17° Υ 18'39 evening set opposition 1°31'17 -11559 Dec 29 j 08:56 17° **Y**17'30 29.25967 AU min. Earth dist. conjunction -11565 Jun 18 j 12:01 3°**Υ**08'15 0°48'42 direct -11558 Mar 19 j 23:59 15°**Υ**54'10 minimum elong -11565 Jun 18 j 12:01 3°**Υ**08'14 0°48'42 evening set -11558 Jun 17 j 23:18 17°**Υ**49'57 max. Earth dist. -11565 Jun 17 j 14:44 3°**Υ**06'15 31.24485 AU morning rise -11565 Jul 03 j 20:19 3°Y42'38 conjunction -11558 Jul 03 j 06:29 18°**Y**′24'16 1°28'07 retrograde -11565 Sep 28 j 08:56 5°Y35'01 minimum elong -11558 Jul 03 j 06:28 18°**Y**′24'16 1°28'17 opposition -11565 Dec 15 j 13:35 4°Υ13'15 0°55'08 max. Earth dist. -11558 Jul 02 j 14:08 18°**Υ**22'44 31.26076 AU min. Earth dist. -11565 Dec 16 j 10:00 4°**Υ**11'52 29.24711 AU morning rise -11558 Jul 18 j 11:14 18° Υ 58'24 direct -11564 Mar 06 j 02:54 2°Y48'35 retrograde $-11558 \text{ Oct } 13 \text{ j } 08:18 \ 20^{\circ} \Upsilon 51'20$ evening set -11564 Jun 04 i 10:59 4°**Ƴ**44'54 opposition -11558 Dec 31 j 04:19 19° Υ 29'14 1°36'54 min. Earth dist. -11558 Dec 31 j 19:14 19° \gamma 28'13 29.26369 AU conjunction -11564 Jun 19 j 21:51 5°Υ19'31 0°54'37 direct $-11557 \text{ Mar } 22 \text{ j } 12:21 \quad 18^{\circ} \Upsilon 04'49$ minimum elong -11564 Jun 19 i 21:51 5°**Y**19'31 0°54'38 evening set -11557 Jun 20 j 09:01 20°**Υ**00'32 max. Earth dist. -11564 Jun 19 j 00:15 5°**Υ**17'29 31.24811 AU -11564 Jul 05 j 05:40 5°**Υ**53'52 -11557 Jul 05 j 15:38 20° Υ 34'50 1°33'18 morning rise conjunction -11564 Sep 29 j 18:57 7°**Y**46′19 -11557 Jul 05 j 15:37 20°**Y**34'49 1°33'31 retrograde minimum elong -11564 Dec 17 j 01:54 6° Y 24'31 1° 01'25 max. Earth dist. -11557 Jul 05 j 00:07 20°**Y**'33'22 31.26500 AU opposition -11557 Jul 20 j 19:55 21° Υ 08'56 -11564 Dec 17 j 22:20 6°**Υ**23'08 29.24987 AU min. Earth dist. morning rise -11563 Mar 08 j 14:05 4°**Υ**59'53 -11557 Oct 15 j 19:58 23°**Y**01'59 direct retrograde evening set -11563 Jun 06 j 21:19 6°**Υ**56'06 -11556 Jan 02 j 16:54 21°**Υ**'39'51 1°42'22 opposition -11563 Jun 21 j 11:31 7°**Υ**28'47 31.25030 AU -11556 Jan 03 j 07:50 21°**Υ**'38'51 29.26825 AU max. Earth dist. min. Earth dist. -11556 Mar 24 j 00:15 20° Y 15'33 direct -11563 Jun 22 j 07:42 7°**Υ**'30'41 1°00'27 -11556 Jun 21 j 18:44 22°**Υ**11'12 conjunction evening set -11563 Jun 22 j 07:41 7°**Υ**'30'41 1°00'31 max. Earth dist. -11556 Jul 06 j 10:36 22°**Y**'44'07 31.26956 AU minimum elong -11563 Jul 07 j 14:52 8°**Y**′05'00 morning rise retrograde -11563 Oct 02 j 03:09 9°**Y**57'30 conjunction -11556 Jul 07 j 00:48 22°**Y**45'27 1°38'21 opposition -11563 Dec 19 j 14:22 8°**Υ**35'39 1°07'37 minimum elong -11556 Jul 07 j 00:47 22°**Y**45'27 1°38'34 min. Earth dist. -11563 Dec 20 j 10:17 8°**Υ**34'18 29.25160 AU morning rise -11556 Jul 22 j 04:33 23°**Υ**19'31 direct -11562 Mar 11 j 03:20 7°**Υ**11'02 retrograde -11556 Oct 17 j 06:52 25°**Υ**12'42 -11562 Jun 09 j 07:31 9°**Y**07'09 -11555 Jan 04 j 05:26 23°**Y**50'34 1°47'41 evening set opposition min. Earth dist. -11555 Jan 04 j 19:00 23°**Y**′49'39 29.27269 AU -11562 Jun 24 j 17:07 9°**Υ**41'41 1°06'12 -11555 Mar 26 j 13:46 22°**Υ**26'21 conjunction direct -11562 Jun 24 j 17:06 9°**Υ**41'41 1°06'16 -11555 Jun 24 j 04:34 24°**Υ**21'57 minimum elong evening set -11562 Jun 23 j 20:32 9°**Υ**39'45 31.25174 AU max. Earth dist. -11562 Jul 09 j 23:57 10°**Υ**15'58 -11555 Jul 09 i 09:56 24° γ 56'10 1°43'16 morning rise conjunction -11555 Jul 09 i 09:55 24° Υ 56'09 1°43'31 retrograde $-11562 \text{ Oct } 04 \text{ j } 14:12 \ 12^{\circ} \Upsilon 08'32$ minimum elong $-11562 \text{ Dec } 22 \text{ i } 02:44 \quad 10^{\circ} \Upsilon 46'37 \quad 1^{\circ} 13'42$ -11555 Jul 08 j 19:48 24° γ 54'50 31.27374 AU opposition max. Earth dist. min. Earth dist. -11562 Dec 22 j 21:35 10°**Υ**45'20 29.25300 AU morning rise -11555 Jul 24 i 13:19 25° γ'30'12 direct -11561 Mar 13 j 13:44 9°**Υ**22'01 retrograde -11555 Oct 19 j 17:45 27° Υ 23'31 -11561 Jun 11 j 17:32 11° Υ 18'02 opposition -11554 Jan 06 j 18:14 26° \(\gamma 01'22 \) 1° 52'52 evening set max. Earth dist. -11561 Jun 26 j 07:54 11°**Υ**'50'44 31.25300 AU min. Earth dist. -11554 Jan 07 j 07:25 26°**Y**′00′29 29.27674 AU direct -11554 Mar 29 j 00:26 24°**Y**37'14 -11561 Jun 27 j 02:41 11°**Υ**'52'31 1°11'51 conjunction evening set -11554 Jun 26 j 14:11 26°**Υ**32'47 minimum elong -11561 Jun 27 j 02:41 11° Υ 52'31 1°11'57 morning rise -11561 Jul 12 j 08:51 12°**Υ**26'45 conjunction -11554 Jul 11 j 19:07 27°**Υ**′06'56 1°48'02 -11561 Oct 06 j 23:00 14° Υ 19'24 minimum elong -11554 Jul 11 j 19:06 27°**Υ**06'56 1°48'17 retrograde -11561 Dec 24 j 15:02 12°**Υ**'57'25 1°19'41 max. Earth dist. -11554 Jul 11 j 06:41 27°**Υ**′05'46 31.27720 AU opposition -11561 Dec 25 j 09:52 12°**Υ**56'08 29.25444 AU -11554 Jul 26 j 21:57 27°**Y**40'57 min. Earth dist. morning rise -11560 Mar 15 j 02:03 11°**Υ**'32'50 -11554 Oct 22 j 02:50 29°**Y**34'24 direct retrograde -11560 Jun 13 j 03:38 13°**Y**28'46 evening set opposition -11553 Jan 09 j 07:04 28° \begin{pmatrix} 12'14 & 1\circ{5}7'52 \end{pmatrix} min. Earth dist. -11553 Jan 09 j 19:37 28°**Υ**11'23 29.27966 AU conjunction -11560 Jun 28 j 12:00 14°**Υ**03'11 1°17'23 direct -11553 Mar 31 j 13:53 26°**Υ**48'10 minimum elong -11560 Jun 28 j 11:59 14°**Υ**03'11 1°17'30 evening set -11553 Jun 29 j 00:04 28°**Y**43'38 max. Earth dist. -11560 Jun 27 j 17:13 14°**Υ**'01'25 31.25471 AU

conjunction

-11553 Jul 14 j 04:17 29°**Υ**'17'46 1°52'38

-11560 Jul 13 j 17:48 14°**Y**37'23

morning rise

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11553 in astronomical counting style is the year 11554 BCE in historical counting style. -11553 Jul 14 j 04:16 29°**Υ**17'46 1°52'55 opposition minimum elong -11546 Jan 25 j 01:01 13°**8**27'06 2°27'49 max. Earth dist. -11553 Jul 13 j 15:20 29°**Υ**16'32 31.27944 AU min. Earth dist. -11546 Jan 25 j 06:58 13°**8**26'42 29.27527 AU -11553 Jul 29 j 06:50 29°**Υ**51'45 -11546 Apr 15 j 23:14 12°**8**03'19 morning rise direct -11553 Aug 02 j 01:07 0°8 -11546 Jul 13 j 17:59 13°**8**58'11 evening set -11553 Oct 24 j 14:33 1°**8**45'19 retrograde opposition -11552 Jan 11 j 19:41 0°**8**23'07 2°02'43 conjunction min. Earth dist. -11552 Jan 12 j 07:15 0°\begin{aligned} \delta 22'20 & 29.28138 AU \end{aligned} -11546 Jul 28 j 18:54 14°**8**32'03 2°20'25 minimum elong -11552 Jan 26 j 06:59 30°R**Y** -11546 Jul 28 j 12:35 14°**8**31'27 31.27352 AU max. Earth dist. direct -11552 Apr 02 j 00:34 28°**Y**59'06 -11546 Aug 10 j 03:45 15°**8** -11552 Jun 03 j 16:36 0° 8 morning rise -11546 Aug 12 j 19:09 15°**8**05'52 evening set -11552 Jun 30 j 09:44 0°**8**54'30 retrograde -11546 Nov 08 j 19:49 17°**8**00'20 -11545 Jan 27 j 13:57 15°**8**37'39 2°31'17 opposition -11552 Jul 15 j 13:35 1°**8**28'35 1°57'05 -11545 Jan 27 j 19:02 15°**8**37'19 29.27564 AU conjunction min. Earth dist. -11552 Jul 15 j 13:33 minimum elong 1°**8**28'35 1°57'22 -11545 Feb 20 j 17:38 15°R8 max. Earth dist. -11552 Jul 15 j 02:10 1°**8**27'30 31.28033 AU direct -11545 Apr 18 j 09:37 14°**8**13'57 morning rise -11552 Jul 30 j 15:33 2°**8**02'32 -11545 Jun 11 j 05:17 15°**8** retrograde -11552 Oct 25 j 23:46 3°**8**56'14 evening set -11545 Jul 16 j 03:08 16°**8**08'45 opposition -11551 Jan 13 j 08:40 2°**8**33'58 2°07'22 min. Earth dist. -11551 Jan 13 j 20:18 2°833'11 29.28165 AU conjunction -11545 Jul 31 j 03:51 16°842'36 2°23'09 direct -11551 Apr 04 j 12:55 1°810'01 minimum elong -11545 Jul 31 j 03:50 16°842'36 2°23'36 evening set -11551 Jul 02 j 19:21 3°**8**05'19 max. Earth dist. -11545 Jul 30 j 23:40 16°842'12 31.27418 AU morning rise -11545 Aug 15 i 03:40 17°**8**16'25 conjunction retrograde -11545 Nov 11 i 05:20 19°**8**11'01 minimum elong -11551 Jul 17 j 22:32 3°**8**39'21 2°01'41 opposition -11544 Jan 30 j 02:44 17° 848'20 2°34'33 max. Earth dist. -11551 Jul 17 j 11:04 3°**8**38'16 31.28000 AU min. Earth dist. -11544 Jan 30 j 06:44 17°**8**48'03 29.27661 AU -11551 Aug 02 j 00:18 4°**8**13'17 direct -11544 Apr 19 j 22:59 16°824'43 morning rise -11551 Oct 28 j 11:25 6°807'06 -11544 Jul 17 j 12:25 18°**8**19'28 retrograde evening set -11550 Jan 15 j 21:33 4°844'46 2°11'51 opposition min. Earth dist. -11550 Jan 16 j 07:31 4°**8**44'06 29.28083 AU conjunction -11544 Aug 01 j 12:36 18°**8**53'17 2°26'05 -11544 Aug 01 j 12:35 18°**8**53'17 2°26'33 -11550 Apr 06 j 23:55 3°**8**20'50 minimum elong direct -11544 Aug 01 j 08:27 18°**8**52'54 31.27537 AU -11550 Jul 05 j 04:51 5°**8**16'02 max. Earth dist. evening set -11544 Aug 16 j 12:24 19°**8**27'06 morning rise -11550 Jul 20 j 07:39 5°**8**50'03 2°05'27 -11544 Nov 12 j 18:03 21°**8**21'52 conjunction retrograde -11550 Jul 20 j 07:38 5°**8**50'03 2°05'48 -11543 Jan 31 j 15:45 19°**8**59'10 2°37'35 minimum elong opposition -11550 Jul 19 j 21:32 5°**8**49'05 31.27859 AU min. Earth dist. -11543 Jan 31 j 18:15 19°858'59 29.27799 AU max. Earth dist. -11550 Aug 04 j 08:58 6°**8**23'57 -11543 Apr 22 j 09:39 18°**8**35'39 morning rise direct -11550 Oct 30 j 21:56 8°**8**17'54 -11543 Jul 19 j 21:27 20°\(\begin{aligned} \begin{aligned} 30'20 \end{aligned} \] retrograde evening set opposition -11549 Jan 18 j 10:25 6°855'28 2°16'09 -11543 Aug 03 j 21:28 21°**8**04'08 2°28'49 min. Earth dist. -11549 Jan 18 j 20:38 6°854'47 29.27924 AU conjunction direct -11549 Apr 09 j 10:15 5°**8**31'34 minimum elong -11543 Aug 03 j 21:27 21°**8**04'08 2°29'19 evening set -11549 Jul 07 j 14:14 7°**8**26'40 max. Earth dist. -11543 Aug 03 j 19:16 21°**8**03'56 31.27656 AU morning rise -11543 Aug 18 j 20:56 21°**8**37'57 conjunction -11549 Jul 22 j 16:33 8°**8**00'38 2°09'22 retrograde -11543 Nov 15 j 03:27 23°832'54 -11549 Jul 22 j 16:32 8°**8**00'38 2°09'45 -11542 Feb 03 j 04:56 22°**8**10'10 2°40'23 minimum elong opposition max. Earth dist. -11549 Jul 22 j 07:12 7°**8**59'45 31.27679 AU min. Earth dist. -11542 Feb 03 j 07:13 22°**8**10'01 29.27904 AU -11549 Aug 06 i 17:36 8°834'31 morning rise direct -11542 Apr 24 j 21:32 20° \(\begin{align*} \delta 46'46 \end{arrange} \) -11549 Nov 02 j 09:20 10°\28'34 retrograde evening set -11542 Jul 22 j 06:47 22°**8**41'22 -11548 Jan 20 j 23:10 9°806'04 2°20'14 opposition -11548 Jan 21 j 07:20 9°**8**05'31 29.27739 AU -11542 Aug 06 j 06:23 23°815'09 2°31'21 min. Earth dist. conjunction direct -11548 Apr 10 j 22:41 7°842'11 minimum elong -11542 Aug 06 i 06:22 23°815'09 2°31'50 evening set -11548 Jul 08 j 23:32 9°**8**37'12 max. Earth dist. -11542 Aug 06 j 04:22 23°8 14'58 31.27729 AU morning rise -11542 Aug 21 j 05:49 23°848'57 conjunction -11548 Jul 24 j 01:20 10°8 11'08 2°13'07 retrograde -11542 Nov 17 j 15:11 25°844'04 -11548 Jul 24 j 01:19 10°**8**11'08 2°13'30 -11541 Feb 05 j 17:52 24°**8**21'19 2°42'58 minimum elong opposition -11548 Jul 23 j 16:48 10°**8**10'20 31.27489 AU -11541 Feb 05 j 18:30 24°**8**21'16 29.27939 AU max. Earth dist. min. Earth dist. morning rise -11548 Aug 08 j 02:03 10°**8**45'00 direct -11541 Apr 27 j 07:54 22°**8**57'59 retrograde -11548 Nov 03 j 21:18 12°**8**39'10 evening set -11541 Jul 24 j 16:03 24°**8**52'31 -11547 Jan 22 j 12:08 11°**8**16'36 2°24'08 opposition min. Earth dist. -11547 Jan 22 j 20:00 11°**8**16'04 29.27594 AU conjunction -11541 Aug 08 j 15:28 25°**8**26'18 2°33'39 -11547 Apr 13 j 10:13 9°**8**52'46 -11541 Aug 08 j 15:27 25°**8**26'18 2°34'10 direct minimum elong -11547 Jul 11 j 08:46 11°**8**47'41 -11541 Aug 08 j 14:33 25°**8**26'13 31.27690 AU evening set max. Earth dist. morning rise -11541 Aug 23 j 14:43 26°**8**00'06 -11547 Jul 26 j 10:13 12°**8**21'35 2°16'39 conjunction retrograde -11541 Nov 20 j 02:12 27°\(255'22\) minimum elong -11547 Jul 26 j 10:12 12°**8**21'35 2°17'04 opposition max. Earth dist. -11547 Jul 26 j 03:29 12°**8**20'57 31.27376 AU min. Earth dist. -11540 Feb 08 j 08:04 26°\(\mathre{\mathre{O}}\) 29.27846 AU -11547 Aug 10 j 10:33 12°**8**55'25 direct -11540 Apr 28 j 17:43 25°809'18 morning rise retrograde -11547 Nov 06 j 08:32 14°**8**49'44 -11540 Jul 26 j 01:16 27°**8**03'46 evening set

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11540 in astronomical counting style is the year 11541 BCE in historical counting style. max. Earth dist. -11534 Aug 23 j 12:13 10°**II**44'06 31.24523 AU conjunction minimum elong -11540 Aug 10 j 00:25 27°\begin{align*} 200:25 -11534 Sep 07 j 05:55 11°**Д**17'23 morning rise max. Earth dist. -11540 Aug 10 j 00:14 27° \(\mathref{3}\)37'30 31.27524 AU -11534 Dec 05 j 11:27 13°**Д**13'27 retrograde -11533 Feb 24 j 03:00 11°**II**50'02 2°55'00 -11540 Aug 24 j 23:35 28°**8**11'18 morning rise opposition -11540 Nov 01 j 12:04 0°**П** -11533 Feb 23 j 21:04 11°**Д**50'26 29.24554 AU min. Earth dist. -11540 Nov 21 j 14:16 0°**Д**06'43 -11533 May 15 j 04:39 10°**Ц**26'55 retrograde direct -11540 Dec 12 j 03:15 30°R8 -11533 Aug 10 j 16:53 12°**Ц**20'40 evening set -11539 Feb 09 j 20:15 28°**8**43'52 2°47'26 opposition -11539 Feb 09 j 19:23 28°**8**43'55 29.27605 AU -11533 Aug 25 j 15:29 12°**Д**54'23 2°43'58 min. Earth dist. conjunction -11533 Aug 25 j 15:29 12°**Д**54'23 2°44'35 direct -11539 May 01 j 05:56 27°**8**20'38 minimum elong -11533 Aug 25 j 21:48 12°**Д**54'59 31.24113 AU evening set -11539 Jul 28 j 10:36 29°**8**15'00 max. Earth dist. -11533 Sep 09 j 15:10 13°**Д**28'13 morning rise -11539 Aug 12 j 09:32 29°**8**48'45 2°37'36 -11533 Dec 07 j 23:17 15°**Д**24'25 conjunction retrograde -11539 Aug 12 j 09:31 29°**8**48'45 2°38'09 minimum elong opposition -11532 Feb 26 j 16:00 14°**I**I00'58 2°55'23 max. Earth dist. -11539 Aug 12 j 09:35 29°848'45 31.27202 AU min. Earth dist. -11532 Feb 26 j 08:00 14°**Д**01'30 29.24181 AU -11539 Aug 17 j 08:11 $0^{\circ}\Pi$ direct -11532 May 16 j 15:18 12°**Д**37'54 morning rise -11539 Aug 27 j 08:43 0°**Ⅲ**22'32 evening set -11532 Aug 12 j 01:45 14°**Д**31'34 retrograde -11539 Nov 24 j 03:07 2°**Ⅱ**18'05 opposition -11538 Feb 12 j 09:34 0°Д55'08 2°49'18 conjunction -11532 Aug 27 j 00:25 15°**I**I05'18 2°44'13 min. Earth dist. -11538 Feb 12 j 08:50 0°Д55'11 29.27227 AU minimum elong -11532 Aug 27 j 00:25 15°**I**I05'18 2°44'50 -11538 Mar 21 j 16:08 30°R8 max. Earth dist. -11532 Aug 27 j 08:09 15°**Д**06'02 31.23764 AU direct -11538 May 03 j 16:32 29°831'56 morning rise -11532 Sep 11 j 00:17 15°**Д**39'09 -11538 Jun 14 j 04:11 $\Pi^{\circ}0$ retrograde -11532 Dec 09 j 10:30 17°**Д**35'32 -11538 Jul 30 j 19:42 evening set 1°**Ⅱ**26′12 opposition -11531 Feb 28 i 05:15 16° II 12'02 2°55'31 min. Earth dist. -11531 Feb 27 j 21:11 16°**Д**12'34 29.23860 AU -11538 Aug 14 j 18:37 1°Д59'56 2°39'14 direct -11531 May 19 j 01:07 14°**Д**49'03 conjunction -11538 Aug 14 j 18:37 1°**I**I59'56 2°39'47 -11531 Aug 14 j 10:45 16°**Д**42'39 minimum elong evening set max. Earth dist. -11538 Aug 14 j 20:09 2°**Д**00'04 31.26756 AU -11538 Aug 29 j 17:43 2°**Д**33'43 -11531 Aug 29 j 09:34 17°**I**I16'24 2°44'13 morning rise conjunction -11538 Nov 26 j 14:38 4°**Д**29'22 -11531 Aug 29 j 09:34 17°**II**16'24 2°44'51 minimum elong retrograde -11531 Aug 29 j 18:31 17°**Д**17'14 31.23464 AU -11537 Feb 14 j 22:41 3°Д06'19 2°50'56 max. Earth dist. opposition -11531 Sep 13 j 09:39 17°**Д**50'17 -11537 Feb 14 j 20:29 3°**Д**06'28 29.26716 AU min. Earth dist. morning rise -11537 May 06 j 05:04 1°**Ц**43'07 -11531 Dec 11 j 22:54 19°**Ц**46'48 retrograde direct -11537 Aug 02 j 04:55 3°**Д**37'17 -11530 Mar 02 j 18:17 18°**Д**23'17 2°55'24 evening set opposition -11530 Mar 02 j 08:12 18°**Д**23'58 29.23556 AU min. Earth dist. -11537 Aug 17 j 03:34 4°**Д**11'00 2°40'39 -11530 May 21 j 12:24 17°**Ⅲ**00'22 conjunction direct -11537 Aug 17 j 03:33 4°**I**11'00 2°41'14 -11530 Aug 16 j 19:51 18°**Д**53'56 minimum elong evening set max. Earth dist. -11537 Aug 17 j 05:03 4°Д11'08 31.26198 AU -11530 Aug 31 j 18:43 19°**Д**27'41 2°43'59 morning rise -11537 Sep 01 j 02:50 4°**П**44'47 conjunction retrograde -11537 Nov 29 j 02:39 6°**Ц**40'32 minimum elong -11530 Aug 31 j 18:43 19°**Ⅲ**27'41 2°44'36 opposition -11536 Feb 17 j 11:45 5°**Ⅲ**17'23 2°52'20 max. Earth dist. -11530 Sep 01 j 03:59 19°**Д**28'34 31.23140 AU min. Earth dist. -11536 Feb 17 j 09:05 5°**П**17'34 29.26140 AU morning rise -11530 Sep 15 j 19:11 20°**Д**01'36 -11536 May 07 j 15:59 3°**Д**54'11 retrograde -11530 Dec 14 j 12:13 21°**Д**58'17 direct -11536 Aug 03 j 13:53 5°**Д**48'14 -11529 Mar 05 j 07:30 20°**I**I34'44 2°55'01 evening set opposition min. Earth dist. -11529 Mar 04 j 21:32 20° **II** 35'24 29.23211 AU -11536 Aug 18 j 12:37 6°**II**21'57 2°41'50 conjunction direct -11529 May 23 j 21:51 19°**Д**11'53 -11536 Aug 18 j 12:36 6° **II** 21'57 2°42'24 minimum elong evening set -11529 Aug 19 j 04:56 21°**II**05'24 -11536 Aug 18 j 16:12 6°**Д**22'17 31.25602 AU max. Earth dist. -11536 Sep 02 j 11:46 6°**Д**55'44 -11529 Sep 03 i 04:06 21° **II** 39'10 2°43'30 morning rise conjunction retrograde -11536 Nov 30 i 13:12 8° **II**51'35 minimum elong -11529 Sep 03 i 04:06 21° II 39'10 2°44'09 -11529 Sep 03 j 14:57 21°**П**40'12 31.22754 AU opposition -11535 Feb 19 i 00:55 7° II 28'20 2°53'28 max. Earth dist. min. Earth dist. -11535 Feb 18 j 21:06 7°**Д**28'35 29.25546 AU morning rise -11529 Sep 18 j 04:43 22°**Д**13'06 direct -11535 May 10 j 05:43 6°**Д**05'09 retrograde -11529 Dec 17 j 00:23 24° **I**I 09'56 -11535 Aug 05 j 22:53 7°**П**59'04 -11528 Mar 06 j 20:32 22°**Д**46'21 2°54'23 evening set opposition -11528 Mar 06 j 09:11 22°**Д**47'07 29.22766 AU min. Earth dist. -11528 May 25 j 09:17 21°**Ц**23'34 conjunction -11535 Aug 20 j 21:24 8°**II**32'47 2°42'47 direct minimum elong -11535 Aug 20 j 21:24 8°**II**32'47 2°43'22 evening set -11528 Aug 20 j 14:15 23°**Ⅲ**17'02 max. Earth dist. -11535 Aug 21 j 01:08 8°**Д**33'08 31.25030 AU -11535 Sep 04 j 20:50 9°**Д**06'35 conjunction -11528 Sep 04 j 13:28 23°**П**50'49 2°42'48 morning rise -11535 Dec 03 j 02:02 11°**I**I02'32 -11528 Sep 04 j 13:28 23°**I**I50'49 2°43'25 retrograde minimum elong -11534 Feb 21 j 14:02 9°**Ⅲ**39'11 2°54'21 -11528 Sep 05 j 00:01 23°**Д**51'49 31.22256 AU opposition max. Earth dist. min. Earth dist. -11534 Feb 21 j 08:36 9°**Д**39'33 29.25014 AU morning rise -11528 Sep 19 j 14:34 24° **I**I24'47 direct -11534 May 12 j 16:46 8°**Ⅱ**16'01 retrograde -11528 Dec 18 j 13:54 26° **I**I21'46 evening set -11534 Aug 08 j 07:51 10°**Ⅲ**09'51 opposition -11527 Mar 09 j 09:48 24°**I**58'07 2°53'30 min. Earth dist. -11527 Mar 08 j 22:13 24°**I**58'54 29.22211 AU -11534 Aug 23 j 06:30 10°**Ⅲ**43'34 2°43'30 -11527 May 27 j 19:38 23°**Д**35'23 conjunction direct

evening set

-11527 Aug 22 j 23:22 25°**Ⅲ**28'46

-11534 Aug 23 j 06:30 10°**Ⅲ**43'34 2°44'04

minimum elong

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Earth dist. conjunction -11520 Sep 21 j 18:00 11°523'52 2°29'27 direct -11526 May 30 j 09:05 25°**Ⅲ**47'14 minimum elong -11520 Sep 22 j 12:17 11°\$25'36 31.15707 AU evening set -11526 Aug 25 j 08:45 27°**Ⅲ**40'32 max. Earth dist. morning rise -11520 Oct 06 j 22:56 11°558'09 conjunction -11526 Sep 09 j 08:33 28° **I** 14'22 2°40'40 retrograde -11519 Jan 05 j 12:25 13°555'48 -11526 Sep 09 j 08:33 28°**Д**14'22 2°41'18 -11519 Mar 27 j 17:17 12°531'29 minimum elong opposition 2°37'36 -11526 Sep 09 j 20:20 28°П15'29 31.20858 AU max. Earth dist. min. Earth dist. -11519 Mar 26 j 22:31 12°532'46 29.15618 AU morning rise -11526 Sep 24 j 10:28 28°**Д**48'25 direct -11519 Jun 14 j 13:38 11°508'46 -11526 Oct 30 j 19:10 0°5 evening set -11519 Sep 09 j 00:53 13°501'24 retrograde -11526 Dec 23 j 15:50 0°545'35 -11525 Feb 18 j 00:51 30°RⅡ conjunction -11519 Sep 24 j 03:38 13°\$35'28 2°26'04 opposition -11525 Mar 14 j 11:57 29°**Ⅲ**21'48 2°50'59 minimum elong -11519 Sep 24 j 03:39 13°535'28 2°26'43 min. Earth dist. -11525 Mar 13 j 22:48 29°**Д**22'41 29.20668 AU max. Earth dist. -11519 Sep 24 j 21:54 13°537'12 31.15123 AU direct -11525 Jun 01 j 19:59 27°**Ⅲ**59'04 morning rise -11519 Oct 09 j 09:25 14°509'49 evening set -11525 Aug 27 j 17:55 29° **II** 52'16 retrograde -11518 Jan 08 j 02:25 16°507'34 -11525 Aug 31 i 05:07 0°5 min. Earth dist. -11518 Mar 29 j 11:02 14°544'30 29.15063 AU opposition -11518 Mar 30 j 06:09 14°543'13 2°34'32 conjunction -11525 Sep 11 j 18:09 0°526'08 2°39'16 direct -11518 Jun 16 i 23:28 13°520'31 minimum elong -11525 Sep 11 j 18:10 0°526'08 2°39'55 evening set -11518 Sep 11 j 10:13 15°5513'07 max. Earth dist. -11525 Sep 12 j 07:20 0°927'23 31.19965 AU -11525 Sep 26 j 20:25 1°900'13 -11518 Sep 26 j 13:40 15°547'14 2°23'06 morning rise conjunction -11525 Dec 26 j 01:44 2°557'28 -11518 Sep 26 j 13:41 15°547'14 2°23'43 retrograde minimum elong -11524 Mar 15 j 11:50 1°534'28 29.19728 AU max. Earth dist. -11518 Sep 27 j 09:46 15°5549'08 31.14586 AU min. Earth dist. -11518 Oct 11 j 19:55 16°521'37 -11524 Mar 16 j 01:02 1°533'34 2°49'21 opposition morning rise -11517 Jan 10 j 15:09 18°519'28 -11524 Jun 03 j 08:19 direct 0°9510'50 retrograde -11517 Apr 01 j 18:45 16°555'05 2°31'14 -11524 Aug 29 j 03:00 evening set 2°903'55 opposition -11517 Mar 31 j 22:59 16°\$56'26 29.14521 AU min. Earth dist. -11524 Sep 13 j 03:33 2°537'49 2°37'37 -11517 Jun 19 j 11:24 15°532'26 conjunction direct -11524 Sep 13 j 03:33 2°537'49 2°38'16 -11517 Sep 13 j 19:45 17°524'59 minimum elong evening set -11524 Sep 13 j 17:11 2°539'06 31.19015 AU max. Earth dist. -11524 Sep 28 j 06:21 3°511'56 -11517 Sep 28 j 23:38 17°559'09 2°19'54 morning rise conjunction retrograde -11524 Dec 27 j 13:48 5°509'15 minimum elong -11517 Sep 28 j 23:39 17°559'09 2°20'32 opposition -11523 Mar 18 j 14:00 3°545'15 2°47'29 max. Earth dist. -11517 Sep 29 j 19:26 18°501'01 31.14054 AU min. Earth dist. -11523 Mar 17 j 23:04 3°\$46'16 29.18764 AU morning rise -11517 Oct 14 j 06:41 18°533'36 direct -11523 Jun 05 j 20:05 2°522'30 retrograde -11516 Jan 13 j 05:23 20°531'32 -11523 Aug 31 j 12:11 4°9515'28 min. Earth dist. -11516 Apr 02 j 10:54 19°508'32 29.13967 AU evening set opposition -11516 Apr 03 j 07:33 19°507'08 2°27'43 -11523 Sep 15 j 13:06 4°5649'23 2°35'46 direct -11516 Jun 20 j 21:28 17°5544'31 conjunction -11523 Sep 15 j 13:06 4°549'23 2°36'25 -11516 Sep 15 j 05:13 19°537'01 minimum elong evening set -11523 Sep 16 j 03:48 4°\$50'47 31.18056 AU max. Earth dist. -11516 Sep 30 j 09:45 20°511'14 2°16'31 morning rise -11523 Sep 30 i 16:26 5°523'33 conjunction -11516 Sep 30 j 09:45 20°511'14 2°17'07 retrograde -11523 Dec 30 i 00:57 7°9520'57 minimum elong -11516 Oct 01 j 06:47 20°513'13 31.13467 AU opposition -11522 Mar 21 j 02:56 5°956'50 2°45'22 max. Earth dist. min. Earth dist. -11522 Mar 20 i 12:06 5°957'50 29.17835 AU morning rise -11516 Oct 15 i 17:24 20°545'45 direct -11522 Jun 08 j 06:35 4°934'04 retrograde -11515 Jan 14 j 17:08 22°543'47 evening set -11522 Sep 02 j 21:18 6°9526'56 opposition -11515 Apr 05 j 20:26 21°519'19 2°23'59 min. Earth dist. -11515 Apr 04 j 23:58 21°520'43 29.13332 AU -11522 Sep 17 j 22:44 conjunction 7°500'53 2°33'40 direct -11515 Jun 23 j 09:23 19°556'45 minimum elong -11522 Sep 17 j 22:44 7°500'53 2°34'18 evening set -11515 Sep 17 j 14:59 21°549'12 -11522 Sep 18 j 14:43 max. Earth dist. 7°502'24 31.17174 AU morning rise -11522 Oct 03 j 02:33 7°935'05 conjunction -11515 Oct 02 j 20:07 22°\$23'27 2°12'55 retrograde -11521 Jan 01 j 12:16 9°532'33 minimum elong -11515 Oct 02 j 20:08 22°523'27 2°13'32 -11521 Mar 23 j 15:41 -11515 Oct 03 j 17:13 22°\$25'27 31.12798 AU opposition 8°9508'21 2°43'01 max. Earth dist. -11521 Mar 22 j 22:46 -11515 Oct 18 j 04:32 22°558'02 min. Earth dist. 8°509'30 29.16990 AU morning rise direct -11521 Jun 10 j 17:58 6°9545'35 retrograde -11514 Jan 17 j 07:02 24°956'08 evening set -11521 Sep 05 j 06:30 8°938'22 min. Earth dist. -11514 Apr 07 j 11:28 23°533'06 29.12597 AU opposition -11514 Apr 08 j 09:04 23°531'38 2°20'02 conjunction -11521 Sep 20 j 08:14 9°**©**12'21 2°31'22 direct -11514 Jun 25 j 21:01 22°509'04 minimum elong -11521 Sep 20 j 08:15 9°**©**12'21 2°32'00 evening set -11514 Sep 20 j 00:51 24°501'28 max. Earth dist. -11521 Sep 21 j 00:35 9°513'54 31.16379 AU morning rise -11521 Oct 05 j 12:44 9°5546'36 -11514 Oct 05 j 06:36 24°535'47 2°09'07 conjunction

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11514 in astronomical counting style is the year 11515 BCE in historical counting style

Attention, astronom	ical year style is used	: The year -11514	in astronomical co		ar 11515 BCE in historical	counting sty	le.
minimum elong	-11514 Oct 05 j 0	5:37 24° © 35'47	2°09'43	min. Earth dist.	-11507 Apr 22 j 23:48	8° Ω 59'48	29.06174 AU
max. Earth dist.	-11514 Oct 06 j 0	3:58 24° © 37'48	31.11998 AU	opposition	-11507 Apr 24 j 00:28	8° Ω 58'06	1°47'02
morning rise	-11514 Oct 20 j 1	5:47 25° © 10'24		direct	-11507 Jul 10 j 22:20	7° Ω 35'25	
retrograde	-11513 Jan 19 j 1	8:59 27° © 08'35		evening set	-11507 Oct 04 j 22:14	9° Ω 27'26	
opposition	-11513 Apr 10 j 2	1:53 25° © 44'01	2°15'53				
min. Earth dist.	-11513 Apr 10 j 0	1:04 25°\$45'27	29.11729 AU	conjunction	-11507 Oct 20 j 08:57	10° Ω 02'07	1°37'39
direct	-11513 Jun 28 j 0	7:42 24° © 21'27		minimum elong	-11507 Oct 20 j 08:58	10° Ω 02'07	1°38'11
evening set	-11513 Sep 22 j 1	0:33 26° © 13'46		max. Earth dist.	-11507 Oct 21 j 10:38	10° Ω 04'32	31.05722 AU
	1			morning rise	-11507 Nov 04 j 23:33	10° Ω 37'10	
conjunction	-11513 Oct 07 j 1	7:03 26°548'08	2°05'09	retrograde	-11506 Feb 04 j 11:20		
minimum elong	-11513 Oct 07 j 1			opposition	-11506 Apr 26 j 12:39		1°41'37
max. Earth dist.	-11513 Oct 08 j 1			min. Earth dist.	-11506 Apr 25 j 12:07		
morning rise	-11513 Oct 23 j 0			direct	-11506 Jul 13 j 09:58		
retrograde	-11512 Jan 22 j 0			evening set	-11506 Oct 07 j 08:31		
opposition	-11512 Apr 12 j 1			evening see	11200 O c t 07 J 00:51	11 00.000	
min. Earth dist.	-11512 Apr 11 j 1			conjunction	-11506 Oct 22 j 19:59	12°Ω14'45	1°32'31
direct	-11512 Jun 29 j 1			minimum elong	-11506 Oct 22 j 20:00		
evening set	-11512 Sep 23 j 2			max. Earth dist.	-11506 Oct 23 j 21:51		
evening set	-11312 Sep 23 j 2	7.20 20 32004		morning rise	-11506 Nov 07 j 11:24		31.031 4 3 A0
conjunction	-11512 Oct 09 j 0	2:30 20°0500128	2°00'59	retrograde	-11506 Nov 07 j 11:24 -11505 Feb 07 j 02:27		
minimum elong	-11512 Oct 09 j 0			min. Earth dist.	-11505 Apr 27 j 23:07		20.04072 ATT
2							
max. Earth dist.	-11512 Oct 10 j 0		31.1008/ AU	opposition	-11505 Apr 29 j 00:49		1-3602
morning rise	-11512 Oct 24 j 1			direct	-11505 Jul 15 j 21:43		
	-11512 Nov 05 j 0			evening set	-11505 Oct 09 j 18:52	13° 8 (52'46	
retrograde	-11511 Jan 23 j 1						
opposition	-11511 Apr 14 j 2			conjunction	-11505 Oct 25 j 07:00		
min. Earth dist.	-11511 Apr 14j0		29.09731 AU	minimum elong	-11505 Oct 25 j 07:00		
	-11511 Apr 20 j 0			max. Earth dist.	-11505 Oct 26 j 09:14		31.04593 AU
direct	-11511 Jul 02 j 0				-11505 Nov 08 j 17:27		
	-11511 Sep 08 j 0			morning rise	-11505 Nov 09 j 23:13		
evening set	-11511 Sep 26 j 0	5:12 0° Ω 38'19		retrograde	-11504 Feb 09 j 14:47		
				opposition	-11504 Apr 30 j 13:08		
conjunction	-11511 Oct 11 j 1			min. Earth dist.	-11504 Apr 29 j 12:16		29.04423 AU
minimum elong	-11511 Oct 11 j 1	4:08 1° Ω 12'47	1°57'14		-11504 May 23 j 06:20	15° R Ω	
max. Earth dist.	-11511 Oct 12 j 1	3:27 1° Ω 14'59	31.09068 AU	direct	-11504 Jul 17 j 08:14		
morning rise	-11511 Oct 27 j 0	1:30 1° Ω 47'35			-11504 Sep 07 j 22:49	15° Ω	
retrograde	-11510 Jan 26 j 0	5:34 3° Ω 45'52		evening set	-11504 Oct 11 j 05:25	16° Ω 05'44	
opposition	-11510 Apr 17 j 1	1:32 2° Ω 21'05	2°02'16				
min. Earth dist.	-11510 Apr 16 j 1	2:34 2° £ 22'39	29.08707 AU	conjunction	-11504 Oct 26 j 18:23	16° Ω 40'35	1°21'49
direct	-11510 Jul 04 j 1	5:33 0° Ω 58'25		minimum elong	-11504 Oct 26 j 18:24	16° Ω 40'35	1°22'17
evening set	-11510 Sep 28 j 1	5:14 2° Ω 50′32		max. Earth dist.	-11504 Oct 27 j 21:16	16° Ω 43'07	31.04050 AU
				morning rise	-11504 Nov 11 j 11:19	17° Ω 15'50	
conjunction	-11510 Oct 14 j 0	0:40 3° Ω 25'02	1°52'09	retrograde	-11503 Feb 11 j 03:21		
minimum elong	-11510 Oct 14 j 0		1°52'41	min. Earth dist.	-11503 May 01 j 23:20		29.03846 AU
max. Earth dist.	-11510 Oct 14 j 2		31.08078 AU	opposition	-11503 May 03 j 01:14		
morning rise	-11510 Oct 29 j 1			direct	-11503 Jul 19 j 19:43		
retrograde	-11509 Jan 28 j 2			evening set	-11503 Oct 13 j 16:17		
opposition	-11509 Apr 19 j 2			Ü	,		
min. Earth dist.	-11509 Apr 19 j 0		29.07756 AU	conjunction	-11503 Oct 29 j 05:52	18° Ω 53'47	1°16'16
direct	-11509 Jul 07 j 0			minimum elong	-11503 Oct 29 j 05:53		
evening set	-11509 Oct 01 j 0			max. Earth dist.	-11503 Oct 30 j 07:57		
e vennig see	11209 000 0110	2.00 2 002 12		morning rise	-11503 Nov 13 j 23:44		31.03 . 10 110
conjunction	-11509 Oct 16 j 1	1:25 5° Ω 37'19	1°47'29	retrograde	-11502 Feb 13 j 16:19		
minimum elong	-11509 Oct 16 j 1			opposition	-11502 May 05 j 13:32		1°18'27
max. Earth dist.	-11509 Oct 10 j 1		31.07176 AU	min. Earth dist.	-11502 May 03 j 13:32 -11502 May 04 j 12:40		
	-				-11502 Jul 22 j 05:08		29.03187 AU
morning rise retrograde	-11509 Nov 01 j 0 -11508 Jan 31 j 0			direct evening set	-11502 Jul 22 j 03:08 -11502 Oct 16 j 03:10		
•				evening set	-11302 Oct 10 J 05:10	20 66 32 08	
opposition	-11508 Apr 21 j 1			agniumation	11502 Oct 21:17:20	210 00704	1910126
min. Earth dist.	-11508 Apr 20 j 1		29.06901 AU	conjunction	-11502 Oct 31 j 17:39		
direct	-11508 Jul 08 j 1			minimum elong	-11502 Oct 31 j 17:40		
evening set	-11508 Oct 02 j 1	2:05 7° Ω 15'02		max. Earth dist.	-11502 Nov 01 j 20:34		31.02/29 AU
	115000 0 17:3		1040/20	morning rise	-11502 Nov 16 j 12:06		
conjunction	-11508 Oct 17 j 2			retrograde	-11501 Feb 16 j 04:24		20.02404 : **
minimum elong	-11508 Oct 17 j 2			min. Earth dist.	-11501 May 07 j 00:06		
max. Earth dist.	-11508 Oct 18 j 2		31.06398 AU	opposition	-11501 May 08 j 01:32		1°12'21
morning rise	-11508 Nov 02 j 1			direct	-11501 Jul 24 j 16:27		
retrograde	-11507 Feb 01 j 2	2:44 10° 81 23'04		evening set	-11501 Oct 18 j 14:16	22° &l 45'27	

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11501 in astronomical counting style is the year 11502 BCE in historical counting style. -11501 Nov 03 j 05:20 23° Ω 20'28 1°04'50 max. Earth dist. -11495 Nov 17 j 08:19 6° m 42'11 30.96382 AU conjunction 7° Mp 15′22 -11501 Nov 03 j 05:21 23° Ω 20'28 1°05'16 -11495 Dec 02 j 04:48 minimum elong morning rise -11501 Nov 04 j 07:04 23° Ω 22'53 31.01895 AU -11494 Mar 03 j 23:46 9° m 13'58 max. Earth dist. retrograde -11501 Nov 19 j 00:44 23° **Ω**55'53 min. Earth dist. -11494 May 22 j 10:53 7° m 50'21 28.96092 AU morning rise -11500 Feb 18 j 17:16 $25^{\circ}\Omega 54'35$ retrograde opposition -11494 May 23 j 12:25 7° **m** 48'34 $0^{\circ}27'05$ -11500 May 09 j 13:45 $24^{\circ}\Omega 29'29$ $1^{\circ}06'08$ opposition direct -11494 Aug 08 j 21:47 6° m 25'35 min. Earth dist. -11500 May 08 j 12:56 24° **Q**31'12 29.01507 AU evening set -11494 Nov 02 j 21:22 8° m 17'33 direct -11500 Jul 26 j 02:13 23°**Ω**06'49 evening set -11500 Oct 20 j 01:11 24° Ω58'45 conjunction -11494 Nov 18 j 17:23 8° **m** 52'55 0°22'17 minimum elong -11494 Nov 18 j 17:23 8° **m** 52'55 0°22'33 conjunction -11500 Nov 04 j 17:10 25° **Ω**33'49 0°58'59 max. Earth dist. -11494 Nov 19 j 19:45 8° m 55'23 30.95745 AU -11500 Nov 04 j 17:10 25° Ω 33'49 0°59'22 minimum elong morning rise -11494 Dec 04 j 17:44 9° Mp 28'41 -11500 Nov 05 j 19:53 25° Ω 36'20 31.00954 AU max. Earth dist. retrograde -11493 Mar 06 j 13:07 11° m 27'19 morning rise -11500 Nov 20 j 13:11 26°**Ω**09'17 opposition -11493 May 25 j 24:00 10° **m** 01'55 0°20'22 retrograde -11499 Feb 20 j 05:00 28°**Ω**07'58 min. Earth dist. -11493 May 24 j 23:24 10° **m** 03'38 28.95506 AU min. Earth dist. -11499 May 11 j 01:03 $26^{\circ}\Omega$ 44'31 29.00511 AU direct -11493 Aug 11 j 07:16 8° Mp 38'56 opposition -11499 May 12 j 01:47 $26^{\circ}\Omega$ 42'48 $0^{\circ}59'49$ evening set -11493 Nov 05 j 09:01 10° m/30'57 direct -11499 Jul 28 j 13:36 25°**\O2**0'04 evening set -11499 Oct 22 j 12:26 $27^{\circ}\Omega$ 11'59 conjunction -11493 Nov 21 j 05:51 11° m 06'23 0°15'59 minimum elong -11493 Nov 21 j 05:51 11° m 06'23 0°16'14 conjunction -11499 Nov 07 j 05:03 $27^{\circ}\Omega47'06$ 0°53'02 max. Earth dist. -11493 Nov 22 j 09:12 11° Mp 08'56 30.95205 AU minimum elong -11499 Nov 07 i 05:04 $27^{\circ}\Omega47'06$ 0°53'25 morning rise -11493 Dec 07 i 06:39 11° m 42'11 max. Earth dist. -11499 Nov 08 i 06:49 $27^{\circ}\Omega$ 49'31 30.99949 AU retrograde -11492 Mar 08 j 01:20 13° mp 40'50 morning rise -11499 Nov 23 j 01:58 $28^{\circ}\Omega$ 22'37 min. Earth dist. -11492 May 26 j 10:16 12° m 17'14 28.94985 AU -11498 Jan 17 i 06:56 0° Mp opposition -11492 May 27 j 11:28 12° **m** 15'28 0°13'37 -11498 Feb 22 j 19:01 0° mp 21'16 -11492 Aug 12 j 18:29 10° m 52'29 retrograde direct -11498 Apr 01 j 00:14 30°RΩ -11492 Nov 06 j 20:59 12° m/44'34 evening set -11498 May 14 j 13:35 $28^{\circ}\Omega$ 56'02 0° 53'24 opposition -11498 May 13 j 12:42 $28^{\circ}\Omega$ 57'45 28.99493 AU-11492 Nov 22 j 18:17 13° m/20'02 0°09'40 min. Earth dist. conjunction -11498 Jul 30 j 23:28 27° **Ω**33'13 -11492 Nov 22 j 18:17 13° m/20'02 0°09'53 direct minimum elong -11498 Oct 24 j 23:40 29°**Ω**25'07 -11492 Nov 22 j 13:00 13° m 19'34 evening set behind sun begin -11492 Nov 22 j 23:35 13° m 20'31 behind sun end -11498 Nov 09 j 17:03 0° m 00'17 0°47'00 -11492 Nov 23 j 20:27 13° M 22'29 30.94708 AU conjunction max. Earth dist. -11498 Nov 09 j 17:03 0° Mp 00'17 0°47'21 -11492 Dec 08 j 19:53 13° m 55'54 minimum elong morning rise -11498 Nov 09 j 14:03 -11491 Mar 10 j 14:10 15° m 54'34 0° m retrograde -11498 Nov 10 j 19:29 0°My02'46 30.98931 AU -11491 May 29 j 23:04 14° m 29'14 0°06'50 max. Earth dist. opposition -11491 May 28 j 22:42 14° m 30'56 28.94493 AU morning rise -11498 Nov 25 j 14:36 0° m 35'51 min. Earth dist. retrograde -11497 Feb 25 j 07:19 2° m/ 34'28 direct -11491 Aug 15 j 03:50 13° Mp 06'15 min. Earth dist. -11497 May 16 j 01:02 1° Mp 10'52 28.98492 AU evening set -11491 Nov 09 j 09:09 14° m 58'25 opposition -11497 May 17 j 01:25 1° m/09'10 0°46'56 -11497 Jul 04 j 21:57 30°RΩ conjunction -11491 Nov 25 j 07:12 15° m 33'55 0°03'21 -11497 Aug 02 j 11:23 29°**Ω**46'17 -11491 Nov 25 j 07:12 15° m 33'55 0°03'33 direct minimum elong -11497 Aug 30 j 14:22 behind sun begin -11491 Nov 25 j 00:43 15° m 33'21 -11497 Oct 27 j 10:49 behind sun end -11491 Nov 25 j 13:41 15° m/34'30 evening set 1°Mp38'11 -11491 Nov 26 j 10:04 15° Mp 36'26 30.94199 AU max. Earth dist. -11497 Nov 12 i 04:53 2° m 13'23 0°40'54 -11491 Dec 11 i 09:12 16° m 09'49 conjunction morning rise minimum elong -11497 Nov 12 i 04:54 2° m 13'24 0°41'15 retrograde -11490 Mar 13 i 01:56 18° m 08'31 max. Earth dist. -11497 Nov 13 i 07:17 2° m 15'52 30.97978 AU min. Earth dist. -11490 May 31 j 10:31 16° m 44'52 28.93955 AU morning rise -11497 Nov 28 i 03:09 2° m 49'00 opposition -11490 Jun 01 j 10:26 16° m 43'12 0°00'02 retrograde -11496 Feb 27 j 22:02 4° mp 47'37 desc. node -11490 Jun 02 j 23:10 16° m 40'37 min. Earth dist. -11496 May 17 i 11:46 3° 10 24'01 28.97581 AU direct -11490 Aug 17 j 14:26 15° m 20'12 -11496 May 18 j 13:09 3° m 22'15 0°40'23 evening set -11490 Nov 11 j 21:36 17° m 12'27 opposition -11496 Aug 03 j 23:21 direct 1° m 59'20 evening set -11496 Oct 28 j 22:14 3° m 51'13 conjunction -11490 Nov 27 j 20:06 17° Mp 48'00 -0°03'10 minimum elong -11490 Nov 27 j 20:07 17° Mp 48'00 0°02'59 conjunction -11496 Nov 13 j 16:57 4° Tp 26'29 0°34'45 behind sun begin -11490 Nov 27 j 13:36 17° m 47'25 minimum elong -11496 Nov 13 j 16:57 4° m/26'30 0°35'04 behind sun end -11490 Nov 28 j 02:38 17° Mp 48'35 -11496 Nov 14 j 19:29 -11490 Nov 28 j 21:28 17° m 50'22 30.93635 AU max. Earth dist. 4° To 28'59 30.97115 AU max. Earth dist. 5° Mp 02'09 morning rise -11496 Nov 29 j 15:57 morning rise -11490 Dec 13 j 22:46 18° m 23'56 -11489 Mar 15 j 16:17 20° m 22'38 retrograde -11495 Mar 01 j 10:15 7° Mp 00'46 retrograde min. Earth dist. -11495 May 20 j 00:23 5° Mp 37'04 28.96779 AU opposition -11489 Jun 03 j 21:58 18° m 57'19 -0°06'46 opposition -11495 May 21 j 00:51 5° m 35'22 0°33'46 min. Earth dist. -11489 Jun 02 j 22:21 18° m 58'59 28.93351 AU direct -11495 Aug 06 j 09:55 4° Mp 12'24 direct -11489 Aug 19 j 23:53 17° Mp 34'17 evening set -11495 Oct 31 j 09:41 6° Mp 04'20 evening set -11489 Nov 14 j 09:56 19° M 26'36 -11495 Nov 16 j 05:13 6° m 39'39 0°28'32 -11489 Nov 30 j 09:04 20° m 02'12 -0°09'30 conjunction conjunction

-11489 Nov 30 j 09:04 20° m 02'12 0°09'20

minimum elong

-11495 Nov 16 j 05:13 6° M 39'39

minimum elong

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11489 in astronomical counting style is the year 11490 BCE in historical counting style. -11489 Nov 30 i 03:35 20° m 01'42 behind sun begin max. Earth dist. -11483 Dec 14 j 14:35 3°**£**28'46 30.88455 AU behind sun end -11489 Nov 30 j 14:33 20° m 02'41 -11483 Dec 29 j 22:14 4°**£**02'50 morning rise -11489 Dec 01 j 10:30 20° mp 04'34 30.92971 AU -11482 Mar 31 j 11:17 6°**£**01'11 max. Earth dist. retrograde -11489 Dec 16 j 12:09 20° m 38'10 -11482 Jun 18 j 08:08 4°**2**37'07 28.88272 AU min. Earth dist. morning rise 4°**△**35'41 -0°53'31 -11488 Mar 17 j 04:26 22° m 36'51 -11482 Jun 19 j 04:19 retrograde opposition -11488 Jun 04 j 11:00 21° Mp 13'07 28.92635 AU min. Earth dist. direct -11482 Sep 04 j 09:00 3°**₽**12'08 -11482 Nov 30 j 03:36 opposition -11488 Jun 05 j 09:31 21° Mp 11'32 -0°13'34 evening set 5°**£**04'52 direct -11488 Aug 21 j 11:54 19° Mp 48'27 evening set -11488 Nov 15 j 22:32 21° m 40'49 conjunction -11482 Dec 16 j 06:07 5°**2**40'40 -0°53'01 minimum elong -11482 Dec 16 j 06:07 5°**△**40'40 0°53'02 conjunction -11488 Dec 01 j 22:15 22° m 16'26 -0°15'49 max. Earth dist. -11482 Dec 17 j 04:57 5°**£**42'48 30.88023 AU -11488 Dec 01 j 22:15 22° mg 16'26 0°15'42 -11481 Jan 01 j 11:54 minimum elong morning rise 6°**£**16'48 -11488 Dec 01 j 21:14 22° Mp 16'21 behind sun begin retrograde -11481 Apr 02 j 22:56 8°**£**15′07 behind sun end -11488 Dec 01 j 23:16 22° m 16'32 opposition -11481 Jun 21 j 15:17 6°**£**49'38 -0°59'57 max. Earth dist. -11488 Dec 02 j 22:41 22° m 18'43 30.92220 AU min. Earth dist. -11481 Jun 20 j 19:20 6°**♀**51'03 28.87910 AU morning rise -11488 Dec 18 j 01:52 22° m 52'26 direct -11481 Sep 06 j 19:45 5°**£**26'03 retrograde -11487 Mar 19 j 18:59 24° m 51'05 evening set -11481 Dec 02 j 16:40 7°**£**18'52 opposition -11487 Jun 07 j 20:47 23° M 25'44 -0°20'20 min. Earth dist. -11487 Jun 06 j 22:06 23° Mp 27'20 28.91839 AU conjunction -11481 Dec 18 j 19:27 7°**£**54'42 -0°59'00 direct -11487 Aug 24 j 00:11 22° m 02'34 minimum elong -11481 Dec 18 j 19:26 7°**£**54'42 0°59'02 evening set -11487 Nov 18 j 11:17 23° m 54'59 max. Earth dist. -11481 Dec 19 j 16:57 7°**2**56'42 30.87732 AU morning rise -11480 Jan 04 i 01:40 8° **△**30'51 conjunction -11487 Dec 04 i 11:29 24° m 30'39 -0°22'08 retrograde -11480 Apr 04 i 12:19 10° \$\textit{\Omega}\$29'09 minimum elong -11487 Dec 04 j 11:29 24° m 30'39 0°22'02 min. Earth dist. -11480 Jun 22 j 06:27 9°**2**05'06 28.87681 AU max. Earth dist. -11487 Dec 05 j 11:20 24° m 32'53 30.91385 AU opposition -11480 Jun 23 i 02:15 9°**2**03'42 -1°06'18 -11487 Dec 20 j 15:36 25° m 06'41 direct -11480 Sep 08 j 05:29 7°**£**40'05 morning rise -11486 Mar 22 j 07:10 27° m 05'17 -11480 Dec 04 j 06:02 9°**₽**33'02 retrograde evening set -11486 Jun 09 j 11:02 25° Mp 41'22 28.90991 AU min. Earth dist. -11486 Jun 10 j 08:10 25° m 39'53 -0°27'05 conjunction -11480 Dec 20 j 09:14 10° \(\Omega\) 08'52 -1°04'54 opposition -11480 Dec 20 j 09:13 10°**2**08'52 1°04'58 -11486 Aug 26 j 11:10 24° Mp 16'37 minimum elong direct -11486 Nov 20 j 23:55 26° m 09'05 max. Earth dist. -11480 Dec 21 j 06:57 10°**2**10'54 30.87534 AU evening set -11479 Jan 05 j 15:35 10°**2**45'02 morning rise -11486 Dec 07 j 00:42 26° mp 44'47 -0°28'25 -11479 Apr 06 j 23:27 12°**2**43'18 conjunction retrograde -11486 Dec 07 j 00:41 26° mp 44'47 0°28'21 -11479 Jun 25 j 13:08 11°**2**17'55 -1°12'34 minimum elong opposition -11486 Dec 08 j 00:31 26° Mp 47'01 30.90539 AU -11479 Jun 24 j 18:31 11°**⊆**19'14 28.87521 AU max. Earth dist. min. Earth dist. -11486 Dec 23 j 05:08 27° m 20'50 -11479 Sep 10 j 16:40 9°**△**54'17 morning rise direct -11485 Mar 24 j 21:15 29° m 19'22 -11479 Dec 06 j 19:38 11°**2**47'21 retrograde evening set opposition -11485 Jun 12 j 19:13 27° m 53'56 -0°33'46 min. Earth dist. -11485 Jun 11 j 21:31 27° m 55'27 28.90157 AU conjunction -11479 Dec 22 j 23:08 12°**2**23'13 -1°10'42 direct -11485 Aug 29 j 00:06 26° Mp 30'35 minimum elong -11479 Dec 22 j 23:07 12°**2**23'13 1°10'48 evening set -11485 Nov 23 j 12:45 28° m 23'06 max. Earth dist. -11479 Dec 23 j 19:40 12°**2**25'08 30.87397 AU morning rise -11478 Jan 08 j 05:44 12°**♀**59'23 conjunction -11485 Dec 09 j 13:51 28° m 58'49 -0°34'39 retrograde -11478 Apr 09 j 13:41 14° **2**57'39 -11485 Dec 09 j 13:51 28° m 58'49 0°34'36 -11478 Jun 27 j 24:00 13°**2**32'19 -1°18'43 minimum elong opposition max. Earth dist. -11485 Dec 10 j 12:35 29° m 00'57 30.89731 AU min. Earth dist. -11478 Jun 27 j 05:19 13°**2**33'38 28.87392 AU -11485 Dec 25 i 18:48 29° m 34'54 morning rise direct -11478 Sep 13 j 04:10 12° \(\Omega\) 08'38 -11484 Jan 06 i 13:34 0°**♀** -11478 Dec 09 i 09:20 14° \(\Omega\) 01'52 evening set -11484 Mar 26 j 10:52 retrograde 1°**♀**33'22 -11478 Dec 25 j 13:02 14° \(\Omega\) 37'45 -1°16'24 min. Earth dist. -11484 Jun 13 i 09:53 0° **2**09'20 28.89406 AU conjunction -11484 Jun 14 i 06:22 0° **2**07'53 -0°40'25 minimum elong -11478 Dec 25 i 13:01 14° \(\Omega\) 37'45 1°16'31 opposition -11484 Jun 18 j 22:25 30°R Mp max. Earth dist. -11478 Dec 26 j 08:51 14° **△**39'36 30.87239 AU direct -11484 Aug 30 j 10:57 28° m 44'27 morning rise -11477 Jan 10 j 19:46 15°**△**13'55 -11484 Nov 07 j 07:56 retrograde -11477 Apr 12 j 01:55 17° **2**12'09 0∘∙თ -11484 Nov 25 j 01:29 evening set 0°**£**37'01 opposition -11477 Jun 30 j 11:00 15° **2**46'52 -1°24'45 -11477 Jun 29 j 18:11 15° **2**48'04 28.87224 AU min. Earth dist. -11477 Sep 15 j 14:46 14°**£**23'10 conjunction -11484 Dec 11 j 03:13 1°**£**12'47 -0°40'50 direct minimum elong -11484 Dec 11 j 03:13 1°**2**12'47 0°40'49 evening set -11477 Dec 11 j 23:09 16° **2**16'31 max. Earth dist. -11484 Dec 12 j 02:37 1°**£**14'58 30.89031 AU -11484 Dec 27 j 08:24 conjunction -11477 Dec 28 j 03:12 16° **2**52'25 -1°21'59 morning rise 1°**£**48'53 -11483 Mar 28 j 22:38 -11477 Dec 28 j 03:11 16°**2**52'25 1°22'08 retrograde 3°**₽**47'17 minimum elong opposition -11483 Jun 16 j 17:21 2°**£**21'47 -0°47'00 max. Earth dist. -11477 Dec 28 j 22:19 16°**-**254'12 30.87038 AU min. Earth dist. -11483 Jun 15 j 20:25 2°**2**23'16 28.88765 AU morning rise -11476 Jan 13 j 10:02 17°**⊆**28'36 direct -11483 Sep 01 j 23:15 0°**£**58'17 retrograde -11476 Apr 13 j 16:24 19°**△**26'47 evening set -11483 Nov 27 j 14:35 2°**£**50'56 opposition -11476 Jul 01 j 21:48 18°**-**201'33 -1°30'39 min. Earth dist. -11476 Jul 01 j 04:58 18°**2**02'44 28.86985 AU -11483 Dec 13 j 16:34 3°**£**26'42 -0°46'58 -11476 Sep 17 j 03:56 16° **2**37'47 conjunction direct

evening set

-11476 Dec 13 j 13:12 18°**2**31'16

-11483 Dec 13 j 16:34 3°**2**26'42 0°46'57

minimum elong

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11475 in astronomical counting style is the year 11476 BCE in historical counting style. -11476 Dec 29 j 17:24 19°**2**07'11 -1°27'27 retrograde -11469 Apr 30 j 07:39 5°M09'02 conjunction -11469 Jul 18 j 00:42 minimum elong -11476 Dec 29 j 17:23 19° **2**07'11 1°27'37 opposition 3°M43'57 -2°07'40 max. Earth dist. -11476 Dec 30 j 10:42 19° **2**08'48 30.86743 AU min. Earth dist. -11469 Jul 17 j 13:06 3°M44'46 28.84976 AU -11469 Oct 03 j 11:50 -11475 Jan 15 j 00:27 19°**2**43'22 2°M19'40 morning rise direct -11469 Dec 30 j 16:21 -11475 Apr 16 j 05:56 21° **△**41'30 4°M13'58 retrograde evening set -11475 Jul 04 j 08:49 20° **2**16'16 -1°36'25 opposition 4°M49'55 -2°01'31 -11475 Jul 03 j 17:49 20°**2**17'20 28.86655 AU -11468 Jan 15 j 21:38 min. Earth dist. conjunction -11468 Jan 15 j 21:36 -11475 Sep 19 j 15:25 18°**♀**52'27 direct minimum elong 4°M49'55 2°01'51 -11475 Dec 16 j 03:15 20°**2**46'02 -11468 Jan 16 j 09:42 evening set max. Earth dist. 4°ML51'02 30.84871 AU morning rise -11468 Feb 01 j 04:37 5°M26'03 conjunction -11474 Jan 01 j 07:49 21° **2**21'58 -1°32'47 retrograde -11468 May 01 j 18:48 7°M23'38 -11474 Jan 01 j 07:48 21°**2**21'58 1°32'59 -11468 Jul 19 j 11:17 5°M58'36 -2°12'15 minimum elong opposition -11474 Jan 02 j 00:54 21°**2**23'34 30.86368 AU -11468 Jul 19 j 01:20 max. Earth dist. min. Earth dist. 5°M59'19 28.85089 AU morning rise -11474 Jan 17 j 14:48 21° **△**58'09 direct -11468 Oct 04 j 22:03 4°MJ34'17 retrograde -11474 Apr 18 j 18:23 23°**♀**56'12 evening set -11467 Jan 01 j 06:46 6° ML28'44 opposition -11474 Jul 06 j 19:30 22°**2**31'00 -1°42'03 min. Earth dist. -11474 Jul 06 j 04:43 22°**2**32'03 28.86248 AU conjunction -11467 Jan 17 j 12:12 7°ML04'41 -2°05'42 direct -11474 Sep 22 j 04:26 21°**♀**07'06 minimum elong -11467 Jan 17 j 12:11 7°M04'41 2°06'03 evening set -11474 Dec 18 j 17:26 23° **2**00'47 max. Earth dist. -11467 Jan 17 j 23:38 7°ML05'45 30.85043 AU morning rise -11467 Feb 02 j 19:07 7°M40'49 conjunction -11473 Jan 03 j 22:01 23°**2**36'43 -1°37'58 retrograde -11467 May 04 j 08:30 9°**™**38'19 minimum elong -11473 Jan 03 j 22:00 23° **2**36'43 1°38'11 opposition -11467 Jul 21 i 21:47 8°M13'23 -2°16'37 max. Earth dist. -11473 Jan 04 j 13:06 23° **△**38'07 30.85943 AU min. Earth dist. -11467 Jul 21 i 11:39 8°M14'06 28.85307 AU morning rise -11473 Jan 20 i 05:13 24° **2**12'54 direct -11467 Oct 07 j 11:42 6°M49'02 retrograde -11473 Apr 21 i 07:41 26° \omega 10'52 evening set -11466 Jan 03 j 21:26 8°M43'39 opposition -11473 Jul 09 i 06:19 24° \$\oldsymbol{\Omega}\$45'40 -1°47'31 min. Earth dist. -11473 Jul 08 j 16:45 24° **2**46'37 28.85836 AU conjunction -11466 Jan 20 j 02:46 9°M19'36 -2°09'42 -11473 Sep 24 j 15:05 23° **2**21'41 minimum elong -11466 Jan 20 j 02:45 9°M19'36 2°10'05 direct -11473 Dec 21 j 07:20 25° **△**15'28 max. Earth dist. -11466 Jan 20 j 12:44 9°M20'32 30.85282 AU evening set -11466 Feb 05 j 09:37 9°ML55'43 morning rise retrograde -11472 Jan 06 j 12:16 25° **2**51'25 -1°43'00 -11466 May 06 j 21:14 11°M 53'10 conjunction -11472 Jan 06 j 12:15 25° **2**51'25 1°43'15 -11466 Jul 24 j 08:22 10°ML28'18 -2°20'47 minimum elong opposition -11472 Jan 07 j 03:44 25°**♀**52'51 30.85531 AU min. Earth dist. -11466 Jul 24 j 00:02 10°ML28'54 28.85584 AU max. Earth dist. -11472 Jan 22 j 19:21 26°**♀**27'35 -11466 Oct 09 j 23:14 9° ML03'57 direct morning rise -11472 Apr 22 j 19:30 28°**♀**25'28 -11465 Jan 06 j 12:03 10°M 58'43 retrograde evening set -11472 Jul 10 j 17:00 27°**♀**00'16 -1°52'49 opposition -11472 Jul 10 j 04:08 27°**♀**01'11 28.85452 AU -11465 Jan 22 j 17:33 11°M 34'40 -2°13'30 min. Earth dist. conjunction direct -11472 Sep 26 j 02:45 25°**△**36'12 minimum elong -11465 Jan 22 j 17:32 11°M34'40 2°13'54 evening set -11472 Dec 22 j 21:37 27°**♀**30'05 max. Earth dist. -11465 Jan 23 j 03:12 11°M 35'34 30.85559 AU morning rise -11465 Feb 08 j 00:07 12°ML10'46 conjunction -11471 Jan 08 j 02:34 28°**2**06'02 -1°47'53 retrograde -11465 May 09 j 10:26 14° ML08'09 minimum elong -11471 Jan 08 j 02:33 28°**♀**06'02 1°48'09 opposition -11465 Jul 26 j 18:55 12°ML43'22 -2°24'44 max. Earth dist. -11471 Jan 08 j 16:12 28°**♀**07'19 30.85184 AU min. Earth dist. -11465 Jul 26 j 10:55 12°ML43'57 28.85853 AU -11471 Jan 24 j 09:49 28°**♀**42'13 direct -11465 Oct 12 j 12:11 11° ML18'59 morning rise -11471 Mar 06 j 05:31 0°M -11464 Jan 09 j 02:49 13°M 13'54 evening set -11471 Apr 25 i 07:59 0°M 40'00 retrograde -11471 Jun 15 i 05:26 30°R **≏** -11464 Jan 25 j 08:11 13°ML49'51 -2°17'06 conjunction -11471 Jul 13 i 03:31 29° **△**14'50 -1°57'57 -11464 Jan 25 j 08:09 13°M 49'51 2°17'31 opposition minimum elong -11464 Jan 25 j 15:33 13°M 50'33 30.85795 AU min. Earth dist. -11471 Jul 12 j 15:04 29° **2**15'43 28.85168 AU max. Earth dist. direct -11471 Sep 28 i 13:14 27° \alpha 50'40 morning rise -11464 Feb 10 j 14:47 14° ML 25'56 evening set -11471 Dec 25 j 11:51 29° **2**44'41 -11464 Feb 26 j 20:28 15°ML -11470 Jan 01 j 10:53 0°M retrograde -11464 May 11 j 00:40 16° ML 23'14 -11464 Jul 27 j 09:00 15°RML -11464 Jul 28 j 05:38 14°ML58'32 -2°28'28 -11470 Jan 10 j 17:01 conjunction 0°M20'38 -1°52'36 opposition -11470 Jan 10 j 17:00 minimum elong 0°M20'38 1°52'53 min. Earth dist. -11464 Jul 27 j 23:10 14°M 58'59 28.86066 AU -11470 Jan 11 j 06:46 max. Earth dist. 0°M21'55 30.84938 AU direct -11464 Oct 13 j 23:48 13°M 34'05 -11470 Jan 27 j 00:06 morning rise 0°M56'48 -11464 Dec 27 j 21:45 15°M retrograde -11470 Apr 27 j 18:11 2°M54'31 -11463 Jan 10 j 17:41 15°M29'08 evening set -11470 Jul 15 j 14:11 1°M29'22 -2°02'54 opposition min. Earth dist. -11470 Jul 15 j 02:52 1°M30'11 28.84997 AU -11463 Jan 26 j 23:13 16°ML05'06 -2°20'29 conjunction -11470 Oct 01 j 00:39 0° ML05'09-11463 Jan 26 j 23:12 16°ML05'06 2°20'54 direct minimum elong -11470 Dec 28 j 02:01 evening set 1°M59'18 max. Earth dist. -11463 Jan 27 j 06:19 16°ML05'46 30.85946 AU morning rise -11463 Feb 12 j 05:28 16° ML41'10 conjunction -11469 Jan 13 j 07:13 2°M35'15 -1°57'09 retrograde -11463 May 13 j 12:49 18°M38'22 minimum elong -11469 Jan 13 j 07:12 2°M35'15 1°57'27 opposition -11463 Jul 30 j 16:13 17°ML13'43 -2°31'59 max. Earth dist. -11469 Jan 13 j 19:44 2°M36'25 30.84837 AU min. Earth dist. -11463 Jul 30 j 10:58 17°ML14'05 28.86165 AU

morning rise

-11469 Jan 29 j 14:19

3°M11'24

direct

-11463 Oct 16 j 12:45 15°M49'12

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 35

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evening set	-11462 Jan 13 j 08:44	-	in astronomicai co	max. Earth dist.	ar 11463 BCE in historical		30.86158 AU
evening set	-11402 Jan 13 J 06.44	17 11644 23			-11456 Feb 13 j 05:50		30.80138 AU
	11462 1 20:14.05	1007 20120	2022140	morning rise	-11456 Feb 29 j 11:10	2°×725'01	
conjunction	-11462 Jan 29 j 14:05			retrograde	-11456 May 28 j 22:59	4° √ 21'19	2040140
minimum elong	-11462 Jan 29 j 14:04			opposition	-11456 Aug 14 j 17:28	2° 🖈 56'57	
max. Earth dist.	-11462 Jan 29 j 18:41		30.83993 AU	min. Earth dist.	-11456 Aug 14 j 18:03		28.86560 AU
morning rise	-11462 Feb 14 j 20:19			direct	-11456 Nov 01 j 01:35	1°×731'52	
retrograde	-11462 May 16 j 01:30		2025115	evening set	-11455 Jan 29 j 16:05	3° ҂ 27'49	
opposition	-11462 Aug 02 j 02:52			. ,.	11455 F. 1. 14:21.00	40 702142	2020121
min. Earth dist.	-11462 Aug 01 j 22:28		28.861// AU	conjunction	-11455 Feb 14 j 21:00	4° ₹ 03'42	
direct	-11462 Oct 19 j 00:28			minimum elong	-11455 Feb 14 j 21:00	4° √ 03'42	
evening set	-11461 Jan 15 j 23:25	19"11659'31		max. Earth dist.	-11455 Feb 14 j 18:36		30.86539 AU
	11461 F 1 01:04 51	200 m 25127	2026127	morning rise	-11455 Mar 03 j 01:39	4° ₹ 39'34	
conjunction	-11461 Feb 01 j 04:51			retrograde	-11455 May 31 j 12:33	6° ₹ 35'47	2051120
minimum elong	-11461 Feb 01 j 04:50			opposition	-11455 Aug 17 j 03:50	5° ₹ 11'29	
max. Earth dist.	-11461 Feb 01 j 09:10		30.85950 AU	min. Earth dist.	-11455 Aug 17 j 05:32		28.87015 AU
morning rise	-11461 Feb 17 j 10:44			direct	-11455 Nov 03 j 13:31	3° √ 46'23	
retrograde	-11461 May 18 j 11:56		2020110	evening set	-11454 Feb 01 j 06:47	5° ⊀ 42'29	
opposition	-11461 Aug 04 j 13:29					60 31000	20.40140
min. Earth dist.	-11461 Aug 04 j 10:42		28.86112 AU	conjunction	-11454 Feb 17 j 11:47	6° ₹ 18'22	
direct	-11461 Oct 21 j 12:22			minimum elong	-11454 Feb 17 j 11:46	6° ₹ 18'22	
evening set	-11460 Jan 18 j 14:16	22°IIL14'31		max. Earth dist.	-11454 Feb 17 j 09:37		30.87044 AU
				morning rise	-11454 Mar 05 j 16:00	6° ∡ 754'13	
conjunction	-11460 Feb 03 j 19:36			retrograde	-11454 Jun 03 j 00:28	8° ∡ ′50′19	
minimum elong	-11460 Feb 03 j 19:35			opposition	-11454 Aug 19 j 14:18	7° ∡ ¹26'09	
max. Earth dist.	-11460 Feb 03 j 21:59		30.85876 AU	min. Earth dist.	-11454 Aug 19 j 16:51		28.87559 AU
morning rise	-11460 Feb 20 j 01:25			direct	-11454 Nov 06 j 02:45	6° ∡ 01'02	
retrograde	-11460 May 20 j 00:59			evening set	-11453 Feb 03 j 21:30	7° ∡ ¹57'16	
opposition	-11460 Aug 05 j 23:48						
min. Earth dist.	-11460 Aug 05 j 21:12		28.86042 AU	conjunction	-11453 Feb 20 j 02:13	8° ∡ 33'09	
direct	-11460 Oct 23 j 00:04			minimum elong	-11453 Feb 20 j 02:12	8° ∡ ³33′09	
evening set	-11459 Jan 20 j 05:09	24°M29'21		max. Earth dist.	-11453 Feb 19 j 22:00		30.87621 AU
				morning rise	-11453 Mar 08 j 06:21	9° ∡ 08'59	
conjunction	-11459 Feb 05 j 10:28			retrograde	-11453 Jun 05 j 13:26		
minimum elong	-11459 Feb 05 j 10:27	25°M05'17	2°32'21	opposition	-11453 Aug 22 j 00:43	9° ∡ ¹40'56	
max. Earth dist.	-11459 Feb 05 j 12:10		30.85804 AU	min. Earth dist.	-11453 Aug 22 j 03:54		28.88158 AU
morning rise	-11459 Feb 21 j 15:59			direct	-11453 Nov 08 j 14:28	8° ∡ 15'49	
retrograde	-11459 May 22 j 10:53	27°M37'55		evening set	-11452 Feb 06 j 12:16	10° ∡ 12'11	
opposition	-11459 Aug 08 j 10:20						
min. Earth dist.	-11459 Aug 08 j 09:36	26°M13′26	28.86006 AU	conjunction	-11452 Feb 22 j 17:02	10° ∡ °48′04	-2°42'43
direct	-11459 Oct 25 j 11:06	24°M48'29		minimum elong	-11452 Feb 22 j 17:02	10° ∡ °48′04	2°43'19
evening set	-11458 Jan 22 j 19:53	26°M44'04		max. Earth dist.	-11452 Feb 22 j 12:41	10° ∡ ¹47'40	30.88205 AU
				morning rise	-11452 Mar 09 j 20:44	11° ∡ ¹23'53	
conjunction	-11458 Feb 08 j 01:08	27°M19'58	-2°34'07	retrograde	-11452 Jun 07 j 00:38	13° ∡ 19'47	
minimum elong	-11458 Feb 08 j 01:07	27°M19'58	2°34'39	opposition	-11452 Aug 23 j 11:10		
max. Earth dist.	-11458 Feb 08 j 01:56	27°M20'03	30.85804 AU	min. Earth dist.	-11452 Aug 23 j 16:07	11° ∡ 55′29	28.88726 AU
morning rise	-11458 Feb 24 j 06:26	27°M55'55		direct	-11452 Nov 10 j 02:21	10° ∡ ³30'42	
retrograde	-11458 May 24 j 23:01	29°M52'27		evening set	-11451 Feb 08 j 03:16	12° ∡ ¹27'12	
opposition	-11458 Aug 10 j 20:39	28°M27'57	-2°45'57				
min. Earth dist.	-11458 Aug 10 j 19:44	28°M28'01	28.86058 AU	conjunction	-11451 Feb 24 j 07:48	13° ∡ 03′04	-2°43'17
direct	-11458 Oct 28 j 00:53	27°M02'59		minimum elong	-11451 Feb 24 j 07:48	13° ∡ ¹03'04	2°43'52
evening set	-11457 Jan 25 j 10:40	28° M $58'40$		max. Earth dist.	-11451 Feb 24 j 01:12	13° ∡ ¹02'27	30.88746 AU
				morning rise	-11451 Mar 12 j 11:22		
conjunction	-11457 Feb 10 j 15:46	29°M34'34	-2°36'09	retrograde	-11451 Jun 09 j 14:05	15° ∡ ³34'39	
minimum elong	-11457 Feb 10 j 15:45	29°M34'34	2°36'41	opposition	-11451 Aug 25 j 21:40	14° ∡ 10'47	-2°54'49
max. Earth dist.	-11457 Feb 10 j 15:22	29°M34'32	30.85906 AU	min. Earth dist.	-11451 Aug 26 j 02:53	14° ∡ 10′25	28.89228 AU
	-11457 Feb 22 j 02:02	0° ∡ ¹		direct	-11451 Nov 12 j 14:00	12° ∡ ¹45'36	
morning rise	-11457 Feb 26 j 20:50	0° ∡ 10′29		evening set	-11450 Feb 10 j 18:04	14° ∡ °42′13	
4 1	-11457 May 27 j 10:32	2° ҂ 06'55					
retrograde	-11437 May 27 J 10.32			conjunction	11450 F. L. 26 : 22 22	150.7110105	-2°43'36
opposition	-11457 Aug 13 j 07:06	0° ∡ ¹42'27	-2°48'00	conjunction	-11450 Feb 26 j 22:32	13 × 1003	550
-			-2°48'00 28.86244 AU	minimum elong	-11450 Feb 26 j 22:32 -11450 Feb 26 j 22:31		
opposition	-11457 Aug 13 j 07:06	0° ∡ ¹42'25		,	·	15° ∡ 18′05	2°44'13
opposition	-11457 Aug 13 j 07:06 -11457 Aug 13 j 07:41	0° х 42′25 30°RM		minimum elong	-11450 Feb 26 j 22:31	15° х 18′05 15° х 17′23	2°44'13
opposition min. Earth dist.	-11457 Aug 13 j 07:06 -11457 Aug 13 j 07:41 -11457 Sep 08 j 05:56	0° х 42′25 30°RM		minimum elong max. Earth dist.	-11450 Feb 26 j 22:31 -11450 Feb 26 j 15:07	15° ₹ 18'05 15° ₹ 17'23 15° ₹ 53'51	2°44'13
opposition min. Earth dist.	-11457 Aug 13 j 07:06 -11457 Aug 13 j 07:41 -11457 Sep 08 j 05:56 -11457 Oct 30 j 12:19	0° ₹ 42'25 30° RM 29° M17'25		minimum elong max. Earth dist. morning rise	-11450 Feb 26 j 22:31 -11450 Feb 26 j 15:07 -11450 Mar 15 j 01:41	15° ₹ 18'05 15° ₹ 17'23 15° ₹ 53'51 17° ₹ 49'31	2°44'13 30.89188 AU
opposition min. Earth dist. direct	-11457 Aug 13 j 07:06 -11457 Aug 13 j 07:41 -11457 Sep 08 j 05:56 -11457 Oct 30 j 12:19 -11457 Dec 20 j 22:09	0° ₹ 42'25 30°RM 29°M17'25 0° ₹		minimum elong max. Earth dist. morning rise retrograde	-11450 Feb 26 j 22:31 -11450 Feb 26 j 15:07 -11450 Mar 15 j 01:41 -11450 Jun 11 j 23:26	15° ₹ 18'05 15° ₹ 17'23 15° ₹ 53'51 17° ₹ 49'31 16° ₹ 25'43	2°44'13 30.89188 AU -2°55'02
opposition min. Earth dist. direct	-11457 Aug 13 j 07:06 -11457 Aug 13 j 07:41 -11457 Sep 08 j 05:56 -11457 Oct 30 j 12:19 -11457 Dec 20 j 22:09	0° ₹ 42'25 30°RM 29°M17'25 0° ₹	28.86244 AU	minimum elong max. Earth dist. morning rise retrograde opposition	-11450 Feb 26 j 22:31 -11450 Feb 26 j 15:07 -11450 Mar 15 j 01:41 -11450 Jun 11 j 23:26 -11450 Aug 28 j 08:20	15° ₹ 18'05 15° ₹ 17'23 15° ₹ 53'51 17° ₹ 49'31 16° ₹ 25'43 16° ₹ 25'12	2°44'13 30.89188 AU -2°55'02
opposition min. Earth dist. direct evening set	-11457 Aug 13 j 07:06 -11457 Aug 13 j 07:41 -11457 Sep 08 j 05:56 -11457 Oct 30 j 12:19 -11457 Dec 20 j 22:09 -11456 Jan 28 j 01:12	0° ₹42'25 30° RM 29° M17'25 0° ₹ 1° ₹13'14	28.86244 AU -2°37'57	minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist.	-11450 Feb 26 j 22:31 -11450 Feb 26 j 15:07 -11450 Mar 15 j 01:41 -11450 Jun 11 j 23:26 -11450 Aug 28 j 08:20 -11450 Aug 28 j 15:39	15° ★ 18'05 15° ★ 17'23 15° ★ 53'51 17° ★ 49'31 16° ★ 25'43 16° ★ 25'12 15° ★ 00'29	2°44'13 30.89188 AU -2°55'02

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11449 in astronomical counting style is the year 11450 BCE in historical counting style. -11449 Mar 01 j 13:11 17° ₹33'02 -2°43'41 retrograde -11443 Jun 27 i 07:26 3°**る**29'13 conjunction minimum elong -11449 Mar 01 j 13:11 17° ₹33'02 2°44'18 opposition -11443 Sep 12 j 09:25 2°**ට**05'45 -2°49'13 max. Earth dist. -11449 Mar 01 j 04:20 17° ₹32'12 30.89557 AU min. Earth dist. -11443 Sep 12 j 22:03 2°る04'51 28.92631 AU -11443 Nov 30 j 19:54 -11449 Mar 17 j 16:08 18°**尽** 08'47 0°る40'05 direct morning rise -11449 Jun 14 j 10:56 20° ₹04'18 -11442 Mar 01 j 13:21 retrograde evening set 2°**る**37'11 -11449 Aug 30 j 18:43 18° ₹ 40'33 -2°54'59 opposition -11442 Mar 17 j 16:42 min. Earth dist. -11449 Aug 31 j 02:12 18°**尽**40'01 28.89958 AU conjunction 3°る12'57 -2°37'23 3°る12'57 2°38'02 -11449 Nov 17 j 14:55 17° ₹ 15'14 -11442 Mar 17 j 16:42 direct minimum elong -11448 Feb 15 j 23:31 19°**尽** 12'00 -11442 Mar 17 j 01:40 evening set max. Earth dist. 3°る11'33 30.92811 AU morning rise -11442 Apr 02 j 17:47 3°**⋜**48'31 conjunction -11448 Mar 03 j 03:44 19° ₹ 47'50 -2°43'31 retrograde -11442 Jun 29 j 20:02 5°**る**42'58 -11448 Mar 03 j 03:44 19° **₹** 47'50 2°44'09 -11442 Sep 14 j 19:50 4°る19'36 -2°47'21 minimum elong opposition -11448 Mar 02 j 17:29 19°**х** 46'53 30.89853 AU -11442 Sep 15 j 08:08 4°る18'43 28.93486 AU max. Earth dist. min. Earth dist. morning rise -11448 Mar 19 j 06:26 20° ₹23'34 direct -11442 Dec 03 j 08:15 2°る53'55 retrograde -11448 Jun 15 j 21:42 22° ₹ 18'56 evening set -11441 Mar 04 j 03:24 4°る51'07 opposition -11448 Sep 01 j 05:16 20° ₹ 55'13 -2°54'41 min. Earth dist. -11448 Sep 01 j 14:36 20°**₹** 54'33 28.90244 AU conjunction -11441 Mar 20 j 06:42 5°**ප්**26'52 -2°35'31 direct -11448 Nov 19 j 02:01 19° **₹** 29'49 minimum elong -11441 Mar 20 j 06:43 5°**ප්**26'52 2°36'09 evening set -11447 Feb 17 j 14:05 21° ₹26'39 max. Earth dist. -11441 Mar 19 j 15:37 5°る25'27 30.93715 AU morning rise -11441 Apr 05 j 07:23 6°**ප**02'24 conjunction -11447 Mar 05 j 18:16 22° ₹ 02'28 -2°43'06 retrograde -11441 Jul 02 j 05:40 7°る56'45 minimum elong -11447 Mar 05 j 18:16 22° ₹ 02'28 2°43'43 opposition -11441 Sep 17 i 06:20 6°**ට**33'29 -2°45'13 max. Earth dist. -11447 Mar 05 i 07:30 22° ₹ 01'27 30.90136 AU min. Earth dist. -11441 Sep 17 i 20:24 6°る32'29 28.94424 AU morning rise -11447 Mar 21 j 20:39 22° ₹38'09 direct -11441 Dec 05 i 19:23 5°る07'49 retrograde -11447 Jun 18 i 08:53 24° ₹33'21 evening set -11440 Mar 05 j 17:31 7°**る**05'06 opposition -11447 Sep 03 j 15:37 23° ₹ 09'40 -2°54'06 min. Earth dist. -11447 Sep 04 j 01:11 23° ₹ 08'59 28.90525 AU conjunction -11440 Mar 21 j 20:38 7°る40'51 -2°33'25 -11447 Nov 21 j 15:55 21° ₹ 44'11 minimum elong -11440 Mar 21 j 20:39 7°る40'51 2°34'04 direct -11446 Feb 20 j 04:38 23°**尽** 41'04 max. Earth dist. -11440 Mar 21 j 04:24 7°**궁**39'20 30.94682 AU evening set -11440 Apr 06 j 21:09 8° 중16'22 morning rise -11446 Mar 08 j 08:33 24° ₹ 16'52 -2°42'27 -11440 Jul 03 j 17:23 10°る10'35 conjunction retrograde -11446 Mar 08 j 08:33 24° **₹** 16'52 2°43'05 -11440 Sep 18 j 16:51 8°₹47'27 -2°42'51 minimum elong opposition -11446 Mar 07 j 20:01 24° 7 15'42 30.90442 AU min. Earth dist. -11440 Sep 19 j 06:52 8°정46'28 28.95376 AU max. Earth dist. -11446 Mar 24 j 10:44 24° ₹ 52'32 -11440 Dec 07 j 08:08 7°**3**21'48 morning rise direct -11446 Jun 20 j 21:08 26° **₹** 47'34 -11439 Mar 08 j 07:41 9°**궁**19'09 retrograde evening set -11446 Sep 06 j 02:06 25° ₹23'55 -2°53'16 opposition -11446 Sep 06 j 12:41 25° ₹23'10 28.90878 AU -11439 Mar 24 j 10:37 9°₹54'54 -2°31'05 min. Earth dist. conjunction direct -11446 Nov 24 j 04:38 23°**₹** 58'22 minimum elong -11439 Mar 24 j 10:37 9°**궁**54'54 2°31'42 evening set -11445 Feb 22 j 18:43 25° ₹ 55'18 max. Earth dist. -11439 Mar 23 j 17:21 9°**궁**53'17 30.95614 AU morning rise -11439 Apr 09 j 10:46 10°**⋜**30'24 conjunction -11445 Mar 10 j 22:39 26° ₹31'05 -2°41'33 retrograde -11439 Jul 06 j 04:03 12°**궁**24'31 -11445 Mar 10 j 22:39 26° ₹31'05 2°42'10 opposition -11439 Sep 21 j 03:35 11° ₹ 01'29 -2°40'14 minimum elong max. Earth dist. -11445 Mar 10 j 10:30 26°**х** 29'57 30.90839 AU min. Earth dist. -11439 Sep 21 j 19:20 11° ₹ 00'22 28.96285 AU -11445 Mar 27 j 00:27 27° ₹ 06'43 direct -11439 Dec 09 j 18:27 9°₹35'50 morning rise retrograde -11445 Jun 23 j 07:51 29° ₹01'36 -11438 Mar 10 j 21:44 11°**⋜**33'15 evening set -11445 Sep 08 j 12:34 27° ₹37'59 -2°52'11 -11438 Mar 26 j 06:41 12°る07'19 30.96490 AU opposition max. Earth dist. -11445 Sep 08 j 23:49 27° ₹37'11 28.91321 AU min. Earth dist. -11438 Mar 27 j 00:33 12°る08'59 -2°28'31 direct -11445 Nov 26 j 18:43 26° ₹ 12'22 conjunction -11438 Mar 27 j 00:34 12°る08'59 2°29'09 evening set -11444 Feb 25 j 09:03 28° ₹ 09'21 minimum elong morning rise -11438 Apr 12 j 00:24 12°る44'28 conjunction -11444 Mar 12 i 12:41 28° \$\frac{7}{45}'07 -2°40'24 retrograde -11438 Jul 08 j 14:57 14°る38'28 minimum elong -11444 Mar 12 j 12:41 28° ₹ 45'07 2°41'02 opposition -11438 Sep 23 j 14:19 13°정15'31 -2°37'22 max. Earth dist. -11444 Mar 11 j 22:46 28°**х** 43'50 30.91354 AU min. Earth dist. -11438 Sep 24 j 06:20 13°る14'23 28.97102 AU -11444 Mar 28 j 14:22 29° ₹20'44 morning rise direct -11438 Dec 12 j 08:12 11°₹49'52 -11444 Apr 16 j 11:38 0°₹ evening set -11437 Mar 13 j 11:40 13°₹47'20 retrograde -11444 Jun 24 j 20:23 1°る15'28 -11444 Sep 05 j 04:42 30°R ✓ conjunction -11437 Mar 29 j 14:12 14°ਰ23'02 -2°25'44 -11444 Sep 09 j 22:51 29° ₹751'54 -2°50'50 minimum elong -11437 Mar 29 j 14:13 14°₹23'03 2°26'21 opposition min. Earth dist. -11444 Sep 10 j 10:19 29°**₹** 51'05 28.91909 AU max. Earth dist. -11437 Mar 28 j 18:31 14°**♂**21'12 30.97264 AU -11444 Nov 28 j 06:50 28°**尽** 26'14 -11437 Apr 14 j 13:51 14°₹58'31 direct morning rise -11443 Feb 15 j 23:57 -11437 Jul 11 j 02:47 16°중52'24 0°ਤ retrograde -11443 Feb 26 j 23:13 0°♂23'18 evening set opposition -11437 Sep 26 j 01:04 15°る29'30 -2°34'17 min. Earth dist. -11437 Sep 26 j 18:17 15°중28'18 28.97829 AU conjunction -11443 Mar 15 j 02:52 0°る59'04 -2°39'01 direct -11437 Dec 14 j 20:28 14°중03'50 minimum elong -11443 Mar 15 j 02:53 0°る59'04 2°39'39 evening set -11436 Mar 15 j 01:30 16°**⋜**01'19 max. Earth dist. -11443 Mar 14 j 13:24 0°る57'48 30.92010 AU max. Earth dist. -11436 Mar 30 j 08:19 16°**⋜**35'11 30.97949 AU

morning rise

-11443 Mar 31 j 04:06

1°る34'39

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11436 in astronomical counting style is the year 11437 BCE in historical counting style. -11436 Mar 31 i 04:02 16° ₹37'02 -2°22'44 opposition -11430 Oct 11 i 04:15 1°≈03'27 -2°06'39 conjunction -11436 Mar 31 j 04:03 16°る37'02 2°23'22 min. Earth dist. -11430 Oct 12 j 01:20 1°≈01'58 29.02795 AU minimum elong -11436 Apr 16 j 03:17 17°る12'28 -11430 Nov 22 j 16:06 30°Rる morning rise -11436 Jul 12 j 13:09 19°る06'13 -11430 Dec 30 j 13:08 29°る37'39 retrograde direct -11429 Feb 05 j 23:37 -11436 Sep 27 j 11:44 17°₹43'23 -2°30'58 opposition 0°≈ -11436 Sep 28 j 05:57 17°중42'06 28.98458 AU -11429 Mar 31 j 22:53 min. Earth dist. evening set 1°≈35'11 -11436 Dec 16 j 10:26 16°♂17'41 direct -11435 Mar 17 j 15:26 18°♂15'12 -11429 Apr 16 j 23:52 evening set conjunction 2°≈10'47 -1°56'12 minimum elong -11429 Apr 16 j 23:53 2°≈10'47 1°56'46 -11435 Apr 02 j 17:36 18°₹50'53 -2°19'32 conjunction max. Earth dist. -11429 Apr 16 j 00:43 2°≈08'37 31.03161 AU minimum elong -11435 Apr 02 j 17:36 18°₹50'53 2°20'09 morning rise -11429 May 02 j 21:05 2°≈46'04 -11435 Apr 01 j 19:57 18°₹48'52 30.98562 AU -11429 Jul 28 j 16:33 max. Earth dist. retrograde 4°≈38'56 -11435 Apr 18 j 16:42 19°**♂**26'18 morning rise opposition -11429 Oct 13 j 15:02 3°≈16'31 -2°01'54 retrograde -11435 Jul 15 j 01:40 21°る19'54 min. Earth dist. -11429 Oct 14 j 11:54 3°≈15'03 29.03831 AU opposition -11435 Sep 29 j 22:27 19°**궁**57'07 -2°27'26 direct -11428 Jan 02 j 02:48 1°≈50'45 min. Earth dist. -11435 Sep 30 j 17:00 19°**궁**55'49 28.99052 AU evening set -11428 Apr 02 j 11:56 3°≈48'18 direct -11435 Dec 18 j 22:56 18°₹31'22 evening set -11434 Mar 20 j 04:51 20°**♂**28'53 conjunction -11428 Apr 18 j 12:35 4°≈23'53 -1°51'41 max. Earth dist. -11434 Apr 04 j 09:51 21°る02'36 30.99150 AU minimum elong -11428 Apr 18 j 12:36 4°≈23'54 1°52'14 max. Earth dist. -11428 Apr 17 j 12:18 4°≈21'37 31.04228 AU conjunction -11434 Apr 05 j 06:59 21°る04'34 -2°16'08 morning rise -11428 May 04 j 09:31 4°≈59'09 minimum elong -11434 Apr 05 j 07:00 21°る04'34 2°16'45 retrograde -11428 Jul 30 i 03:31 6°≈51'56 morning rise -11434 Apr 21 j 05:37 21°る39'57 opposition -11428 Oct 15 i 01:55 5°≈29'36 -1°56'58 retrograde -11434 Jul 17 j 12:29 23°る33'25 min. Earth dist. -11428 Oct 15 j 23:31 5°≈28'06 29.04905 AU opposition -11434 Oct 02 j 09:16 22°る10'40 -2°23'41 direct -11427 Jan 03 j 13:33 4°≈03'53 min. Earth dist. -11434 Oct 03 j 05:04 22°る09'16 28.99635 AU evening set -11427 Apr 05 j 00:53 6°≈01'27 -11434 Dec 21 j 13:08 20°る44'53 max. Earth dist. -11427 Apr 20 j 01:32 6°≈34'48 31.05299 AU direct evening set -11433 Mar 22 j 18:21 22°₹42'25 -11427 Apr 21 j 01:22 6°≈37'02 -1°46'59 conjunction -11433 Apr 07 j 20:08 23°♂18'04 -2°12'31 minimum elong -11427 Apr 21 j 01:23 conjunction 6°≈37'02 1°47'30 -11433 Apr 07 j 20:09 23°る18'04 2°13'07 -11427 May 06 j 21:50 minimum elong morning rise 7°≈12'16 -11433 Apr 06 j 21:30 23°중15'57 30.99766 AU -11427 Aug 01 j 13:43 max. Earth dist. retrograde 9°≈04'59 -11427 Oct 17 j 13:02 7°≈42'43 -1°51'51 -11433 Apr 23 j 18:40 23°₹53'26 morning rise opposition -11433 Jul 20 j 00:28 25°**⋜**46'45 min. Earth dist. -11427 Oct 18 j 11:20 7°≈41'10 29.05934 AU retrograde -11433 Oct 04 j 19:47 24°₹24'02 -2°19'44 -11426 Jan 06 j 02:22 opposition direct 6°≈17'02 -11433 Oct 05 j 15:09 24°중22'41 29.00275 AU -11426 Apr 07 j 13:46 min. Earth dist. evening set 8°≈14'37 -11433 Dec 24 j 02:25 22°**궁**58'14 direct evening set -11432 Mar 24 j 07:39 24°る55'45 conjunction -11426 Apr 23 j 13:47 8°≈50'10 -1°42'07 max. Earth dist. -11432 Apr 08 j 10:59 25°**⋜**29'19 31.00445 AU minimum elong -11426 Apr 23 j 13:48 8°≈50'10 1°42'39 max. Earth dist. -11426 Apr 22 j 12:23 8°≈47'47 31.06299 AU -11432 Apr 09 j 09:21 25°**⋜**31'24 -2°08'43 conjunction morning rise -11426 May 09 j 10:03 9°≈25'23 -11432 Apr 09 j 09:22 25°₹31'24 2°09'19 retrograde -11426 Aug 04 j 02:01 11°≈18'01 minimum elong morning rise -11432 Apr 25 j 07:26 26°**⋜**06'45 opposition -11426 Oct 20 j 00:08 9°≈55'49 -1°46'35 retrograde -11432 Jul 21 j 09:42 27°**⋜**59'55 min. Earth dist. -11426 Oct 20 j 22:35 9°≈54'16 29.06885 AU -11432 Oct 06 j 06:38 26°₹37'16 -2°15'34 direct -11425 Jan 08 j 14:43 8°≈30'09 opposition -11432 Oct 07 j 03:22 26°る35'49 29.00998 AU min. Earth dist. evening set -11425 Apr 10 i 02:34 10°≈27'43 -11432 Dec 25 j 14:25 25°る11'27 direct max. Earth dist. -11425 Apr 25 j 01:32 11°≈00'56 31.07192 AU evening set -11431 Mar 26 j 20:53 27°る08'58 -11425 Apr 26 j 02:27 11°≈03'15 -1°37'07 conjunction minimum elong conjunction -11431 Apr 11 i 22:16 27° ₹ 44'36 -2°04'44 -11425 Apr 26 j 02:28 11°≈03'15 1°37'37 -11431 Apr 11 i 22:17 27° ₹ 44'36 2°05'19 morning rise -11425 May 11 j 22:12 11°≈38'27 minimum elong max. Earth dist. -11431 Apr 10 j 23:12 27°る42'26 31.01235 AU retrograde -11425 Aug 06 j 12:37 13°≈30'59 -11431 Apr 27 j 20:08 28°**♂**19'55 -11425 Oct 22 j 11:15 12°≈08'51 -1°41'10 morning rise opposition -11431 Jun 26 j 10:25 0°≈ min. Earth dist. -11425 Oct 23 j 11:03 12°≈07'11 29.07707 AU retrograde -11431 Jul 23 j 20:53 0°≈12'58 direct -11424 Jan 11 j 04:55 10°≈43'11 -11431 Aug 20 j 13:39 30°R♂ evening set -11424 Apr 11 j 15:28 12°≈40'44 opposition -11431 Oct 08 j 17:22 28° 중50'23 -2°11'12 min. Earth dist. -11431 Oct 09 j 13:24 28°정48'58 29.01833 AU conjunction -11424 Apr 27 j 14:53 13°≈16'14 -1°31'58 -11431 Dec 28 j 03:17 27°₹24'33 minimum elong -11424 Apr 27 j 14:54 13°≈16'14 1°32'29 direct -11430 Mar 29 j 10:01 29°**♂**22'05 -11424 Apr 26 j 12:20 13°≈13'45 31.07966 AU evening set max. Earth dist. -11430 Apr 13 j 11:56 29°중55'32 31.02137 AU max. Earth dist. morning rise -11424 May 13 j 10:27 13°≈51'24 -11424 Jun 17 j 15:50 15°≈ conjunction -11430 Apr 14 j 11:11 29°♂57'42 -2°00'34 retrograde -11424 Aug 08 j 00:30 15°≈43'51 minimum elong -11430 Apr 14 j 11:12 29°♂57'42 2°01'09 -11424 Sep 30 j 02:26 15°R≈ -11430 Apr 15 j 11:49 0°**≈** opposition -11424 Oct 23 j 22:23 14°≈21'44 -1°35'36 -11430 Apr 30 j 08:40 0°≈33'00 min. Earth dist. -11424 Oct 24 j 21:46 14°≈20'06 29.08412 AU morning rise

direct

-11423 Jan 12 j 18:27 12°≈56'03

-11430 Jul 26 j 06:58 2°≈25'58

retrograde

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11423 in astronomical counting style is the year 11424 BCE in historical counting style. -11423 Apr 14 i 04:02 14°≈53'34 evening set -11417 Jun 19 i 14:52 0°**)**€ -11423 Apr 17 j 02:32 15°≈ -11417 Aug 23 j 23:09 1°**H**08'48 retrograde max. Earth dist. -11423 Apr 29 j 00:55 15°≈26'35 31.08618 AU -11417 Nov 01 j 05:23 30°R≈ opposition -11417 Nov 09 j 04:53 29°≈46'49 -0°53'22 -11423 Apr 30 j 03:15 15°≈29'03 -1°26'42 min. Earth dist. -11417 Nov 10 j 05:00 29°≈45'09 29.13066 AU conjunction -11416 Jan 29 j 07:58 28°**≈**21'13 -11423 Apr 30 j 03:15 15°≈29'03 1°27'11 minimum elong direct -11423 May 15 j 22:16 16°≈04'11 morning rise -11416 Apr 21 j 02:03 0°**∀** retrograde -11423 Aug 10 j 10:12 17°≈56'32 evening set -11416 Apr 29 j 16:20 0°**)** 18′26 -11423 Oct 26 j 09:42 16°≈34'26 -1°29'54 opposition max. Earth dist. -11416 May 14 j 11:08 0°**₭**51'19 31.13487 AU -11423 Oct 27 j 10:33 16°≈32'42 29.09015 AU min. Earth dist. direct -11422 Jan 15 j 07:14 15°≈08'45 conjunction -11416 May 15 j 12:51 0°**升**53'44 -0°46'51 -11422 Apr 16 j 16:33 17°≈06'12 -11416 May 15 j 12:51 evening set minimum elong 0° **★**53'44 0°47'13 -11416 May 31 j 05:03 morning rise 1°**)** 28'40 conjunction -11422 May 02 j 15:20 17°≈41'39 -1°21'19 retrograde -11416 Aug 25 j 09:40 3°**¥**20′37 minimum elong -11422 May 02 j 15:21 17°≈41'39 1°21'47 opposition -11416 Nov 10 j 16:23 1°**)** 58'42 -0°46'57 max. Earth dist. -11422 May 01 j 12:16 17°≈39'07 31.09204 AU min. Earth dist. -11416 Nov 11 j 17:12 1°**¥**57'00 29.14020 AU morning rise -11422 May 18 j 10:07 18°≈16'45 direct -11415 Jan 30 j 21:12 0°**)** 33′12 retrograde -11422 Aug 12 j 21:22 20°≈09'00 evening set -11415 May 02 j 04:04 2°**)** 30'24 opposition -11422 Oct 28 j 20:46 18°≈46'54 -1°24'04 min. Earth dist. -11422 Oct 29 j 21:01 18°≈45'13 29.09566 AU conjunction -11415 May 17 j 23:56 3°\cdot\05'39 -0°40'50 direct -11421 Jan 17 j 21:01 17°≈21'12 minimum elong -11415 May 17 j 23:57 3°**¥**05'39 0°41'09 evening set -11421 Apr 19 j 04:46 19°≈18'36 max. Earth dist. -11415 May 16 j 21:24 3°**)**€03'10 31.14461 AU max. Earth dist. -11421 May 04 i 00:07 19°≈51'30 31.09748 AU morning rise -11415 Jun 02 j 15:51 3°**)**(40'34 retrograde -11415 Aug 27 i 21:35 5°**)**€32'32 conjunction -11421 May 05 i 03:15 19°≈54'02 -1°15'48 opposition -11415 Nov 13 j 03:50 4°\(\mathbf{H}\) 10'40 -0°40'28 -11421 May 05 j 03:16 19°≈54'02 1°16'15 min. Earth dist. -11415 Nov 14 j 03:40 4°\(\mathcal{H}\)09'02 29.14983 AU minimum elong -11421 May 20 j 21:37 20°≈29'06 -11414 Feb 02 j 09:29 2°**)** 45'14 morning rise direct -11421 Aug 15 j 06:57 22°≈21'16 -11414 May 04 j 15:39 4°**)** 42′25 retrograde evening set -11421 Oct 31 j 08:00 20°≈59'10 -1°18'08 max. Earth dist. -11414 May 19 j 09:21 5° **X** 15'14 31.15400 AU opposition -11421 Nov 01 j 09:14 20°≈57'25 29.10113 AU min. Earth dist. -11420 Jan 20 j 08:09 19°≈33'27 -11414 May 20 j 11:11 5° **X** 17'39 -0°34'44 direct conjunction -11420 Apr 20 j 16:54 21°≈30'47 -11414 May 20 j 11:11 5°**米** 17'39 0°35'03 evening set minimum elong -11414 Jun 05 j 02:29 5°**米**52'32 morning rise -11420 May 06 j 15:02 22°≈06'11 -1°10'12 -11414 Aug 30 j 07:53 7° **★** 44'30 conjunction retrograde -11420 May 06 j 15:03 22°≈06'12 1°10'37 -11414 Nov 15 j 15:26 6° ★ 22'42 -0°33'56 minimum elong opposition -11420 May 05 j 12:14 22°≈03'41 31.10318 AU min. Earth dist. -11414 Nov 16 j 16:26 6° **★** 20'59 29.15892 AU max. Earth dist. -11420 May 22 j 08:59 22°≈41'14 -11413 Feb 04 j 22:04 4° **★** 57'20 morning rise direct retrograde -11420 Aug 16 j 15:47 24°≈33'19 evening set -11413 May 07 j 03:15 6° **★** 54'29 opposition -11420 Nov 01 j 19:08 23°≈11'14 -1°12'05 min. Earth dist. -11420 Nov 02 j 19:49 23°≈09'31 29.10694 AU conjunction -11413 May 22 j 22:13 7°**米**29'41 -0°28'36 direct -11419 Jan 21 j 21:55 21°≈45'31 minimum elong -11413 May 22 j 22:13 7°**米**29'41 0°28'53 -11419 Apr 23 j 05:01 23°≈42'48 max. Earth dist. -11413 May 21 j 19:53 7°**米** 27'13 31.16269 AU evening set max. Earth dist. -11419 May 07 j 23:17 24°≈15'37 31.10947 AU -11413 Jun 07 j 13:11 8°**米**04'32 morning rise -11413 Sep 01 j 19:48 9° **∺** 56'30 retrograde -11419 May 09 j 02:39 24°≈18'11 -1°04'30 -11413 Nov 18 j 03:01 8° **∺** 34'44 -0°27'21 conjunction opposition -11419 May 09 i 02:39 24°≈18'11 1°04'54 -11413 Nov 19 j 03:14 8° ¥ 33'04 29.16693 AU minimum elong min. Earth dist. -11419 May 24 j 20:14 24°≈53'12 morning rise direct -11412 Feb 07 i 12:15 7° \(\) \(09'24 \) retrograde -11419 Aug 19 i 02:05 26°≈45'13 evening set -11412 May 08 i 14:49 9° **H** 06'31 opposition -11419 Nov 04 i 06:27 25°≈23'09 -1°05'56 max. Earth dist. -11412 May 23 j 06:53 9° **X** 39'13 31.17006 AU min. Earth dist. -11419 Nov 05 i 07:09 25°≈21'26 29.11379 AU direct -11418 Jan 24 i 08:14 23°≈57'27 conjunction -11412 May 24 i 09:17 9° \(\frac{1}{4}\)1'41 -0°22'26 minimum elong evening set -11418 Apr 25 j 16:43 25°≈54'42 -11412 May 24 j 09:17 9°**H**41'41 0°22'41 max. Earth dist. -11418 May 10 j 11:53 26°≈27'36 31.11692 AU -11412 Jun 08 j 23:40 10° **∺** 16'30 morning rise -11412 Sep 03 j 05:40 12° **)**€08'28 retrograde -11412 Nov 19 j 14:46 10° **€** 46'42 -0°20'44 conjunction -11418 May 11 j 14:04 26°≈30'02 -0°58'42 opposition minimum elong -11418 May 11 j 14:05 26°≈30'03 0°59'05 min. Earth dist. -11412 Nov 20 j 15:54 10° **★** 44'59 29.17375 AU morning rise -11418 May 27 j 07:08 27°≈05'02 direct -11411 Feb 08 j 23:58 9°**米**21'25 -11418 Aug 21 j 11:24 28°≈57'01 -11411 May 11 j 02:16 11° **★** 18'28 retrograde evening set -11418 Nov 06 j 17:47 27°≈34'59 -0°59'42 opposition min. Earth dist. -11418 Nov 07 j 18:28 27°≈33'17 29.12166 AU -11411 May 26 j 20:15 11° ¥ 53'36 -0°16'14 conjunction -11411 May 26 j 20:15 11° ¥ 53'36 0°16'28 direct -11417 Jan 26 j 20:28 26°≈09'20 minimum elong evening set -11417 Apr 28 j 04:37 28°≈06'33 max. Earth dist. -11411 May 25 j 18:13 11°**米**51'09 31.17634 AU max. Earth dist. -11417 May 12 j 22:24 28°≈39'20 31.12546 AU morning rise -11411 Jun 11 j 10:09 12°**∺**28'22 retrograde -11411 Sep 05 j 14:24 14°**米**20'19 conjunction -11417 May 14 j 01:24 28°≈41'52 -0°52'49 opposition -11411 Nov 22 j 02:33 12° **∺** 58'34 -0°14'06

min. Earth dist.

direct

-11411 Nov 23 j 03:06 12° **€** 56'52 29.17936 AU

-11410 Feb 11 j 13:41 11°**)** 33'17

-11417 May 14 j 01:25 28°≈41'52 0°53'11

-11417 May 29 j 18:12 29°≈16'50

minimum elong

morning rise

Planetary Phenomena of Neptune from -11900 through -11398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -11410 in astronomical counting style is the year 11411 BCE in historical counting style. -11410 May 13 j 13:32 13° + 30'16 retrograde -11405 Sep 19 i 02:58 27° + 27'36 evening set max. Earth dist. -11410 May 28 j 04:15 14°**米**02'51 31.18149 AU -11405 Dec 06 j 01:19 26° \tag{05'42} 0°25'42 opposition min. Earth dist. -11405 Dec 07 j 00:07 26° \(\)409 29.21102 AU -11410 May 29 j 06:54 14° **H** 05'21 -0°10'02 -11404 Feb 25 j 12:59 24° **∺**40'35 direct conjunction -11410 May 29 j 06:54 14° \(\text{\chi} 05'21 \) 0°10'15 -11404 May 26 j 06:39 26° **∺** 37'05 minimum elong evening set -11410 May 29 j 01:45 14° **\(\)** 04'53 behind sun begin -11410 May 29 j 12:03 14°**米**05'49 -11404 Jun 10 j 20:35 27° H 11'54 $0^{\circ}27'13$ behind sun end conjunction -11410 Jun 13 j 20:24 14° **∺**40'06 -11404 Jun 10 j 20:34 27° **∺**11'54 0°27'09 morning rise minimum elong -11404 Jun 09 j 21:32 27°**米**09'44 31.21463 AU retrograde -11410 Sep 08 j 00:26 16° **★** 32'01 max. Earth dist. opposition -11410 Nov 24 j 14:18 15° **X** 10'14 -0°07'26 morning rise -11404 Jun 26 j 06:58 27° **∺**46'25 min. Earth dist. -11410 Nov 25 j 14:59 15° **★**08'33 29.18418 AU retrograde -11404 Sep 20 j 14:40 29° ₩ 38'27 -11409 Feb 14 j 00:21 13°**)** 44'58 -11404 Dec 07 j 13:13 28° **¥** 16'34 0°32'15 direct opposition -11409 May 16 j 00:38 15°**)** 41'51 evening set min. Earth dist. -11404 Dec 08 j 10:28 28°\mathbf{H}\ 15'07 29.21899 AU direct -11403 Feb 27 j 02:33 26° **₭**51'32 conjunction -11409 May 31 j 17:36 16°**米** 16'54 -0°03'50 evening set -11403 May 28 j 17:15 28° **∺**48'00 minimum elong -11409 May 31 j 17:37 16° **∺** 16'54 0°04'01 max. Earth dist. -11403 Jun 12 j 08:10 29° **∺** 20'41 31.22284 AU behind sun begin -11409 May 31 j 11:14 16° **∺** 16'20 behind sun end -11409 May 31 j 23:59 16° **∺** 17'28 conjunction -11403 Jun 13 j 06:35 29° **€** 22'47 0°33'19 max. Earth dist. -11409 May 30 j 16:04 16° ¥ 14'30 31.18601 AU minimum elong -11403 Jun 13 j 06:35 29° **\(22'47** morning rise -11409 Jun 16 j 06:30 16° ¥ 51'36 morning rise -11403 Jun 28 j 16:25 29°\\$57'16 retrograde -11409 Sep 10 j 09:11 18° \(\frac{1}{4}\)43'30 -11403 Jun 29 j 22:22 $0^{\circ}\Upsilon$ opposition -11409 Nov 27 j 01:57 17°\ 21'42 -0°00'47 retrograde -11403 Sep 23 j 01:10 1°Y49'23 min. Earth dist. -11409 Nov 28 j 02:41 17° \(\)20'00 29.18840 AU opposition -11403 Dec 10 i 01:22 0°**Υ**27'31 0°38'46 asc. node -11408 Jan 08 j 08:52 16° ¥ 19'37 min. Earth dist. -11403 Dec 10 j 22:55 0°**Υ**26'03 29.22744 AU direct -11408 Feb 16 j 13:09 15° ¥ 56'26 -11403 Dec 27 j 04:35 30°R € evening set -11408 May 17 j 11:48 17° **\(\)** 53'13 direct -11402 Mar 01 j 13:43 29° **★**02'35 max. Earth dist. -11408 Jun 01 j 01:51 18°**米**25'46 31.19027 AU -11402 May 01 j 18:36 $0^{\circ}\Upsilon$ -11402 May 31 j 03:41 0°Y59'01 evening set -11408 Jun 02 j 04:03 18°\dag{28'13} 0°02'32 conjunction -11408 Jun 02 j 04:02 18°¥28'13 0°02'22 -11402 Jun 15 j 16:28 1°**Υ**33'46 0°39'23 conjunction minimum elong -11408 Jun 01 j 21:35 18°**)** €27'38 -11402 Jun 15 j 16:27 behind sun begin 1°Υ33'45 0°39'22 minimum elong -11408 Jun 02 j 10:29 18° **€** 28'48 -11402 Jun 14 j 19:03 1°**Υ**'31'45 31.23121 AU behind sun end max. Earth dist. -11408 Jun 17 j 16:34 19°**米**02'54 -11402 Jul 01 j 01:45 2°**Y**08'12 morning rise morning rise -11408 Sep 11 j 19:56 20° **★** 54'47 -11402 Sep 25 j 10:34 4° Υ 00'24 retrograde retrograde -11402 Dec 12 j 13:29 2° **Y** 38'35 0° 45'13 -11408 Nov 28 j 13:44 19° **X** 32'56 0°05'52 opposition opposition -11408 Nov 29 j 13:36 19° **∺** 31'18 29.19283 AU -11402 Dec 13 j 10:06 2° **Y** 37'11 29.23550 AU min. Earth dist. min. Earth dist. -11407 Feb 18 j 00:38 18° **米** 07'40 -11401 Mar 04 j 03:03 1°**Υ**13'45 direct direct -11407 May 19 j 22:31 20°**米**04'22 evening set evening set -11401 Jun 02 j 14:20 3°**Υ**10'09 max. Earth dist. -11401 Jun 17 j 04:32 3°Υ42'48 31.23885 AU conjunction -11407 Jun 04 j 14:20 20° ¥39'19 0°08'44 -11401 Jun 18 j 02:22 3°**Υ**'44'51 0°45'23 -11407 Jun 04 j 14:20 20° **∺** 39'19 0°08'35 conjunction minimum elong behind sun begin -11407 Jun 04 j 08:42 20° **€** 38'49 -11401 Jun 18 j 02:21 3°**Υ**'44'51 0°45'24 minimum elong behind sun end -11407 Jun 04 j 19:58 20°**升** 39'50 -11401 Jul 03 j 11:11 4°**Υ**19'16 morning rise max. Earth dist. -11407 Jun 03 j 13:51 20° **€** 37'02 31.19487 AU -11401 Sep 27 j 21:22 6°**Υ**11'32 retrograde -11407 Jun 20 j 02:11 21°**)** 13'57 -11401 Dec 15 j 01:36 4° **Y**49'45 0° 51'36 morning rise opposition -11407 Sep 14 i 05:18 23° \(\) 05'52 -11401 Dec 15 j 22:07 4° Υ 48'21 29.24280 AU retrograde min. Earth dist. -11407 Dec 01 i 01:42 21°\day{43'58} 0°12'30 -11400 Mar 05 i 13:40 3° **Y**25'00 opposition direct -11400 Jun 04 i 00:51 5° **Y**21'21 min. Earth dist. -11407 Dec 02 j 01:44 21° \(\frac{1}{42}\)'19 29.19780 AU evening set direct -11406 Feb 20 j 12:57 20° **H** 18'44 evening set -11406 May 22 j 09:23 22° *\frac{1}{15'21} conjunction -11400 Jun 19 i 12:23 5°Υ56'01 0°51'20 max. Earth dist. -11406 Jun 05 j 23:44 22° \ 47'56 31.20038 AU minimum elong -11400 Jun 19 i 12:23 5°**Y**56′00 0°51'21 max. Earth dist. -11400 Jun 18 i 15:50 5° Υ 54'05 31.24549 AU -11406 Jun 07 j 00:27 22° ¥ 50'15 0°14'55 -11400 Jul 04 j 20:31 6°**Υ**'30'23 conjunction morning rise 8°**Y**22'46 minimum elong retrograde -11400 Sep 29 j 06:43 7°**Υ**'00'59 0°57'55 behind sun begin -11406 Jun 06 j 21:47 22° ¥ 50'01 opposition -11400 Dec 16 j 14:02 -11400 Dec 17 j 10:27 behind sun end -11406 Jun 07 j 03:07 22°\ 50'29 min. Earth dist. 6°**Y**59'35 29.24876 AU 5°Y36'19 morning rise -11406 Jun 22 j 11:57 23°**米**24'51 direct -11399 Mar 08 j 02:27 7°**Y**32'36 retrograde -11406 Sep 16 j 16:38 25° ¥ 16'46 -11399 Jun 06 j 11:21 evening set -11406 Dec 03 j 13:21 23°¥54'52 0°19'07 opposition -11406 Dec 04 j 11:45 23° ¥ 53'20 29.20388 AU -11399 Jun 21 j 22:05 8°**Υ**07'12 0°57'12 min. Earth dist. conjunction -11399 Jun 21 j 22:04 8°**Y**'07'12 0°57'14 direct -11405 Feb 23 j 00:24 22° ★29'40 minimum elong evening set -11405 May 24 j 20:00 24° \(\mathbf{X}\) 26'13 max. Earth dist. -11399 Jun 21 j 00:52 8°**Y**05'12 31.25076 AU 8°**Y**41'33 max. Earth dist. -11405 Jun 08 j 11:12 24° ¥ 58'53 31.20695 AU morning rise -11399 Jul 07 j 05:50 retrograde -11399 Oct 01 j 17:51 10°**Υ**34'01 conjunction -11405 Jun 09 j 10:38 25° **★** 01'05 0°21'05 opposition -11399 Dec 19 j 02:25 9°**Υ**12'13 1°04'08 -11405 Jun 09 j 10:37 25°**米**01'05 0°20'59 min. Earth dist. -11399 Dec 19 j 21:58 9°**Υ**10'53 29.25345 AU minimum elong

-11405 Jun 24 j 21:28 25°**)** 35'38

morning rise