

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 1

Attention, astronomical year style is used: The year -900 in astronomical counting style is the year 901 BCE in historical counting style.

direct	-900 Feb 04 j 19:33	16°♄37'15		opposition	-893 Dec 06 j 02:21	5°♄56'22	-1°-10'-52
				min. Earth dist.	-893 Dec 06 j 05:25	5°♄56'09	28.94028 AU
conjunction	-900 May 20 j 00:28	19°♄08'23	-1°-31'-33	direct	-892 Feb 22 j 17:07	4°♄31'29	
minimum elong	-900 May 20 j 00:28	19°♄08'23	1°31'33				
max. Earth dist.	-900 May 20 j 03:14	19°♄08'39	30.86897 AU	conjunction	-892 Jun 07 j 18:41	7°♄03'10	-1°-4'-22
retrograde	-900 Sep 03 j 01:49	21°♄40'49		minimum elong	-892 Jun 07 j 18:41	7°♄03'10	1°04'23
opposition	-900 Nov 20 j 01:28	20°♄16'21	-1°-36'-19	max. Earth dist.	-892 Jun 07 j 15:02	7°♄02'49	30.94442 AU
min. Earth dist.	-900 Nov 19 j 22:35	20°♄16'33	28.87272 AU	retrograde	-892 Sep 20 j 21:46	9°♄34'18	
direct	-899 Feb 06 j 07:05	18°♄51'35		opposition	-892 Dec 07 j 12:47	8°♄10'33	-1°-6'-45
				min. Earth dist.	-892 Dec 07 j 16:30	8°♄10'17	28.94909 AU
conjunction	-899 May 22 j 14:50	21°♄22'47	-1°-28'-35	direct	-891 Feb 24 j 06:40	6°♄45'38	
minimum elong	-899 May 22 j 14:50	21°♄22'47	1°28'35				
max. Earth dist.	-899 May 22 j 18:02	21°♄23'05	30.87522 AU	conjunction	-891 Jun 10 j 08:47	9°♄17'19	-1°00'-29
retrograde	-899 Sep 05 j 12:42	23°♄55'03		minimum elong	-891 Jun 10 j 08:47	9°♄17'19	1°00'29
opposition	-899 Nov 22 j 11:53	22°♄30'38	-1°-33'-5	max. Earth dist.	-891 Jun 10 j 02:51	9°♄16'46	30.95288 AU
min. Earth dist.	-899 Nov 22 j 09:52	22°♄30'47	28.87960 AU	retrograde	-891 Sep 23 j 10:55	11°♄48'16	
direct	-898 Feb 08 j 19:02	21°♄05'50		opposition	-891 Dec 09 j 23:09	10°♄24'33	-1°-2'-34
				min. Earth dist.	-891 Dec 10 j 03:54	10°♄24'13	28.95725 AU
conjunction	-898 May 25 j 05:00	23°♄37'06	-1°-25'-29	direct	-890 Feb 26 j 19:16	8°♄59'34	
minimum elong	-898 May 25 j 05:00	23°♄37'06	1°25'30				
max. Earth dist.	-898 May 25 j 06:31	23°♄37'14	30.88302 AU	conjunction	-890 Jun 12 j 22:57	11°♄31'17	0°-56'-31
retrograde	-898 Sep 08 j 00:40	26°♄09'12		minimum elong	-890 Jun 12 j 22:57	11°♄31'17	0°56'32
opposition	-898 Nov 24 j 22:16	24°♄44'52	-1°-29'-42	max. Earth dist.	-890 Jun 12 j 17:07	11°♄30'44	30.96081 AU
min. Earth dist.	-898 Nov 24 j 20:11	24°♄45'01	28.88815 AU	retrograde	-890 Sep 25 j 21:15	14°♄02'01	
direct	-897 Feb 11 j 06:17	23°♄20'03		opposition	-890 Dec 12 j 09:29	12°♄38'21	0°-58'-17
				min. Earth dist.	-890 Dec 12 j 15:29	12°♄37'55	28.96496 AU
conjunction	-897 May 27 j 19:11	25°♄51'23	-1°-22'-16	direct	-889 Mar 01 j 08:21	11°♄13'19	
minimum elong	-897 May 27 j 19:11	25°♄51'23	1°22'16				
max. Earth dist.	-897 May 27 j 20:51	25°♄51'32	30.89228 AU	conjunction	-889 Jun 15 j 12:45	13°♄45'01	0°-52'-28
retrograde	-897 Sep 10 j 10:32	28°♄23'20		minimum elong	-889 Jun 15 j 12:46	13°♄45'01	0°52'28
opposition	-897 Nov 27 j 08:46	26°♄59'07	-1°-26'-11	max. Earth dist.	-889 Jun 15 j 04:57	13°♄44'18	30.96861 AU
min. Earth dist.	-897 Nov 27 j 08:06	26°♄59'09	28.89799 AU	retrograde	-889 Sep 28 j 09:09	16°♄15'33	
direct	-896 Feb 13 j 17:23	25°♄34'17		opposition	-889 Dec 14 j 19:43	14°♄51'55	0°-53'-55
				min. Earth dist.	-889 Dec 15 j 01:56	14°♄51'29	28.97280 AU
conjunction	-896 May 29 j 09:27	28°♄05'41	-1°-18'-55	direct	-888 Mar 02 j 20:29	13°♄26'49	
minimum elong	-896 May 29 j 09:27	28°♄05'41	1°18'56				
max. Earth dist.	-896 May 29 j 09:43	28°♄05'43	30.90281 AU	conjunction	-888 Jun 17 j 02:45	15°♄58'33	0°-48'-21
retrograde	-896 Jul 26 j 00:52	0°♄		minimum elong	-888 Jun 17 j 02:45	15°♄58'33	0°48'21
				max. Earth dist.	-888 Jun 16 j 18:58	15°♄57'50	30.97657 AU
opposition	-896 Sep 11 j 23:32	0°♄37'30		retrograde	-888 Sep 29 j 18:43	18°♄28'52	
min. Earth dist.	-896 Oct 30 j 18:31	30°♄		opposition	-888 Dec 16 j 05:58	17°♄05'18	0°-49'-28
direct	-896 Nov 28 j 18:59	29°♄13'23	-1°-22'-32	min. Earth dist.	-888 Dec 16 j 13:43	17°♄04'45	28.98103 AU
				direct	-887 Mar 05 j 08:02	15°♄40'08	
conjunction	-895 May 31 j 23:48	0°♄20'03	-1°-15'-27				
minimum elong	-895 May 31 j 23:49	0°♄20'03	1°15'26	conjunction	-887 Jun 19 j 16:27	18°♄11'53	0°-44'-10
max. Earth dist.	-895 May 31 j 23:17	0°♄20'00	30.91379 AU	minimum elong	-887 Jun 19 j 16:27	18°♄11'53	0°44'10
retrograde	-895 Sep 14 j 09:48	2°♄51'43		max. Earth dist.	-887 Jun 19 j 07:18	18°♄11'02	30.98531 AU
opposition	-895 Dec 01 j 05:31	1°♄27'43	-1°-18'-45	retrograde	-887 Oct 02 j 06:42	20°♄42'00	
min. Earth dist.	-895 Dec 01 j 06:42	1°♄27'38	28.91982 AU	opposition	-887 Dec 18 j 16:10	19°♄18'30	0°-44'-57
direct	-894 Feb 17 j 15:23	0°♄02'54		min. Earth dist.	-887 Dec 18 j 23:28	19°♄17'59	28.99023 AU
				direct	-886 Mar 07 j 19:33	17°♄53'18	
conjunction	-894 Jun 03 j 14:00	2°♄34'27	-1°-11'-51				
minimum elong	-894 Jun 03 j 14:01	2°♄34'27	1°11'52	conjunction	-886 Jun 22 j 05:57	20°♄25'03	0°-39'-55
max. Earth dist.	-894 Jun 03 j 12:40	2°♄34'20	30.92476 AU	minimum elong	-886 Jun 22 j 05:57	20°♄25'04	0°39'55
retrograde	-894 Sep 16 j 22:02	5°♄05'58		max. Earth dist.	-886 Jun 21 j 20:31	20°♄24'11	30.99504 AU
opposition	-894 Dec 03 j 15:55	3°♄42'04	-1°-14'-52	retrograde	-886 Oct 04 j 15:50	22°♄55'01	
min. Earth dist.	-894 Dec 03 j 17:15	3°♄41'58	28.93042 AU	opposition	-886 Dec 21 j 02:32	21°♄31'36	0°-40'-23
direct	-893 Feb 20 j 05:23	2°♄17'14		min. Earth dist.	-886 Dec 21 j 11:18	21°♄30'59	29.00066 AU
				direct	-885 Mar 10 j 06:21	20°♄06'23	
conjunction	-893 Jun 06 j 04:17	4°♄48'51	-1°-8'-10				
minimum elong	-893 Jun 06 j 04:17	4°♄48'51	1°08'10	conjunction	-885 Jun 24 j 19:31	22°♄38'11	0°-35'-36
max. Earth dist.	-893 Jun 06 j 01:07	4°♄48'33	30.93499 AU	minimum elong	-885 Jun 24 j 19:31	22°♄38'11	0°35'36
retrograde	-893 Sep 19 j 09:56	7°♄20'12		max. Earth dist.	-885 Jun 24 j 09:37	22°♄37'16	31.00620 AU
				retrograde	-885 Oct 07 j 02:56	25°♄07'59	
				opposition	-885 Dec 23 j 12:35	23°♄44'39	0°-35'-44

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 2

Attention, astronomical year style is used: The year -885 in astronomical counting style is the year 886 BCE in historical counting style.

min. Earth dist.	-885 Dec 23 j 21:05	23°II44'03	29.01230 AU	asc. node	-877 Jun 27 j 06:27	9°☾48'19	
direct	-884 Mar 11 j 19:21	22°II19'27					
conjunction	-884 Jun 26 j 09:05	24°II51'18	0°-31'-14	conjunction	-877 Jul 13 j 06:31	10°☾23'38	0°00'12
minimum elong	-884 Jun 26 j 09:05	24°II51'18	0°31'15	minimum elong	-877 Jul 13 j 06:30	10°☾23'38	0°00'13
max. Earth dist.	-884 Jun 25 j 22:01	24°II50'17	31.01839 AU	behind sun begin	-877 Jul 13 j 00:00	10°☾23'04	
retrograde	-884 Oct 08 j 14:13	27°II20'58		behind sun end	-877 Jul 13 j 13:00	10°☾24'13	
opposition	-884 Dec 24 j 22:53	25°II57'46	0°-31'-3	max. Earth dist.	-877 Jul 12 j 13:09	10°☾22'02	31.09439 AU
min. Earth dist.	-884 Dec 25 j 08:39	25°II57'04	29.02495 AU	retrograde	-877 Oct 24 j 19:13	12°☾52'13	
direct	-883 Mar 14 j 06:06	24°II32'35		opposition	-876 Jan 09 j 23:15	11°☾29'33	0°02'35
conjunction	-883 Jun 28 j 22:35	27°II04'30	0°-26'-50	min. Earth dist.	-876 Jan 10 j 15:18	11°☾28'25	29.09841 AU
minimum elong	-883 Jun 28 j 22:35	27°II04'30	0°26'49	direct	-876 Mar 29 j 20:32	10°☾04'17	
max. Earth dist.	-883 Jun 28 j 11:34	27°II03'29	31.03131 AU	conjunction	-876 Jul 14 j 19:27	12°☾36'17	0°04'47
retrograde	-883 Oct 11 j 01:35	29°II34'02		minimum elong	-876 Jul 14 j 19:28	12°☾36'17	0°04'48
opposition	-883 Dec 27 j 09:08	28°II10'57	0°-26'-19	behind sun begin	-876 Jul 14 j 13:03	12°☾35'42	
min. Earth dist.	-883 Dec 27 j 19:19	28°II10'14	29.03785 AU	behind sun end	-876 Jul 15 j 01:52	12°☾36'51	
direct	-882 Mar 16 j 19:01	26°II45'48		max. Earth dist.	-876 Jul 14 j 01:28	12°☾34'37	31.10212 AU
conjunction	-882 Jul 01 j 11:59	29°II17'47	0°-22'-23	retrograde	-876 Oct 26 j 05:06	15°☾04'39	
minimum elong	-882 Jul 01 j 11:59	29°II17'47	0°22'23	opposition	-875 Jan 11 j 09:31	13°☾42'01	0°07'25
max. Earth dist.	-882 Jun 30 j 23:01	29°II16'35	31.04418 AU	min. Earth dist.	-875 Jan 12 j 01:22	13°☾40'55	29.10605 AU
retrograde	-882 Jul 20 j 16:23	0°☾		direct	-875 Apr 01 j 09:18	12°☾16'42	
opposition	-882 Oct 13 j 14:55	1°☾47'11		conjunction	-875 Jul 17 j 08:07	14°☾48'39	0°09'16
min. Earth dist.	-882 Dec 29 j 19:24	0°☾24'12	0°-21'-32	minimum elong	-875 Jul 17 j 08:06	14°☾48'39	0°09'17
direct	-881 Mar 19 j 07:25	28°II59'05		behind sun begin	-875 Jul 17 j 02:36	14°☾48'10	
conjunction	-881 Jul 04 j 01:31	1°☾31'07	0°-17'-54	behind sun end	-875 Jul 17 j 13:37	14°☾49'08	
minimum elong	-881 Jul 04 j 01:31	1°☾31'07	0°17'53	max. Earth dist.	-875 Jul 16 j 13:14	14°☾46'55	31.10983 AU
max. Earth dist.	-881 Jul 03 j 12:38	1°☾29'56	31.05646 AU	retrograde	-875 Oct 28 j 15:07	17°☾16'52	
retrograde	-881 Oct 16 j 01:14	4°☾00'23		opposition	-874 Jan 13 j 19:52	15°☾54'15	0°12'13
opposition	-880 Jan 01 j 05:51	2°☾37'30	0°-16'-44	min. Earth dist.	-874 Jan 14 j 12:43	15°☾53'04	29.11418 AU
min. Earth dist.	-880 Jan 01 j 18:17	2°☾36'37	29.06227 AU	direct	-874 Apr 03 j 19:30	14°☾28'52	
direct	-880 Mar 20 j 20:43	1°☾12'23		conjunction	-874 Jul 19 j 20:44	17°☾00'47	0°13'45
conjunction	-880 Jul 05 j 14:54	3°☾44'26	0°-13'-24	minimum elong	-874 Jul 19 j 20:44	17°☾00'47	0°13'45
minimum elong	-880 Jul 05 j 14:54	3°☾44'26	0°13'24	behind sun begin	-874 Jul 19 j 17:22	17°☾00'29	
behind sun begin	-880 Jul 05 j 11:18	3°☾44'07		behind sun end	-874 Jul 20 j 00:06	17°☾01'05	
behind sun end	-880 Jul 05 j 18:31	3°☾44'45		max. Earth dist.	-874 Jul 19 j 02:14	16°☾59'05	31.11833 AU
max. Earth dist.	-880 Jul 04 j 23:51	3°☾43'03	31.06760 AU	retrograde	-874 Oct 31 j 00:52	19°☾28'50	
retrograde	-880 Oct 17 j 13:28	6°☾13'32		opposition	-873 Jan 16 j 06:06	18°☾06'15	0°17'00
opposition	-879 Jan 02 j 16:09	4°☾50'45	0°-11'-54	min. Earth dist.	-873 Jan 16 j 22:57	18°☾05'04	29.12312 AU
min. Earth dist.	-879 Jan 03 j 04:53	4°☾49'51	29.07284 AU	direct	-873 Apr 06 j 08:52	16°☾40'51	
direct	-879 Mar 23 j 09:01	3°☾25'36		conjunction	-873 Jul 22 j 09:10	19°☾12'44	0°18'12
conjunction	-879 Jul 08 j 04:22	5°☾57'41	0°-8'-53	minimum elong	-873 Jul 22 j 09:09	19°☾12'44	0°18'13
minimum elong	-879 Jul 08 j 04:22	5°☾57'41	0°08'54	max. Earth dist.	-873 Jul 21 j 13:17	19°☾10'54	31.12783 AU
behind sun begin	-879 Jul 07 j 22:44	5°☾57'11		retrograde	-873 Nov 02 j 12:46	21°☾40'38	
behind sun end	-879 Jul 08 j 09:59	5°☾58'11		opposition	-872 Jan 18 j 16:25	20°☾18'06	0°21'46
max. Earth dist.	-879 Jul 07 j 13:12	5°☾56'17	31.07749 AU	min. Earth dist.	-872 Jan 19 j 09:26	20°☾16'54	29.13328 AU
retrograde	-879 Oct 19 j 23:32	8°☾26'37		direct	-872 Apr 07 j 20:50	18°☾52'41	
opposition	-878 Jan 05 j 02:41	7°☾03'52	0°-7'-4	conjunction	-872 Jul 23 j 21:40	21°☾24'35	0°22'38
min. Earth dist.	-878 Jan 05 j 17:07	7°☾02'52	29.08217 AU	minimum elong	-872 Jul 23 j 21:39	21°☾24'35	0°22'39
direct	-878 Mar 25 j 21:09	5°☾38'43		max. Earth dist.	-872 Jul 23 j 02:35	21°☾22'49	31.13849 AU
conjunction	-878 Jul 10 j 17:21	8°☾10'46	0°-4'-23	retrograde	-872 Nov 03 j 22:16	23°☾52'21	
minimum elong	-878 Jul 10 j 17:22	8°☾10'46	0°04'24	opposition	-871 Jan 20 j 02:47	22°☾29'53	0°26'29
behind sun begin	-878 Jul 10 j 10:54	8°☾10'11		min. Earth dist.	-871 Jan 20 j 20:36	22°☾28'38	29.14438 AU
behind sun end	-878 Jul 10 j 23:49	8°☾11'20		direct	-871 Apr 10 j 09:35	21°☾04'30	
max. Earth dist.	-878 Jul 10 j 00:34	8°☾09'13	31.08639 AU	conjunction	-871 Jul 26 j 09:55	23°☾36'23	0°27'02
retrograde	-878 Oct 22 j 11:10	10°☾39'31		minimum elong	-871 Jul 26 j 09:55	23°☾36'23	0°27'03
opposition	-877 Jan 07 j 12:58	9°☾16'49	0°-2'-14	max. Earth dist.	-871 Jul 25 j 13:30	23°☾34'30	31.15008 AU
min. Earth dist.	-877 Jan 08 j 03:14	9°☾15'49	29.09059 AU	retrograde	-871 Nov 06 j 10:33	26°☾04'03	
direct	-877 Mar 28 j 09:17	7°☾51'37		opposition	-870 Jan 22 j 13:08	24°☾41'40	0°31'10
conjunction	-877 Jul 10 j 17:21	8°☾10'46	0°-4'-23	min. Earth dist.	-870 Jan 23 j 06:36	24°☾40'27	29.15630 AU
minimum elong	-877 Jul 10 j 17:22	8°☾10'46	0°04'24	direct	-870 Apr 12 j 21:32	23°☾16'19	
behind sun begin	-877 Jul 10 j 10:54	8°☾10'11		conjunction	-870 Jul 28 j 22:07	25°☾48'13	0°31'24
behind sun end	-877 Jul 10 j 23:49	8°☾11'20					

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 3

Attention, astronomical year style is used: The year -870 in astronomical counting style is the year 871 BCE in historical counting style.

minimum elong	-870 Jul 28 j 22:07	25° \mathcal{E} 48'13	0°31'25	conjunction	-862 Aug 15 j 20:56	13° \mathcal{O} 21'21	1°04'02
max. Earth dist.	-870 Jul 28 j 02:17	25° \mathcal{E} 46'23	31.16199 AU	minimum elong	-862 Aug 15 j 20:56	13° \mathcal{O} 21'21	1°04'02
retrograde	-870 Nov 08 j 20:41	28° \mathcal{E} 15'47		max. Earth dist.	-862 Aug 14 j 20:31	13° \mathcal{O} 19'05	31.22868 AU
opposition	-869 Jan 24 j 23:39	26° \mathcal{E} 53'30	0°35'48		-862 Oct 03 j 02:47	15° \mathcal{O}	
min. Earth dist.	-869 Jan 25 j 18:32	26° \mathcal{E} 52'11	29.16816 AU	retrograde	-862 Nov 26 j 06:21	15° \mathcal{O} 48'06	
direct	-869 Apr 15 j 09:47	25° \mathcal{E} 28'11			-861 Jan 21 j 11:13	15° \mathcal{R} \mathcal{O}	
				opposition	-861 Feb 11 j 12:22	14° \mathcal{O} 26'05	1°10'21
conjunction	-869 Jul 31 j 10:18	28° \mathcal{E} 00'06	0°35'43	min. Earth dist.	-861 Feb 12 j 09:48	14° \mathcal{O} 24'36	29.23284 AU
minimum elong	-869 Jul 31 j 10:17	28° \mathcal{E} 00'06	0°35'44	direct	-861 May 03 j 09:00	13° \mathcal{O} 00'46	
max. Earth dist.	-869 Jul 30 j 13:07	27° \mathcal{E} 58'08	31.17363 AU		-861 Aug 03 j 17:43	15° \mathcal{O}	
	-869 Oct 01 j 19:49	0° \mathcal{O}		max. Earth dist.	-861 Aug 17 j 08:53	15° \mathcal{O} 30'11	31.23584 AU
retrograde	-869 Nov 11 j 08:13	0° \mathcal{O} 27'33					
	-869 Dec 22 j 15:16	30° \mathcal{R} \mathcal{E}		conjunction	-861 Aug 18 j 08:18	15° \mathcal{O} 32'22	1°07'44
opposition	-868 Jan 27 j 10:00	29° \mathcal{E} 05'21	0°40'23	minimum elong	-861 Aug 18 j 08:17	15° \mathcal{O} 32'21	1°07'44
min. Earth dist.	-868 Jan 28 j 04:31	29° \mathcal{E} 04'04	29.17942 AU	retrograde	-861 Nov 28 j 16:20	17° \mathcal{O} 59'00	
direct	-868 Apr 16 j 22:08	27° \mathcal{E} 40'04		opposition	-860 Feb 13 j 23:03	16° \mathcal{O} 37'01	1°14'16
	-868 Jul 27 j 13:28	0° \mathcal{O}		min. Earth dist.	-860 Feb 14 j 21:21	16° \mathcal{O} 35'29	29.24057 AU
				direct	-860 May 04 j 21:59	15° \mathcal{O} 11'43	
conjunction	-868 Aug 01 j 22:34	0° \mathcal{O} 11'59	0°39'59				
minimum elong	-868 Aug 01 j 22:34	0° \mathcal{O} 11'59	0°39'59	conjunction	-860 Aug 19 j 19:25	17° \mathcal{O} 43'16	1°11'21
max. Earth dist.	-868 Aug 01 j 01:03	0° \mathcal{O} 10'00	31.18429 AU	minimum elong	-860 Aug 19 j 19:25	17° \mathcal{O} 43'16	1°11'21
retrograde	-868 Nov 12 j 17:00	2° \mathcal{O} 39'21		max. Earth dist.	-860 Aug 18 j 19:27	17° \mathcal{O} 41'02	31.24417 AU
opposition	-867 Jan 28 j 20:42	1° \mathcal{O} 17'13	0°44'55	retrograde	-860 Nov 30 j 03:23	20° \mathcal{O} 09'51	
min. Earth dist.	-867 Jan 29 j 16:50	1° \mathcal{O} 15'49	29.18967 AU	opposition	-859 Feb 15 j 09:45	18° \mathcal{O} 47'54	1°18'04
	-867 Mar 27 j 21:04	30° \mathcal{R} \mathcal{E}		min. Earth dist.	-859 Feb 16 j 06:51	18° \mathcal{O} 46'27	29.24945 AU
direct	-867 Apr 19 j 09:03	29° \mathcal{E} 51'58		direct	-859 May 07 j 10:44	17° \mathcal{O} 22'38	
	-867 May 11 j 16:20	0° \mathcal{O}		max. Earth dist.	-859 Aug 21 j 06:56	19° \mathcal{O} 51'58	31.25346 AU
conjunction	-867 Aug 04 j 10:33	2° \mathcal{O} 23'51	0°44'11	conjunction	-859 Aug 22 j 06:25	19° \mathcal{O} 54'09	1°14'51
minimum elong	-867 Aug 04 j 10:32	2° \mathcal{O} 23'51	0°44'11	minimum elong	-859 Aug 22 j 06:25	19° \mathcal{O} 54'09	1°14'51
max. Earth dist.	-867 Aug 03 j 12:28	2° \mathcal{O} 21'48	31.19391 AU	retrograde	-859 Dec 02 j 11:59	22° \mathcal{O} 20'41	
retrograde	-867 Nov 15 j 02:50	4° \mathcal{O} 51'07		opposition	-858 Feb 17 j 20:37	20° \mathcal{O} 58'48	1°21'45
opposition	-866 Jan 31 j 07:18	3° \mathcal{O} 29'02	0°49'22	min. Earth dist.	-858 Feb 18 j 18:38	20° \mathcal{O} 57'17	29.25924 AU
min. Earth dist.	-866 Feb 01 j 03:14	3° \mathcal{O} 27'39	29.19863 AU	direct	-858 May 09 j 21:27	19° \mathcal{O} 33'36	
direct	-866 Apr 21 j 21:23	2° \mathcal{O} 03'47					
				conjunction	-858 Aug 24 j 17:25	22° \mathcal{O} 05'05	1°18'15
conjunction	-866 Aug 06 j 22:32	4° \mathcal{O} 35'39	0°48'19	minimum elong	-858 Aug 24 j 17:25	22° \mathcal{O} 05'05	1°18'15
minimum elong	-866 Aug 06 j 22:32	4° \mathcal{O} 35'39	0°48'19	max. Earth dist.	-858 Aug 23 j 18:05	22° \mathcal{O} 02'55	31.26351 AU
max. Earth dist.	-866 Aug 05 j 23:28	4° \mathcal{O} 33'31	31.20222 AU	retrograde	-858 Dec 04 j 21:46	24° \mathcal{O} 31'34	
retrograde	-866 Nov 17 j 12:53	7° \mathcal{O} 02'49		opposition	-857 Feb 20 j 07:16	23° \mathcal{O} 09'45	1°25'19
opposition	-865 Feb 02 j 17:51	5° \mathcal{O} 40'46	0°53'44	min. Earth dist.	-857 Feb 21 j 04:41	23° \mathcal{O} 08'17	29.26931 AU
min. Earth dist.	-865 Feb 03 j 14:55	5° \mathcal{O} 39'19	29.20654 AU	direct	-857 May 12 j 09:33	21° \mathcal{O} 44'37	
direct	-865 Apr 24 j 07:04	4° \mathcal{O} 15'30		max. Earth dist.	-857 Aug 26 j 04:35	24° \mathcal{O} 13'51	31.27343 AU
max. Earth dist.	-865 Aug 08 j 11:35	6° \mathcal{O} 45'12	31.20957 AU				
				conjunction	-857 Aug 27 j 04:25	24° \mathcal{O} 16'04	1°21'32
conjunction	-865 Aug 09 j 10:29	6° \mathcal{O} 47'20	0°52'22	minimum elong	-857 Aug 27 j 04:25	24° \mathcal{O} 16'04	1°21'32
minimum elong	-865 Aug 09 j 10:29	6° \mathcal{O} 47'20	0°52'23	retrograde	-857 Dec 07 j 07:56	26° \mathcal{O} 42'32	
retrograde	-865 Nov 19 j 22:11	9° \mathcal{O} 14'23		opposition	-856 Feb 22 j 18:15	25° \mathcal{O} 20'46	1°28'46
opposition	-864 Feb 05 j 04:29	7° \mathcal{O} 52'22	0°58'02	min. Earth dist.	-856 Feb 23 j 16:19	25° \mathcal{O} 19'15	29.27914 AU
min. Earth dist.	-864 Feb 06 j 01:48	7° \mathcal{O} 50'53	29.21335 AU	direct	-856 May 13 j 19:07	23° \mathcal{O} 55'41	
direct	-864 Apr 25 j 20:32	6° \mathcal{O} 27'05					
				conjunction	-856 Aug 28 j 15:23	26° \mathcal{O} 27'06	1°24'42
conjunction	-864 Aug 10 j 22:08	8° \mathcal{O} 58'51	0°56'20	minimum elong	-856 Aug 28 j 15:22	26° \mathcal{O} 27'06	1°24'42
minimum elong	-864 Aug 10 j 22:08	8° \mathcal{O} 58'51	0°56'21	max. Earth dist.	-856 Aug 27 j 16:10	26° \mathcal{O} 24'56	31.28278 AU
max. Earth dist.	-864 Aug 09 j 21:50	8° \mathcal{O} 56'36	31.21602 AU	retrograde	-856 Dec 08 j 16:40	28° \mathcal{O} 53'32	
retrograde	-864 Nov 21 j 09:38	11° \mathcal{O} 25'48		opposition	-855 Feb 24 j 05:20	27° \mathcal{O} 31'49	1°32'05
opposition	-863 Feb 06 j 15:05	10° \mathcal{O} 03'47	1°02'14	min. Earth dist.	-855 Feb 25 j 03:27	27° \mathcal{O} 30'18	29.28797 AU
min. Earth dist.	-863 Feb 07 j 12:35	10° \mathcal{O} 02'18	29.21971 AU	direct	-855 May 16 j 08:02	26° \mathcal{O} 06'47	
direct	-863 Apr 28 j 08:10	8° \mathcal{O} 38'29		max. Earth dist.	-855 Aug 30 j 01:46	28° \mathcal{O} 35'52	31.29102 AU
max. Earth dist.	-863 Aug 12 j 10:22	11° \mathcal{O} 08'02	31.22222 AU				
				conjunction	-855 Aug 31 j 02:12	28° \mathcal{O} 38'08	1°27'44
conjunction	-863 Aug 13 j 09:46	11° \mathcal{O} 10'12	1°00'14	minimum elong	-855 Aug 31 j 02:12	28° \mathcal{O} 38'08	1°27'44
minimum elong	-863 Aug 13 j 09:46	11° \mathcal{O} 10'12	1°00'15		-855 Oct 08 j 19:15	0° \mathcal{O} \mathcal{M}	
retrograde	-863 Nov 23 j 18:34	13° \mathcal{O} 37'02		retrograde	-855 Dec 11 j 03:50	1° \mathcal{M} 04'32	
opposition	-862 Feb 09 j 01:48	12° \mathcal{O} 15'01	1°06'21		-854 Feb 16 j 04:40	30° \mathcal{R} \mathcal{O}	
min. Earth dist.	-862 Feb 09 j 23:59	12° \mathcal{O} 13'29	29.22598 AU	opposition	-854 Feb 26 j 16:24	29° \mathcal{O} 42'51	1°35'16
direct	-862 Apr 30 j 20:32	10° \mathcal{O} 49'42		min. Earth dist.	-854 Feb 27 j 14:31	29° \mathcal{O} 41'20	29.29574 AU

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 4

Attention, astronomical year style is used: The year -854 in astronomical counting style is the year 855 BCE in historical counting style.

direct	-854 May 18 j 18:13	28°♁17'50		conjunction	-846 Sep 19 j 23:15	18°♃12'55	1°48'57
	-854 Aug 11 j 04:04	0°♃		minimum elong	-846 Sep 19 j 23:14	18°♃12'55	1°48'58
				max. Earth dist.	-846 Sep 19 j 00:40	18°♃10'48	31.33087 AU
conjunction	-854 Sep 02 j 13:02	0°♃49'08	1°30'39	retrograde	-846 Dec 30 j 21:26	20°♃39'10	
minimum elong	-854 Sep 02 j 13:02	0°♃49'08	1°30'40	opposition	-845 Mar 18 j 21:58	19°♃17'27	1°57'15
max. Earth dist.	-854 Sep 01 j 13:28	0°♃46'56	31.29800 AU	min. Earth dist.	-845 Mar 19 j 18:27	19°♃16'03	29.33494 AU
retrograde	-854 Dec 13 j 12:56	3°♃15'30		direct	-845 Jun 08 j 04:32	17°♃52'42	
opposition	-853 Mar 01 j 03:39	1°♃53'49	1°38'18				
min. Earth dist.	-853 Mar 02 j 02:36	1°♃52'14	29.30198 AU	conjunction	-845 Sep 22 j 09:15	20°♃23'20	1°50'34
direct	-853 May 21 j 06:06	0°♃28'50		minimum elong	-845 Sep 22 j 09:15	20°♃23'20	1°50'34
				max. Earth dist.	-845 Sep 21 j 12:08	20°♃21'21	31.33626 AU
conjunction	-853 Sep 04 j 23:42	3°♃00'03	1°33'26	retrograde	-844 Jan 02 j 06:39	22°♃49'38	
minimum elong	-853 Sep 04 j 23:42	3°♃00'03	1°33'26	opposition	-844 Mar 20 j 09:33	21°♃27'57	1°58'53
max. Earth dist.	-853 Sep 03 j 22:55	2°♃57'44	31.30353 AU	min. Earth dist.	-844 Mar 21 j 06:27	21°♃26'31	29.34014 AU
retrograde	-853 Dec 16 j 00:40	5°♃26'22		direct	-844 Jun 09 j 15:23	20°♃03'18	
opposition	-852 Mar 02 j 14:42	4°♃04'40	1°41'12				
min. Earth dist.	-852 Mar 03 j 13:01	4°♃03'09	29.30689 AU	conjunction	-844 Sep 23 j 19:06	22°♃33'52	1°52'02
direct	-852 May 22 j 18:34	2°♃39'41		minimum elong	-844 Sep 23 j 19:05	22°♃33'52	1°52'02
max. Earth dist.	-852 Sep 05 j 10:28	5°♃08'36	31.30775 AU	max. Earth dist.	-844 Sep 22 j 21:21	22°♃31'50	31.34124 AU
				retrograde	-843 Jan 03 j 18:56	25°♃00'14	
conjunction	-852 Sep 06 j 10:25	5°♃10'50	1°36'05	opposition	-843 Mar 22 j 21:12	23°♃38'34	2°00'21
minimum elong	-852 Sep 06 j 10:25	5°♃10'50	1°36'06	min. Earth dist.	-843 Mar 23 j 17:00	23°♃37'13	29.34476 AU
retrograde	-852 Dec 17 j 10:43	7°♃37'06		direct	-843 Jun 12 j 03:11	22°♃13'59	
opposition	-851 Mar 05 j 02:05	6°♃15'23	1°43'58	max. Earth dist.	-843 Sep 25 j 08:17	24°♃42'35	31.34521 AU
min. Earth dist.	-851 Mar 06 j 01:24	6°♃13'48	29.31065 AU				
direct	-851 May 25 j 07:29	4°♃50'25		conjunction	-843 Sep 26 j 04:57	24°♃44'31	1°53'19
				minimum elong	-843 Sep 26 j 04:57	24°♃44'31	1°53'19
conjunction	-851 Sep 08 j 20:42	7°♃21'27	1°38'36	retrograde	-842 Jan 06 j 05:46	27°♃10'56	
minimum elong	-851 Sep 08 j 20:42	7°♃21'27	1°38'36	opposition	-842 Mar 25 j 09:03	25°♃49'16	2°01'39
max. Earth dist.	-851 Sep 07 j 20:17	7°♃19'10	31.31114 AU	min. Earth dist.	-842 Mar 26 j 05:41	25°♃47'52	29.34817 AU
retrograde	-851 Dec 19 j 21:29	9°♃47'41		direct	-842 Jun 14 j 15:19	24°♃24'46	
opposition	-850 Mar 07 j 13:15	8°♃25'56	1°46'34				
min. Earth dist.	-850 Mar 08 j 11:26	8°♃24'25	29.31375 AU	conjunction	-842 Sep 28 j 14:47	26°♃55'13	1°54'27
direct	-850 May 27 j 20:36	7°♃00'58		minimum elong	-842 Sep 28 j 14:47	26°♃55'13	1°54'27
max. Earth dist.	-850 Sep 10 j 07:04	9°♃29'40	31.31401 AU	max. Earth dist.	-842 Sep 27 j 17:46	26°♃53'15	31.34796 AU
				retrograde	-841 Jan 08 j 16:56	29°♃21'41	
conjunction	-850 Sep 11 j 07:03	9°♃31'54	1°40'58	opposition	-841 Mar 27 j 20:39	28°♃00'01	2°02'46
minimum elong	-850 Sep 11 j 07:03	9°♃31'54	1°40'58	min. Earth dist.	-841 Mar 28 j 16:08	27°♃58'42	29.35012 AU
retrograde	-850 Dec 22 j 06:22	11°♃58'05		direct	-841 Jun 17 j 03:47	26°♃35'33	
opposition	-849 Mar 10 j 00:27	10°♃36'19	1°49'02	max. Earth dist.	-841 Sep 30 j 03:52	29°♃03'59	31.34905 AU
min. Earth dist.	-849 Mar 10 j 23:24	10°♃34'45	29.31677 AU				
direct	-849 May 30 j 08:01	9°♃11'21		conjunction	-841 Oct 01 j 00:43	29°♃05'56	1°55'25
				minimum elong	-841 Oct 01 j 00:43	29°♃05'56	1°55'25
conjunction	-849 Sep 13 j 17:17	11°♃42'12	1°43'11				
minimum elong	-849 Sep 13 j 17:17	11°♃42'12	1°43'11	retrograde	-840 Jan 11 j 02:54	1°♁32'26	
max. Earth dist.	-849 Sep 12 j 17:53	11°♃40'01	31.31717 AU	opposition	-840 Mar 29 j 08:38	0°♁10'44	2°03'43
retrograde	-849 Dec 24 j 15:48	14°♃08'22		min. Earth dist.	-840 Mar 30 j 04:54	0°♁09'22	29.35053 AU
opposition	-848 Mar 11 j 11:46	12°♃46'35	1°51'19				
min. Earth dist.	-848 Mar 12 j 09:35	12°♃45'06	29.32016 AU	direct	-840 Apr 04 j 23:27	30°♃	
direct	-848 May 31 j 20:59	11°♃21'39			-840 Jun 18 j 15:47	28°♃46'19	
max. Earth dist.	-848 Sep 14 j 03:55	13°♃50'14	31.32088 AU		-840 Aug 27 j 16:12	0°♁	
				conjunction	-840 Oct 02 j 10:23	1°♁16'35	1°56'14
conjunction	-848 Sep 15 j 03:18	13°♃52'25	1°45'16	minimum elong	-840 Oct 02 j 10:23	1°♁16'35	1°56'14
minimum elong	-848 Sep 15 j 03:18	13°♃52'25	1°45'16	max. Earth dist.	-840 Oct 01 j 14:08	1°♁14'42	31.34873 AU
retrograde	-848 Dec 26 j 01:49	16°♃18'36		retrograde	-839 Jan 12 j 13:06	3°♁43'07	
opposition	-847 Mar 13 j 23:11	14°♃56'49	1°53'28	opposition	-839 Mar 31 j 20:33	2°♁21'22	2°04'30
min. Earth dist.	-847 Mar 14 j 20:54	14°♃55'20	29.32445 AU	min. Earth dist.	-839 Apr 01 j 15:52	2°♁20'04	29.34941 AU
direct	-847 Jun 03 j 06:57	13°♃31'55		direct	-839 Jun 21 j 05:49	0°♁56'57	
conjunction	-847 Sep 17 j 13:24	16°♃02'38	1°47'11	conjunction	-839 Oct 04 j 20:02	3°♁27'07	1°56'52
minimum elong	-847 Sep 17 j 13:23	16°♃02'38	1°47'11	minimum elong	-839 Oct 04 j 20:02	3°♁27'07	1°56'52
max. Earth dist.	-847 Sep 16 j 15:23	16°♃00'34	31.32558 AU	max. Earth dist.	-839 Oct 03 j 23:31	3°♁25'12	31.34703 AU
retrograde	-847 Dec 28 j 10:16	18°♃28'50		retrograde	-838 Jan 14 j 23:09	5°♁53'40	
opposition	-846 Mar 16 j 10:33	17°♃07'05	1°55'26	opposition	-838 Apr 03 j 08:23	4°♁31'51	2°05'06
min. Earth dist.	-846 Mar 17 j 07:41	17°♃05'38	29.32945 AU	min. Earth dist.	-838 Apr 04 j 03:47	4°♁30'32	29.34734 AU
direct	-846 Jun 05 j 19:15	15°♃42'16		direct	-838 Jun 23 j 16:39	3°♁07'26	
				max. Earth dist.	-838 Oct 06 j 10:27	5°♁35'41	31.34457 AU

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 5

Attention, astronomical year style is used: The year -838 in astronomical counting style is the year 839 BCE in historical counting style.

conjunction	-838 Oct 07 j 05:34	5° <u>♁</u> 37'28	1°57'21	opposition	-829 Apr 23 j 21:20	24° <u>♁</u> 03'27	2°02'28
minimum elong	-838 Oct 07 j 05:34	5° <u>♁</u> 37'28	1°57'21	min. Earth dist.	-829 Apr 24 j 10:29	24° <u>♁</u> 02'34	29.33559 AU
retrograde	-837 Jan 17 j 06:53	8° <u>♁</u> 04'02		direct	-829 Jul 13 j 23:54	22° <u>♁</u> 39'30	
opposition	-837 Apr 05 j 20:18	6° <u>♁</u> 42'09	2°05'31				
min. Earth dist.	-837 Apr 06 j 15:05	6° <u>♁</u> 40'53	29.34457 AU	conjunction	-829 Oct 26 j 16:31	25° <u>♁</u> 08'48	1°54'07
direct	-837 Jun 26 j 05:38	5° <u>♁</u> 17'44		minimum elong	-829 Oct 26 j 16:32	25° <u>♁</u> 08'48	1°54'06
				max. Earth dist.	-829 Oct 26 j 04:01	25° <u>♁</u> 07'37	31.33276 AU
conjunction	-837 Oct 09 j 14:50	7° <u>♁</u> 47'38	1°57'39	retrograde	-828 Feb 06 j 05:14	27° <u>♁</u> 36'11	
minimum elong	-837 Oct 09 j 14:50	7° <u>♁</u> 47'38	1°57'39	opposition	-828 Apr 25 j 09:50	26° <u>♁</u> 14'02	2°01'17
max. Earth dist.	-837 Oct 08 j 19:21	7° <u>♁</u> 45'49	31.34180 AU	min. Earth dist.	-828 Apr 25 j 22:24	26° <u>♁</u> 13'11	29.33215 AU
retrograde	-836 Jan 19 j 17:16	10° <u>♁</u> 14'14		direct	-828 Jul 15 j 12:50	24° <u>♁</u> 50'09	
opposition	-836 Apr 07 j 08:13	8° <u>♁</u> 52'17	2°05'46				
min. Earth dist.	-836 Apr 08 j 01:56	8° <u>♁</u> 51'05	29.34202 AU	conjunction	-828 Oct 28 j 01:42	27° <u>♁</u> 19'22	1°52'55
direct	-836 Jun 27 j 15:41	7° <u>♁</u> 27'51		minimum elong	-828 Oct 28 j 01:42	27° <u>♁</u> 19'22	1°52'56
max. Earth dist.	-836 Oct 10 j 06:37	9° <u>♁</u> 56'00	31.33948 AU	max. Earth dist.	-828 Oct 27 j 12:35	27° <u>♁</u> 18'08	31.32872 AU
				retrograde	-827 Feb 07 j 16:30	29° <u>♁</u> 46'52	
conjunction	-836 Oct 11 j 00:13	9° <u>♁</u> 57'39	1°57'48	opposition	-827 Apr 27 j 22:19	28° <u>♁</u> 24'40	1°59'56
minimum elong	-836 Oct 11 j 00:13	9° <u>♁</u> 57'39	1°57'48	min. Earth dist.	-827 Apr 28 j 09:58	28° <u>♁</u> 23'53	29.32746 AU
retrograde	-835 Jan 21 j 02:09	12° <u>♁</u> 24'18		direct	-827 Jul 17 j 23:00	27° <u>♁</u> 00'48	
opposition	-835 Apr 09 j 20:19	11° <u>♁</u> 02'17	2°05'50				
min. Earth dist.	-835 Apr 10 j 13:49	11° <u>♁</u> 01'06	29.34008 AU	conjunction	-827 Oct 30 j 10:54	29° <u>♁</u> 29'56	1°51'35
direct	-835 Jun 30 j 03:07	9° <u>♁</u> 37'54		minimum elong	-827 Oct 30 j 10:54	29° <u>♁</u> 29'56	1°51'34
				max. Earth dist.	-827 Oct 29 j 23:21	29° <u>♁</u> 28'50	31.32335 AU
conjunction	-835 Oct 13 j 09:17	12° <u>♁</u> 07'34	1°57'47		-827 Nov 12 j 19:48	0° <u>♁</u>	
minimum elong	-835 Oct 13 j 09:17	12° <u>♁</u> 07'34	1°57'46	retrograde	-826 Feb 10 j 01:48	1° <u>♁</u> 57'32	
max. Earth dist.	-835 Oct 12 j 15:44	12° <u>♁</u> 05'55	31.33807 AU	opposition	-826 Apr 30 j 10:53	0° <u>♁</u> 35'16	1°58'25
retrograde	-834 Jan 23 j 13:37	14° <u>♁</u> 34'18		min. Earth dist.	-826 Apr 30 j 22:39	0° <u>♁</u> 34'28	29.32140 AU
opposition	-834 Apr 12 j 08:15	13° <u>♁</u> 12'14	2°05'43		-826 May 22 j 22:20	30° <u>♁</u>	
min. Earth dist.	-834 Apr 13 j 00:00	13° <u>♁</u> 11'10	29.33907 AU	direct	-826 Jul 20 j 10:47	29° <u>♁</u> 11'26	
direct	-834 Jul 02 j 14:05	11° <u>♁</u> 47'54			-826 Sep 14 j 00:11	0° <u>♁</u>	
conjunction	-834 Oct 15 j 18:34	14° <u>♁</u> 17'30	1°57'35	conjunction	-826 Nov 01 j 19:57	1° <u>♁</u> 40'27	1°50'05
minimum elong	-834 Oct 15 j 18:34	14° <u>♁</u> 17'30	1°57'35	minimum elong	-826 Nov 01 j 19:57	1° <u>♁</u> 40'27	1°50'04
max. Earth dist.	-834 Oct 15 j 02:32	14° <u>♁</u> 16'00	31.33740 AU	max. Earth dist.	-826 Nov 01 j 08:16	1° <u>♁</u> 39'20	31.31695 AU
retrograde	-833 Jan 26 j 00:08	16° <u>♁</u> 44'19		retrograde	-825 Feb 12 j 13:11	4° <u>♁</u> 08'08	
opposition	-833 Apr 14 j 20:16	15° <u>♁</u> 22'14	2°05'26	opposition	-825 May 02 j 23:11	2° <u>♁</u> 45'48	1°56'44
min. Earth dist.	-833 Apr 15 j 12:15	15° <u>♁</u> 21'09	29.33871 AU	min. Earth dist.	-825 May 03 j 09:23	2° <u>♁</u> 45'06	29.31461 AU
direct	-833 Jul 05 j 00:53	13° <u>♁</u> 57'58		direct	-825 Jul 22 j 21:43	1° <u>♁</u> 21'58	
conjunction	-833 Oct 18 j 03:44	16° <u>♁</u> 27'30	1°57'14	conjunction	-825 Nov 04 j 05:01	3° <u>♁</u> 50'53	1°48'25
minimum elong	-833 Oct 18 j 03:44	16° <u>♁</u> 27'30	1°57'13	minimum elong	-825 Nov 04 j 05:01	3° <u>♁</u> 50'53	1°48'24
max. Earth dist.	-833 Oct 17 j 12:10	16° <u>♁</u> 26'03	31.33736 AU	max. Earth dist.	-825 Nov 03 j 18:46	3° <u>♁</u> 49'55	31.30998 AU
retrograde	-832 Jan 28 j 11:33	18° <u>♁</u> 54'25		retrograde	-824 Feb 14 j 23:51	6° <u>♁</u> 18'40	
opposition	-832 Apr 16 j 08:23	17° <u>♁</u> 32'20	2°04'57	opposition	-824 May 04 j 11:51	4° <u>♁</u> 56'14	1°54'53
min. Earth dist.	-832 Apr 16 j 22:33	17° <u>♁</u> 31'23	29.33866 AU	min. Earth dist.	-824 May 04 j 22:07	4° <u>♁</u> 55'32	29.30767 AU
direct	-832 Jul 06 j 12:34	16° <u>♁</u> 08'09		direct	-824 Jul 24 j 08:07	3° <u>♁</u> 32'25	
conjunction	-832 Oct 19 j 12:50	18° <u>♁</u> 37'38	1°56'42	conjunction	-824 Nov 05 j 13:51	6° <u>♁</u> 01'13	1°46'37
minimum elong	-832 Oct 19 j 12:49	18° <u>♁</u> 37'38	1°56'42	minimum elong	-824 Nov 05 j 13:52	6° <u>♁</u> 01'13	1°46'36
max. Earth dist.	-832 Oct 18 j 21:57	18° <u>♁</u> 36'14	31.33726 AU	max. Earth dist.	-824 Nov 05 j 04:29	6° <u>♁</u> 00'20	31.30333 AU
retrograde	-831 Jan 29 j 22:33	21° <u>♁</u> 04'40		retrograde	-823 Feb 16 j 11:09	8° <u>♁</u> 29'07	
opposition	-831 Apr 18 j 20:46	19° <u>♁</u> 42'34	2°04'18	opposition	-823 May 07 j 00:20	7° <u>♁</u> 06'36	1°52'52
min. Earth dist.	-831 Apr 19 j 11:12	19° <u>♁</u> 41'36	29.33846 AU	min. Earth dist.	-823 May 07 j 08:26	7° <u>♁</u> 06'04	29.30127 AU
direct	-831 Jul 09 j 00:00	18° <u>♁</u> 18'29		direct	-823 Jul 26 j 19:29	5° <u>♁</u> 42'49	
conjunction	-831 Oct 21 j 22:04	20° <u>♁</u> 47'54	1°56'00	conjunction	-823 Nov 07 j 22:47	8° <u>♁</u> 11'31	1°44'39
minimum elong	-831 Oct 21 j 22:04	20° <u>♁</u> 47'54	1°56'00	minimum elong	-823 Nov 07 j 22:48	8° <u>♁</u> 11'31	1°44'39
max. Earth dist.	-831 Oct 21 j 08:19	20° <u>♁</u> 46'36	31.33682 AU	max. Earth dist.	-823 Nov 07 j 14:14	8° <u>♁</u> 10'43	31.29733 AU
retrograde	-830 Feb 01 j 09:25	23° <u>♁</u> 15'02		retrograde	-822 Feb 18 j 22:43	10° <u>♁</u> 39'33	
opposition	-830 Apr 21 j 08:55	21° <u>♁</u> 52'57	2°03'28	opposition	-822 May 09 j 12:48	9° <u>♁</u> 16'58	1°50'41
min. Earth dist.	-830 Apr 21 j 22:11	21° <u>♁</u> 52'03	29.33753 AU	min. Earth dist.	-822 May 09 j 20:45	9° <u>♁</u> 16'26	29.29580 AU
direct	-830 Jul 11 j 13:19	20° <u>♁</u> 28'55		direct	-822 Jul 29 j 06:56	7° <u>♁</u> 53'13	
conjunction	-830 Oct 24 j 07:15	22° <u>♁</u> 58'18	1°55'08	conjunction	-822 Nov 10 j 07:47	10° <u>♁</u> 21'52	1°42'33
minimum elong	-830 Oct 24 j 07:15	22° <u>♁</u> 58'18	1°55'08	minimum elong	-822 Nov 10 j 07:47	10° <u>♁</u> 21'52	1°42'33
max. Earth dist.	-830 Oct 23 j 17:17	22° <u>♁</u> 56'59	31.33540 AU	max. Earth dist.	-822 Nov 10 j 00:53	10° <u>♁</u> 21'13	31.29241 AU
retrograde	-829 Feb 03 j 20:35	25° <u>♁</u> 25'34		retrograde	-821 Feb 21 j 10:26	12° <u>♁</u> 50'00	

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 6

Attention, astronomical year style is used: The year -821 in astronomical counting style is the year 822 BCE in historical counting style.

opposition	-821 May 12 j 01:20	11°M.27'23	1°48'21	max. Earth dist.	-814 Nov 27 j 07:12	27°M.48'34	31.24707 AU
min. Earth dist.	-821 May 12 j 07:31	11°M.26'58	29.29116 AU		-813 Feb 06 j 01:22	0°Z	
direct	-821 Jul 31 j 20:01	10°M.03'42		retrograde	-813 Mar 11 j 04:13	0°Z18'02	
					-813 Apr 14 j 05:46	30°RM	
conjunction	-821 Nov 12 j 16:34	12°M.32'17	1°40'17	opposition	-813 May 30 j 08:15	28°M.55'01	1°24'18
minimum elong	-821 Nov 12 j 16:34	12°M.32'17	1°40'16	min. Earth dist.	-813 May 30 j 09:01	28°M.54'58	29.24254 AU
max. Earth dist.	-821 Nov 12 j 09:56	12°M.31'39	31.28820 AU	direct	-813 Aug 18 j 13:22	27°M.31'43	
	-820 Feb 17 j 23:55	15°M					
retrograde	-820 Feb 23 j 21:51	15°M.00'34		conjunction	-813 Nov 29 j 17:43	29°M.59'45	1°17'14
	-820 Feb 29 j 18:01	15°RM		minimum elong	-813 Nov 29 j 17:43	29°M.59'45	1°17'13
opposition	-820 May 13 j 14:02	13°M.37'55	1°45'52		-813 Nov 29 j 20:17	0°Z	
min. Earth dist.	-820 May 13 j 19:33	13°M.37'33	29.28726 AU	max. Earth dist.	-813 Nov 29 j 17:58	29°M.59'47	31.23673 AU
direct	-820 Aug 02 j 06:13	12°M.14'19		retrograde	-812 Mar 12 j 16:08	2°Z29'12	
				opposition	-812 May 31 j 21:13	1°Z06'05	1°20'42
conjunction	-820 Nov 14 j 01:36	14°M.42'50	1°37'52	min. Earth dist.	-812 May 31 j 20:24	1°Z06'09	29.23184 AU
minimum elong	-820 Nov 14 j 01:36	14°M.42'50	1°37'52		-812 Jul 17 j 22:08	30°RM	
max. Earth dist.	-820 Nov 13 j 20:59	14°M.42'24	31.28451 AU	direct	-812 Aug 20 j 02:21	29°M.42'48	
	-820 Nov 21 j 15:33	15°M			-812 Sep 21 j 08:26	0°Z	
retrograde	-819 Feb 25 j 07:22	17°M.11'17					
opposition	-819 May 16 j 02:45	15°M.48'36	1°43'13	conjunction	-812 Dec 01 j 02:49	2°Z10'45	1°13'49
min. Earth dist.	-819 May 16 j 07:17	15°M.48'18	29.28351 AU	minimum elong	-812 Dec 01 j 02:50	2°Z10'45	1°13'49
	-819 Jun 17 j 03:46	15°RM		max. Earth dist.	-812 Dec 01 j 03:10	2°Z10'47	31.22607 AU
direct	-819 Aug 04 j 19:13	14°M.25'04		retrograde	-811 Mar 15 j 04:10	4°Z40'20	
	-819 Sep 20 j 07:25	15°M		opposition	-811 Jun 03 j 10:09	3°Z17'07	1°16'59
				min. Earth dist.	-811 Jun 03 j 08:44	3°Z17'13	29.22140 AU
conjunction	-819 Nov 16 j 10:30	16°M.53'32	1°35'19	direct	-811 Aug 22 j 12:39	1°Z53'50	
minimum elong	-819 Nov 16 j 10:30	16°M.53'32	1°35'18				
max. Earth dist.	-819 Nov 16 j 05:41	16°M.53'05	31.28080 AU	conjunction	-811 Dec 03 j 12:03	4°Z21'43	1°10'17
retrograde	-818 Feb 27 j 19:31	19°M.22'08		minimum elong	-811 Dec 03 j 12:04	4°Z21'43	1°10'16
opposition	-818 May 18 j 15:29	17°M.59'26	1°40'24	max. Earth dist.	-811 Dec 03 j 14:29	4°Z21'57	31.21586 AU
min. Earth dist.	-818 May 18 j 18:51	17°M.59'13	29.27957 AU	retrograde	-810 Mar 17 j 14:24	6°Z51'27	
direct	-818 Aug 07 j 05:57	16°M.35'59		opposition	-810 Jun 05 j 23:03	5°Z28'09	1°13'09
				min. Earth dist.	-810 Jun 05 j 20:25	5°Z28'19	29.21146 AU
conjunction	-818 Nov 18 j 19:39	19°M.04'24	1°32'37	direct	-810 Aug 25 j 01:58	4°Z04'53	
minimum elong	-818 Nov 18 j 19:39	19°M.04'24	1°32'37				
max. Earth dist.	-818 Nov 18 j 16:31	19°M.04'06	31.27646 AU	conjunction	-810 Dec 05 j 21:08	6°Z32'44	1°06'39
retrograde	-817 Mar 02 j 05:21	21°M.33'09		minimum elong	-810 Dec 05 j 21:08	6°Z32'44	1°06'38
opposition	-817 May 21 j 04:21	20°M.10'25	1°37'27	max. Earth dist.	-810 Dec 05 j 23:36	6°Z32'58	31.20644 AU
min. Earth dist.	-817 May 21 j 07:45	20°M.10'12	29.27472 AU	retrograde	-809 Mar 20 j 03:11	9°Z02'37	
direct	-817 Aug 09 j 17:45	18°M.47'02		opposition	-809 Jun 08 j 11:55	7°Z39'15	1°09'13
				min. Earth dist.	-809 Jun 08 j 07:47	7°Z39'32	29.20248 AU
conjunction	-817 Nov 21 j 04:47	21°M.15'23	1°29'48	direct	-809 Aug 27 j 12:58	6°Z16'02	
minimum elong	-817 Nov 21 j 04:48	21°M.15'23	1°29'47				
max. Earth dist.	-817 Nov 21 j 01:40	21°M.15'05	31.27123 AU	conjunction	-809 Dec 08 j 06:27	8°Z43'51	1°02'55
retrograde	-816 Mar 03 j 17:00	23°M.44'18		minimum elong	-809 Dec 08 j 06:27	8°Z43'51	1°02'54
opposition	-816 May 22 j 17:17	22°M.21'31	1°34'22	max. Earth dist.	-809 Dec 08 j 10:53	8°Z44'16	31.19789 AU
min. Earth dist.	-816 May 22 j 19:06	22°M.21'24	29.26882 AU	retrograde	-808 Mar 21 j 13:25	11°Z13'55	
direct	-816 Aug 11 j 04:24	20°M.58'11		opposition	-808 Jun 10 j 00:58	9°Z50'31	1°05'10
				min. Earth dist.	-808 Jun 09 j 20:23	9°Z50'49	29.19429 AU
conjunction	-816 Nov 22 j 13:59	23°M.26'28	1°26'50	direct	-808 Aug 29 j 00:38	8°Z27'22	
minimum elong	-816 Nov 22 j 13:59	23°M.26'28	1°26'50				
max. Earth dist.	-816 Nov 22 j 11:53	23°M.26'16	31.26459 AU	conjunction	-808 Dec 09 j 15:37	10°Z55'08	0°59'05
retrograde	-815 Mar 06 j 04:00	25°M.55'32		minimum elong	-808 Dec 09 j 15:37	10°Z55'08	0°59'05
opposition	-815 May 25 j 06:24	24°M.32'41	1°31'08	max. Earth dist.	-808 Dec 09 j 20:35	10°Z55'36	31.19017 AU
min. Earth dist.	-815 May 25 j 08:37	24°M.32'32	29.26144 AU	retrograde	-807 Mar 24 j 01:11	13°Z25'23	
direct	-815 Aug 13 j 14:37	23°M.09'23		opposition	-807 Jun 12 j 13:54	12°Z01'58	1°01'01
				min. Earth dist.	-807 Jun 12 j 07:28	12°Z02'24	29.18672 AU
conjunction	-815 Nov 24 j 23:19	25°M.37'35	1°23'45	direct	-807 Aug 31 j 11:07	10°Z38'52	
minimum elong	-815 Nov 24 j 23:19	25°M.37'35	1°23'44				
max. Earth dist.	-815 Nov 24 j 21:44	25°M.37'26	31.25657 AU	conjunction	-807 Dec 12 j 01:04	13°Z06'38	0°55'10
retrograde	-814 Mar 08 j 15:56	28°M.06'47		minimum elong	-807 Dec 12 j 01:04	13°Z06'38	0°55'09
opposition	-814 May 27 j 19:10	26°M.43'52	1°27'47	max. Earth dist.	-807 Dec 12 j 07:11	13°Z07'13	31.18268 AU
min. Earth dist.	-814 May 27 j 19:43	26°M.43'50	29.25257 AU	retrograde	-806 Mar 26 j 12:25	15°Z37'05	
direct	-814 Aug 16 j 02:09	25°M.20'34		opposition	-806 Jun 15 j 02:51	14°Z13'37	0°56'47
				min. Earth dist.	-806 Jun 14 j 20:38	14°Z14'03	29.17924 AU
conjunction	-814 Nov 27 j 08:34	27°M.48'42	1°20'33	direct	-806 Sep 02 j 20:34	12°Z50'36	
minimum elong	-814 Nov 27 j 08:34	27°M.48'42	1°20'33				

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 7

Attention, astronomical year style is used: The year -806 in astronomical counting style is the year 807 BCE in historical counting style.

conjunction	-806 Dec 14 j 10:33	15°♂18'21	0°51'09	conjunction	-798 Dec 31 j 16:50	2°♁55'07	0°16'54
minimum elong	-806 Dec 14 j 10:33	15°♂18'21	0°51'09	minimum elong	-798 Dec 31 j 16:51	2°♁55'07	0°16'54
max. Earth dist.	-806 Dec 14 j 17:36	15°♂19'01	31.17520 AU	max. Earth dist.	-797 Jan 01 j 05:31	2°♁56'19	31.08433 AU
retrograde	-805 Mar 29 j 01:00	17°♂48'59		retrograde	-797 Apr 16 j 03:25	5°♁26'55	
opposition	-805 Jun 17 j 15:52	16°♂25'30	0°52'28	min. Earth dist.	-797 Jul 05 j 11:51	4°♁03'35	29.07877 AU
min. Earth dist.	-805 Jun 17 j 07:48	16°♂26'03	29.17144 AU	opposition	-797 Jul 06 j 00:39	4°♁02'42	0°15'37
direct	-805 Sep 05 j 07:37	15°♂02'32		direct	-797 Sep 23 j 03:56	2°♁39'41	
conjunction	-805 Dec 16 j 19:59	17°♂30'16	0°47'04	conjunction	-796 Jan 03 j 02:44	5°♁07'06	0°12'27
minimum elong	-805 Dec 16 j 20:00	17°♂30'16	0°47'03	minimum elong	-796 Jan 03 j 02:44	5°♁07'06	0°12'26
max. Earth dist.	-805 Dec 17 j 03:17	17°♂30'57	31.16705 AU	behind sun begin	-796 Jan 02 j 22:28	5°♁06'43	
retrograde	-804 Mar 30 j 14:10	20°♂01'07		behind sun end	-796 Jan 03 j 06:59	5°♁07'29	
opposition	-804 Jun 19 j 05:09	18°♂37'35	0°48'03	max. Earth dist.	-796 Jan 03 j 16:41	5°♁08'25	31.07328 AU
min. Earth dist.	-804 Jun 18 j 21:21	18°♂38'06	29.16291 AU	retrograde	-796 Apr 17 j 15:34	7°♁39'03	
direct	-804 Sep 06 j 17:58	17°♂14'39		opposition	-796 Jul 07 j 13:35	6°♁14'47	0°10'50
conjunction	-804 Dec 18 j 05:49	19°♂42'23	0°42'55	min. Earth dist.	-796 Jul 06 j 22:41	6°♁15'48	29.06825 AU
minimum elong	-804 Dec 18 j 05:49	19°♂42'23	0°42'55	direct	-796 Sep 24 j 15:18	4°♁51'45	
max. Earth dist.	-804 Dec 18 j 14:32	19°♂43'12	31.15801 AU	conjunction	-795 Jan 04 j 12:44	7°♁19'11	0°07'59
retrograde	-803 Apr 02 j 03:04	22°♂13'23		minimum elong	-795 Jan 04 j 12:44	7°♁19'11	0°07'59
opposition	-803 Jun 21 j 18:11	20°♂49'48	0°43'34	behind sun begin	-795 Jan 04 j 06:59	7°♁18'39	
min. Earth dist.	-803 Jun 21 j 09:09	20°♂50'24	29.15317 AU	behind sun end	-795 Jan 04 j 18:30	7°♁19'42	
direct	-803 Sep 09 j 05:45	19°♂26'53		max. Earth dist.	-795 Jan 05 j 03:02	7°♁20'31	31.06328 AU
conjunction	-803 Dec 20 j 15:33	21°♂54'35	0°38'42	retrograde	-795 Apr 20 j 04:08	9°♁51'18	
minimum elong	-803 Dec 20 j 15:34	21°♂54'35	0°38'41	min. Earth dist.	-795 Jul 09 j 11:39	8°♁27'59	29.05885 AU
max. Earth dist.	-803 Dec 20 j 23:48	21°♂55'22	31.14761 AU	opposition	-795 Jul 10 j 02:30	8°♁26'58	0°06'02
retrograde	-802 Apr 04 j 16:07	24°♂25'45		direct	-795 Sep 27 j 00:47	7°♁03'59	
opposition	-802 Jun 24 j 07:24	23°♂02'05	0°39'02	conjunction	-794 Jan 06 j 22:57	9°♁31'25	0°03'30
min. Earth dist.	-802 Jun 23 j 22:17	23°♂02'42	29.14209 AU	minimum elong	-794 Jan 06 j 22:58	9°♁31'25	0°03'29
direct	-802 Sep 11 j 16:00	21°♂39'10		behind sun begin	-794 Jan 06 j 16:36	9°♁30'50	
conjunction	-802 Dec 23 j 01:26	24°♂06'50	0°34'25	behind sun end	-794 Jan 07 j 05:20	9°♁32'00	
minimum elong	-802 Dec 23 j 01:26	24°♂06'50	0°34'25	max. Earth dist.	-794 Jan 07 j 15:02	9°♁32'56	31.05433 AU
max. Earth dist.	-802 Dec 23 j 11:15	24°♂07'46	31.13581 AU	retrograde	-794 Apr 22 j 16:47	12°♁03'42	
retrograde	-801 Apr 07 j 04:02	26°♂38'08		opposition	-794 Jul 12 j 15:22	10°♁39'21	0°01'12
opposition	-801 Jun 26 j 20:33	25°♂14'22	0°34'26	min. Earth dist.	-794 Jul 11 j 23:01	10°♁40'28	29.05016 AU
min. Earth dist.	-801 Jun 26 j 10:43	25°♂15'01	29.12960 AU	direct	-794 Sep 29 j 11:52	9°♁16'23	
direct	-801 Sep 14 j 05:51	23°♂51'26		desc. node	-794 Oct 12 j 10:11	9°♁19'15	
conjunction	-801 Dec 25 j 11:13	26°♂19'02	0°30'06	conjunction	-793 Jan 09 j 09:02	11°♁43'52	0°-1'-7
minimum elong	-801 Dec 25 j 11:13	26°♂19'02	0°30'05	minimum elong	-793 Jan 09 j 09:01	11°♁43'52	0°01'08
max. Earth dist.	-801 Dec 25 j 20:41	26°♂19'56	31.12300 AU	behind sun begin	-793 Jan 09 j 02:37	11°♁43'17	
retrograde	-800 Apr 08 j 17:58	28°♂50'27		behind sun end	-793 Jan 09 j 15:26	11°♁44'22	
opposition	-800 Jun 28 j 09:40	27°♂26'34	0°29'47	max. Earth dist.	-793 Jan 10 j 00:56	11°♁45'22	31.04591 AU
min. Earth dist.	-800 Jun 27 j 22:49	27°♂27'18	29.11649 AU	retrograde	-793 Apr 25 j 06:44	14°♁16'21	
direct	-800 Sep 15 j 17:34	26°♂03'36		min. Earth dist.	-793 Jul 14 j 11:51	12°♁53'05	29.04197 AU
conjunction	-800 Dec 26 j 21:04	28°♂31'09	0°25'44	opposition	-793 Jul 15 j 04:26	12°♁51'57	0°-3'-37
minimum elong	-800 Dec 26 j 21:04	28°♂31'09	0°25'43	direct	-793 Oct 01 j 21:29	11°♁29'03	
max. Earth dist.	-800 Dec 27 j 08:10	28°♂32'11	31.10968 AU	conjunction	-792 Jan 11 j 19:31	13°♁56'33	0°-5'-40
retrograde	-799 Feb 06 j 14:10	0°♁		minimum elong	-792 Jan 11 j 19:31	13°♁56'33	0°05'42
opposition	-799 Apr 11 j 04:12	1°♁02'41		behind sun begin	-792 Jan 11 j 13:21	13°♁56'00	
min. Earth dist.	-799 Jun 17 j 17:02	30°♁♂		behind sun end	-792 Jan 12 j 01:41	13°♁57'07	
direct	-799 Jun 30 j 22:46	29°♂38'40	0°25'06	max. Earth dist.	-792 Jan 12 j 13:10	13°♁58'13	31.03769 AU
conjunction	-799 Jun 30 j 11:44	29°♂39'25	29.10317 AU	retrograde	-792 Apr 26 j 19:57	16°♁29'13	
retrograde	-799 Sep 18 j 05:46	28°♂15'40		opposition	-792 Jul 16 j 17:24	15°♁04'48	0°-8'-26
minimum elong	-799 Dec 10 j 01:30	0°♁		min. Earth dist.	-792 Jul 16 j 00:11	15°♁05'59	29.03364 AU
conjunction	-799 Dec 29 j 06:56	0°♁43'09	0°21'20	direct	-792 Oct 03 j 10:11	13°♁41'56	
minimum elong	-799 Dec 29 j 06:56	0°♁43'09	0°21'19	conjunction	-791 Jan 13 j 06:02	16°♁09'29	0°-10'-9
max. Earth dist.	-799 Dec 29 j 18:29	0°♁44'15	31.09664 AU	minimum elong	-791 Jan 13 j 06:02	16°♁09'29	0°10'11
retrograde	-798 Apr 13 j 16:04	3°♁14'48		behind sun begin	-791 Jan 13 j 00:52	16°♁09'01	
opposition	-798 Jul 03 j 11:34	1°♁50'42	0°20'23	behind sun end	-791 Jan 13 j 11:11	16°♁09'57	
min. Earth dist.	-798 Jul 02 j 22:47	1°♁51'34	29.09048 AU	max. Earth dist.	-791 Jan 13 j 23:10	16°♁11'06	31.02920 AU
direct	-798 Sep 20 j 17:24	0°♁27'40		retrograde	-791 Apr 29 j 11:06	18°♁42'19	
conjunction				opposition	-791 Jul 19 j 06:25	17°♁17'53	0°-13'-16
minimum elong				min. Earth dist.	-791 Jul 18 j 12:31	17°♁19'06	29.02484 AU

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 8

Attention, astronomical year style is used: The year -791 in astronomical counting style is the year 792 BCE in historical counting style.

direct	-791 Oct 05 j 21:15	15°☾55'02		opposition	-783 Aug 06 j 13:08	5°☾04'58	0°-50'-34
				min. Earth dist.	-783 Aug 05 j 15:39	5°☾06'27	28.93995 AU
conjunction	-790 Jan 15 j 16:50	18°☾22'38	0°-14'-39	direct	-783 Oct 23 j 15:09	3°☾41'57	
minimum elong	-790 Jan 15 j 16:50	18°☾22'38	0°14'41				
behind sun begin	-790 Jan 15 j 14:02	18°☾22'23		conjunction	-782 Feb 02 j 08:53	6°☾09'40	0°-49'-20
behind sun end	-790 Jan 15 j 19:38	18°☾22'53		minimum elong	-782 Feb 02 j 08:53	6°☾09'40	0°49'22
max. Earth dist.	-790 Jan 16 j 11:02	18°☾24'21	31.01978 AU	max. Earth dist.	-782 Feb 03 j 06:49	6°☾11'45	30.93583 AU
retrograde	-790 May 01 j 22:43	20°☾55'38		retrograde	-782 May 20 j 06:16	8°☾43'37	
opposition	-790 Jul 21 j 19:21	19°☾31'09	0°-18'-4	min. Earth dist.	-782 Aug 08 j 03:29	7°☾20'08	28.93289 AU
min. Earth dist.	-790 Jul 21 j 01:46	19°☾32'21	29.01492 AU	opposition	-782 Aug 09 j 01:44	7°☾18'36	0°-54'-59
direct	-790 Oct 08 j 09:05	18°☾08'19		direct	-782 Oct 26 j 01:31	5°☾55'35	
conjunction	-789 Jan 18 j 03:41	20°☾35'56	0°-19'-7	conjunction	-781 Feb 04 j 20:21	8°☾23'21	0°-53'-26
minimum elong	-789 Jan 18 j 03:41	20°☾35'56	0°19'08	minimum elong	-781 Feb 04 j 20:21	8°☾23'21	0°53'27
max. Earth dist.	-789 Jan 18 j 21:48	20°☾37'39	31.00942 AU	max. Earth dist.	-781 Feb 05 j 19:36	8°☾25'33	30.92913 AU
retrograde	-789 May 04 j 12:23	23°☾09'04		retrograde	-781 May 22 j 18:57	10°☾57'26	
opposition	-789 Jul 24 j 08:22	21°☾44'32	0°-22'-50	opposition	-781 Aug 11 j 14:29	9°☾32'23	0°-59'-19
min. Earth dist.	-789 Jul 23 j 13:38	21°☾45'49	29.00401 AU	min. Earth dist.	-781 Aug 10 j 16:20	9°☾33'55	28.92662 AU
direct	-789 Oct 10 j 21:14	20°☾21'41		direct	-781 Oct 28 j 13:03	8°☾09'24	
conjunction	-788 Jan 20 j 14:29	22°☾49'18	0°-23'-34	conjunction	-780 Feb 07 j 07:52	10°☾37'14	0°-57'-26
minimum elong	-788 Jan 20 j 14:29	22°☾49'18	0°23'36	minimum elong	-780 Feb 07 j 07:51	10°☾37'14	0°57'28
max. Earth dist.	-788 Jan 21 j 09:03	22°☾51'04	30.99794 AU	max. Earth dist.	-780 Feb 08 j 07:10	10°☾39'26	30.92322 AU
retrograde	-788 May 06 j 00:52	25°☾22'34		retrograde	-780 May 24 j 10:22	13°☾11'25	
opposition	-788 Jul 25 j 21:27	23°☾57'57	0°-27'-35	min. Earth dist.	-780 Aug 12 j 04:01	11°☾47'58	28.92085 AU
min. Earth dist.	-788 Jul 25 j 03:23	23°☾59'11	28.99220 AU	opposition	-780 Aug 13 j 03:08	11°☾46'22	-1°-3'-33
direct	-788 Oct 12 j 08:25	22°☾35'04		direct	-780 Oct 30 j 01:27	10°☾23'24	
conjunction	-787 Jan 22 j 01:29	25°☾02'41	0°-27'-59	conjunction	-779 Feb 08 j 19:41	12°☾51'18	-1°-1'-22
minimum elong	-787 Jan 22 j 01:29	25°☾02'41	0°28'00	minimum elong	-779 Feb 08 j 19:41	12°☾51'18	1°01'23
max. Earth dist.	-787 Jan 22 j 20:49	25°☾04'31	30.98598 AU	max. Earth dist.	-779 Feb 09 j 19:16	12°☾53'32	30.91727 AU
retrograde	-787 May 08 j 12:45	27°☾36'03			-779 Apr 16 j 21:33	15°☾	
opposition	-787 Jul 28 j 10:06	26°☾11'21	0°-32'-17	retrograde	-779 May 26 j 23:36	15°☾25'37	
min. Earth dist.	-787 Jul 27 j 14:35	26°☾12'41	28.98015 AU		-779 Jul 06 j 22:11	15°☾	
direct	-787 Oct 14 j 20:21	24°☾48'25		opposition	-779 Aug 15 j 15:46	14°☾00'33	-1°-7'-43
conjunction	-786 Jan 24 j 12:24	27°☾16'02	0°-32'-21	min. Earth dist.	-779 Aug 14 j 17:38	14°☾02'05	28.91486 AU
minimum elong	-786 Jan 24 j 12:24	27°☾16'02	0°32'23	direct	-779 Nov 01 j 12:41	12°☾37'35	
max. Earth dist.	-786 Jan 25 j 07:37	27°☾17'51	30.97394 AU		-778 Feb 08 j 21:02	15°☾	
retrograde	-786 May 11 j 00:35	29°☾49'31		conjunction	-778 Feb 11 j 07:43	15°☾05'34	-1°-5'-12
opposition	-786 Jul 30 j 23:00	28°☾24'43	0°-36'-57	minimum elong	-778 Feb 11 j 07:43	15°☾05'34	1°05'14
min. Earth dist.	-786 Jul 30 j 03:51	28°☾26'02	28.96849 AU	max. Earth dist.	-778 Feb 12 j 07:37	15°☾07'49	30.91100 AU
direct	-786 Oct 17 j 06:08	27°☾01'45		retrograde	-778 May 29 j 12:50	17°☾39'59	
conjunction	-785 Jan 26 j 23:22	29°☾29'22	0°-36'-41	min. Earth dist.	-778 Aug 17 j 05:15	16°☾16'31	28.90818 AU
minimum elong	-785 Jan 26 j 23:21	29°☾29'22	0°36'42	opposition	-778 Aug 18 j 04:23	16°☾14'54	-1°-11'-46
max. Earth dist.	-785 Jan 27 j 20:15	29°☾31'21	30.96263 AU		-778 Oct 13 j 03:22	15°☾	
	-785 Feb 09 j 12:23	0°☾		direct	-778 Nov 04 j 00:49	14°☾51'56	
retrograde	-785 May 13 j 12:42	2°☾02'58			-778 Nov 25 j 11:37	15°☾	
opposition	-785 Aug 02 j 11:44	0°☾38'05	0°-41'-33	conjunction	-777 Feb 13 j 19:39	17°☾19'57	-1°-8'-57
min. Earth dist.	-785 Aug 01 j 15:07	0°☾39'30	28.95769 AU	minimum elong	-777 Feb 13 j 19:38	17°☾19'57	1°08'57
	-785 Aug 26 j 09:50	30°☾☾		max. Earth dist.	-777 Feb 14 j 18:49	17°☾22'09	30.90373 AU
direct	-785 Oct 19 j 17:06	29°☾15'05		retrograde	-777 Jun 01 j 01:38	19°☾54'29	
	-785 Dec 10 j 14:53	0°☾		opposition	-777 Aug 20 j 17:13	18°☾29'22	-1°-15'-43
conjunction	-784 Jan 29 j 10:23	1°☾42'43	0°-40'-58	min. Earth dist.	-777 Aug 19 j 19:06	18°☾30'54	28.90048 AU
minimum elong	-784 Jan 29 j 10:23	1°☾42'43	0°41'00	direct	-777 Nov 06 j 11:08	17°☾06'23	
max. Earth dist.	-784 Jan 30 j 06:59	1°☾44'40	30.95242 AU	conjunction	-776 Feb 16 j 07:59	19°☾34'26	-1°-12'-35
retrograde	-784 May 15 j 02:32	4°☾16'26		minimum elong	-776 Feb 16 j 07:58	19°☾34'26	1°12'37
min. Earth dist.	-784 Aug 03 j 03:45	2°☾52'55	28.94825 AU	max. Earth dist.	-776 Feb 17 j 07:59	19°☾36'43	30.89548 AU
opposition	-784 Aug 04 j 00:28	2°☾51'29	0°-46'-6	retrograde	-776 Jun 02 j 14:23	22°☾09'07	
direct	-784 Oct 21 j 02:57	1°☾28'28		min. Earth dist.	-776 Aug 21 j 06:56	20°☾45'27	28.89173 AU
conjunction	-783 Jan 30 j 21:40	3°☾56'08	0°-45'-11	opposition	-776 Aug 22 j 05:42	20°☾43'52	-1°-19'-33
minimum elong	-783 Jan 30 j 21:40	3°☾56'08	0°45'12	direct	-776 Nov 07 j 22:49	19°☾20'49	
max. Earth dist.	-783 Jan 31 j 20:00	3°☾58'15	30.94351 AU	conjunction	-775 Feb 17 j 20:11	21°☾48'55	-1°-16'-7
retrograde	-783 May 17 j 15:32	6°☾29'58		minimum elong	-775 Feb 17 j 20:11	21°☾48'55	1°16'08

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 9

Attention, astronomical year style is used: The year -775 in astronomical counting style is the year 776 BCE in historical counting style.

max. Earth dist.	-775 Feb 18 j 19:07	21°≈51'05	30.88634 AU	max. Earth dist.	-767 Mar 09 j 01:56	9°≈48'06	30.83508 AU
retrograde	-775 Jun 05 j 03:38	24°≈23'34		retrograde	-767 Jun 23 j 16:42	12°≈20'49	
opposition	-775 Aug 24 j 18:18	22°≈58'21	-1°-23'-15	opposition	-767 Sep 11 j 19:57	10°≈55'27	-1°-48'00
min. Earth dist.	-775 Aug 23 j 20:10	22°≈59'53	28.88242 AU	min. Earth dist.	-767 Sep 10 j 20:53	10°≈57'04	28.83479 AU
direct	-775 Nov 10 j 09:10	21°≈35'15		direct	-767 Nov 28 j 05:58	9°≈32'10	
conjunction	-774 Feb 20 j 08:32	24°≈03'23	-1°-19'-31	conjunction	-766 Mar 10 j 13:53	12°≈00'56	-1°-42'-7
minimum elong	-774 Feb 20 j 08:32	24°≈03'23	1°19'34	minimum elong	-766 Mar 10 j 13:52	12°≈00'56	1°42'09
max. Earth dist.	-774 Feb 21 j 08:38	24°≈05'39	30.87681 AU	max. Earth dist.	-766 Mar 11 j 13:39	12°≈03'11	30.83210 AU
retrograde	-774 Jun 07 j 15:45	26°≈38'04		retrograde	-766 Jun 26 j 05:24	14°≈36'05	
min. Earth dist.	-774 Aug 26 j 08:16	25°≈14'20	28.87297 AU	min. Earth dist.	-766 Sep 13 j 10:03	13°≈12'16	28.83175 AU
opposition	-774 Aug 27 j 06:38	25°≈12'47	-1°-26'-51	opposition	-766 Sep 14 j 08:08	13°≈10'44	-1°-50'-24
direct	-774 Nov 12 j 21:19	23°≈49'37		direct	-766 Nov 30 j 16:15	11°≈47'26	
conjunction	-773 Feb 22 j 20:48	26°≈17'48	-1°-22'-49	conjunction	-765 Mar 13 j 03:18	14°≈16'17	-1°-44'-17
minimum elong	-773 Feb 22 j 20:48	26°≈17'48	1°22'50	minimum elong	-765 Mar 13 j 03:18	14°≈16'17	1°44'18
max. Earth dist.	-773 Feb 23 j 20:05	26°≈20'00	30.86765 AU	max. Earth dist.	-765 Mar 14 j 03:44	14°≈18'36	30.82867 AU
retrograde	-773 Jun 10 j 06:09	28°≈52'33		retrograde	-765 Jun 28 j 17:18	16°≈51'28	
opposition	-773 Aug 29 j 18:59	27°≈27'12	-1°-30'-18	opposition	-765 Sep 16 j 20:12	15°≈26'06	-1°-52'-38
min. Earth dist.	-773 Aug 28 j 20:16	27°≈28'46	28.86429 AU	min. Earth dist.	-765 Sep 15 j 22:23	15°≈27'38	28.82792 AU
direct	-773 Nov 15 j 07:40	26°≈03'58		direct	-765 Dec 03 j 03:52	14°≈02'47	
conjunction	-772 Feb 25 j 09:14	28°≈32'13	-1°-25'-59	conjunction	-764 Mar 14 j 16:40	16°≈31'43	-1°-46'-18
minimum elong	-772 Feb 25 j 09:14	28°≈32'13	1°26'01	minimum elong	-764 Mar 14 j 16:40	16°≈31'43	1°46'19
max. Earth dist.	-772 Feb 26 j 09:32	28°≈34'30	30.85927 AU	max. Earth dist.	-764 Mar 15 j 15:28	16°≈33'51	30.82442 AU
	-772 Apr 06 j 13:04	0°≈		retrograde	-764 Jun 30 j 07:50	19°≈06'53	
retrograde	-772 Jun 11 j 18:51	1°≈07'01		min. Earth dist.	-764 Sep 17 j 10:53	17°≈43'00	28.82325 AU
	-772 Aug 20 j 05:40	30°≈		opposition	-764 Sep 18 j 08:18	17°≈41'30	-1°-54'-42
min. Earth dist.	-772 Aug 30 j 08:53	29°≈43'11	28.85649 AU	direct	-764 Dec 04 j 14:04	16°≈18'06	
opposition	-772 Aug 31 j 07:18	29°≈41'37	-1°-33'-37				
direct	-772 Nov 16 j 19:29	28°≈18'22		conjunction	-763 Mar 17 j 06:16	18°≈47'06	-1°-48'-9
	-771 Feb 05 j 23:51	0°≈		minimum elong	-763 Mar 17 j 06:16	18°≈47'06	1°48'09
conjunction	-771 Feb 26 j 21:47	0°≈46'40	-1°-29'-2	max. Earth dist.	-763 Mar 18 j 05:18	18°≈49'16	30.81922 AU
minimum elong	-771 Feb 26 j 21:47	0°≈46'40	1°29'02	retrograde	-763 Jul 02 j 19:34	21°≈22'14	
max. Earth dist.	-771 Feb 27 j 21:50	0°≈48'56	30.85211 AU	opposition	-763 Sep 20 j 20:10	19°≈56'50	-1°-56'-35
retrograde	-771 Jun 14 j 10:25	3°≈21'31		min. Earth dist.	-763 Sep 19 j 23:42	19°≈58'16	28.81773 AU
opposition	-771 Sep 02 j 19:21	1°≈56'05	-1°-36'-48	direct	-763 Dec 07 j 02:18	18°≈33'21	
min. Earth dist.	-771 Sep 01 j 20:03	1°≈57'43	28.85002 AU				
direct	-771 Nov 19 j 08:05	0°≈32'48		conjunction	-762 Mar 19 j 19:44	21°≈02'24	-1°-49'-50
conjunction	-770 Mar 01 j 10:22	3°≈01'12	-1°-31'-56	minimum elong	-762 Mar 19 j 19:44	21°≈02'24	1°49'51
minimum elong	-770 Mar 01 j 10:22	3°≈01'12	1°31'57	max. Earth dist.	-762 Mar 20 j 17:49	21°≈04'28	30.81364 AU
max. Earth dist.	-770 Mar 02 j 10:46	3°≈03'30	30.84615 AU	retrograde	-762 Jul 05 j 10:13	23°≈37'29	
retrograde	-770 Jun 16 j 23:26	5°≈36'07		min. Earth dist.	-762 Sep 22 j 11:13	22°≈13'29	28.81214 AU
min. Earth dist.	-770 Sep 04 j 09:08	4°≈12'15	28.84480 AU	opposition	-762 Sep 23 j 07:59	22°≈12'01	-1°-58'-18
opposition	-770 Sep 05 j 07:38	4°≈10'41	-1°-39'-50	direct	-762 Dec 09 j 15:04	20°≈48'27	
direct	-770 Nov 21 j 19:29	2°≈47'24					
conjunction	-769 Mar 03 j 22:58	5°≈15'52	-1°-34'-42	conjunction	-761 Mar 22 j 09:07	23°≈17'33	-1°-51'-21
minimum elong	-769 Mar 03 j 22:57	5°≈15'52	1°34'42	minimum elong	-761 Mar 22 j 09:07	23°≈17'33	1°51'21
max. Earth dist.	-769 Mar 04 j 23:50	5°≈18'13	30.84160 AU	max. Earth dist.	-761 Mar 23 j 07:10	23°≈19'37	30.80807 AU
retrograde	-769 Jun 19 j 13:27	7°≈50'50		retrograde	-761 Jul 07 j 22:22	25°≈52'36	
opposition	-769 Sep 07 j 19:46	6°≈25'25	-1°-42'-43	opposition	-761 Sep 25 j 19:50	24°≈27'05	-1°-59'-49
min. Earth dist.	-769 Sep 06 j 20:10	6°≈27'04	28.84080 AU	min. Earth dist.	-761 Sep 25 j 00:19	24°≈28'27	28.80689 AU
direct	-769 Nov 24 j 07:45	5°≈02'08		direct	-761 Dec 12 j 02:43	23°≈03'26	
conjunction	-768 Mar 05 j 11:46	7°≈30'42	-1°-37'-19	conjunction	-760 Mar 23 j 22:44	25°≈32'34	-1°-52'-41
minimum elong	-768 Mar 05 j 11:45	7°≈30'42	1°37'21	minimum elong	-760 Mar 23 j 22:44	25°≈32'34	1°52'43
max. Earth dist.	-768 Mar 06 j 12:02	7°≈32'59	30.83799 AU	max. Earth dist.	-760 Mar 24 j 20:43	25°≈34'38	30.80327 AU
retrograde	-768 Jun 21 j 03:16	10°≈05'44		retrograde	-760 Jul 09 j 12:49	28°≈07'33	
min. Earth dist.	-768 Sep 08 j 09:23	8°≈41'55	28.83766 AU	min. Earth dist.	-760 Sep 26 j 11:04	26°≈43'26	28.80258 AU
opposition	-768 Sep 09 j 07:55	8°≈40'20	-1°-45'-26	opposition	-760 Sep 27 j 07:18	26°≈42'00	-2°-1'-10
direct	-768 Nov 25 j 18:10	7°≈17'03		direct	-760 Dec 13 j 15:47	25°≈18'17	
conjunction	-767 Mar 08 j 00:53	9°≈45'44	-1°-39'-48	conjunction	-759 Mar 26 j 12:18	27°≈47'29	-1°-53'-52
minimum elong	-767 Mar 08 j 00:53	9°≈45'44	1°39'49	minimum elong	-759 Mar 26 j 12:18	27°≈47'29	1°53'52
				max. Earth dist.	-759 Mar 27 j 09:28	27°≈49'28	30.79947 AU
					-759 Jun 04 j 20:13	0°≈	
				retrograde	-759 Jul 12 j 02:28	0°≈22'25	

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 10

Attention, astronomical year style is used: The year -759 in astronomical counting style is the year 760 BCE in historical counting style.

	-759 Aug 18 j 18:36	30°R☾		retrograde	-751 Jul 30 j 11:11	18°Y23'48	
opposition	-759 Sep 29 j 18:58	28°X56'51	-2°-2'-20	opposition	-751 Oct 17 j 14:13	16°Y58'37	-2°-4'-46
min. Earth dist.	-759 Sep 28 j 23:51	28°X58'12	28.79956 AU	min. Earth dist.	-751 Oct 16 j 22:38	16°Y59'43	28.80901 AU
direct	-759 Dec 16 j 03:12	27°X33'05		direct	-750 Jan 02 j 23:46	15°Y34'40	
	-758 Mar 28 j 00:56	0°Y					
conjunction	-758 Mar 29 j 01:52	0°Y02'21	-1°-54'-52	conjunction	-750 Apr 16 j 18:20	18°Y04'46	-1°-56'-26
minimum elong	-758 Mar 29 j 01:52	0°Y02'21	1°54'53	minimum elong	-750 Apr 16 j 18:20	18°Y04'46	1°56'27
max. Earth dist.	-758 Mar 29 j 23:44	0°Y04'24	30.79717 AU	max. Earth dist.	-750 Apr 17 j 10:21	18°Y06'16	30.80779 AU
retrograde	-758 Jul 14 j 15:26	2°Y37'14		retrograde	-750 Aug 02 j 00:38	20°Y39'17	
min. Earth dist.	-758 Oct 01 j 10:37	1°Y13'05	28.79799 AU	min. Earth dist.	-750 Oct 19 j 11:42	19°Y15'05	28.80927 AU
opposition	-758 Oct 02 j 06:25	1°Y11'41	-2°-3'-18	opposition	-750 Oct 20 j 01:36	19°Y14'05	-2°-4'-12
	-758 Nov 21 j 20:24	30°R☾		direct	-749 Jan 05 j 12:04	17°Y50'05	
direct	-758 Dec 18 j 15:56	29°X47'52		conjunction	-749 Apr 19 j 08:44	20°Y20'14	-1°-55'-50
	-757 Jan 14 j 01:05	0°Y		minimum elong	-749 Apr 19 j 08:44	20°Y20'14	1°55'50
conjunction	-757 Mar 31 j 15:30	2°Y17'13	-1°-55'-41	max. Earth dist.	-749 Apr 20 j 00:40	20°Y21'44	30.80806 AU
minimum elong	-757 Mar 31 j 15:30	2°Y17'13	1°55'42	retrograde	-749 Aug 04 j 13:35	22°Y54'37	
max. Earth dist.	-757 Apr 01 j 12:10	2°Y19'09	30.79641 AU	opposition	-749 Oct 22 j 12:36	21°Y29'27	-2°-3'-28
retrograde	-757 Jul 17 j 04:16	4°Y52'05		min. Earth dist.	-749 Oct 21 j 22:36	21°Y30'27	28.80949 AU
opposition	-757 Oct 04 j 17:56	3°Y26'33	-2°-4'-5	direct	-748 Jan 08 j 01:43	20°Y05'22	
min. Earth dist.	-757 Oct 03 j 22:59	3°Y27'54	28.79810 AU	conjunction	-748 Apr 20 j 23:01	22°Y35'34	-1°-55'-3
direct	-757 Dec 21 j 02:08	2°Y02'43		minimum elong	-748 Apr 20 j 23:01	22°Y35'34	1°55'04
conjunction	-756 Apr 02 j 05:24	4°Y32'10	-1°-56'-20	max. Earth dist.	-748 Apr 21 j 13:16	22°Y36'54	30.80850 AU
minimum elong	-756 Apr 02 j 05:24	4°Y32'10	1°56'22	retrograde	-748 Aug 06 j 02:40	25°Y09'50	
max. Earth dist.	-756 Apr 03 j 02:55	4°Y34'12	30.79719 AU	opposition	-748 Oct 23 j 23:43	23°Y44'40	-2°-2'-32
retrograde	-756 Jul 18 j 16:25	7°Y07'00		min. Earth dist.	-748 Oct 23 j 10:59	23°Y45'34	28.81027 AU
min. Earth dist.	-756 Oct 05 j 10:31	5°Y42'52	28.79942 AU	direct	-747 Jan 09 j 12:48	22°Y20'30	
opposition	-756 Oct 06 j 05:22	5°Y41'32	-2°-4'-41	conjunction	-747 Apr 23 j 13:23	24°Y50'46	-1°-54'-6
direct	-756 Dec 22 j 13:41	4°Y17'42		minimum elong	-747 Apr 23 j 13:23	24°Y50'46	1°54'06
conjunction	-755 Apr 04 j 19:15	6°Y47'16	-1°-56'-48	max. Earth dist.	-747 Apr 24 j 04:08	24°Y52'09	30.80964 AU
minimum elong	-755 Apr 04 j 19:15	6°Y47'16	1°56'48	retrograde	-747 Aug 08 j 15:07	27°Y24'53	
max. Earth dist.	-755 Apr 05 j 15:13	6°Y49'09	30.79910 AU	opposition	-747 Oct 26 j 10:38	25°Y59'45	-2°-1'-25
retrograde	-755 Jul 21 j 06:27	9°Y22'05		min. Earth dist.	-747 Oct 25 j 22:11	26°Y00'38	28.81186 AU
opposition	-755 Oct 08 j 16:43	7°Y56'41	-2°-5'-5	direct	-746 Jan 12 j 01:25	24°Y35'32	
min. Earth dist.	-755 Oct 07 j 22:16	7°Y57'59	28.80176 AU	conjunction	-746 Apr 26 j 03:33	27°Y05'51	-1°-52'-58
direct	-755 Dec 24 j 23:24	6°Y32'51		minimum elong	-746 Apr 26 j 03:33	27°Y05'51	1°52'59
conjunction	-754 Apr 07 j 09:20	9°Y02'32	-1°-57'-5	max. Earth dist.	-746 Apr 26 j 16:37	27°Y07'04	30.81195 AU
minimum elong	-754 Apr 07 j 09:20	9°Y02'32	1°57'07	retrograde	-746 Aug 11 j 03:45	29°Y39'50	
max. Earth dist.	-754 Apr 08 j 05:39	9°Y04'27	30.80162 AU	opposition	-746 Oct 28 j 21:33	28°Y14'43	-2°00'-7
retrograde	-754 Jul 23 j 17:56	11°Y37'20		min. Earth dist.	-746 Oct 28 j 09:29	28°Y15'35	28.81490 AU
min. Earth dist.	-754 Oct 10 j 10:45	10°Y13'15	28.80436 AU	direct	-745 Jan 14 j 11:58	26°Y50'26	
opposition	-754 Oct 11 j 04:09	10°Y12'01	-2°-5'-17	conjunction	-745 Apr 28 j 17:51	29°Y20'49	-1°-51'-40
direct	-754 Dec 27 j 10:59	8°Y48'11		minimum elong	-745 Apr 28 j 17:51	29°Y20'49	1°51'40
conjunction	-753 Apr 09 j 23:23	11°Y17'59	-1°-57'-12	max. Earth dist.	-745 Apr 29 j 07:21	29°Y22'05	30.81566 AU
minimum elong	-753 Apr 09 j 23:23	11°Y17'59	1°57'11		-745 May 16 j 09:04	0°X	
max. Earth dist.	-753 Apr 10 j 18:16	11°Y19'46	30.80424 AU	retrograde	-745 Aug 13 j 14:03	1°X54'42	
retrograde	-753 Jul 26 j 08:22	13°Y52'45		opposition	-745 Oct 31 j 08:31	0°X29'37	-1°-58'-38
opposition	-753 Oct 13 j 15:33	12°Y27'29	-2°-5'-18	min. Earth dist.	-745 Oct 30 j 21:18	0°X30'25	28.81928 AU
min. Earth dist.	-753 Oct 12 j 22:16	12°Y28'43	28.80673 AU		-745 Nov 18 j 01:56	30°R☾	
direct	-753 Dec 29 j 23:06	11°Y03'38		direct	-744 Jan 16 j 23:47	29°Y05'19	
conjunction	-752 Apr 11 j 13:46	13°Y33'34	-1°-57'-7		-744 Mar 15 j 04:33	0°X	
minimum elong	-752 Apr 11 j 13:46	13°Y33'34	1°57'08	conjunction	-744 Apr 30 j 08:10	1°X35'46	-1°-50'-11
max. Earth dist.	-752 Apr 12 j 08:04	13°Y35'17	30.80616 AU	minimum elong	-744 Apr 30 j 08:11	1°X35'46	1°50'12
retrograde	-752 Jul 27 j 20:31	16°Y08'16		max. Earth dist.	-744 Apr 30 j 20:13	1°X36'54	30.82091 AU
min. Earth dist.	-752 Oct 14 j 11:29	14°Y44'09	28.80826 AU	retrograde	-744 Aug 15 j 03:22	4°X09'31	
opposition	-752 Oct 15 j 02:56	14°Y43'03	-2°-5'-8	opposition	-744 Nov 01 j 19:13	2°X44'31	-1°-56'-58
direct	-752 Dec 31 j 10:13	13°Y19'10		min. Earth dist.	-744 Nov 01 j 07:53	2°X45'19	28.82517 AU
conjunction	-751 Apr 14 j 04:11	15°Y49'11	-1°-56'-52	direct	-743 Jan 18 j 10:56	1°X20'10	
minimum elong	-751 Apr 14 j 04:11	15°Y49'11	1°56'52	conjunction	-743 May 02 j 22:36	3°X50'43	-1°-48'-33
max. Earth dist.	-751 Apr 14 j 21:30	15°Y50'48	30.80737 AU	minimum elong	-743 May 02 j 22:36	3°X50'43	1°48'33
				max. Earth dist.	-743 May 03 j 10:32	3°X51'50	30.82740 AU

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 12

Attention, astronomical year style is used: The year -727 in astronomical counting style is the year 728 BCE in historical counting style.

minimum elong	-727 Jun 09 j 13:03	9°II45'51	1°02'19	retrograde	-719 Oct 10 j 10:01	0°☾04'10	
max. Earth dist.	-727 Jun 09 j 09:39	9°II45'33	30.94229 AU		-719 Oct 26 j 00:00	30°RII	
retrograde	-727 Sep 22 j 17:38	12°II17'02		opposition	-719 Dec 26 j 17:36	28°II40'50	0°-28'-51
opposition	-727 Dec 09 j 07:28	10°II53'18	-1°-4'-32	min. Earth dist.	-719 Dec 27 j 03:04	28°II40'10	29.01349 AU
min. Earth dist.	-727 Dec 09 j 11:27	10°II53'01	28.94717 AU	direct	-718 Mar 16 j 03:08	27°II15'33	
direct	-726 Feb 26 j 02:02	9°II28'25					
				conjunction	-718 Jun 30 j 17:00	29°II47'25	0°-24'-47
conjunction	-726 Jun 12 j 03:03	12°II00'09	0°-58'-24	minimum elong	-718 Jun 30 j 17:00	29°II47'26	0°24'47
minimum elong	-726 Jun 12 j 03:03	12°II00'09	0°58'24	max. Earth dist.	-718 Jun 30 j 05:57	29°II46'25	31.01934 AU
max. Earth dist.	-726 Jun 11 j 21:25	11°II59'38	30.95113 AU		-718 Jul 06 j 08:34	0°☾	
retrograde	-726 Sep 25 j 06:34	14°II31'09		retrograde	-718 Oct 12 j 20:53	2°☾16'55	
opposition	-726 Dec 11 j 17:51	13°II07'28	-1°00'-20	opposition	-718 Dec 29 j 03:52	0°☾53'43	0°-24'-9
min. Earth dist.	-726 Dec 11 j 22:08	13°II07'10	28.95549 AU	min. Earth dist.	-718 Dec 29 j 14:25	0°☾52'58	29.02565 AU
direct	-725 Feb 28 j 13:56	11°II42'32			-717 Feb 01 j 12:30	30°RII	
				direct	-717 Mar 18 j 15:52	29°II28'27	
conjunction	-725 Jun 14 j 17:19	14°II14'18	0°-54'-26		-717 May 02 j 00:09	0°☾	
minimum elong	-725 Jun 14 j 17:19	14°II14'18	0°54'26				
max. Earth dist.	-725 Jun 14 j 11:12	14°II13'44	30.95898 AU	conjunction	-717 Jul 03 j 06:21	2°☾00'23	0°-20'-22
retrograde	-725 Sep 27 j 15:45	16°II45'05		minimum elong	-717 Jul 03 j 06:21	2°☾00'23	0°20'23
opposition	-725 Dec 14 j 04:14	15°II21'28	0°-56'-2	max. Earth dist.	-717 Jul 02 j 17:32	1°☾59'12	31.03198 AU
min. Earth dist.	-725 Dec 14 j 10:31	15°II21'01	28.96293 AU	retrograde	-717 Oct 15 j 09:44	4°☾29'44	
direct	-724 Mar 02 j 01:02	13°II56'28		opposition	-717 Dec 31 j 13:57	3°☾06'40	0°-19'-24
				min. Earth dist.	-716 Jan 01 j 00:27	3°☾05'55	29.03849 AU
conjunction	-724 Jun 16 j 07:23	16°II28'13	0°-50'-22	direct	-716 Mar 20 j 03:34	1°☾41'26	
minimum elong	-724 Jun 16 j 07:23	16°II28'13	0°50'23				
max. Earth dist.	-724 Jun 15 j 23:46	16°II27'31	30.96626 AU	conjunction	-716 Jul 04 j 19:50	4°☾13'25	0°-15'-55
retrograde	-724 Sep 29 j 02:40	18°II58'48		minimum elong	-716 Jul 04 j 19:51	4°☾13'25	0°15'55
opposition	-724 Dec 15 j 14:30	17°II35'13	0°-51'-40	max. Earth dist.	-716 Jul 04 j 07:00	4°☾12'15	31.04479 AU
min. Earth dist.	-724 Dec 15 j 20:45	17°II34'47	28.96993 AU	retrograde	-716 Oct 16 j 19:09	6°☾42'39	
direct	-723 Mar 04 j 14:17	16°II10'09		opposition	-715 Jan 02 j 00:23	5°☾19'42	0°-14'-37
				min. Earth dist.	-715 Jan 02 j 12:41	5°☾18'50	29.05121 AU
conjunction	-723 Jun 18 j 21:11	18°II41'55	0°-46'-15	direct	-715 Mar 22 j 14:29	3°☾54'30	
minimum elong	-723 Jun 18 j 21:11	18°II41'55	0°46'16				
max. Earth dist.	-723 Jun 18 j 12:43	18°II41'08	30.97315 AU	conjunction	-715 Jul 07 j 09:00	6°☾26'32	0°-11'-26
retrograde	-723 Oct 01 j 12:42	21°II12'17		minimum elong	-715 Jul 07 j 09:00	6°☾26'32	0°11'27
opposition	-723 Dec 18 j 00:52	19°II48'44	0°-47'-13	behind sun begin	-715 Jul 07 j 04:19	6°☾26'07	
min. Earth dist.	-723 Dec 18 j 08:47	19°II48'11	28.97694 AU	behind sun end	-715 Jul 07 j 13:41	6°☾26'57	
direct	-722 Mar 07 j 01:00	18°II23'35		max. Earth dist.	-715 Jul 06 j 18:48	6°☾25'13	31.05730 AU
				retrograde	-715 Oct 19 j 06:04	8°☾55'38	
conjunction	-722 Jun 21 j 10:58	20°II55'21	0°-42'-4	opposition	-714 Jan 04 j 10:41	7°☾32'47	0°-9'-49
minimum elong	-722 Jun 21 j 10:58	20°II55'21	0°42'04	min. Earth dist.	-714 Jan 04 j 22:52	7°☾31'56	29.06330 AU
max. Earth dist.	-722 Jun 21 j 02:00	20°II54'31	30.98041 AU	direct	-714 Mar 25 j 02:56	6°☾07'35	
retrograde	-722 Oct 03 j 23:34	23°II25'31					
opposition	-722 Dec 20 j 10:56	22°II02'00	0°-42'-43	conjunction	-714 Jul 09 j 22:18	8°☾39'39	0°-6'-58
min. Earth dist.	-722 Dec 20 j 18:47	22°II01'27	28.98438 AU	minimum elong	-714 Jul 09 j 22:19	8°☾39'40	0°06'58
direct	-721 Mar 09 j 14:09	20°II36'47		behind sun begin	-714 Jul 09 j 16:13	8°☾39'07	
				behind sun end	-714 Jul 10 j 04:24	8°☾40'12	
conjunction	-721 Jun 24 j 00:36	23°II08'34	0°-37'-49	max. Earth dist.	-714 Jul 09 j 07:15	8°☾38'16	31.06884 AU
minimum elong	-721 Jun 24 j 00:36	23°II08'34	0°37'50	retrograde	-714 Oct 21 j 16:11	11°☾08'37	
max. Earth dist.	-721 Jun 23 j 14:12	23°II07'36	30.98826 AU	opposition	-713 Jan 06 j 21:02	9°☾45'51	0°-5'-1
retrograde	-721 Oct 06 j 11:02	25°II38'32		min. Earth dist.	-713 Jan 07 j 11:02	9°☾44'52	29.07442 AU
opposition	-721 Dec 22 j 21:12	24°II15'04	0°-38'-9	direct	-713 Mar 27 j 12:36	8°☾20'39	
min. Earth dist.	-721 Dec 23 j 06:07	24°II14'26	28.99281 AU				
direct	-720 Mar 11 j 01:57	22°II49'48		conjunction	-713 Jul 12 j 11:36	10°☾52'44	0°-2'-28
				minimum elong	-713 Jul 12 j 11:36	10°☾52'44	0°02'30
conjunction	-720 Jun 25 j 14:13	25°II21'36	0°-33'-31	behind sun begin	-713 Jul 12 j 05:02	10°☾52'09	
minimum elong	-720 Jun 25 j 14:13	25°II21'36	0°33'31	behind sun end	-713 Jul 12 j 18:10	10°☾53'19	
max. Earth dist.	-720 Jun 25 j 04:11	25°II20'40	30.99725 AU	max. Earth dist.	-713 Jul 11 j 19:43	10°☾51'16	31.07943 AU
retrograde	-720 Oct 07 j 21:59	27°II51'23		retrograde	-713 Oct 24 j 02:30	13°☾21'32	
opposition	-720 Dec 24 j 07:24	26°II27'59	0°-33'-32	opposition	-712 Jan 09 j 07:24	11°☾58'51	0°00'-12
min. Earth dist.	-720 Dec 24 j 16:39	26°II27'20	29.00237 AU	min. Earth dist.	-712 Jan 09 j 21:31	11°☾57'51	29.08438 AU
direct	-719 Mar 13 j 15:50	25°II02'42		asc. node	-712 Jan 26 j 11:27	11°☾30'29	
				direct	-712 Mar 29 j 01:36	10°☾33'37	
conjunction	-719 Jun 28 j 03:36	27°II34'31	0°-29'-10	max. Earth dist.	-712 Jul 13 j 07:10	13°☾04'05	31.08888 AU
minimum elong	-719 Jun 28 j 03:36	27°II34'31	0°29'11				
max. Earth dist.	-719 Jun 27 j 15:58	27°II33'27	31.00760 AU	conjunction	-712 Jul 14 j 00:38	13°☾05'42	0°02'08
	-719 Sep 24 j 20:31	0°☾		minimum elong	-712 Jul 14 j 00:37	13°☾05'42	0°02'09

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 13

Attention, astronomical year style is used: The year -712 in astronomical counting style is the year 713 BCE in historical counting style.

behind sun begin	-712 Jul 13 j 18:02	13° \mathfrak{E} 05'07		opposition	-704 Jan 26 j 18:19	29° \mathfrak{E} 36'32	0°37'29
behind sun end	-712 Jul 14 j 07:12	13° \mathfrak{E} 06'17		min. Earth dist.	-704 Jan 27 j 12:54	29° \mathfrak{E} 35'14	29.16307 AU
retrograde	-712 Oct 25 j 13:15	15° \mathfrak{E} 34'21		direct	-704 Apr 16 j 03:00	28° \mathfrak{E} 11'12	
opposition	-711 Jan 10 j 17:48	14° \mathfrak{E} 11'41	0°04'35		-704 Jul 12 j 14:11	0° Ω	
min. Earth dist.	-711 Jan 11 j 09:09	14° \mathfrak{E} 10'37	29.09351 AU	max. Earth dist.	-704 Jul 31 j 08:20	0° Ω 41'13	31.16895 AU
direct	-711 Mar 31 j 13:18	12° \mathfrak{E} 46'26					
conjunction	-711 Jul 16 j 13:37	15° \mathfrak{E} 18'30	0°06'37	conjunction	-704 Aug 01 j 04:41	0° Ω 43'06	0°37'16
minimum elong	-711 Jul 16 j 13:37	15° \mathfrak{E} 18'30	0°06'37	minimum elong	-704 Aug 01 j 04:41	0° Ω 43'06	0°37'17
behind sun begin	-711 Jul 16 j 07:29	15° \mathfrak{E} 17'57		retrograde	-704 Nov 12 j 00:36	3° Ω 10'36	
behind sun end	-711 Jul 16 j 19:46	15° \mathfrak{E} 19'02		opposition	-703 Jan 28 j 04:48	1° Ω 48'23	0°42'01
max. Earth dist.	-711 Jul 15 j 20:18	15° \mathfrak{E} 16'54	31.09767 AU	min. Earth dist.	-703 Jan 28 j 23:10	1° Ω 47'06	29.17529 AU
retrograde	-711 Oct 27 j 23:25	17° \mathfrak{E} 46'58		direct	-703 Apr 18 j 15:42	0° Ω 23'05	
opposition	-710 Jan 13 j 04:08	16° \mathfrak{E} 24'21	0°09'22	conjunction	-703 Aug 03 j 16:49	2° Ω 55'00	0°41'29
min. Earth dist.	-710 Jan 13 j 20:07	16° \mathfrak{E} 23'14	29.10200 AU	minimum elong	-703 Aug 03 j 16:49	2° Ω 55'00	0°41'29
direct	-710 Apr 03 j 03:00	14° \mathfrak{E} 59'03		max. Earth dist.	-703 Aug 02 j 19:18	2° Ω 53'00	31.18089 AU
max. Earth dist.	-710 Jul 18 j 07:18	17° \mathfrak{E} 29'19	31.10606 AU	retrograde	-703 Nov 14 j 11:04	5° Ω 22'24	
conjunction	-710 Jul 19 j 02:18	17° \mathfrak{E} 31'05	0°11'05	opposition	-702 Jan 30 j 15:22	4° Ω 00'16	0°46'29
minimum elong	-710 Jul 19 j 02:18	17° \mathfrak{E} 31'05	0°11'06	min. Earth dist.	-702 Jan 31 j 10:42	3° Ω 58'55	29.18704 AU
behind sun begin	-710 Jul 18 j 21:27	17° \mathfrak{E} 30'39		direct	-702 Apr 21 j 02:03	2° Ω 35'00	
behind sun end	-710 Jul 19 j 07:08	17° \mathfrak{E} 31'30		max. Earth dist.	-702 Aug 05 j 07:43	5° Ω 04'56	31.19205 AU
retrograde	-710 Oct 30 j 10:58	19° \mathfrak{E} 59'23		conjunction	-702 Aug 06 j 04:59	5° Ω 06'55	0°45'37
opposition	-709 Jan 15 j 14:26	18° \mathfrak{E} 36'47	0°14'08	minimum elong	-702 Aug 06 j 04:59	5° Ω 06'55	0°45'39
min. Earth dist.	-709 Jan 16 j 06:45	18° \mathfrak{E} 35'39	29.11044 AU	retrograde	-702 Nov 16 j 20:56	7° Ω 34'13	
direct	-709 Apr 05 j 14:25	17° \mathfrak{E} 11'27		opposition	-701 Feb 02 j 02:03	6° Ω 12'09	0°50'53
conjunction	-709 Jul 21 j 15:05	19° \mathfrak{E} 43'27	0°15'31	min. Earth dist.	-701 Feb 02 j 22:03	6° Ω 10'45	29.19752 AU
minimum elong	-709 Jul 21 j 15:05	19° \mathfrak{E} 43'27	0°15'31	direct	-701 Apr 23 j 14:46	4° Ω 46'55	
behind sun begin	-709 Jul 21 j 13:45	19° \mathfrak{E} 43'19		conjunction	-701 Aug 08 j 17:00	7° Ω 18'48	0°49'42
behind sun end	-709 Jul 21 j 16:25	19° \mathfrak{E} 43'34		minimum elong	-701 Aug 08 j 17:00	7° Ω 18'48	0°49'42
max. Earth dist.	-709 Jul 20 j 20:40	19° \mathfrak{E} 41'45	31.11449 AU	max. Earth dist.	-701 Aug 07 j 18:02	7° Ω 16'40	31.20183 AU
retrograde	-709 Nov 01 j 21:24	22° \mathfrak{E} 11'34		retrograde	-701 Nov 19 j 08:34	9° Ω 46'01	
opposition	-708 Jan 18 j 00:46	20° \mathfrak{E} 49'00	0°18'53	opposition	-700 Feb 04 j 12:42	8° Ω 24'00	0°55'12
min. Earth dist.	-708 Jan 18 j 18:06	20° \mathfrak{E} 47'47	29.11906 AU	min. Earth dist.	-700 Feb 05 j 08:59	8° Ω 22'35	29.20674 AU
direct	-708 Apr 07 j 04:29	19° \mathfrak{E} 23'38		direct	-700 Apr 25 j 01:55	6° Ω 58'46	
max. Earth dist.	-708 Jul 22 j 07:43	21° \mathfrak{E} 53'45	31.12351 AU	max. Earth dist.	-700 Aug 09 j 06:37	9° Ω 28'33	31.21026 AU
conjunction	-708 Jul 23 j 03:33	21° \mathfrak{E} 55'35	0°19'56	conjunction	-700 Aug 10 j 05:06	9° Ω 30'38	0°53'42
minimum elong	-708 Jul 23 j 03:33	21° \mathfrak{E} 55'35	0°19'57	minimum elong	-700 Aug 10 j 05:05	9° Ω 30'38	0°53'43
retrograde	-708 Nov 03 j 09:22	24° \mathfrak{E} 23'33		retrograde	-700 Nov 20 j 18:54	11° Ω 57'45	
opposition	-707 Jan 19 j 11:07	23° \mathfrak{E} 01'01	0°23'36	opposition	-699 Feb 05 j 23:33	10° Ω 35'45	0°59'26
min. Earth dist.	-707 Jan 20 j 03:52	22° \mathfrak{E} 59'51	29.12858 AU	min. Earth dist.	-699 Feb 06 j 20:58	10° Ω 34'16	29.21454 AU
direct	-707 Apr 09 j 17:20	21° \mathfrak{E} 35'37		direct	-699 Apr 27 j 15:45	9° Ω 10'32	
conjunction	-707 Jul 25 j 15:53	24° \mathfrak{E} 07'33	0°24'20	conjunction	-699 Aug 12 j 16:42	11° Ω 42'21	0°57'38
minimum elong	-707 Jul 25 j 15:53	24° \mathfrak{E} 07'33	0°24'20	minimum elong	-699 Aug 12 j 16:42	11° Ω 42'21	0°57'37
max. Earth dist.	-707 Jul 24 j 20:38	24° \mathfrak{E} 05'47	31.13345 AU	max. Earth dist.	-699 Aug 11 j 16:42	11° Ω 40'07	31.21749 AU
retrograde	-707 Nov 05 j 18:16	26° \mathfrak{E} 35'23		retrograde	-699 Nov 23 j 06:45	14° Ω 09'22	
opposition	-706 Jan 21 j 21:36	25° \mathfrak{E} 12'54	0°28'16	opposition	-698 Feb 08 j 10:11	12° Ω 47'23	1°03'35
min. Earth dist.	-706 Jan 22 j 15:34	25° \mathfrak{E} 11'39	29.13915 AU	min. Earth dist.	-698 Feb 09 j 07:12	12° Ω 45'56	29.22127 AU
direct	-706 Apr 12 j 04:57	23° \mathfrak{E} 47'31		direct	-698 Apr 30 j 04:45	11° Ω 22'09	
max. Earth dist.	-706 Jul 27 j 08:09	26° \mathfrak{E} 17'34	31.14463 AU	max. Earth dist.	-698 Aug 14 j 04:50	13° Ω 51'44	31.22366 AU
conjunction	-706 Jul 28 j 04:11	26° \mathfrak{E} 19'25	0°28'41	conjunction	-698 Aug 15 j 04:30	13° Ω 53'56	1°01'28
minimum elong	-706 Jul 28 j 04:11	26° \mathfrak{E} 19'25	0°28'42	minimum elong	-698 Aug 15 j 04:29	13° Ω 53'56	1°01'28
retrograde	-706 Nov 08 j 04:58	28° \mathfrak{E} 47'06			-698 Sep 14 j 19:29	15° Ω	
opposition	-705 Jan 24 j 07:47	27° \mathfrak{E} 24'43	0°32'54	retrograde	-698 Nov 25 j 15:39	16° Ω 20'50	
min. Earth dist.	-705 Jan 25 j 01:06	27° \mathfrak{E} 23'30	29.15077 AU	opposition	-697 Feb 10 j 20:51	14° Ω 58'52	1°07'37
direct	-705 Apr 14 j 17:15	25° \mathfrak{E} 59'20			-697 Feb 10 j 04:26	15° \mathfrak{R} Ω	
conjunction	-705 Jul 30 j 16:32	28° \mathfrak{E} 31'15	0°33'00	min. Earth dist.	-697 Feb 11 j 19:20	14° Ω 57'18	29.22717 AU
minimum elong	-705 Jul 30 j 16:32	28° \mathfrak{E} 31'15	0°33'00	direct	-697 May 02 j 16:49	13° Ω 33'36	
max. Earth dist.	-705 Jul 29 j 20:21	28° \mathfrak{E} 29'23	31.15658 AU		-697 Jul 18 j 09:45	15° Ω	
retrograde	-705 Sep 11 j 05:32	0° Ω		conjunction	-697 Aug 17 j 15:59	16° Ω 05'19	1°05'12
	-705 Nov 10 j 15:01	0° Ω 58'50		minimum elong	-697 Aug 17 j 15:59	16° Ω 05'19	1°05'12
	-704 Jan 12 j 12:42	30° \mathfrak{R} \mathfrak{E}		max. Earth dist.	-697 Aug 16 j 15:37	16° Ω 03'03	31.22938 AU

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 14

Attention, astronomical year style is used: The year -697 in astronomical counting style is the year 698 BCE in historical counting style.

retrograde	-697 Nov 28 j 02:05	18°Ω32'07		retrograde	-689 Dec 15 j 10:07	6°♄00'00	
opposition	-696 Feb 13 j 07:31	17°Ω10'09	1°11'34	opposition	-688 Mar 01 j 22:59	4°♄38'18	1°38'53
min. Earth dist.	-696 Feb 14 j 05:15	17°Ω08'39	29.23280 AU	min. Earth dist.	-688 Mar 02 j 21:56	4°♄36'44	29.29388 AU
direct	-696 May 04 j 05:55	15°Ω44'53		direct	-688 May 22 j 01:58	3°♄13'19	
max. Earth dist.	-696 Aug 18 j 03:02	18°Ω14'17	31.23497 AU				
				conjunction	-688 Sep 05 j 18:39	5°♄44'35	1°33'56
conjunction	-696 Aug 19 j 03:15	18°Ω16'32	1°08'50	minimum elong	-688 Sep 05 j 18:39	5°♄44'35	1°33'57
minimum elong	-696 Aug 19 j 03:15	18°Ω16'32	1°08'51	max. Earth dist.	-688 Sep 04 j 18:28	5°♄42'20	31.29564 AU
retrograde	-696 Nov 29 j 11:43	20°Ω43'14		retrograde	-688 Dec 16 j 21:12	8°♄10'59	
opposition	-695 Feb 14 j 18:24	19°Ω21'17	1°15'24	opposition	-687 Mar 04 j 10:11	6°♄49'17	1°41'42
min. Earth dist.	-695 Feb 15 j 16:57	19°Ω19'43	29.23878 AU	min. Earth dist.	-687 Mar 05 j 08:19	6°♄47'46	29.29916 AU
direct	-695 May 06 j 16:19	17°Ω56'00		direct	-687 May 24 j 15:45	5°♄24'19	
				max. Earth dist.	-687 Sep 07 j 05:07	7°♄53'15	31.30015 AU
conjunction	-695 Aug 21 j 14:26	20°Ω27'35	1°12'23				
minimum elong	-695 Aug 21 j 14:25	20°Ω27'35	1°12'22	conjunction	-687 Sep 08 j 05:21	7°♄55'31	1°36'31
max. Earth dist.	-695 Aug 20 j 14:35	20°Ω25'22	31.24127 AU	minimum elong	-687 Sep 08 j 05:21	7°♄55'31	1°36'30
retrograde	-695 Dec 01 j 20:11	22°Ω54'13		retrograde	-687 Dec 19 j 07:14	10°♄21'52	
opposition	-694 Feb 17 j 05:02	21°Ω32'17	1°19'08	opposition	-686 Mar 06 j 21:23	9°♄00'09	1°44'23
min. Earth dist.	-694 Feb 18 j 02:50	21°Ω30'46	29.24550 AU	min. Earth dist.	-686 Mar 07 j 20:30	8°♄58'34	29.30319 AU
direct	-694 May 09 j 05:10	20°Ω07'01		direct	-686 May 27 j 03:07	7°♄35'11	
max. Earth dist.	-694 Aug 23 j 01:06	22°Ω36'16	31.24845 AU				
				conjunction	-686 Sep 10 j 15:57	10°♄06'18	1°38'56
conjunction	-694 Aug 24 j 01:30	22°Ω38'33	1°15'49	minimum elong	-686 Sep 10 j 15:57	10°♄06'17	1°38'57
minimum elong	-694 Aug 24 j 01:29	22°Ω38'33	1°15'50	max. Earth dist.	-686 Sep 09 j 15:57	10°♄04'03	31.30357 AU
retrograde	-694 Dec 04 j 05:52	25°Ω05'07		retrograde	-686 Dec 21 j 15:38	12°♄32'35	
opposition	-693 Feb 19 j 15:53	23°Ω43'12	1°22'44	opposition	-685 Mar 09 j 08:38	11°♄10'51	1°46'54
min. Earth dist.	-693 Feb 20 j 13:52	23°Ω41'41	29.25330 AU	min. Earth dist.	-685 Mar 10 j 07:10	11°♄09'18	29.30600 AU
direct	-693 May 11 j 14:55	22°Ω17'58		direct	-685 May 29 j 16:24	9°♄45'53	
				max. Earth dist.	-685 Sep 12 j 01:41	12°♄14'35	31.30595 AU
conjunction	-693 Aug 26 j 12:34	24°Ω49'28	1°19'08				
minimum elong	-693 Aug 26 j 12:34	24°Ω49'28	1°19'08	conjunction	-685 Sep 13 j 02:17	12°♄16'53	1°41'14
max. Earth dist.	-693 Aug 25 j 13:15	24°Ω47'18	31.25664 AU	minimum elong	-685 Sep 13 j 02:17	12°♄16'53	1°41'13
retrograde	-693 Dec 06 j 14:59	27°Ω16'00		retrograde	-685 Dec 24 j 01:07	14°♄43'08	
opposition	-692 Feb 22 j 02:45	25°Ω54'09	1°26'14	opposition	-684 Mar 10 j 19:56	13°♄21'22	1°49'16
min. Earth dist.	-692 Feb 23 j 00:45	25°Ω52'38	29.26178 AU	min. Earth dist.	-684 Mar 11 j 18:38	13°♄19'48	29.30825 AU
direct	-692 May 13 j 02:23	24°Ω28'58		direct	-684 May 31 j 02:47	11°♄56'23	
conjunction	-692 Aug 27 j 23:27	27°Ω00'26	1°22'21	conjunction	-684 Sep 14 j 12:35	14°♄27'17	1°43'22
minimum elong	-692 Aug 27 j 23:27	27°Ω00'25	1°22'22	minimum elong	-684 Sep 14 j 12:35	14°♄27'17	1°43'23
max. Earth dist.	-692 Aug 26 j 23:15	26°Ω58'10	31.26541 AU	max. Earth dist.	-684 Sep 13 j 13:15	14°♄25'06	31.30805 AU
retrograde	-692 Dec 08 j 02:28	29°Ω26'56		retrograde	-684 Dec 25 j 09:39	16°♄53'30	
opposition	-691 Feb 23 j 13:40	28°Ω05'08	1°29'36	opposition	-683 Mar 13 j 07:18	15°♄31'41	1°51'29
min. Earth dist.	-691 Feb 24 j 11:15	28°Ω03'39	29.27078 AU	min. Earth dist.	-683 Mar 14 j 05:49	15°♄30'08	29.31037 AU
direct	-691 May 15 j 12:47	26°Ω40'01		direct	-683 Jun 02 j 14:39	14°♄06'42	
max. Earth dist.	-691 Aug 29 j 11:16	29°Ω09'18	31.27424 AU				
				conjunction	-683 Sep 16 j 22:31	16°♄37'29	1°45'22
conjunction	-691 Aug 30 j 10:19	29°Ω11'26	1°25'26	minimum elong	-683 Sep 16 j 22:31	16°♄37'29	1°45'21
minimum elong	-691 Aug 30 j 10:19	29°Ω11'26	1°25'26	max. Earth dist.	-683 Sep 15 j 22:39	16°♄35'15	31.31037 AU
retrograde	-691 Sep 21 j 12:22	0°♄		retrograde	-683 Dec 27 j 20:26	19°♄03'42	
retrograde	-691 Dec 10 j 12:41	1°♄37'56		opposition	-682 Mar 15 j 18:34	17°♄41'51	1°53'32
opposition	-690 Feb 26 j 00:45	0°♄16'10	1°32'50	min. Earth dist.	-682 Mar 16 j 16:10	17°♄40'22	29.31312 AU
min. Earth dist.	-690 Feb 26 j 23:09	0°♄14'38	29.27940 AU	direct	-682 Jun 05 j 01:14	16°♄16'53	
direct	-690 Mar 07 j 21:08	30°♄		max. Earth dist.	-682 Sep 18 j 10:21	18°♄45'31	31.31343 AU
direct	-690 May 18 j 01:52	28°Ω51'07					
	-690 Jul 24 j 20:23	0°♄		conjunction	-682 Sep 19 j 08:36	18°♄47'35	1°47'12
				minimum elong	-682 Sep 19 j 08:36	18°♄47'35	1°47'12
conjunction	-690 Sep 01 j 21:07	1°♄22'30	1°28'24	retrograde	-682 Dec 30 j 05:54	21°♄13'48	
minimum elong	-690 Sep 01 j 21:07	1°♄22'30	1°28'25	opposition	-681 Mar 18 j 05:55	19°♄51'57	1°55'25
max. Earth dist.	-690 Aug 31 j 20:54	1°♄20'15	31.28250 AU	min. Earth dist.	-681 Mar 19 j 03:42	19°♄50'28	29.31667 AU
retrograde	-690 Dec 13 j 00:25	3°♄48'58		direct	-681 Jun 07 j 13:20	18°♄27'02	
opposition	-689 Feb 28 j 11:40	2°♄27'14	1°35'56				
min. Earth dist.	-689 Mar 01 j 09:22	2°♄25'45	29.28725 AU	conjunction	-681 Sep 21 j 18:29	20°♄57'40	1°48'54
direct	-689 May 20 j 13:58	1°♄02'13		minimum elong	-681 Sep 21 j 18:29	20°♄57'40	1°48'53
max. Earth dist.	-689 Sep 03 j 08:24	3°♄31'22	31.28967 AU	max. Earth dist.	-681 Sep 20 j 19:53	20°♄55'33	31.31757 AU
				retrograde	-680 Jan 01 j 17:32	23°♄23'55	
conjunction	-689 Sep 04 j 08:03	3°♄33'34	1°31'14	opposition	-680 Mar 19 j 17:19	22°♄02'04	1°57'08
minimum elong	-689 Sep 04 j 08:03	3°♄33'34	1°31'13	min. Earth dist.	-680 Mar 20 j 13:32	22°♄00'41	29.32129 AU

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 15

Attention, astronomical year style is used: The year -680 in astronomical counting style is the year 681 BCE in historical counting style.

direct	-680 Jun 09 j 00:27	20° $\mathring{\text{M}}$ 37'13		direct	-672 Jun 26 j 21:52	8° $\mathring{\text{U}}$ 02'09	
max. Earth dist.	-680 Sep 22 j 06:57	23° $\mathring{\text{M}}$ 05'49	31.32251 AU				
conjunction	-680 Sep 23 j 04:17	23° $\mathring{\text{M}}$ 07'49	1°50'26	conjunction	-672 Oct 10 j 09:56	10° $\mathring{\text{U}}$ 32'07	1°56'54
minimum elong	-680 Sep 23 j 04:17	23° $\mathring{\text{M}}$ 07'49	1°50'26	minimum elong	-672 Oct 10 j 09:56	10° $\mathring{\text{U}}$ 32'07	1°56'54
retrograde	-679 Jan 03 j 03:28	25° $\mathring{\text{M}}$ 34'07		max. Earth dist.	-672 Oct 09 j 14:49	10° $\mathring{\text{U}}$ 30'20	31.34012 AU
opposition	-679 Mar 22 j 04:55	24° $\mathring{\text{M}}$ 12'18	1°58'42	retrograde	-671 Jan 20 j 13:13	12° $\mathring{\text{U}}$ 58'50	
min. Earth dist.	-679 Mar 23 j 01:43	24° $\mathring{\text{M}}$ 10'53	29.32655 AU	opposition	-671 Apr 09 j 03:39	11° $\mathring{\text{U}}$ 36'55	2°04'55
direct	-679 Jun 11 j 11:51	22° $\mathring{\text{M}}$ 47'33		min. Earth dist.	-671 Apr 09 j 21:00	11° $\mathring{\text{U}}$ 35'44	29.34037 AU
				direct	-671 Jun 29 j 08:37	10° $\mathring{\text{U}}$ 12'33	
conjunction	-679 Sep 25 j 14:04	25° $\mathring{\text{M}}$ 18'05	1°51'48	conjunction	-671 Oct 12 j 19:23	12° $\mathring{\text{U}}$ 42'25	1°56'58
minimum elong	-679 Sep 25 j 14:04	25° $\mathring{\text{M}}$ 18'05	1°51'48	minimum elong	-671 Oct 12 j 19:23	12° $\mathring{\text{U}}$ 42'25	1°56'57
max. Earth dist.	-679 Sep 24 j 16:57	25° $\mathring{\text{M}}$ 16'06	31.32795 AU	max. Earth dist.	-671 Oct 12 j 01:27	12° $\mathring{\text{U}}$ 40'44	31.33782 AU
retrograde	-678 Jan 05 j 14:54	27° $\mathring{\text{M}}$ 44'26		retrograde	-670 Jan 22 j 23:13	15° $\mathring{\text{U}}$ 09'09	
opposition	-678 Mar 24 j 16:17	26° $\mathring{\text{M}}$ 22'40	2°00'05	opposition	-670 Apr 11 j 15:36	13° $\mathring{\text{U}}$ 47'10	2°04'54
min. Earth dist.	-678 Mar 25 j 11:50	26° $\mathring{\text{M}}$ 21'20	29.33191 AU	min. Earth dist.	-670 Apr 12 j 09:23	13° $\mathring{\text{U}}$ 45'58	29.33820 AU
direct	-678 Jun 14 j 01:04	24° $\mathring{\text{M}}$ 58'00		direct	-670 Jul 01 j 20:29	12° $\mathring{\text{U}}$ 22'49	
				max. Earth dist.	-670 Oct 14 j 11:25	14° $\mathring{\text{U}}$ 50'56	31.33592 AU
conjunction	-678 Sep 27 j 23:57	27° $\mathring{\text{M}}$ 28'30	1°53'01	conjunction	-670 Oct 15 j 04:41	14° $\mathring{\text{U}}$ 52'34	1°56'52
minimum elong	-678 Sep 27 j 23:57	27° $\mathring{\text{M}}$ 28'30	1°53'02	minimum elong	-670 Oct 15 j 04:41	14° $\mathring{\text{U}}$ 52'34	1°56'52
max. Earth dist.	-678 Sep 27 j 03:07	27° $\mathring{\text{M}}$ 26'34	31.33307 AU	retrograde	-669 Jan 25 j 10:44	17° $\mathring{\text{U}}$ 19'20	
retrograde	-677 Jan 08 j 01:51	29° $\mathring{\text{M}}$ 54'55		opposition	-669 Apr 14 j 03:37	15° $\mathring{\text{U}}$ 57'18	2°04'43
opposition	-677 Mar 27 j 04:04	28° $\mathring{\text{M}}$ 33'11	2°01'18	min. Earth dist.	-669 Apr 14 j 19:35	15° $\mathring{\text{U}}$ 56'13	29.33654 AU
min. Earth dist.	-677 Mar 28 j 00:10	28° $\mathring{\text{M}}$ 31'49	29.33682 AU	direct	-669 Jul 04 j 09:52	14° $\mathring{\text{U}}$ 32'59	
direct	-677 Jun 16 j 12:13	27° $\mathring{\text{M}}$ 08'36					
conjunction	-677 Sep 30 j 09:43	29° $\mathring{\text{M}}$ 39'04	1°54'05	conjunction	-669 Oct 17 j 13:52	17° $\mathring{\text{U}}$ 02'37	1°56'37
minimum elong	-677 Sep 30 j 09:43	29° $\mathring{\text{M}}$ 39'04	1°54'04	minimum elong	-669 Oct 17 j 13:52	17° $\mathring{\text{U}}$ 02'37	1°56'36
max. Earth dist.	-677 Sep 29 j 13:40	29° $\mathring{\text{M}}$ 37'11	31.33753 AU	max. Earth dist.	-669 Oct 16 j 21:19	17° $\mathring{\text{U}}$ 01'04	31.33462 AU
retrograde	-677 Oct 09 j 17:44	0° $\mathring{\text{U}}$		retrograde	-668 Jan 27 j 21:43	19° $\mathring{\text{U}}$ 29'29	
retrograde	-676 Jan 10 j 10:40	2° $\mathring{\text{U}}$ 05'32		opposition	-668 Apr 15 j 15:51	18° $\mathring{\text{U}}$ 07'23	2°04'21
opposition	-676 Mar 28 j 15:54	0° $\mathring{\text{U}}$ 43'49	2°02'20	min. Earth dist.	-668 Apr 16 j 07:40	18° $\mathring{\text{U}}$ 06'19	29.33575 AU
min. Earth dist.	-676 Mar 29 j 11:09	0° $\mathring{\text{U}}$ 42'30	29.34066 AU	direct	-668 Jul 05 j 20:58	16° $\mathring{\text{U}}$ 43'07	
	-676 Apr 25 j 21:54	30° $\mathring{\text{R}}$ $\mathring{\text{M}}$					
direct	-676 Jun 18 j 01:07	29° $\mathring{\text{M}}$ 19'19		conjunction	-668 Oct 18 j 23:08	19° $\mathring{\text{U}}$ 12'41	1°56'11
	-676 Aug 08 j 00:08	0° $\mathring{\text{U}}$		minimum elong	-668 Oct 18 j 23:08	19° $\mathring{\text{U}}$ 12'41	1°56'11
				max. Earth dist.	-668 Oct 18 j 08:02	19° $\mathring{\text{U}}$ 11'16	31.33427 AU
conjunction	-676 Oct 01 j 19:29	1° $\mathring{\text{U}}$ 49'43	1°54'58	retrograde	-667 Jan 29 j 06:53	21° $\mathring{\text{U}}$ 39'37	
minimum elong	-676 Oct 01 j 19:29	1° $\mathring{\text{U}}$ 49'43	1°54'59	opposition	-667 Apr 18 j 03:53	20° $\mathring{\text{U}}$ 17'31	2°03'48
max. Earth dist.	-676 Sep 30 j 22:52	1° $\mathring{\text{U}}$ 47'47	31.34075 AU	min. Earth dist.	-667 Apr 18 j 18:18	20° $\mathring{\text{U}}$ 16'33	29.33558 AU
retrograde	-675 Jan 11 j 20:51	4° $\mathring{\text{U}}$ 16'15		direct	-667 Jul 08 j 09:45	18° $\mathring{\text{U}}$ 53'19	
opposition	-675 Mar 31 j 03:46	2° $\mathring{\text{U}}$ 54'32	2°03'12	conjunction	-667 Oct 21 j 08:13	21° $\mathring{\text{U}}$ 22'49	1°55'35
min. Earth dist.	-675 Mar 31 j 23:03	2° $\mathring{\text{U}}$ 53'13	29.34336 AU	minimum elong	-667 Oct 21 j 08:13	21° $\mathring{\text{U}}$ 22'49	1°55'34
direct	-675 Jun 20 j 11:25	1° $\mathring{\text{U}}$ 30'05		max. Earth dist.	-667 Oct 20 j 17:02	21° $\mathring{\text{U}}$ 21'23	31.33435 AU
max. Earth dist.	-675 Oct 03 j 09:51	3° $\mathring{\text{U}}$ 58'35	31.34266 AU	retrograde	-666 Jan 31 j 17:48	23° $\mathring{\text{U}}$ 49'51	
conjunction	-675 Oct 04 j 05:16	4° $\mathring{\text{U}}$ 00'25	1°55'42	opposition	-666 Apr 20 j 16:05	22° $\mathring{\text{U}}$ 27'44	2°03'05
minimum elong	-675 Oct 04 j 05:16	4° $\mathring{\text{U}}$ 00'25	1°55'41	min. Earth dist.	-666 Apr 21 j 05:58	22° $\mathring{\text{U}}$ 26'48	29.33578 AU
retrograde	-674 Jan 14 j 05:53	6° $\mathring{\text{U}}$ 27'00		direct	-666 Jul 10 j 20:33	21° $\mathring{\text{U}}$ 03'37	
opposition	-674 Apr 02 j 15:43	5° $\mathring{\text{U}}$ 05'16	2°03'53	conjunction	-666 Oct 23 j 17:28	23° $\mathring{\text{U}}$ 33'03	1°54'49
min. Earth dist.	-674 Apr 03 j 10:59	5° $\mathring{\text{U}}$ 03'57	29.34441 AU	minimum elong	-666 Oct 23 j 17:28	23° $\mathring{\text{U}}$ 33'03	1°54'49
direct	-674 Jun 22 j 23:25	3° $\mathring{\text{U}}$ 40'52		max. Earth dist.	-666 Oct 23 j 04:03	23° $\mathring{\text{U}}$ 31'47	31.33446 AU
conjunction	-674 Oct 06 j 14:54	6° $\mathring{\text{U}}$ 11'05	1°56'16	retrograde	-665 Feb 03 j 03:10	26° $\mathring{\text{U}}$ 00'12	
minimum elong	-674 Oct 06 j 14:54	6° $\mathring{\text{U}}$ 11'05	1°56'16	opposition	-665 Apr 23 j 04:23	24° $\mathring{\text{U}}$ 38'05	2°02'10
max. Earth dist.	-674 Oct 05 j 18:41	6° $\mathring{\text{U}}$ 09'11	31.34299 AU	min. Earth dist.	-665 Apr 23 j 17:51	24° $\mathring{\text{U}}$ 37'11	29.33559 AU
retrograde	-673 Jan 16 j 16:39	8° $\mathring{\text{U}}$ 37'43		direct	-665 Jul 13 j 08:45	23° $\mathring{\text{U}}$ 14'04	
opposition	-673 Apr 05 j 03:35	7° $\mathring{\text{U}}$ 15'56	2°04'24	conjunction	-665 Oct 26 j 02:35	25° $\mathring{\text{U}}$ 43'25	1°53'53
min. Earth dist.	-673 Apr 05 j 22:07	7° $\mathring{\text{U}}$ 14'41	29.34407 AU	minimum elong	-665 Oct 26 j 02:35	25° $\mathring{\text{U}}$ 43'25	1°53'52
direct	-673 Jun 25 j 10:14	5° $\mathring{\text{U}}$ 51'34		max. Earth dist.	-665 Oct 25 j 12:49	25° $\mathring{\text{U}}$ 42'07	31.33408 AU
max. Earth dist.	-673 Oct 08 j 05:48	8° $\mathring{\text{U}}$ 19'54	31.34199 AU	retrograde	-664 Feb 05 j 14:26	28° $\mathring{\text{U}}$ 10'41	
conjunction	-673 Oct 09 j 00:38	8° $\mathring{\text{U}}$ 21'40	1°56'40	opposition	-664 Apr 24 j 16:47	26° $\mathring{\text{U}}$ 48'34	2°01'05
minimum elong	-673 Oct 09 j 00:38	8° $\mathring{\text{U}}$ 21'40	1°56'39	min. Earth dist.	-664 Apr 25 j 05:07	26° $\mathring{\text{U}}$ 47'44	29.33483 AU
retrograde	-672 Jan 19 j 01:59	10° $\mathring{\text{U}}$ 48'20		direct	-664 Jul 14 j 19:01	25° $\mathring{\text{U}}$ 24'37	
opposition	-672 Apr 06 j 15:42	9° $\mathring{\text{U}}$ 26'30	2°04'45	conjunction	-664 Oct 27 j 11:48	27° $\mathring{\text{U}}$ 53'55	1°52'48
min. Earth dist.	-672 Apr 07 j 10:35	9° $\mathring{\text{U}}$ 25'13	29.34251 AU				

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 16

Attention, astronomical year style is used: The year -664 in astronomical counting style is the year 665 BCE in historical counting style.

minimum elong	-664 Oct 27 j 11:48	27°♁53'55	1°52'48	min. Earth dist.	-656 May 13 j 04:28	14°♁13'03	29.28820 AU
max. Earth dist.	-664 Oct 26 j 23:36	27°♁52'46	31.33273 AU	direct	-656 Aug 01 j 17:30	12°♁49'50	
	-663 Jan 02 j 07:19	0°♁			-656 Nov 05 j 09:06	15°♁	
retrograde	-663 Feb 07 j 00:12	0°♁21'19					
	-663 Mar 15 j 23:29	30°♁		conjunction	-656 Nov 13 j 12:28	15°♁18'25	1°38'29
opposition	-663 Apr 27 j 05:21	28°♁59'11	1°59'50	minimum elong	-656 Nov 13 j 12:29	15°♁18'25	1°38'29
min. Earth dist.	-663 Apr 27 j 17:58	28°♁58'20	29.33282 AU	max. Earth dist.	-656 Nov 13 j 05:27	15°♁17'45	31.28430 AU
direct	-663 Jul 17 j 06:03	27°♁35'18		retrograde	-655 Feb 24 j 15:56	17°♁46'43	
	-663 Oct 27 j 21:05	0°♁		opposition	-655 May 15 j 10:00	16°♁24'03	1°43'55
				min. Earth dist.	-655 May 15 j 15:26	16°♁23'41	29.28240 AU
conjunction	-663 Oct 29 j 21:02	0°♁04'31	1°51'32	direct	-655 Aug 04 j 03:55	15°♁00'24	
minimum elong	-663 Oct 29 j 21:02	0°♁04'31	1°51'31				
max. Earth dist.	-663 Oct 29 j 08:30	0°♁03'20	31.33010 AU	conjunction	-655 Nov 15 j 21:31	17°♁28'56	1°36'02
retrograde	-662 Feb 09 j 11:59	2°♁32'03		minimum elong	-655 Nov 15 j 21:31	17°♁28'56	1°36'01
opposition	-662 Apr 29 j 17:40	1°♁09'52	1°58'25	max. Earth dist.	-655 Nov 15 j 16:23	17°♁28'27	31.27883 AU
min. Earth dist.	-662 Apr 30 j 04:50	1°♁09'07	29.32937 AU	retrograde	-654 Feb 27 j 01:16	19°♁57'22	
	-662 Jun 19 j 17:00	30°♁		opposition	-654 May 17 j 22:37	18°♁34'40	1°41'13
direct	-662 Jul 19 j 16:21	29°♁46'03		min. Earth dist.	-654 May 18 j 03:49	18°♁34'19	29.27716 AU
	-662 Aug 18 j 01:57	0°♁		direct	-654 Aug 06 j 14:44	17°♁11'06	
conjunction	-662 Nov 01 j 06:22	2°♁15'12	1°50'08	conjunction	-654 Nov 18 j 06:27	19°♁39'33	1°33'26
minimum elong	-662 Nov 01 j 06:22	2°♁15'12	1°50'08	minimum elong	-654 Nov 18 j 06:28	19°♁39'33	1°33'26
max. Earth dist.	-662 Oct 31 j 18:40	2°♁14'05	31.32583 AU	max. Earth dist.	-654 Nov 18 j 01:43	19°♁39'06	31.27397 AU
retrograde	-661 Feb 11 j 22:55	4°♁42'50		retrograde	-653 Mar 01 j 13:20	22°♁08'09	
opposition	-661 May 02 j 06:24	3°♁20'37	1°56'49	opposition	-653 May 20 j 11:19	20°♁45'25	1°38'23
min. Earth dist.	-661 May 02 j 18:08	3°♁19'49	29.32432 AU	min. Earth dist.	-653 May 20 j 14:32	20°♁45'12	29.27231 AU
direct	-661 Jul 22 j 03:55	1°♁56'50		direct	-653 Aug 09 j 00:45	19°♁21'55	
conjunction	-661 Nov 03 j 15:31	4°♁25'53	1°48'34	conjunction	-653 Nov 20 j 15:25	21°♁50'19	1°30'42
minimum elong	-661 Nov 03 j 15:31	4°♁25'53	1°48'33	minimum elong	-653 Nov 20 j 15:25	21°♁50'19	1°30'41
max. Earth dist.	-661 Nov 03 j 04:24	4°♁24'50	31.32014 AU	max. Earth dist.	-653 Nov 20 j 11:51	21°♁49'59	31.26909 AU
retrograde	-660 Feb 14 j 11:04	6°♁53'38		retrograde	-652 Mar 03 j 00:35	24°♁19'06	
opposition	-660 May 03 j 19:00	5°♁31'20	1°55'04	opposition	-652 May 22 j 00:17	22°♁56'19	1°35'23
min. Earth dist.	-660 May 04 j 05:10	5°♁30'39	29.31782 AU	min. Earth dist.	-652 May 22 j 03:42	22°♁56'05	29.26731 AU
direct	-660 Jul 23 j 16:57	4°♁07'34		direct	-652 Aug 10 j 11:31	21°♁32'53	
conjunction	-660 Nov 05 j 00:40	6°♁36'32	1°46'50	conjunction	-652 Nov 22 j 00:33	24°♁01'14	1°27'51
minimum elong	-660 Nov 05 j 00:41	6°♁36'32	1°46'51	minimum elong	-652 Nov 22 j 00:34	24°♁01'14	1°27'51
max. Earth dist.	-660 Nov 04 j 13:51	6°♁35'31	31.31309 AU	max. Earth dist.	-652 Nov 21 j 22:00	24°♁00'59	31.26395 AU
retrograde	-659 Feb 15 j 22:37	9°♁04'23		retrograde	-651 Mar 05 j 13:07	26°♁30'09	
opposition	-659 May 06 j 07:34	7°♁41'59	1°53'09	opposition	-651 May 24 j 12:56	25°♁07'20	1°32'16
min. Earth dist.	-659 May 06 j 17:55	7°♁41'18	29.31040 AU	min. Earth dist.	-651 May 24 j 14:43	25°♁07'13	29.26172 AU
direct	-659 Jul 26 j 03:53	6°♁18'14		direct	-651 Aug 12 j 23:00	23°♁43'57	
conjunction	-659 Nov 07 j 09:46	8°♁47'06	1°44'58	conjunction	-651 Nov 24 j 09:43	26°♁12'16	1°24'51
minimum elong	-659 Nov 07 j 09:47	8°♁47'06	1°44'57	minimum elong	-651 Nov 24 j 09:43	26°♁12'16	1°24'50
max. Earth dist.	-659 Nov 07 j 00:26	8°♁46'13	31.30544 AU	max. Earth dist.	-651 Nov 24 j 07:19	26°♁12'02	31.25788 AU
retrograde	-658 Feb 18 j 08:08	11°♁15'02		retrograde	-650 Mar 08 j 01:28	28°♁41'21	
opposition	-658 May 08 j 20:07	9°♁52'33	1°51'05	opposition	-650 May 27 j 01:55	27°♁18'29	1°29'00
min. Earth dist.	-658 May 09 j 05:00	9°♁51'57	29.30249 AU	min. Earth dist.	-650 May 27 j 03:51	27°♁18'21	29.25514 AU
direct	-658 Jul 28 j 17:14	8°♁28'48		direct	-650 Aug 15 j 08:57	25°♁55'08	
conjunction	-658 Nov 09 j 18:37	10°♁57'34	1°42'57	conjunction	-650 Nov 26 j 18:57	28°♁23'23	1°21'44
minimum elong	-658 Nov 09 j 18:38	10°♁57'34	1°42'57	minimum elong	-650 Nov 26 j 18:57	28°♁23'23	1°21'44
max. Earth dist.	-658 Nov 09 j 09:19	10°♁56'41	31.29765 AU	max. Earth dist.	-650 Nov 26 j 17:58	28°♁23'17	31.25071 AU
retrograde	-657 Feb 20 j 19:26	13°♁25'36			-649 Jan 12 j 00:45	0°♁	
opposition	-657 May 11 j 08:45	12°♁03'03	1°48'51	retrograde	-649 Mar 10 j 12:29	0°♁52'36	
min. Earth dist.	-657 May 11 j 16:46	12°♁02'30	29.29499 AU		-649 May 10 j 10:02	30°♁	
direct	-657 Jul 31 j 04:53	10°♁39'19		opposition	-649 May 29 j 14:52	29°♁29'40	1°25'36
				min. Earth dist.	-649 May 29 j 15:32	29°♁29'38	29.24717 AU
conjunction	-657 Nov 12 j 03:40	13°♁07'59	1°40'48	direct	-649 Aug 17 j 22:24	28°♁06'22	
minimum elong	-657 Nov 12 j 03:41	13°♁07'59	1°40'46		-649 Nov 13 j 20:07	0°♁	
max. Earth dist.	-657 Nov 11 j 20:31	13°♁07'19	31.29051 AU				
	-656 Jan 07 j 03:30	15°♁		conjunction	-649 Nov 29 j 04:11	0°♁34'32	1°18'30
retrograde	-656 Feb 23 j 05:06	15°♁36'09		minimum elong	-649 Nov 29 j 04:11	0°♁34'32	1°18'29
	-656 Apr 12 j 09:54	15°♁		max. Earth dist.	-649 Nov 29 j 02:47	0°♁34'24	31.24217 AU
opposition	-656 May 12 j 21:25	14°♁13'31	1°46'28	retrograde	-648 Mar 12 j 01:30	3°♁03'53	

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 17

Attention, astronomical year style is used: The year -648 in astronomical counting style is the year 649 BCE in historical counting style.

opposition	-648 May 31 j 03:52	1° 7 40'52	1°22'06	conjunction	-640 Dec 17 j 15:30	20° 7 15'03	0°44'56
min. Earth dist.	-648 May 31 j 04:03	1° 7 40'51	29.23802 AU	minimum elong	-640 Dec 17 j 15:30	20° 7 15'03	0°44'56
direct	-648 Aug 19 j 09:57	0° 7 17'35		max. Earth dist.	-640 Dec 17 j 22:54	20° 7 15'45	31.16149 AU
				retrograde	-639 Apr 01 j 12:02	22° 7 45'50	
conjunction	-648 Nov 30 j 13:29	2° 7 45'40	1°15'10	opposition	-639 Jun 21 j 00:24	21° 7 22'15	0°45'46
minimum elong	-648 Nov 30 j 13:29	2° 7 45'40	1°15'10	min. Earth dist.	-639 Jun 20 j 15:50	21° 7 22'49	29.15817 AU
max. Earth dist.	-648 Nov 30 j 13:49	2° 7 45'42	31.23242 AU	direct	-639 Sep 08 j 14:16	19° 7 59'15	
retrograde	-647 Mar 14 j 11:39	5° 7 15'08					
opposition	-647 Jun 02 j 16:50	3° 7 52'01	1°18'28	conjunction	-639 Dec 20 j 01:11	22° 7 26'59	0°40'47
min. Earth dist.	-647 Jun 02 j 16:29	3° 7 52'03	29.22762 AU	minimum elong	-639 Dec 20 j 01:11	22° 7 26'59	0°40'45
direct	-647 Aug 21 j 22:53	2° 7 28'44		max. Earth dist.	-639 Dec 20 j 10:22	22° 7 27'51	31.15421 AU
				retrograde	-638 Apr 03 j 23:16	24° 7 57'57	
conjunction	-647 Dec 02 j 22:37	4° 7 56'43	1°11'43	opposition	-638 Jun 23 j 13:28	23° 7 34'21	0°41'18
minimum elong	-647 Dec 02 j 22:37	4° 7 56'43	1°11'41	min. Earth dist.	-638 Jun 23 j 04:25	23° 7 34'57	29.15045 AU
max. Earth dist.	-647 Dec 02 j 22:50	4° 7 56'45	31.22180 AU	direct	-638 Sep 11 j 02:27	22° 7 11'25	
retrograde	-646 Mar 16 j 23:01	7° 7 26'19					
opposition	-646 Jun 05 j 05:39	6° 7 03'06	1°14'44	conjunction	-638 Dec 22 j 10:54	24° 7 39'08	0°36'34
min. Earth dist.	-646 Jun 05 j 03:59	6° 7 03'12	29.21678 AU	minimum elong	-638 Dec 22 j 10:54	24° 7 39'08	0°36'34
direct	-646 Aug 24 j 10:02	4° 7 39'47		max. Earth dist.	-638 Dec 22 j 19:49	24° 7 39'58	31.14615 AU
				retrograde	-637 Apr 06 j 12:13	27° 7 10'17	
conjunction	-646 Dec 05 j 07:52	7° 7 07'42	1°08'10	opposition	-637 Jun 26 j 02:40	25° 7 46'37	0°36'46
minimum elong	-646 Dec 05 j 07:52	7° 7 07'42	1°08'09	min. Earth dist.	-637 Jun 25 j 16:32	25° 7 47'18	29.14184 AU
max. Earth dist.	-646 Dec 05 j 09:51	7° 7 07'53	31.21091 AU	direct	-637 Sep 13 j 13:47	24° 7 23'43	
retrograde	-645 Mar 19 j 08:42	9° 7 37'26					
opposition	-645 Jun 07 j 18:42	8° 7 14'06	1°10'53	conjunction	-637 Dec 24 j 20:46	26° 7 51'25	0°32'18
min. Earth dist.	-645 Jun 07 j 16:44	8° 7 14'14	29.20603 AU	minimum elong	-637 Dec 24 j 20:46	26° 7 51'25	0°32'17
direct	-645 Aug 26 j 21:43	6° 7 50'49		max. Earth dist.	-637 Dec 25 j 06:54	26° 7 52'23	31.13681 AU
				retrograde	-636 Apr 07 j 23:16	29° 7 22'44	
conjunction	-645 Dec 07 j 16:55	9° 7 18'38	1°04'31	opposition	-636 Jun 27 j 15:57	27° 7 59'01	0°32'10
minimum elong	-645 Dec 07 j 16:55	9° 7 18'38	1°04'30	min. Earth dist.	-636 Jun 27 j 06:04	27° 7 59'41	29.13180 AU
max. Earth dist.	-645 Dec 07 j 19:34	9° 7 18'53	31.20060 AU	direct	-636 Sep 15 j 02:08	26° 7 36'08	
retrograde	-644 Mar 20 j 20:47	11° 7 48'30					
opposition	-644 Jun 09 j 07:36	10° 7 25'06	1°06'56	conjunction	-636 Dec 26 j 06:45	29° 7 03'47	0°27'59
min. Earth dist.	-644 Jun 09 j 03:26	10° 7 25'23	29.19610 AU	minimum elong	-636 Dec 26 j 06:45	29° 7 03'47	0°27'59
direct	-644 Aug 28 j 08:25	9° 7 01'49		max. Earth dist.	-636 Dec 26 j 16:59	29° 7 04'45	31.12621 AU
					-635 Jan 20 j 13:25	0° 7	
conjunction	-644 Dec 09 j 02:11	11° 7 29'35	1°00'47	retrograde	-635 Apr 10 j 12:05	1° 7 35'15	
minimum elong	-644 Dec 09 j 02:11	11° 7 29'36	1°00'47	opposition	-635 Jun 30 j 04:52	0° 7 11'26	0°27'32
max. Earth dist.	-644 Dec 09 j 06:00	11° 7 29'57	31.19111 AU	min. Earth dist.	-635 Jun 29 j 17:29	0° 7 12'12	29.12051 AU
retrograde	-643 Mar 23 j 07:51	13° 7 59'38			-635 Jul 07 j 06:10	30° 7 R 7	
opposition	-643 Jun 11 j 20:27	12° 7 36'10	1°02'53	direct	-635 Sep 17 j 13:38	28° 7 48'32	
min. Earth dist.	-643 Jun 11 j 16:14	12° 7 36'27	29.18716 AU		-635 Nov 23 j 13:47	0° 7	
direct	-643 Aug 30 j 18:42	11° 7 12'55					
				conjunction	-635 Dec 28 j 16:42	1° 7 16'09	0°23'37
conjunction	-643 Dec 11 j 11:29	13° 7 40'39	0°56'56	minimum elong	-635 Dec 28 j 16:42	1° 7 16'09	0°23'36
minimum elong	-643 Dec 11 j 11:29	13° 7 40'39	0°56'56	max. Earth dist.	-635 Dec 29 j 03:27	1° 7 17'10	31.11435 AU
max. Earth dist.	-643 Dec 11 j 16:44	13° 7 41'09	31.18278 AU	retrograde	-634 Apr 12 j 22:31	3° 7 47'44	
retrograde	-642 Mar 25 j 20:24	16° 7 10'52		opposition	-634 Jul 02 j 18:04	2° 7 23'49	0°22'51
opposition	-642 Jun 14 j 09:18	14° 7 47'21	0°58'44	min. Earth dist.	-634 Jul 02 j 07:07	2° 7 24'34	29.10828 AU
min. Earth dist.	-642 Jun 14 j 03:00	14° 7 47'47	29.17918 AU	direct	-634 Sep 20 j 00:24	1° 7 00'54	
direct	-642 Sep 02 j 05:32	13° 7 24'10					
				conjunction	-634 Dec 31 j 02:34	3° 7 28'27	0°19'14
conjunction	-642 Dec 13 j 20:38	15° 7 51'54	0°53'01	minimum elong	-634 Dec 31 j 02:34	3° 7 28'27	0°19'14
minimum elong	-642 Dec 13 j 20:38	15° 7 51'54	0°53'01	max. Earth dist.	-634 Dec 31 j 14:36	3° 7 29'35	31.10199 AU
max. Earth dist.	-642 Dec 14 j 02:22	15° 7 52'26	31.17522 AU	retrograde	-633 Apr 15 j 10:20	6° 7 00'09	
retrograde	-641 Mar 28 j 09:13	18° 7 22'18		opposition	-633 Jul 05 j 07:05	4° 7 36'07	0°18'08
opposition	-641 Jun 16 j 22:24	16° 7 58'45	0°54'30	min. Earth dist.	-633 Jul 04 j 18:21	4° 7 36'59	29.09582 AU
min. Earth dist.	-641 Jun 16 j 15:53	16° 7 59'12	29.17199 AU	direct	-633 Sep 22 j 11:36	3° 7 13'10	
direct	-641 Sep 04 j 14:39	15° 7 35'38					
				conjunction	-632 Jan 02 j 12:28	5° 7 40'40	0°14'49
conjunction	-641 Dec 16 j 06:06	18° 7 03'21	0°49'01	minimum elong	-632 Jan 02 j 12:28	5° 7 40'40	0°14'48
minimum elong	-641 Dec 16 j 06:06	18° 7 03'21	0°49'00	behind sun begin	-632 Jan 02 j 09:45	5° 7 40'25	
max. Earth dist.	-641 Dec 16 j 13:43	18° 7 04'04	31.16831 AU	behind sun end	-632 Jan 02 j 15:11	5° 7 40'55	
retrograde	-640 Mar 29 j 21:25	20° 7 33'56		max. Earth dist.	-632 Jan 03 j 00:40	5° 7 41'49	31.08964 AU
opposition	-640 Jun 18 j 11:20	19° 7 10'23	0°50'10	retrograde	-632 Apr 16 j 23:00	8° 7 12'30	
min. Earth dist.	-640 Jun 18 j 03:19	19° 7 10'55	29.16511 AU	opposition	-632 Jul 06 j 20:05	6° 7 48'22	0°13'24
direct	-640 Sep 06 j 03:19	17° 7 47'20		min. Earth dist.	-632 Jul 06 j 07:22	6° 7 49'14	29.08387 AU

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 18

Attention, astronomical year style is used: The year -632 in astronomical counting style is the year 633 BCE in historical counting style.

direct	-632 Sep 23 j 20:56	5°☾25'23		opposition	-625 Jul 23 j 14:59	22°☾16'44	0°-20'-2
				min. Earth dist.	-625 Jul 22 j 21:22	22°☾17'56	29.01982 AU
conjunction	-631 Jan 03 j 22:34	7°☾52'51	0°10'23	direct	-625 Oct 10 j 04:46	20°☾53'55	
minimum elong	-631 Jan 03 j 22:35	7°☾52'51	0°10'23				
behind sun begin	-631 Jan 03 j 17:29	7°☾52'23		conjunction	-624 Jan 19 j 23:24	23°☾21'30	0°-20'-57
behind sun end	-631 Jan 04 j 03:40	7°☾53'19		minimum elong	-624 Jan 19 j 23:24	23°☾21'30	0°20'58
max. Earth dist.	-631 Jan 04 j 12:37	7°☾54'10	31.07804 AU	max. Earth dist.	-624 Jan 20 j 18:13	23°☾23'17	31.01480 AU
retrograde	-631 Apr 19 j 11:13	10°☾24'49		retrograde	-624 May 05 j 05:58	25°☾54'37	
opposition	-631 Jul 09 j 08:58	9°☾00'35	0°08'38	min. Earth dist.	-624 Jul 24 j 09:02	24°☾31'25	29.00987 AU
min. Earth dist.	-631 Jul 08 j 18:41	9°☾01'34	29.07267 AU	opposition	-624 Jul 25 j 03:51	24°☾30'07	0°-24'-46
direct	-631 Sep 26 j 09:39	7°☾37'36		direct	-624 Oct 11 j 15:54	23°☾07'18	
conjunction	-630 Jan 06 j 08:31	10°☾05'02	0°05'57	conjunction	-623 Jan 21 j 10:21	25°☾34'56	0°-25'-21
minimum elong	-630 Jan 06 j 08:30	10°☾05'02	0°05'56	minimum elong	-623 Jan 21 j 10:20	25°☾34'56	0°25'22
behind sun begin	-630 Jan 06 j 02:23	10°☾04'29		max. Earth dist.	-623 Jan 22 j 04:35	25°☾36'39	31.00418 AU
behind sun end	-630 Jan 06 j 14:38	10°☾05'36		retrograde	-623 May 07 j 19:07	28°☾08'12	
max. Earth dist.	-630 Jan 06 j 22:25	10°☾06'21	31.06736 AU	opposition	-623 Jul 27 j 16:58	26°☾43'38	0°-29'-28
retrograde	-630 Apr 22 j 01:44	12°☾37'09		min. Earth dist.	-623 Jul 26 j 22:49	26°☾44'53	28.99871 AU
opposition	-630 Jul 11 j 21:56	11°☾12'51	0°03'52	direct	-623 Oct 14 j 01:23	25°☾20'48	
min. Earth dist.	-630 Jul 11 j 06:56	11°☾13'52	29.06258 AU				
direct	-630 Sep 28 j 19:51	9°☾49'52		conjunction	-622 Jan 23 j 21:22	27°☾48'26	0°-29'-43
				minimum elong	-622 Jan 23 j 21:22	27°☾48'26	0°29'45
conjunction	-629 Jan 08 j 18:44	12°☾17'19	0°01'27	max. Earth dist.	-622 Jan 24 j 16:52	27°☾50'17	30.99241 AU
minimum elong	-629 Jan 08 j 18:45	12°☾17'19	0°01'27		-622 Apr 03 j 12:16	0°≈	
behind sun begin	-629 Jan 08 j 12:20	12°☾16'44		retrograde	-622 May 10 j 07:30	0°≈21'49	
behind sun end	-629 Jan 09 j 01:10	12°☾17'54			-622 Jun 17 j 04:07	30°R☾	
max. Earth dist.	-629 Jan 09 j 10:38	12°☾18'49	31.05774 AU	min. Earth dist.	-622 Jul 29 j 10:46	28°☾58'29	28.98642 AU
retrograde	-629 Apr 24 j 13:20	14°☾49'35		opposition	-622 Jul 30 j 05:53	28°☾57'10	0°-34'-7
desc. node	-629 May 04 j 07:50	14°☾48'02		direct	-622 Oct 16 j 14:08	27°☾34'18	
opposition	-629 Jul 14 j 10:57	13°☾25'14	0°00'-55		-621 Jan 25 j 11:47	0°≈	
min. Earth dist.	-629 Jul 13 j 19:08	13°☾26'19	29.05341 AU				
direct	-629 Oct 01 j 07:37	12°☾02'16		conjunction	-621 Jan 26 j 08:21	0°≈01'57	0°-34'-3
				minimum elong	-621 Jan 26 j 08:20	0°≈01'57	0°34'04
conjunction	-628 Jan 11 j 04:55	14°☾29'44	0°-3'-8	max. Earth dist.	-621 Jan 27 j 03:10	0°≈03'43	30.97989 AU
minimum elong	-628 Jan 11 j 04:54	14°☾29'44	0°03'10	retrograde	-621 May 12 j 22:05	2°≈35'27	
behind sun begin	-628 Jan 10 j 22:31	14°☾29'09		opposition	-621 Aug 01 j 18:49	1°≈10'42	0°-38'-44
behind sun end	-628 Jan 11 j 11:17	14°☾30'18		min. Earth dist.	-621 Jul 31 j 23:36	1°≈12'01	28.97386 AU
max. Earth dist.	-628 Jan 11 j 20:51	14°☾31'14	31.04907 AU		-621 Sep 21 j 21:19	30°R☾	
retrograde	-628 Apr 26 j 03:42	17°☾02'10		direct	-621 Oct 19 j 00:13	29°☾47'46	
opposition	-628 Jul 15 j 23:56	15°☾37'47	0°-5'-42		-621 Nov 14 j 17:06	0°≈	
min. Earth dist.	-628 Jul 15 j 06:57	15°☾38'56	29.04506 AU				
direct	-628 Oct 02 j 18:53	14°☾14'51		conjunction	-620 Jan 28 j 19:29	2°≈15'25	0°-38'-19
				minimum elong	-620 Jan 28 j 19:28	2°≈15'25	0°38'22
conjunction	-627 Jan 12 j 15:21	16°☾42'20	0°-7'-36	max. Earth dist.	-620 Jan 29 j 15:53	2°≈17'21	30.96725 AU
minimum elong	-627 Jan 12 j 15:22	16°☾42'20	0°07'37	retrograde	-620 May 14 j 09:50	4°≈49'02	
behind sun begin	-627 Jan 12 j 09:31	16°☾41'49		min. Earth dist.	-620 Aug 02 j 11:56	3°≈25'32	28.96141 AU
behind sun end	-627 Jan 12 j 21:12	16°☾42'52		opposition	-620 Aug 03 j 07:36	3°≈24'11	0°-43'-16
max. Earth dist.	-627 Jan 13 j 08:37	16°☾43'58	31.04080 AU	direct	-620 Oct 20 j 11:57	2°≈01'12	
retrograde	-627 Apr 28 j 15:58	19°☾14'56					
opposition	-627 Jul 18 j 12:50	17°☾50'32	0°-10'-30	conjunction	-619 Jan 30 j 06:35	4°≈28'52	0°-42'-33
min. Earth dist.	-627 Jul 17 j 20:02	17°☾51'40	29.03691 AU	minimum elong	-619 Jan 30 j 06:35	4°≈28'52	0°42'34
direct	-627 Oct 05 j 06:50	16°☾27'39		max. Earth dist.	-619 Jan 31 j 02:47	4°≈30'47	30.95517 AU
				retrograde	-619 May 17 j 00:49	7°≈02'34	
conjunction	-626 Jan 15 j 01:54	18°☾55'10	0°-12'-3	opposition	-619 Aug 05 j 20:11	5°≈37'39	0°-47'-45
minimum elong	-626 Jan 15 j 01:53	18°☾55'10	0°12'05	min. Earth dist.	-619 Aug 04 j 23:37	5°≈39'03	28.94988 AU
behind sun begin	-626 Jan 14 j 21:28	18°☾54'46		direct	-619 Oct 22 j 23:48	4°≈14'37	
behind sun end	-626 Jan 15 j 06:18	18°☾55'34					
max. Earth dist.	-626 Jan 15 j 19:29	18°☾56'50	31.03273 AU	conjunction	-618 Feb 01 j 17:49	6°≈42'19	0°-46'-42
retrograde	-626 May 01 j 05:45	21°☾27'57		minimum elong	-618 Feb 01 j 17:48	6°≈42'19	0°46'44
min. Earth dist.	-626 Jul 20 j 07:32	20°☾04'46	29.02870 AU	max. Earth dist.	-618 Feb 02 j 15:16	6°≈44'21	30.94405 AU
opposition	-626 Jul 21 j 01:48	20°☾03'31	0°-15'-17	retrograde	-618 May 19 j 13:44	9°≈16'08	
direct	-626 Oct 07 j 18:14	18°☾40'40		opposition	-618 Aug 08 j 08:55	7°≈51'08	0°-52'-10
				min. Earth dist.	-618 Aug 07 j 12:23	7°≈52'33	28.93948 AU
conjunction	-625 Jan 17 j 12:27	21°☾08'14	0°-16'-31	direct	-618 Oct 25 j 12:10	6°≈28'06	
minimum elong	-625 Jan 17 j 12:26	21°☾08'14	0°16'31				
max. Earth dist.	-625 Jan 18 j 06:25	21°☾09'56	31.02415 AU	conjunction	-617 Feb 04 j 04:58	8°≈55'49	0°-50'-48
retrograde	-625 May 03 j 17:12	23°☾41'12		minimum elong	-617 Feb 04 j 04:58	8°≈55'49	0°50'48

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 19

Attention, astronomical year style is used: The year -617 in astronomical counting style is the year 618 BCE in historical counting style.

max. Earth dist.	-617 Feb 05 j 02:52	8°57'53	30.93437 AU	max. Earth dist.	-609 Feb 23 j 03:58	26°51'02	30.87584 AU
retrograde	-617 May 22 j 03:33	11°29'44		retrograde	-609 Jun 09 j 12:34	29°23'29	
opposition	-617 Aug 10 j 21:31	10°04'41	0°-56'-30	min. Earth dist.	-609 Aug 28 j 04:10	27°59'42	28.87216 AU
min. Earth dist.	-617 Aug 09 j 23:26	10°06'13	28.93049 AU	opposition	-609 Aug 29 j 02:06	27°58'11	-1°-27'-43
direct	-617 Oct 27 j 23:52	8°41'38		direct	-609 Nov 14 j 16:58	26°35'01	
conjunction	-616 Feb 06 j 16:23	11°09'24	0°-54'-49	conjunction	-608 Feb 24 j 16:35	29°03'12	-1°-23'-36
minimum elong	-616 Feb 06 j 16:23	11°09'24	0°54'50	minimum elong	-608 Feb 24 j 16:35	29°03'12	1°23'37
max. Earth dist.	-616 Feb 07 j 14:43	11°11'31	30.92590 AU	max. Earth dist.	-608 Feb 25 j 16:08	29°05'26	30.86683 AU
retrograde	-616 May 23 j 15:25	13°43'26		retrograde	-608 Mar 21 j 07:40	0°8	
opposition	-616 Aug 12 j 10:05	12°18'22	-1°00'-45	retrograde	-608 Jun 11 j 03:00	1°8'37'56	
min. Earth dist.	-616 Aug 11 j 12:32	12°19'51	28.92272 AU	opposition	-608 Aug 30 j 14:16	0°8'12'34	-1°-31'-5
direct	-616 Oct 29 j 10:41	10°55'19		min. Earth dist.	-608 Aug 29 j 15:28	0°8'14'10	28.86327 AU
conjunction	-615 Feb 08 j 03:58	13°23'08	0°-58'-45	direct	-608 Sep 07 j 03:17	30°8	
minimum elong	-615 Feb 08 j 03:57	13°23'08	0°58'46	direct	-608 Nov 16 j 05:05	28°49'20	
max. Earth dist.	-615 Feb 09 j 03:20	13°25'21	30.91869 AU	direct	-607 Jan 21 j 06:55	0°8	
retrograde	-615 Mar 26 j 06:28	15°8		conjunction	-607 Feb 26 j 04:59	1°8'17'35	-1°-26'-41
retrograde	-615 May 26 j 05:10	15°57'17		minimum elong	-607 Feb 26 j 04:59	1°8'17'35	1°26'42
opposition	-615 Jul 28 j 20:56	15°8		max. Earth dist.	-607 Feb 27 j 04:33	1°8'19'48	30.85802 AU
opposition	-615 Aug 14 j 22:35	14°32'12	-1°-4'-55	retrograde	-607 Jun 13 j 15:48	3°8'52'21	
min. Earth dist.	-615 Aug 13 j 23:39	14°33'47	28.91594 AU	min. Earth dist.	-607 Sep 01 j 04:40	2°8'28'28	28.85495 AU
direct	-615 Oct 31 j 22:20	13°09'10		opposition	-607 Sep 02 j 02:37	2°8'26'56	-1°-34'-19
conjunction	-614 Feb 10 j 15:26	15°37'02	-1°-2'-36	direct	-607 Nov 18 j 16:40	1°8'03'39	
minimum elong	-614 Feb 10 j 15:25	15°37'02	1°02'38	conjunction	-606 Feb 28 j 17:23	3°8'31'56	-1°-29'-39
max. Earth dist.	-614 Feb 11 j 14:29	15°39'13	30.91218 AU	minimum elong	-606 Feb 28 j 17:23	3°8'31'56	1°29'40
retrograde	-614 May 28 j 17:44	18°11'20		max. Earth dist.	-606 Mar 01 j 17:44	3°8'34'14	30.85020 AU
opposition	-614 Aug 17 j 11:18	16°46'13	-1°-9'00	retrograde	-606 Jun 16 j 06:07	6°8'06'45	
min. Earth dist.	-614 Aug 16 j 13:02	16°47'45	28.90977 AU	opposition	-606 Sep 04 j 14:47	4°8'41'17	-1°-37'-25
direct	-614 Nov 03 j 07:56	15°23'12		min. Earth dist.	-606 Sep 03 j 15:37	4°8'42'54	28.84773 AU
conjunction	-613 Feb 13 j 03:22	17°51'08	-1°-6'-22	direct	-606 Nov 21 j 05:09	3°8'17'58	
minimum elong	-613 Feb 13 j 03:22	17°51'08	1°06'23	conjunction	-605 Mar 03 j 05:53	5°8'46'19	-1°-32'-28
max. Earth dist.	-613 Feb 14 j 03:41	17°53'26	30.90608 AU	minimum elong	-605 Mar 03 j 05:53	5°8'46'19	1°32'29
retrograde	-613 May 31 j 05:51	20°25'32		max. Earth dist.	-605 Mar 04 j 05:44	5°8'48'34	30.84356 AU
opposition	-613 Aug 19 j 23:49	19°00'25	-1°-12'-58	retrograde	-605 Jun 18 j 18:17	8°8'21'11	
min. Earth dist.	-613 Aug 19 j 00:49	19°02'01	28.90365 AU	min. Earth dist.	-605 Sep 06 j 04:35	6°8'57'16	28.84194 AU
direct	-613 Nov 05 j 19:49	17°37'24		opposition	-605 Sep 07 j 02:58	6°8'55'42	-1°-40'-22
conjunction	-612 Feb 15 j 15:20	20°05'25	-1°-10'-2	direct	-605 Nov 23 j 15:08	5°8'32'22	
minimum elong	-612 Feb 15 j 15:20	20°05'25	1°10'04	conjunction	-604 Mar 04 j 18:40	8°8'00'47	-1°-35'-9
max. Earth dist.	-612 Feb 16 j 14:35	20°07'37	30.89976 AU	minimum elong	-604 Mar 04 j 18:40	8°8'00'47	1°35'11
retrograde	-612 Jun 01 j 20:10	22°39'55		max. Earth dist.	-604 Mar 05 j 19:41	8°8'03'09	30.83844 AU
opposition	-612 Aug 21 j 12:29	21°14'47	-1°-16'-50	retrograde	-604 Jun 20 j 06:24	10°8'35'42	
min. Earth dist.	-612 Aug 20 j 13:53	21°16'21	28.89711 AU	opposition	-604 Sep 08 j 15:02	9°8'10'13	-1°-43'-9
direct	-612 Nov 07 j 05:13	19°51'45		min. Earth dist.	-604 Sep 07 j 15:50	9°8'11'51	28.83749 AU
conjunction	-611 Feb 17 j 03:38	22°19'49	-1°-13'-36	direct	-604 Nov 25 j 03:03	7°8'46'53	
minimum elong	-611 Feb 17 j 03:38	22°19'49	1°13'36	conjunction	-603 Mar 07 j 07:18	10°8'15'23	-1°-37'-42
max. Earth dist.	-611 Feb 18 j 03:48	22°22'06	30.89263 AU	minimum elong	-603 Mar 07 j 07:18	10°8'15'23	1°37'43
retrograde	-611 Jun 04 j 08:36	24°54'25		max. Earth dist.	-603 Mar 08 j 07:20	10°8'17'39	30.83465 AU
min. Earth dist.	-611 Aug 23 j 02:30	23°30'48	28.88952 AU	retrograde	-603 Jun 22 j 20:13	12°8'50'22	
opposition	-611 Aug 24 j 00:59	23°29'14	-1°-20'-35	min. Earth dist.	-603 Sep 10 j 04:12	11°8'26'31	28.83444 AU
direct	-611 Nov 09 j 16:57	22°06'11		opposition	-603 Sep 11 j 03:06	11°8'24'54	-1°-45'-48
conjunction	-610 Feb 19 j 15:52	24°34'18	-1°-17'-3	direct	-603 Nov 27 j 11:58	10°8'01'34	
minimum elong	-610 Feb 19 j 15:52	24°34'18	1°17'04	conjunction	-602 Mar 09 j 20:15	12°8'30'11	-1°-40'-5
max. Earth dist.	-610 Feb 20 j 15:05	24°36'30	30.88465 AU	minimum elong	-602 Mar 09 j 20:15	12°8'30'11	1°40'07
retrograde	-610 Jun 06 j 23:48	27°08'57		max. Earth dist.	-602 Mar 10 j 21:25	12°8'32'33	30.83208 AU
opposition	-610 Aug 26 j 13:34	25°43'43	-1°-24'-13	retrograde	-602 Jun 25 j 08:31	15°8'05'13	
min. Earth dist.	-610 Aug 25 j 14:52	25°45'18	28.88117 AU	opposition	-602 Sep 13 j 15:09	13°8'39'48	-1°-48'-16
direct	-610 Nov 12 j 04:38	24°20'37		min. Earth dist.	-602 Sep 12 j 16:15	13°8'41'24	28.83233 AU
conjunction	-609 Feb 22 j 04:09	26°48'47	-1°-20'-23	direct	-602 Nov 29 j 23:11	12°8'16'28	
minimum elong	-609 Feb 22 j 04:09	26°48'47	1°20'24	conjunction	-601 Mar 12 j 09:11	14°8'45'11	-1°-42'-20
				minimum elong	-601 Mar 12 j 09:11	14°8'45'11	1°42'21

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 20

Attention, astronomical year style is used: The year -601 in astronomical counting style is the year 602 BCE in historical counting style.

max. Earth dist.	-601 Mar 13 j 09:24	14° ✕ 47'28	30.83037 AU	max. Earth dist.	-593 Mar 31 j 19:12	2° ☾ 49'53	30.80390 AU
retrograde	-601 Jun 27 j 23:20	17° ✕ 20'17		retrograde	-593 Jul 16 j 09:40	5° ☾ 22'46	
min. Earth dist.	-601 Sep 15 j 04:18	15° ✕ 56'30	28.83084 AU	min. Earth dist.	-593 Oct 03 j 06:51	3° ☾ 58'37	28.80413 AU
opposition	-601 Sep 16 j 03:12	15° ✕ 54'53	-1°-50'-35	opposition	-593 Oct 04 j 01:52	3° ☾ 57'16	-2°-2'-47
direct	-601 Dec 02 j 10:19	14° ✕ 31'33		direct	-593 Dec 20 j 10:07	2° ☾ 33'31	
conjunction	-600 Mar 13 j 22:30	17° ✕ 00'24	-1°-44'-25	conjunction	-592 Apr 01 j 11:20	5° ☾ 02'52	-1°-55'-9
minimum elong	-600 Mar 13 j 22:30	17° ✕ 00'24	1°44'26	minimum elong	-592 Apr 01 j 11:20	5° ☾ 02'52	1°55'10
max. Earth dist.	-600 Mar 14 j 23:06	17° ✕ 02'43	30.82874 AU	max. Earth dist.	-592 Apr 02 j 07:39	5° ☾ 04'46	30.80194 AU
retrograde	-600 Jun 29 j 11:58	19° ✕ 35'33		retrograde	-592 Jul 17 j 22:51	7° ☾ 37'43	
opposition	-600 Sep 17 j 15:08	18° ✕ 10'11	-1°-52'-44	opposition	-592 Oct 05 j 13:17	6° ☾ 12'14	-2°-3'-29
min. Earth dist.	-600 Sep 16 j 17:23	18° ✕ 11'43	28.82910 AU	min. Earth dist.	-592 Oct 04 j 18:17	6° ☾ 13'34	28.80290 AU
direct	-600 Dec 03 j 21:45	16° ✕ 46'51		direct	-592 Dec 21 j 20:48	4° ☾ 48'25	
conjunction	-599 Mar 16 j 11:57	19° ✕ 15'48	-1°-46'-21	conjunction	-591 Apr 04 j 01:11	7° ☾ 17'51	-1°-55'-43
minimum elong	-599 Mar 16 j 11:56	19° ✕ 15'48	1°46'21	minimum elong	-591 Apr 04 j 01:11	7° ☾ 17'51	1°55'44
max. Earth dist.	-599 Mar 17 j 11:38	19° ✕ 18'02	30.82678 AU	max. Earth dist.	-591 Apr 04 j 22:03	7° ☾ 19'49	30.80131 AU
retrograde	-599 Jul 02 j 03:14	21° ✕ 50'59		retrograde	-591 Jul 20 j 10:41	9° ☾ 52'40	
min. Earth dist.	-599 Sep 19 j 05:02	20° ✕ 27'11	28.82678 AU	min. Earth dist.	-591 Oct 07 j 06:42	8° ☾ 28'29	28.80297 AU
opposition	-599 Sep 20 j 03:09	20° ✕ 25'38	-1°-54'-42	opposition	-591 Oct 08 j 00:49	8° ☾ 27'12	-2°-3'-59
direct	-599 Dec 06 j 09:43	19° ✕ 02'16		direct	-591 Dec 24 j 07:42	7° ☾ 03'22	
conjunction	-598 Mar 19 j 01:18	21° ✕ 31'18	-1°-48'-6	conjunction	-590 Apr 06 j 14:53	9° ☾ 32'53	-1°-56'-7
minimum elong	-598 Mar 19 j 01:18	21° ✕ 31'18	1°48'07	minimum elong	-590 Apr 06 j 14:53	9° ☾ 32'53	1°56'07
max. Earth dist.	-598 Mar 20 j 00:24	21° ✕ 33'29	30.82387 AU	max. Earth dist.	-590 Apr 07 j 11:00	9° ☾ 34'47	30.80217 AU
retrograde	-598 Jul 04 j 17:04	24° ✕ 06'29		retrograde	-590 Jul 23 j 01:03	12° ☾ 07'40	
opposition	-598 Sep 22 j 15:18	22° ✕ 41'07	-1°-56'-30	opposition	-590 Oct 10 j 12:15	10° ☾ 42'15	-2°-4'-18
min. Earth dist.	-598 Sep 21 j 18:40	22° ✕ 42'34	28.82345 AU	min. Earth dist.	-590 Oct 09 j 17:38	10° ☾ 43'34	28.80438 AU
direct	-598 Dec 08 j 22:11	21° ✕ 17'43		direct	-590 Dec 26 j 19:32	9° ☾ 18'24	
conjunction	-597 Mar 21 j 15:00	23° ✕ 46'49	-1°-49'-42	conjunction	-589 Apr 09 j 04:54	11° ☾ 48'02	-1°-56'-19
minimum elong	-597 Mar 21 j 15:00	23° ✕ 46'49	1°49'43	minimum elong	-589 Apr 09 j 04:54	11° ☾ 48'02	1°56'20
max. Earth dist.	-597 Mar 22 j 13:53	23° ✕ 48'59	30.82017 AU	max. Earth dist.	-589 Apr 10 j 00:39	11° ☾ 49'53	30.80401 AU
retrograde	-597 Jul 07 j 07:49	26° ✕ 21'58		retrograde	-589 Jul 25 j 14:09	14° ☾ 22'47	
min. Earth dist.	-597 Sep 24 j 06:03	24° ✕ 58'03	28.81931 AU	opposition	-589 Oct 12 j 23:39	12° ☾ 57'26	-2°-4'-26
opposition	-597 Sep 25 j 03:05	24° ✕ 56'35	-1°-58'-7	min. Earth dist.	-589 Oct 12 j 06:33	12° ☾ 58'38	28.80662 AU
direct	-597 Dec 11 j 11:50	23° ✕ 33'06		direct	-589 Dec 29 j 07:25	11° ☾ 33'34	
conjunction	-596 Mar 23 j 04:37	26° ✕ 02'16	-1°-51'-8	conjunction	-588 Apr 10 j 19:07	14° ☾ 03'20	-1°-56'-21
minimum elong	-596 Mar 23 j 04:37	26° ✕ 02'16	1°51'10	minimum elong	-588 Apr 10 j 19:07	14° ☾ 03'20	1°56'22
max. Earth dist.	-596 Mar 24 j 02:16	26° ✕ 04'18	30.81572 AU	max. Earth dist.	-588 Apr 11 j 14:28	14° ☾ 05'09	30.80655 AU
retrograde	-596 Jul 08 j 20:15	28° ✕ 37'21		retrograde	-588 Jul 27 j 04:44	16° ☾ 38'02	
opposition	-596 Sep 26 j 15:01	27° ✕ 11'56	-1°-59'-34	opposition	-588 Oct 14 j 10:58	15° ☾ 12'45	-2°-4'-22
min. Earth dist.	-596 Sep 25 j 19:26	27° ✕ 13'19	28.81480 AU	min. Earth dist.	-588 Oct 13 j 17:34	15° ☾ 13'59	28.80915 AU
direct	-596 Dec 12 j 22:47	25° ✕ 48'24		direct	-588 Dec 30 j 20:44	13° ☾ 48'54	
conjunction	-595 Mar 25 j 18:17	28° ✕ 17'35	-1°-52'-24	conjunction	-587 Apr 13 j 09:12	16° ☾ 18'47	-1°-56'-12
minimum elong	-595 Mar 25 j 18:17	28° ✕ 17'35	1°52'25	minimum elong	-587 Apr 13 j 09:12	16° ☾ 18'47	1°56'13
max. Earth dist.	-595 Mar 26 j 16:30	28° ✕ 19'40	30.81118 AU	max. Earth dist.	-587 Apr 14 j 03:12	16° ☾ 20'28	30.80892 AU
retrograde	-595 May 14 j 06:13	0° ☾		retrograde	-587 Jul 29 j 17:59	18° ☾ 53'27	
retrograde	-595 Jul 11 j 09:09	0° ☾ 52'37		opposition	-587 Oct 16 j 22:28	17° ☾ 28'14	-2°-4'-6
min. Earth dist.	-595 Sep 09 j 04:27	30° ☾		min. Earth dist.	-587 Oct 16 j 06:47	17° ☾ 29'20	28.81136 AU
opposition	-595 Sep 28 j 06:45	29° ✕ 28'34	28.81037 AU	direct	-586 Jan 02 j 07:36	16° ☾ 04'21	
opposition	-595 Sep 29 j 02:38	29° ✕ 27'10	-2°00'-49	conjunction	-586 Apr 15 j 23:37	18° ☾ 34'21	-1°-55'-52
direct	-595 Dec 15 j 11:48	28° ✕ 03'32		minimum elong	-586 Apr 15 j 23:37	18° ☾ 34'21	1°55'52
conjunction	-594 Mar 13 j 16:49	0° ☾		max. Earth dist.	-586 Apr 16 j 17:35	18° ☾ 36'02	30.81082 AU
conjunction	-594 Mar 28 j 07:51	0° ☾ 32'47	-1°-53'-30	retrograde	-586 Aug 01 j 08:07	21° ☾ 08'57	
minimum elong	-594 Mar 28 j 07:51	0° ☾ 32'47	1°53'31	opposition	-586 Oct 19 j 09:43	19° ☾ 43'47	-2°-3'-39
max. Earth dist.	-594 Mar 29 j 04:38	0° ☾ 34'44	30.80708 AU	min. Earth dist.	-586 Oct 18 j 18:15	19° ☾ 44'52	28.81277 AU
retrograde	-594 Jul 13 j 22:37	3° ☾ 07'45		direct	-585 Jan 04 j 20:55	18° ☾ 19'52	
opposition	-594 Oct 01 j 14:19	1° ☾ 42'16	-2°-1'-54	conjunction	-585 Apr 18 j 13:56	20° ☾ 49'57	-1°-55'-21
min. Earth dist.	-594 Sep 30 j 19:08	1° ☾ 43'37	28.80678 AU	minimum elong	-585 Apr 18 j 13:56	20° ☾ 49'57	1°55'22
direct	-594 Dec 17 j 21:54	0° ☾ 18'34		max. Earth dist.	-585 Apr 19 j 05:46	20° ☾ 51'26	30.81183 AU
conjunction	-593 Mar 30 j 21:36	2° ☾ 47'51	-1°-54'-25	retrograde	-585 Aug 03 j 21:42	23° ☾ 24'28	
minimum elong	-593 Mar 30 j 21:36	2° ☾ 47'51	1°54'26	opposition	-585 Oct 21 j 21:05	21° ☾ 59'19	-2°-3'-1

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 21

Attention, astronomical year style is used: The year -585 in astronomical counting style is the year 586 BCE in historical counting style.

min. Earth dist.	-585 Oct 21 j 06:55	22° Υ 00'20	28.81337 AU	retrograde	-577 Aug 22 j 00:20	11° Υ 24'39	
direct	-584 Jan 07 j 07:43	20° Υ 35'21		opposition	-577 Nov 08 j 12:26	9° Υ 59'46	-1°-51'-21
conjunction	-584 Apr 20 j 04:28	23° Υ 05'31	-1°-54'-40	min. Earth dist.	-577 Nov 08 j 02:51	10° Υ 00'26	28.83292 AU
minimum elong	-584 Apr 20 j 04:29	23° Υ 05'31	1°54'41	direct	-576 Jan 25 j 08:19	8° Υ 35'20	
max. Earth dist.	-584 Apr 20 j 20:22	23° Υ 07'00	30.81204 AU	conjunction	-576 May 08 j 22:59	11° Υ 06'04	-1°-43'-7
retrograde	-584 Aug 05 j 08:41	25° Υ 39'55		minimum elong	-576 May 08 j 22:59	11° Υ 06'04	1°43'07
opposition	-584 Oct 23 j 08:11	24° Υ 14'47	-2°-2'-11	max. Earth dist.	-576 May 09 j 08:25	11° Υ 06'57	30.83563 AU
min. Earth dist.	-584 Oct 22 j 18:46	24° Υ 15'45	28.81324 AU	retrograde	-576 Aug 23 j 13:22	13° Υ 39'27	
direct	-583 Jan 08 j 20:30	22° Υ 50'46		opposition	-576 Nov 09 j 23:10	12° Υ 14'38	-1°-49'-6
conjunction	-583 Apr 22 j 18:45	25° Υ 20'58	-1°-53'-49	min. Earth dist.	-576 Nov 09 j 14:46	12° Υ 15'14	28.84047 AU
minimum elong	-583 Apr 22 j 18:45	25° Υ 20'58	1°53'50	direct	-575 Jan 26 j 19:33	10° Υ 50'13	
max. Earth dist.	-583 Apr 23 j 08:44	25° Υ 22'17	30.81192 AU	conjunction	-575 May 11 j 13:32	13° Υ 21'02	-1°-40'-55
retrograde	-583 Aug 07 j 21:28	27° Υ 55'15		minimum elong	-575 May 11 j 13:32	13° Υ 21'02	1°40'56
opposition	-583 Oct 25 j 19:17	26° Υ 30'08	-2°-1'-11	max. Earth dist.	-575 May 11 j 23:07	13° Υ 21'56	30.84334 AU
min. Earth dist.	-583 Oct 25 j 06:20	26° Υ 31'03	28.81315 AU		-575 Jun 28 j 10:28	15° Υ	
direct	-582 Jan 11 j 07:19	25° Υ 06'01		retrograde	-575 Aug 26 j 01:17	15° Υ 54'18	
conjunction	-582 Apr 25 j 09:03	27° Υ 36'18	-1°-52'-48		-575 Oct 25 j 04:09	15° Υ	
minimum elong	-582 Apr 25 j 09:03	27° Υ 36'18	1°52'48	opposition	-575 Nov 12 j 09:55	14° Υ 29'35	-1°-46'-40
max. Earth dist.	-582 Apr 25 j 23:16	27° Υ 37'37	30.81192 AU	min. Earth dist.	-575 Nov 12 j 02:19	14° Υ 30'08	28.84807 AU
retrograde	-582 Jul 16 j 07:54	0° Υ		direct	-574 Jan 29 j 08:10	13° Υ 05'09	
opposition	-582 Aug 10 j 08:41	0° Υ 10'27			-574 Apr 27 j 21:56	15° Υ	
min. Earth dist.	-582 Sep 04 j 15:21	30° Υ		conjunction	-574 May 14 j 03:56	15° Υ 36'04	-1°-38'-35
direct	-582 Oct 28 j 06:22	28° Υ 45'20	-2°00'00	minimum elong	-574 May 14 j 03:56	15° Υ 36'04	1°38'34
conjunction	-581 Apr 27 j 23:23	29° Υ 51'28	-1°-51'-36	max. Earth dist.	-574 May 14 j 11:17	15° Υ 36'45	30.85086 AU
minimum elong	-581 Apr 27 j 23:23	29° Υ 51'28	1°51'37	retrograde	-574 Aug 28 j 14:56	18° Υ 09'11	
max. Earth dist.	-581 Apr 28 j 12:18	29° Υ 52'40	30.81264 AU	opposition	-574 Nov 14 j 20:42	16° Υ 44'34	-1°-44'-5
retrograde	-581 May 01 j 18:38	0° Υ		min. Earth dist.	-574 Nov 14 j 13:52	16° Υ 45'03	28.85528 AU
opposition	-581 Aug 12 j 21:14	2° Υ 25'28		direct	-573 Jan 31 j 19:20	15° Υ 20'05	
min. Earth dist.	-581 Oct 30 j 17:08	1° Υ 00'23	-1°-58'-37	conjunction	-573 May 16 j 18:41	17° Υ 51'05	-1°-36'-5
max. Earth dist.	-581 Oct 30 j 05:16	1° Υ 01'13	28.81453 AU	minimum elong	-573 May 16 j 18:41	17° Υ 51'05	1°36'06
retrograde	-581 Dec 09 j 03:50	30° Υ		max. Earth dist.	-573 May 17 j 01:46	17° Υ 51'45	30.85761 AU
direct	-580 Jan 16 j 06:16	29° Υ 36'06		retrograde	-573 Aug 31 j 01:50	20° Υ 24'03	
conjunction	-580 Apr 29 j 13:45	2° Υ 06'30	-1°-50'-14	opposition	-573 Nov 17 j 07:27	18° Υ 59'30	-1°-41'-21
minimum elong	-580 Apr 29 j 13:46	2° Υ 06'30	1°50'14	min. Earth dist.	-573 Nov 17 j 02:20	18° Υ 59'52	28.86151 AU
max. Earth dist.	-580 Apr 30 j 02:17	2° Υ 07'40	30.81432 AU	direct	-572 Feb 03 j 06:34	17° Υ 34'59	
retrograde	-580 Aug 14 j 08:32	4° Υ 40'22		conjunction	-572 May 18 j 09:15	20° Υ 06'02	-1°-33'-27
opposition	-580 Nov 01 j 04:07	3° Υ 15'18	-1°-57'-4	minimum elong	-572 May 18 j 09:16	20° Υ 06'02	1°33'27
min. Earth dist.	-580 Oct 31 j 17:40	3° Υ 16'03	28.81689 AU	max. Earth dist.	-572 May 18 j 14:22	20° Υ 06'31	30.86358 AU
direct	-579 Jan 17 j 18:20	1° Υ 50'58		retrograde	-572 Sep 01 j 14:02	22° Υ 38'51	
conjunction	-579 May 02 j 03:56	4° Υ 21'25	-1°-48'-42	opposition	-572 Nov 18 j 18:08	21° Υ 14'21	-1°-38'-27
minimum elong	-579 May 02 j 03:56	4° Υ 21'25	1°48'43	min. Earth dist.	-572 Nov 18 j 13:13	21° Υ 14'42	28.86703 AU
max. Earth dist.	-579 May 02 j 16:01	4° Υ 22'33	30.81751 AU	direct	-571 Feb 04 j 18:53	19° Υ 49'46	
retrograde	-579 Aug 16 j 21:46	6° Υ 55'10		conjunction	-571 May 20 j 23:38	22° Υ 20'52	-1°-30'-41
opposition	-579 Nov 03 j 14:54	5° Υ 30'08	-1°-55'-21	minimum elong	-571 May 20 j 23:39	22° Υ 20'52	1°30'42
min. Earth dist.	-579 Nov 03 j 03:53	5° Υ 30'55	28.82077 AU	max. Earth dist.	-571 May 21 j 04:04	22° Υ 21'17	30.86877 AU
direct	-578 Jan 20 j 07:27	4° Υ 05'45		retrograde	-571 Sep 04 j 00:27	24° Υ 53'31	
conjunction	-578 May 04 j 18:11	6° Υ 36'18	-1°-47'00	opposition	-571 Nov 21 j 04:52	23° Υ 29'03	-1°-35'-25
minimum elong	-578 May 04 j 18:12	6° Υ 36'18	1°47'01	min. Earth dist.	-571 Nov 21 j 01:48	23° Υ 29'16	28.87201 AU
max. Earth dist.	-578 May 05 j 05:16	6° Υ 37'20	30.82218 AU	direct	-570 Feb 07 j 06:29	22° Υ 04'24	
retrograde	-578 Aug 19 j 10:27	9° Υ 09'55		conjunction	-570 May 23 j 14:05	24° Υ 35'33	-1°-27'-47
opposition	-578 Nov 06 j 01:43	7° Υ 44'56	-1°-53'-26	minimum elong	-570 May 23 j 14:06	24° Υ 35'33	1°27'47
min. Earth dist.	-578 Nov 05 j 16:09	7° Υ 45'37	28.82624 AU	max. Earth dist.	-570 May 23 j 17:24	24° Υ 35'51	30.87380 AU
direct	-577 Jan 22 j 18:21	6° Υ 20'32		retrograde	-570 Sep 06 j 12:55	27° Υ 08'00	
conjunction	-577 May 07 j 08:39	8° Υ 51'09	-1°-45'-8	opposition	-570 Nov 23 j 15:15	25° Υ 43'35	-1°-32'-15
minimum elong	-577 May 07 j 08:39	8° Υ 51'09	1°45'10	min. Earth dist.	-570 Nov 23 j 12:06	25° Υ 43'49	28.87695 AU
max. Earth dist.	-577 May 07 j 19:53	8° Υ 52'12	30.82843 AU	direct	-569 Feb 09 j 19:24	24° Υ 18'52	
conjunction	-577 May 07 j 08:39	8° Υ 51'09	-1°-45'-8	conjunction	-569 May 26 j 04:30	26° Υ 50'04	-1°-24'-45
minimum elong	-577 May 07 j 08:39	8° Υ 51'09	1°45'10	minimum elong	-569 May 26 j 04:30	26° Υ 50'04	1°24'46
max. Earth dist.	-577 May 07 j 19:53	8° Υ 52'12	30.82843 AU	max. Earth dist.	-569 May 26 j 06:31	26° Υ 50'15	30.87887 AU

Planetary Phenomena of Neptune from -900 through -400 (UT), AstroDienst AG 14-Nov-2015 16:11, page 22

Attention, astronomical year style is used: The year -569 in astronomical counting style is the year 570 BCE in historical counting style.

retrograde	-569 Sep 09 j 00:27	29°♄22'20		retrograde	-561 Sep 26 j 23:29	17°♃15'04	
opposition	-569 Nov 26 j 01:49	27°♄57'58	-1°-28'-56	opposition	-561 Dec 13 j 12:56	15°♃51'27	0°-58'-5
min. Earth dist.	-569 Nov 26 j 00:21	27°♄58'04	28.88230 AU	min. Earth dist.	-561 Dec 13 j 16:50	15°♃51'11	28.95876 AU
direct	-568 Feb 12 j 06:47	26°♄33'10		direct	-560 Mar 01 j 06:41	14°♃26'34	
conjunction	-568 May 27 j 18:47	29°♄04'25	-1°-21'-35	conjunction	-560 Jun 15 j 12:14	16°♃58'21	0°-52'-19
minimum elong	-568 May 27 j 18:48	29°♄04'25	1°21'35	minimum elong	-560 Jun 15 j 12:14	16°♃58'21	0°52'19
max. Earth dist.	-568 May 27 j 20:43	29°♄04'36	30.88464 AU	max. Earth dist.	-560 Jun 15 j 06:05	16°♃57'47	30.96312 AU
	-568 Jun 22 j 04:53	0°♃		retrograde	-560 Sep 28 j 09:49	19°♃29'13	
retrograde	-568 Sep 10 j 13:03	1°♃36'30		opposition	-560 Dec 14 j 23:29	18°♃05'40	0°-53'-47
opposition	-568 Nov 27 j 12:09	0°♃12'11	-1°-25'-30	min. Earth dist.	-560 Dec 15 j 05:18	18°♃05'15	28.96785 AU
min. Earth dist.	-568 Nov 27 j 10:43	0°♃12'17	28.88842 AU	direct	-559 Mar 03 j 18:25	16°♃40'44	
	-568 Dec 04 j 16:06	30°♃		conjunction	-559 Jun 18 j 02:22	19°♃12'33	0°-48'-15
direct	-567 Feb 13 j 21:06	28°♄47'21		minimum elong	-559 Jun 18 j 02:22	19°♃12'33	0°48'17
	-567 Apr 23 j 09:38	0°♃		max. Earth dist.	-559 Jun 17 j 19:36	19°♃11'55	30.97177 AU
conjunction	-567 May 30 j 08:56	1°♃18'39	-1°-18'-18	retrograde	-559 Sep 30 j 21:16	21°♃43'12	
minimum elong	-567 May 30 j 08:56	1°♃18'39	1°18'20	opposition	-559 Dec 17 j 09:48	20°♃19'42	0°-49'-24
max. Earth dist.	-567 May 30 j 09:13	1°♃18'41	30.89140 AU	min. Earth dist.	-559 Dec 17 j 16:02	20°♃19'16	28.97592 AU
retrograde	-567 Sep 13 j 01:17	3°♃50'35		direct	-558 Mar 06 j 08:35	18°♃54'42	
opposition	-567 Nov 29 j 22:34	2°♃26'19	-1°-21'-55	conjunction	-558 Jun 20 j 16:19	21°♃26'32	0°-44'-7
min. Earth dist.	-567 Nov 29 j 22:04	2°♃26'21	28.89591 AU	minimum elong	-558 Jun 20 j 16:19	21°♃26'32	0°44'07
direct	-566 Feb 16 j 08:40	1°♃01'26		max. Earth dist.	-558 Jun 20 j 07:34	21°♃25'44	30.97949 AU
conjunction	-566 Jun 01 j 23:09	3°♃32'48	-1°-14'-55	retrograde	-558 Oct 03 j 09:00	23°♃57'00	
minimum elong	-566 Jun 01 j 23:09	3°♃32'48	1°14'54	opposition	-558 Dec 19 j 20:11	22°♃33'32	0°-44'-57
max. Earth dist.	-566 Jun 01 j 23:48	3°♃32'52	30.89959 AU	min. Earth dist.	-558 Dec 20 j 03:44	22°♃33'00	28.98337 AU
retrograde	-566 Sep 15 j 12:57	6°♃04'33		direct	-557 Mar 08 j 20:23	21°♃08'28	
opposition	-566 Dec 02 j 08:59	4°♃40'23	-1°-18'-14	conjunction	-557 Jun 23 j 06:20	23°♃40'18	0°-39'-56
min. Earth dist.	-566 Dec 02 j 08:59	4°♃40'23	28.90467 AU	minimum elong	-557 Jun 23 j 06:20	23°♃40'18	0°39'57
direct	-565 Feb 18 j 21:37	3°♃15'30		max. Earth dist.	-557 Jun 22 j 21:35	23°♃39'30	30.98673 AU
conjunction	-565 Jun 04 j 13:18	5°♃46'56	-1°-11'-24	retrograde	-557 Oct 05 j 20:06	26°♃10'32	
minimum elong	-565 Jun 04 j 13:18	5°♃46'56	1°11'25	opposition	-557 Dec 22 j 06:27	24°♃47'07	0°-40'-26
max. Earth dist.	-565 Jun 04 j 12:02	5°♃46'49	30.90917 AU	min. Earth dist.	-557 Dec 22 j 14:50	24°♃46'31	28.99041 AU
retrograde	-565 Sep 18 j 02:32	8°♃18'32		direct	-556 Mar 10 j 10:09	23°♃21'59	
opposition	-565 Dec 04 j 19:16	6°♃54'28	-1°-14'-25	conjunction	-556 Jun 24 j 20:00	25°♃53'49	0°-35'-41
min. Earth dist.	-565 Dec 04 j 19:37	6°♃54'27	28.91488 AU	minimum elong	-556 Jun 24 j 20:00	25°♃53'49	0°35'41
direct	-564 Feb 21 j 09:04	5°♃29'35		max. Earth dist.	-556 Jun 24 j 09:15	25°♃52'50	30.99390 AU
conjunction	-564 Jun 06 j 03:35	8°♃01'07	-1°-7'-47	retrograde	-556 Oct 07 j 08:57	28°♃23'51	
minimum elong	-564 Jun 06 j 03:35	8°♃01'07	1°07'47	opposition	-556 Dec 23 j 16:44	27°♃00'27	0°-35'-52
max. Earth dist.	-564 Jun 06 j 02:38	8°♃01'01	30.91992 AU	min. Earth dist.	-556 Dec 24 j 01:26	26°♃59'50	28.99782 AU
retrograde	-564 Sep 19 j 13:05	10°♃32'34		direct	-555 Mar 12 j 22:55	25°♃35'15	
opposition	-564 Dec 06 j 05:45	9°♃08'37	-1°-10'-29	conjunction	-555 Jun 27 j 09:33	28°♃07'05	0°-31'-24
min. Earth dist.	-564 Dec 06 j 07:28	9°♃08'30	28.92597 AU	minimum elong	-555 Jun 27 j 09:33	28°♃07'05	0°31'24
direct	-563 Feb 22 j 20:16	7°♃43'46		max. Earth dist.	-555 Jun 26 j 23:14	28°♃06'08	31.00154 AU
conjunction	-563 Jun 08 j 17:33	10°♃15'21	-1°-4'-3		-555 Aug 23 j 10:45	0°♃	
minimum elong	-563 Jun 08 j 17:33	10°♃15'21	1°04'04	retrograde	-555 Oct 09 j 18:29	0°♃36'55	
max. Earth dist.	-563 Jun 08 j 14:56	10°♃15'07	30.93142 AU		-555 Nov 27 j 01:14	30°♃	
retrograde	-563 Sep 22 j 00:58	12°♃46'41		opposition	-555 Dec 26 j 03:05	29°♃13'34	0°-31'-15
opposition	-563 Dec 08 j 16:06	11°♃22'52	-1°-6'-27	min. Earth dist.	-555 Dec 26 j 13:03	29°♃12'51	29.00582 AU
min. Earth dist.	-563 Dec 08 j 17:53	11°♃22'44	28.93749 AU	direct	-554 Mar 15 j 11:26	27°♃48'19	
direct	-562 Feb 25 j 08:09	9°♃58'00			-554 Jun 20 j 21:30	0°♃	
conjunction	-562 Jun 11 j 07:50	12°♃29'41	-1°00'-14	conjunction	-554 Jun 29 j 23:00	0°♃20'09	0°-27'-3
minimum elong	-562 Jun 11 j 07:51	12°♃29'41	1°00'14	minimum elong	-554 Jun 29 j 23:00	0°♃20'09	0°27'04
max. Earth dist.	-562 Jun 11 j 04:40	12°♃29'24	30.94277 AU	max. Earth dist.	-554 Jun 29 j 11:10	0°♃19'03	31.01012 AU
retrograde	-562 Sep 24 j 11:22	15°♃00'52		retrograde	-554 Oct 12 j 06:02	2°♃49'47	
opposition	-562 Dec 11 j 02:31	13°♃37'10	-1°-2'-19	opposition	-554 Dec 28 j 13:09	1°♃26'30	0°-26'-36
min. Earth dist.	-562 Dec 11 j 06:19	13°♃36'54	28.94859 AU	min. Earth dist.	-554 Dec 28 j 22:47	1°♃25'49	29.01496 AU
direct	-561 Feb 27 j 18:43	12°♃12'18		direct	-553 Mar 17 j 23:35	0°♃01'13	
conjunction	-561 Jun 13 j 22:07	14°♃44'03	0°-56'-19	conjunction	-553 Jul 02 j 12:32	2°♃33'04	0°-22'-41
minimum elong	-561 Jun 13 j 22:07	14°♃44'03	0°56'20	minimum elong	-553 Jul 02 j 12:32	2°♃33'04	0°22'42
max. Earth dist.	-561 Jun 13 j 17:26	14°♃43'37	30.95354 AU	max. Earth dist.	-553 Jul 02 j 00:46	2°♃31'59	31.01982 AU

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 23

Attention, astronomical year style is used: The year -553 in astronomical counting style is the year 554 BCE in historical counting style.

retrograde	-553 Oct 14 j 15:57	5°☾02'33		behind sun end	-546 Jul 18 j 14:46	18°☾04'13	
opposition	-553 Dec 30 j 23:32	3°☾39'20	0°-21'-54	max. Earth dist.	-546 Jul 17 j 15:44	18°☾02'07	31.09572 AU
min. Earth dist.	-553 Dec 31 j 10:34	3°☾38'33	29.02530 AU	retrograde	-546 Oct 29 j 20:51	20°☾32'14	
direct	-552 Mar 19 j 10:15	2°☾14'03		opposition	-545 Jan 14 j 23:54	19°☾09'38	0°11'24
				min. Earth dist.	-545 Jan 15 j 16:19	19°☾08'29	29.09985 AU
conjunction	-552 Jul 04 j 01:45	4°☾45'56	0°-18'-17	direct	-545 Apr 04 j 23:56	17°☾44'22	
minimum elong	-552 Jul 04 j 01:45	4°☾45'56	0°18'17				
max. Earth dist.	-552 Jul 03 j 13:08	4°☾44'46	31.03084 AU	conjunction	-545 Jul 20 j 21:55	20°☾16'26	0°12'58
retrograde	-552 Oct 16 j 03:06	7°☾15'16		minimum elong	-545 Jul 20 j 21:55	20°☾16'26	0°12'57
opposition	-551 Jan 01 j 09:43	5°☾52'09	0°-17'-11	behind sun begin	-545 Jul 20 j 18:01	20°☾16'06	
min. Earth dist.	-551 Jan 01 j 20:16	5°☾51'25	29.03674 AU	behind sun end	-545 Jul 21 j 01:50	20°☾16'47	
direct	-551 Mar 21 j 21:53	4°☾26'53		max. Earth dist.	-545 Jul 20 j 02:54	20°☾14'41	31.10355 AU
				retrograde	-545 Nov 01 j 08:30	22°☾44'47	
conjunction	-551 Jul 06 j 15:02	6°☾58'49	0°-13'-51	opposition	-544 Jan 17 j 10:14	21°☾22'13	0°16'08
minimum elong	-551 Jul 06 j 15:02	6°☾58'49	0°13'52	min. Earth dist.	-544 Jan 18 j 02:28	21°☾21'05	29.10741 AU
behind sun begin	-551 Jul 06 j 11:47	6°☾58'32		direct	-544 Apr 06 j 12:44	19°☾56'54	
behind sun end	-551 Jul 06 j 18:18	6°☾59'07					
max. Earth dist.	-551 Jul 06 j 01:41	6°☾57'36	31.04266 AU	conjunction	-544 Jul 22 j 10:36	22°☾28'58	0°17'22
retrograde	-551 Oct 18 j 12:59	9°☾28'02		minimum elong	-544 Jul 22 j 10:35	22°☾28'58	0°17'22
opposition	-550 Jan 03 j 19:58	8°☾05'02	0°-12'-25	max. Earth dist.	-544 Jul 21 j 15:40	22°☾27'13	31.11085 AU
min. Earth dist.	-550 Jan 04 j 08:05	8°☾04'11	29.04888 AU	retrograde	-544 Nov 02 j 18:21	24°☾57'09	
direct	-550 Mar 24 j 08:38	6°☾39'47		opposition	-543 Jan 18 j 20:41	23°☾34'36	0°20'50
				min. Earth dist.	-543 Jan 19 j 14:25	23°☾33'21	29.11474 AU
conjunction	-550 Jul 09 j 04:24	9°☾11'47	0°-9'-25	direct	-543 Apr 09 j 00:12	22°☾09'15	
minimum elong	-550 Jul 09 j 04:23	9°☾11'47	0°09'24				
behind sun begin	-550 Jul 08 j 22:55	9°☾11'18		conjunction	-543 Jul 24 j 23:06	24°☾41'15	0°21'44
behind sun end	-550 Jul 09 j 09:51	9°☾12'16		minimum elong	-543 Jul 24 j 23:06	24°☾41'15	0°21'44
max. Earth dist.	-550 Jul 08 j 14:43	9°☾10'31	31.05487 AU	max. Earth dist.	-543 Jul 24 j 03:21	24°☾39'25	31.11830 AU
retrograde	-550 Oct 20 j 23:55	11°☾40'52		retrograde	-543 Nov 05 j 04:20	27°☾09'16	
opposition	-549 Jan 06 j 06:16	10°☾17'59	0°-7'-39	opposition	-542 Jan 21 j 06:51	25°☾46'44	0°25'30
min. Earth dist.	-549 Jan 06 j 18:39	10°☾17'06	29.06084 AU	min. Earth dist.	-542 Jan 22 j 00:02	25°☾45'32	29.12237 AU
direct	-549 Mar 26 j 21:38	8°☾52'45		direct	-542 Apr 11 j 12:31	24°☾21'20	
conjunction	-549 Jul 11 j 17:37	11°☾24'48	0°-4'-58	conjunction	-542 Jul 27 j 11:34	26°☾53'19	0°26'05
minimum elong	-549 Jul 11 j 17:38	11°☾24'48	0°04'58	minimum elong	-542 Jul 27 j 11:34	26°☾53'19	0°26'06
behind sun begin	-549 Jul 11 j 11:14	11°☾24'14		max. Earth dist.	-542 Jul 26 j 15:21	26°☾51'27	31.12618 AU
behind sun end	-549 Jul 12 j 00:02	11°☾25'22		retrograde	-542 Nov 07 j 12:54	29°☾21'10	
max. Earth dist.	-549 Jul 11 j 02:16	11°☾23'23	31.06651 AU	opposition	-541 Jan 23 j 17:17	27°☾58'41	0°30'07
retrograde	-549 Oct 23 j 11:30	13°☾53'46		min. Earth dist.	-541 Jan 24 j 11:35	27°☾57'24	29.13083 AU
opposition	-548 Jan 08 j 16:39	12°☾30'58	0°-2'-53	direct	-541 Apr 13 j 23:25	26°☾33'15	
min. Earth dist.	-548 Jan 09 j 06:11	12°☾30'01	29.07221 AU				
direct	-548 Mar 28 j 08:25	11°☾05'45		conjunction	-541 Jul 29 j 23:51	29°☾05'12	0°30'23
				minimum elong	-541 Jul 29 j 23:51	29°☾05'12	0°30'23
conjunction	-548 Jul 13 j 06:57	13°☾37'50	0°00'-26	max. Earth dist.	-541 Jul 29 j 03:52	29°☾03'20	31.13515 AU
minimum elong	-548 Jul 13 j 06:57	13°☾37'50	0°00'26		-541 Aug 24 j 03:11	0°☾	
behind sun begin	-548 Jul 13 j 00:23	13°☾37'15		retrograde	-541 Nov 09 j 22:17	1°☾32'54	
behind sun end	-548 Jul 13 j 13:30	13°☾38'25		opposition	-540 Jan 26 j 03:39	0°☾10'28	0°34'41
max. Earth dist.	-548 Jul 12 j 15:36	13°☾36'25	31.07734 AU	min. Earth dist.	-540 Jan 26 j 21:35	0°☾09'13	29.14033 AU
asc. node	-548 Aug 18 j 06:21	14°☾54'26			-540 Feb 01 j 09:38	30°☾☾	
retrograde	-548 Oct 24 j 22:35	16°☾06'40		direct	-540 Apr 15 j 11:29	28°☾45'02	
opposition	-547 Jan 10 j 03:08	14°☾43'57	0°01'53		-540 Jun 25 j 07:09	0°☾	
min. Earth dist.	-547 Jan 10 j 17:32	14°☾42'56	29.08246 AU				
direct	-547 Mar 30 j 22:00	13°☾18'44		conjunction	-540 Jul 31 j 12:01	1°☾16'57	0°34'38
				minimum elong	-540 Jul 31 j 12:01	1°☾16'57	0°34'39
conjunction	-547 Jul 15 j 19:52	15°☾50'50	0°04'06	max. Earth dist.	-540 Jul 30 j 15:08	1°☾15'01	31.14530 AU
minimum elong	-547 Jul 15 j 19:53	15°☾50'50	0°04'06	retrograde	-540 Nov 11 j 09:08	3°☾44'33	
behind sun begin	-547 Jul 15 j 13:24	15°☾50'15		opposition	-539 Jan 27 j 14:04	2°☾22'10	0°39'13
behind sun end	-547 Jul 16 j 02:22	15°☾51'24		min. Earth dist.	-539 Jan 28 j 08:22	2°☾20'53	29.15122 AU
max. Earth dist.	-547 Jul 15 j 02:26	15°☾49'13	31.08708 AU	direct	-539 Apr 17 j 21:22	0°☾56'45	
retrograde	-547 Oct 27 j 11:28	18°☾19'31		max. Earth dist.	-539 Aug 02 j 04:01	3°☾26'47	31.15665 AU
opposition	-546 Jan 12 j 13:31	16°☾56'51	0°06'39				
min. Earth dist.	-546 Jan 13 j 04:21	16°☾55'49	29.09171 AU	conjunction	-539 Aug 03 j 00:06	3°☾28'39	0°38'51
direct	-546 Apr 02 j 11:04	15°☾31'37		minimum elong	-539 Aug 03 j 00:06	3°☾28'39	0°38'51
				retrograde	-539 Nov 13 j 19:03	5°☾56'09	
conjunction	-546 Jul 18 j 09:04	18°☾03'43	0°08'32	opposition	-538 Jan 30 j 00:30	4°☾33'51	0°43'41
minimum elong	-546 Jul 18 j 09:03	18°☾03'43	0°08'33	min. Earth dist.	-538 Jan 30 j 19:14	4°☾32'33	29.16284 AU
behind sun begin	-546 Jul 18 j 03:21	18°☾03'13		direct	-538 Apr 20 j 10:35	3°☾08'28	

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 24

Attention, astronomical year style is used: The year -538 in astronomical counting style is the year 539 BCE in historical counting style.

conjunction	-538 Aug 05 j 12:07	5°Ω40'23	0°43'00	conjunction	-530 Aug 23 j 09:52	23°Ω12'50	1°13'23
minimum elong	-538 Aug 05 j 12:07	5°Ω40'22	0°43'00	minimum elong	-530 Aug 23 j 09:52	23°Ω12'50	1°13'23
max. Earth dist.	-538 Aug 04 j 14:32	5°Ω38'22	31.16849 AU	retrograde	-530 Dec 03 j 14:55	25°Ω39'30	
retrograde	-538 Nov 16 j 07:18	8°Ω07'47		opposition	-529 Feb 19 j 00:45	24°Ω17'33	1°20'10
opposition	-537 Feb 01 j 10:54	6°Ω45'33	0°48'05	min. Earth dist.	-529 Feb 19 j 23:05	24°Ω16'00	29.24090 AU
min. Earth dist.	-537 Feb 02 j 05:35	6°Ω44'15	29.17482 AU	direct	-529 May 10 j 22:45	22°Ω52'17	
direct	-537 Apr 22 j 22:37	5°Ω20'13		conjunction	-529 Aug 25 j 20:57	25°Ω23'50	1°16'45
max. Earth dist.	-537 Aug 07 j 03:19	7°Ω50'11	31.18025 AU	minimum elong	-529 Aug 25 j 20:56	25°Ω23'50	1°16'45
conjunction	-537 Aug 08 j 00:15	7°Ω52'08	0°47'05	max. Earth dist.	-529 Aug 24 j 20:22	25°Ω21'32	31.24354 AU
minimum elong	-537 Aug 08 j 00:15	7°Ω52'08	0°47'05	retrograde	-529 Dec 06 j 02:37	27°Ω50'26	
retrograde	-537 Nov 18 j 16:55	10°Ω19'27		opposition	-528 Feb 21 j 11:36	26°Ω28'30	1°23'42
opposition	-536 Feb 03 j 21:37	8°Ω57'18	0°52'24	min. Earth dist.	-528 Feb 22 j 09:13	26°Ω27'00	29.24804 AU
min. Earth dist.	-536 Feb 04 j 17:36	8°Ω55'55	29.18634 AU	direct	-528 May 12 j 10:16	25°Ω03'14	
direct	-536 Apr 24 j 10:46	7°Ω32'00		max. Earth dist.	-528 Aug 26 j 08:38	27°Ω32'35	31.25105 AU
conjunction	-536 Aug 09 j 12:01	10°Ω03'54	0°51'06	conjunction	-528 Aug 27 j 07:55	27°Ω34'45	1°20'00
minimum elong	-536 Aug 09 j 12:00	10°Ω03'54	0°51'06	minimum elong	-528 Aug 27 j 07:55	27°Ω34'45	1°20'00
max. Earth dist.	-536 Aug 08 j 13:42	10°Ω01'50	31.19139 AU		-528 Nov 28 j 19:57	0°♄	
retrograde	-536 Nov 20 j 04:58	12°Ω31'08		retrograde	-528 Dec 07 j 11:49	0°♄01'19	
opposition	-535 Feb 05 j 08:14	11°Ω09'03	0°56'39		-528 Dec 16 j 05:30	30°RΩ	
min. Earth dist.	-535 Feb 06 j 03:48	11°Ω07'41	29.19705 AU	opposition	-527 Feb 22 j 22:35	28°Ω39'24	1°27'07
direct	-535 Apr 26 j 23:43	9°Ω43'46		min. Earth dist.	-527 Feb 23 j 20:51	28°Ω37'52	29.25607 AU
max. Earth dist.	-535 Aug 11 j 01:49	12°Ω13'36	31.20141 AU	direct	-527 May 14 j 21:48	27°Ω14'12	
conjunction	-535 Aug 12 j 00:01	12°Ω15'39	0°55'02	conjunction	-527 Aug 29 j 18:49	29°Ω45'39	1°23'08
minimum elong	-535 Aug 12 j 00:01	12°Ω15'39	0°55'02	minimum elong	-527 Aug 29 j 18:49	29°Ω45'39	1°23'08
retrograde	-535 Nov 22 j 15:10	14°Ω42'48		max. Earth dist.	-527 Aug 28 j 18:49	29°Ω43'25	31.25958 AU
opposition	-534 Feb 07 j 18:55	13°Ω20'45	1°00'49		-527 Sep 05 j 04:50	0°♄	
min. Earth dist.	-534 Feb 08 j 16:04	13°Ω19'17	29.20657 AU	retrograde	-527 Dec 09 j 23:49	2°♄12'11	
direct	-534 Apr 29 j 11:35	11°Ω55'30		opposition	-526 Feb 25 j 09:16	0°♄50'20	1°30'24
conjunction	-534 Aug 14 j 11:53	14°Ω27'21	0°58'54	min. Earth dist.	-526 Feb 26 j 06:32	0°♄48'52	29.26496 AU
minimum elong	-534 Aug 14 j 11:52	14°Ω27'21	0°58'54		-526 Mar 29 j 23:36	30°RΩ	
max. Earth dist.	-534 Aug 13 j 12:44	14°Ω25'12	31.21031 AU	direct	-526 May 17 j 10:51	29°Ω25'11	
	-534 Aug 29 j 05:31	15°Ω		max. Earth dist.	-526 Jul 03 j 14:44	0°♄	
retrograde	-534 Nov 25 j 01:23	16°Ω54'23			-526 Aug 31 j 06:36	1°♄54'28	31.26862 AU
opposition	-533 Feb 10 j 05:38	15°Ω32'23	1°04'54	conjunction	-526 Sep 01 j 05:49	1°♄56'38	1°26'09
min. Earth dist.	-533 Feb 11 j 02:19	15°Ω30'57	29.21482 AU	minimum elong	-526 Sep 01 j 05:49	1°♄56'38	1°26'09
	-533 Mar 02 j 05:03	15°RΩ		retrograde	-526 Dec 12 j 10:39	4°♄23'08	
direct	-533 May 02 j 00:32	14°Ω07'08		opposition	-525 Feb 27 j 20:23	3°♄01'21	1°33'33
	-533 Jun 29 j 16:20	15°Ω		min. Earth dist.	-525 Feb 28 j 18:39	2°♄59'49	29.27418 AU
				direct	-525 May 19 j 22:56	1°♄36'16	
conjunction	-533 Aug 16 j 23:35	16°Ω38'56	1°02'40	conjunction	-525 Sep 03 j 16:33	4°♄07'41	1°29'03
minimum elong	-533 Aug 16 j 23:34	16°Ω38'56	1°02'40	minimum elong	-525 Sep 03 j 16:33	4°♄07'41	1°29'03
max. Earth dist.	-533 Aug 15 j 23:51	16°Ω36'44	31.21789 AU	max. Earth dist.	-525 Sep 02 j 17:07	4°♄05'30	31.27778 AU
retrograde	-533 Nov 27 j 10:20	19°Ω05'53		retrograde	-525 Dec 14 j 20:43	6°♄34'10	
opposition	-532 Feb 12 j 16:30	17°Ω43'55	1°08'52	opposition	-524 Mar 01 j 07:27	5°♄12'27	1°36'35
min. Earth dist.	-532 Feb 13 j 14:23	17°Ω42'24	29.22203 AU	min. Earth dist.	-524 Mar 02 j 04:49	5°♄10'58	29.28310 AU
direct	-532 May 03 j 11:23	16°Ω18'39		direct	-524 May 21 j 11:49	3°♄47'26	
max. Earth dist.	-532 Aug 17 j 11:35	18°Ω48'12	31.22467 AU	max. Earth dist.	-524 Sep 04 j 03:42	6°♄16'36	31.28626 AU
conjunction	-532 Aug 18 j 11:11	18°Ω50'24	1°06'20	conjunction	-524 Sep 05 j 03:21	6°♄18'49	1°31'48
minimum elong	-532 Aug 18 j 11:11	18°Ω50'24	1°06'21	minimum elong	-524 Sep 05 j 03:21	6°♄18'49	1°31'48
retrograde	-532 Nov 28 j 19:24	21°Ω17'14		retrograde	-524 Dec 16 j 06:08	8°♄45'17	
opposition	-531 Feb 14 j 03:12	19°Ω55'17	1°12'45	opposition	-523 Mar 03 j 18:37	7°♄23'36	1°39'27
min. Earth dist.	-531 Feb 15 j 00:58	19°Ω53'46	29.22844 AU	min. Earth dist.	-523 Mar 04 j 16:55	7°♄22'04	29.29128 AU
direct	-531 May 05 j 23:27	18°Ω30'01		direct	-523 May 23 j 22:24	5°♄58'39	
conjunction	-531 Aug 20 j 22:31	21°Ω01'41	1°09'55	conjunction	-523 Sep 07 j 14:08	8°♄29'59	1°34'26
minimum elong	-531 Aug 20 j 22:31	21°Ω01'41	1°09'55	minimum elong	-523 Sep 07 j 14:08	8°♄29'59	1°34'26
max. Earth dist.	-531 Aug 19 j 21:59	20°Ω59'25	31.23082 AU	max. Earth dist.	-523 Sep 06 j 14:49	8°♄27'48	31.29380 AU
retrograde	-531 Dec 01 j 05:48	23°Ω28'27		retrograde	-523 Dec 18 j 15:25	10°♄56'26	
opposition	-530 Feb 16 j 13:57	22°Ω06'30	1°16'31	opposition	-522 Mar 06 j 05:53	9°♄34'46	1°42'11
min. Earth dist.	-530 Feb 17 j 12:05	22°Ω04'58	29.23462 AU	min. Earth dist.	-522 Mar 07 j 03:59	9°♄33'15	29.29808 AU
direct	-530 May 08 j 09:36	20°Ω41'13		direct	-522 May 26 j 10:44	8°♄09'51	
max. Earth dist.	-530 Aug 22 j 10:18	23°Ω10'38	31.23694 AU				

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 25

Attention, astronomical year style is used: The year -522 in astronomical counting style is the year 523 BCE in historical counting style.

max. Earth dist.	-522 Sep 09 j 00:31	10° \mathbb{M} 38'51	31.29980 AU	max. Earth dist.	-514 Sep 26 j 13:16	28° \mathbb{M} 03'21	31.32124 AU
					-514 Nov 24 j 20:46	0° $\underline{\text{A}}$	
conjunction	-522 Sep 10 j 00:47	10° \mathbb{M} 41'07	1°36'55	retrograde	-513 Jan 07 j 09:08	0° $\underline{\text{A}}$ 31'39	
minimum elong	-522 Sep 10 j 00:47	10° \mathbb{M} 41'07	1°36'55		-513 Feb 21 j 12:35	30° \mathbb{R} \mathbb{M}	
retrograde	-522 Dec 21 j 01:48	13° \mathbb{M} 07'33		opposition	-513 Mar 26 j 12:47	29° \mathbb{M} 09'50	1°59'48
opposition	-521 Mar 08 j 17:11	11° \mathbb{M} 45'54	1°44'47	min. Earth dist.	-513 Mar 27 j 08:48	29° \mathbb{M} 08'28	29.32456 AU
min. Earth dist.	-521 Mar 09 j 15:33	11° \mathbb{M} 44'22	29.30348 AU	direct	-513 Jun 15 j 22:10	27° \mathbb{M} 45'07	
direct	-521 May 28 j 21:11	10° \mathbb{M} 21'00			-513 Sep 22 j 21:18	0° $\underline{\text{A}}$	
conjunction	-521 Sep 12 j 11:30	12° \mathbb{M} 52'11	1°39'16	conjunction	-513 Sep 29 j 20:01	0° $\underline{\text{A}}$ 15'36	1°52'43
minimum elong	-521 Sep 12 j 11:30	12° \mathbb{M} 52'11	1°39'16	minimum elong	-513 Sep 29 j 20:01	0° $\underline{\text{A}}$ 15'36	1°52'43
max. Earth dist.	-521 Sep 11 j 12:08	12° \mathbb{M} 50'00	31.30439 AU	max. Earth dist.	-513 Sep 28 j 22:44	0° $\underline{\text{A}}$ 13'36	31.32531 AU
retrograde	-521 Dec 23 j 10:19	15° \mathbb{M} 18'35		retrograde	-512 Jan 09 j 19:58	2° $\underline{\text{A}}$ 42'01	
opposition	-520 Mar 10 j 04:40	13° \mathbb{M} 56'55	1°47'13	opposition	-512 Mar 28 j 00:28	1° $\underline{\text{A}}$ 20'12	2°00'55
min. Earth dist.	-520 Mar 11 j 03:21	13° \mathbb{M} 55'22	29.30731 AU	min. Earth dist.	-512 Mar 28 j 20:06	1° $\underline{\text{A}}$ 18'52	29.32875 AU
direct	-520 May 30 j 09:49	12° \mathbb{M} 32'03			-512 May 31 j 14:19	30° \mathbb{R} \mathbb{M}	
conjunction	-520 Sep 13 j 21:50	15° \mathbb{M} 03'07	1°41'29	direct	-512 Jun 17 j 08:10	29° \mathbb{M} 55'35	
minimum elong	-520 Sep 13 j 21:49	15° \mathbb{M} 03'07	1°41'29		-512 Jul 03 j 21:58	0° $\underline{\text{A}}$	
max. Earth dist.	-520 Sep 12 j 21:20	15° \mathbb{M} 00'50	31.30758 AU	max. Earth dist.	-512 Sep 30 j 10:00	2° $\underline{\text{A}}$ 24'09	31.32928 AU
retrograde	-520 Dec 24 j 21:30	17° \mathbb{M} 29'29		conjunction	-512 Oct 01 j 05:46	2° $\underline{\text{A}}$ 26'00	1°53'41
opposition	-519 Mar 12 j 15:59	16° \mathbb{M} 07'47	1°49'30	minimum elong	-512 Oct 01 j 05:46	2° $\underline{\text{A}}$ 26'00	1°53'41
min. Earth dist.	-519 Mar 13 j 14:06	16° \mathbb{M} 06'16	29.30996 AU	retrograde	-511 Jan 11 j 04:41	4° $\underline{\text{A}}$ 52'30	
direct	-519 Jun 01 j 20:38	14° \mathbb{M} 42'54		opposition	-511 Mar 30 j 12:16	3° $\underline{\text{A}}$ 30'43	2°01'52
max. Earth dist.	-519 Sep 15 j 08:52	17° \mathbb{M} 11'41	31.30962 AU	min. Earth dist.	-511 Mar 31 j 07:53	3° $\underline{\text{A}}$ 29'23	29.33236 AU
conjunction	-519 Sep 16 j 08:19	17° \mathbb{M} 13'52	1°43'33	direct	-511 Jun 19 j 19:57	2° $\underline{\text{A}}$ 06'10	
minimum elong	-519 Sep 16 j 08:18	17° \mathbb{M} 13'52	1°43'33	conjunction	-511 Oct 03 j 15:28	4° $\underline{\text{A}}$ 36'33	1°54'29
retrograde	-519 Dec 27 j 06:28	19° \mathbb{M} 40'12		minimum elong	-511 Oct 03 j 15:28	4° $\underline{\text{A}}$ 36'33	1°54'29
opposition	-518 Mar 15 j 03:20	18° \mathbb{M} 18'27	1°51'37	max. Earth dist.	-511 Oct 02 j 18:53	4° $\underline{\text{A}}$ 34'37	31.33250 AU
min. Earth dist.	-518 Mar 16 j 02:19	18° \mathbb{M} 16'53	29.31162 AU	retrograde	-510 Jan 13 j 16:13	7° $\underline{\text{A}}$ 03'06	
direct	-518 Jun 04 j 08:23	16° \mathbb{M} 53'33		opposition	-510 Apr 01 j 23:56	5° $\underline{\text{A}}$ 41'20	2°02'39
conjunction	-518 Sep 18 j 18:30	19° \mathbb{M} 24'25	1°45'28	min. Earth dist.	-510 Apr 02 j 18:42	5° $\underline{\text{A}}$ 40'03	29.33512 AU
minimum elong	-518 Sep 18 j 18:30	19° \mathbb{M} 24'25	1°45'27	direct	-510 Jun 22 j 05:42	4° $\underline{\text{A}}$ 16'51	
max. Earth dist.	-518 Sep 17 j 18:32	19° \mathbb{M} 22'11	31.31110 AU	max. Earth dist.	-510 Oct 05 j 05:58	6° $\underline{\text{A}}$ 45'21	31.33459 AU
retrograde	-518 Dec 29 j 18:02	21° \mathbb{M} 50'43		conjunction	-510 Oct 06 j 01:21	6° $\underline{\text{A}}$ 47'10	1°55'08
opposition	-517 Mar 17 j 14:43	20° \mathbb{M} 28'55	1°53'35	minimum elong	-510 Oct 06 j 01:21	6° $\underline{\text{A}}$ 47'10	1°55'08
min. Earth dist.	-517 Mar 18 j 12:26	20° \mathbb{M} 27'26	29.31303 AU	retrograde	-509 Jan 16 j 01:53	9° $\underline{\text{A}}$ 13'49	
direct	-517 Jun 06 j 21:44	19° \mathbb{M} 04'01		opposition	-509 Apr 04 j 12:01	7° $\underline{\text{A}}$ 52'02	2°03'15
max. Earth dist.	-517 Sep 20 j 05:38	21° \mathbb{M} 32'38	31.31248 AU	min. Earth dist.	-509 Apr 05 j 07:27	7° $\underline{\text{A}}$ 50'43	29.33656 AU
conjunction	-517 Sep 21 j 04:32	21° \mathbb{M} 34'46	1°47'13	direct	-509 Jun 24 j 16:45	6° $\underline{\text{A}}$ 27'37	
minimum elong	-517 Sep 21 j 04:32	21° \mathbb{M} 34'46	1°47'13	conjunction	-509 Oct 08 j 10:54	8° $\underline{\text{A}}$ 57'51	1°55'37
retrograde	-516 Jan 01 j 04:20	24° \mathbb{M} 01'03		minimum elong	-509 Oct 08 j 10:54	8° $\underline{\text{A}}$ 57'51	1°55'37
opposition	-516 Mar 19 j 02:19	22° \mathbb{M} 39'12	1°55'23	max. Earth dist.	-509 Oct 07 j 15:07	8° $\underline{\text{A}}$ 56'00	31.33539 AU
min. Earth dist.	-516 Mar 20 j 00:32	22° \mathbb{M} 37'41	29.31477 AU	retrograde	-508 Jan 18 j 14:02	11° $\underline{\text{A}}$ 24'33	
direct	-516 Jun 08 j 09:52	21° \mathbb{M} 14'19		opposition	-508 Apr 05 j 23:58	10° $\underline{\text{A}}$ 02'45	2°03'41
conjunction	-516 Sep 22 j 14:30	23° \mathbb{M} 44'59	1°48'50	min. Earth dist.	-508 Apr 06 j 18:08	10° $\underline{\text{A}}$ 01'31	29.33662 AU
minimum elong	-516 Sep 22 j 14:29	23° \mathbb{M} 44'59	1°48'50	direct	-508 Jun 26 j 05:42	8° $\underline{\text{A}}$ 38'22	
max. Earth dist.	-516 Sep 21 j 16:00	23° \mathbb{M} 42'53	31.31459 AU	conjunction	-508 Oct 09 j 20:39	11° $\underline{\text{A}}$ 08'31	1°55'56
retrograde	-515 Jan 02 j 14:08	26° \mathbb{M} 11'15		minimum elong	-508 Oct 09 j 20:39	11° $\underline{\text{A}}$ 08'31	1°55'56
opposition	-515 Mar 21 j 13:38	24° \mathbb{M} 49'24	1°57'02	max. Earth dist.	-508 Oct 09 j 01:34	11° $\underline{\text{A}}$ 06'44	31.33467 AU
min. Earth dist.	-515 Mar 22 j 10:21	24° \mathbb{M} 47'59	29.31726 AU	retrograde	-507 Jan 20 j 01:10	13° $\underline{\text{A}}$ 35'16	
direct	-515 Jun 10 j 22:47	23° \mathbb{M} 24'32		opposition	-507 Apr 08 j 11:55	12° $\underline{\text{A}}$ 13'25	2°03'56
max. Earth dist.	-515 Sep 24 j 02:12	25° \mathbb{M} 53'03	31.31748 AU	min. Earth dist.	-507 Apr 09 j 06:51	12° $\underline{\text{A}}$ 12'08	29.33529 AU
conjunction	-515 Sep 25 j 00:25	25° \mathbb{M} 55'08	1°50'17	direct	-507 Jun 28 j 17:14	10° $\underline{\text{A}}$ 49'04	
minimum elong	-515 Sep 25 j 00:25	25° \mathbb{M} 55'08	1°50'17	max. Earth dist.	-507 Oct 11 j 11:26	13° $\underline{\text{A}}$ 17'21	31.33278 AU
retrograde	-514 Jan 04 j 23:57	28° \mathbb{M} 21'26		conjunction	-507 Oct 12 j 06:14	13° $\underline{\text{A}}$ 19'07	1°56'05
opposition	-514 Mar 24 j 01:12	26° \mathbb{M} 59'35	1°58'30	minimum elong	-507 Oct 12 j 06:14	13° $\underline{\text{A}}$ 19'07	1°56'06
min. Earth dist.	-514 Mar 24 j 22:05	26° \mathbb{M} 58'09	29.32067 AU	retrograde	-506 Jan 22 j 11:09	15° $\underline{\text{A}}$ 45'54	
direct	-514 Jun 13 j 09:43	25° \mathbb{M} 34'47		opposition	-506 Apr 10 j 23:52	14° $\underline{\text{A}}$ 23'59	2°04'01
conjunction	-514 Sep 27 j 10:16	28° \mathbb{M} 05'19	1°51'35	min. Earth dist.	-506 Apr 11 j 17:28	14° $\underline{\text{A}}$ 22'48	29.33276 AU
minimum elong	-514 Sep 27 j 10:16	28° \mathbb{M} 05'19	1°51'35	direct	-506 Jul 01 j 06:23	12° $\underline{\text{A}}$ 59'38	

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 26

Attention, astronomical year style is used: The year -506 in astronomical counting style is the year 507 BCE in historical counting style.

conjunction	-506 Oct 14 j 15:35	15°♁29'35	1°56'05	conjunction	-498 Oct 31 j 16:57	2°♁51'18	1°50'07
minimum elong	-506 Oct 14 j 15:36	15°♁29'35	1°56'05	minimum elong	-498 Oct 31 j 16:57	2°♁51'18	1°50'07
max. Earth dist.	-506 Oct 13 j 20:58	15°♁27'50	31.32985 AU	max. Earth dist.	-498 Oct 31 j 05:24	2°♁50'13	31.31980 AU
retrograde	-505 Jan 24 j 21:33	17°♁56'24		retrograde	-497 Feb 11 j 08:38	5°♁18'51	
opposition	-505 Apr 13 j 12:01	16°♁34'25	2°03'55	opposition	-497 May 01 j 13:53	3°♁56'37	1°56'52
min. Earth dist.	-505 Apr 14 j 05:44	16°♁33'13	29.32967 AU	min. Earth dist.	-497 May 02 j 00:37	3°♁55'53	29.32002 AU
direct	-505 Jul 03 j 18:24	15°♁10'04		direct	-497 Jul 21 j 13:35	2°♁32'44	
max. Earth dist.	-505 Oct 16 j 07:48	17°♁38'17	31.32673 AU				
conjunction	-505 Oct 17 j 00:57	17°♁39'53	1°55'55	conjunction	-497 Nov 03 j 02:10	5°♁01'54	1°48'39
minimum elong	-505 Oct 17 j 00:57	17°♁39'53	1°55'55	minimum elong	-497 Nov 03 j 02:10	5°♁01'54	1°48'39
retrograde	-504 Jan 27 j 06:55	20°♁06'44		max. Earth dist.	-497 Nov 02 j 14:37	5°♁00'48	31.31765 AU
opposition	-504 Apr 15 j 00:04	18°♁44'41	2°03'39	retrograde	-496 Feb 13 j 20:32	7°♁29'34	
min. Earth dist.	-504 Apr 15 j 16:39	18°♁43'33	29.32659 AU	opposition	-496 May 03 j 02:29	6°♁07'17	1°55'13
direct	-504 Jul 05 j 08:02	17°♁20'21		min. Earth dist.	-496 May 03 j 13:23	6°♁06'33	29.31728 AU
				direct	-496 Jul 23 j 01:01	4°♁43'29	
conjunction	-504 Oct 18 j 10:02	19°♁50'03	1°55'35	conjunction	-496 Nov 04 j 11:27	7°♁12'34	1°47'01
minimum elong	-504 Oct 18 j 10:02	19°♁50'03	1°55'34	minimum elong	-496 Nov 04 j 11:28	7°♁12'34	1°47'01
max. Earth dist.	-504 Oct 17 j 16:53	19°♁48'26	31.32394 AU	max. Earth dist.	-496 Nov 04 j 01:13	7°♁11'36	31.31419 AU
retrograde	-503 Jan 28 j 17:11	22°♁16'57		retrograde	-495 Feb 15 j 06:54	9°♁40'20	
opposition	-503 Apr 17 j 12:08	20°♁54'50	2°03'13	opposition	-495 May 05 j 15:05	8°♁18'02	1°53'24
min. Earth dist.	-503 Apr 18 j 03:51	20°♁53'46	29.32424 AU	min. Earth dist.	-495 May 06 j 01:08	8°♁17'21	29.31290 AU
direct	-503 Jul 07 j 18:33	19°♁30'31		direct	-495 Jul 25 j 14:38	6°♁54'16	
conjunction	-503 Oct 20 j 19:18	22°♁00'07	1°55'05	conjunction	-495 Nov 06 j 20:36	9°♁23'16	1°45'15
minimum elong	-503 Oct 20 j 19:18	22°♁00'07	1°55'04	minimum elong	-495 Nov 06 j 20:36	9°♁23'16	1°45'14
max. Earth dist.	-503 Oct 20 j 04:06	21°♁58'41	31.32199 AU	max. Earth dist.	-495 Nov 06 j 09:54	9°♁22'15	31.30912 AU
retrograde	-502 Jan 31 j 01:03	24°♁27'05		retrograde	-494 Feb 17 j 18:03	11°♁51'09	
opposition	-502 Apr 20 j 00:13	23°♁04'55	2°02'36	opposition	-494 May 08 j 03:40	10°♁28'46	1°51'25
min. Earth dist.	-502 Apr 20 j 15:18	23°♁03'54	29.32269 AU	min. Earth dist.	-494 May 08 j 13:11	10°♁28'08	29.30715 AU
direct	-502 Jul 10 j 06:41	21°♁40'40		direct	-494 Jul 28 j 01:23	9°♁05'02	
conjunction	-502 Oct 23 j 04:23	24°♁10'10	1°54'25	conjunction	-494 Nov 09 j 05:52	11°♁33'56	1°43'19
minimum elong	-502 Oct 23 j 04:23	24°♁10'10	1°54'24	minimum elong	-494 Nov 09 j 05:52	11°♁33'56	1°43'18
max. Earth dist.	-502 Oct 22 j 13:05	24°♁08'43	31.32105 AU	max. Earth dist.	-494 Nov 08 j 20:52	11°♁33'05	31.30281 AU
retrograde	-501 Feb 02 j 12:28	26°♁37'13		retrograde	-493 Feb 20 j 02:37	14°♁01'55	
opposition	-501 Apr 22 j 12:24	25°♁15'02	2°01'48	opposition	-493 May 10 j 16:25	12°♁39'28	1°49'17
min. Earth dist.	-501 Apr 23 j 01:49	25°♁14'08	29.32217 AU	min. Earth dist.	-493 May 11 j 01:32	12°♁38'51	29.30028 AU
direct	-501 Jul 12 j 16:26	23°♁50'51		direct	-493 Jul 30 j 14:09	11°♁15'45	
conjunction	-501 Oct 25 j 13:29	26°♁20'16	1°53'35	conjunction	-493 Nov 11 j 14:47	13°♁44'33	1°41'15
minimum elong	-501 Oct 25 j 13:29	26°♁20'16	1°53'35	minimum elong	-493 Nov 11 j 14:47	13°♁44'33	1°41'14
max. Earth dist.	-501 Oct 25 j 00:00	26°♁19'00	31.32082 AU	max. Earth dist.	-493 Nov 11 j 05:38	13°♁43'41	31.29576 AU
retrograde	-500 Feb 04 j 22:07	28°♁47'27			-493 Dec 16 j 12:28	15°♁	
opposition	-500 Apr 24 j 00:45	27°♁25'15	2°00'50	retrograde	-492 Feb 22 j 14:11	16°♁12'38	
min. Earth dist.	-500 Apr 24 j 14:18	27°♁24'20	29.32211 AU		-492 May 06 j 01:44	15°♁	
direct	-500 Jul 14 j 03:21	26°♁01'09		opposition	-492 May 12 j 05:01	14°♁50'06	1°46'59
conjunction	-500 Oct 26 j 22:36	28°♁30'29	1°52'36	min. Earth dist.	-492 May 12 j 12:34	14°♁49'35	29.29307 AU
minimum elong	-500 Oct 26 j 22:36	28°♁30'29	1°52'35	direct	-492 Aug 01 j 00:34	13°♁26'23	
max. Earth dist.	-500 Oct 26 j 09:20	28°♁29'14	31.32095 AU		-492 Oct 19 j 02:02	15°♁	
retrograde	-500 Dec 08 j 10:39	0°♁		conjunction	-492 Nov 12 j 23:53	15°♁55'05	1°39'02
	-499 Feb 06 j 10:05	0°♁57'46		minimum elong	-492 Nov 12 j 23:53	15°♁55'05	1°39'01
	-499 Apr 11 j 05:37	30°♁		max. Earth dist.	-492 Nov 12 j 16:25	15°♁54'23	31.28851 AU
opposition	-499 Apr 26 j 12:50	29°♁35'34	1°59'41	retrograde	-491 Feb 23 j 23:37	18°♁23'17	
min. Earth dist.	-499 Apr 27 j 00:43	29°♁34'46	29.32210 AU	opposition	-491 May 14 j 17:34	17°♁00'40	1°44'33
direct	-499 Jul 16 j 14:37	28°♁11'32		min. Earth dist.	-491 May 15 j 01:06	17°♁00'10	29.28598 AU
	-499 Oct 11 j 00:38	0°♁		direct	-491 Aug 03 j 11:47	15°♁36'59	
conjunction	-499 Oct 29 j 07:50	0°♁40'50	1°51'26	conjunction	-491 Nov 15 j 08:53	18°♁05'35	1°36'40
minimum elong	-499 Oct 29 j 07:50	0°♁40'50	1°51'27	minimum elong	-491 Nov 15 j 08:53	18°♁05'35	1°36'40
max. Earth dist.	-499 Oct 28 j 19:30	0°♁39'40	31.32071 AU	max. Earth dist.	-491 Nov 15 j 02:03	18°♁04'56	31.28186 AU
retrograde	-498 Feb 08 j 21:37	3°♁08'15		retrograde	-490 Feb 26 j 11:29	20°♁33'54	
opposition	-498 Apr 29 j 01:22	1°♁46'02	1°58'22	opposition	-490 May 17 j 06:11	19°♁11'14	1°41'58
min. Earth dist.	-498 Apr 29 j 13:40	1°♁45'12	29.32157 AU	min. Earth dist.	-490 May 17 j 11:35	19°♁10'52	29.27964 AU
direct	-498 Jul 19 j 00:54	0°♁22'05		direct	-490 Aug 05 j 22:45	17°♁47'36	

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 27

Attention, astronomical year style is used: The year -490 in astronomical counting style is the year 491 BCE in historical counting style.

conjunction	-490 Nov 17 j 17:47	20°M.16'07	1°34'10	conjunction	-482 Dec 04 j 19:11	7°A.44'56	1°09'33
minimum elong	-490 Nov 17 j 17:47	20°M.16'07	1°34'10	minimum elong	-482 Dec 04 j 19:12	7°A.44'56	1°09'33
max. Earth dist.	-490 Nov 17 j 12:11	20°M.15'36	31.27592 AU	max. Earth dist.	-482 Dec 04 j 19:50	7°A.44'59	31.22537 AU
retrograde	-489 Feb 28 j 23:09	22°M.44'36		retrograde	-481 Mar 18 j 18:49	10°A.14'36	
opposition	-489 May 19 j 19:01	21°M.21'52	1°39'13	opposition	-481 Jun 07 j 02:23	8°A.51'28	1°12'24
min. Earth dist.	-489 May 20 j 00:18	21°M.21'31	29.27415 AU	min. Earth dist.	-481 Jun 07 j 00:30	8°A.51'36	29.22029 AU
direct	-489 Aug 08 j 08:02	19°M.58'17		direct	-481 Aug 26 j 06:00	7°A.28'15	
conjunction	-489 Nov 20 j 02:49	22°M.26'45	1°31'32	conjunction	-481 Dec 07 j 04:32	9°A.56'13	1°05'59
minimum elong	-489 Nov 20 j 02:49	22°M.26'45	1°31'32	minimum elong	-481 Dec 07 j 04:32	9°A.56'13	1°05'59
max. Earth dist.	-489 Nov 19 j 22:33	22°M.26'21	31.27093 AU	max. Earth dist.	-481 Dec 07 j 05:53	9°A.56'21	31.21422 AU
retrograde	-488 Mar 02 j 10:33	24°M.55'22		retrograde	-480 Mar 20 j 06:10	12°A.26'01	
opposition	-488 May 21 j 07:37	23°M.32'37	1°36'20	opposition	-480 Jun 08 j 15:23	11°A.02'46	1°08'32
min. Earth dist.	-488 May 21 j 10:54	23°M.32'24	29.26933 AU	min. Earth dist.	-480 Jun 08 j 13:46	11°A.02'53	29.20887 AU
direct	-488 Aug 09 j 20:12	22°M.09'06		direct	-480 Aug 27 j 15:40	9°A.39'32	
conjunction	-488 Nov 21 j 11:46	24°M.37'32	1°28'46	conjunction	-480 Dec 08 j 13:51	12°A.07'24	1°02'19
minimum elong	-488 Nov 21 j 11:47	24°M.37'32	1°28'46	minimum elong	-480 Dec 08 j 13:51	12°A.07'25	1°02'18
max. Earth dist.	-488 Nov 21 j 07:49	24°M.37'09	31.26634 AU	max. Earth dist.	-480 Dec 08 j 16:31	12°A.07'40	31.20275 AU
retrograde	-487 Mar 04 j 23:40	27°M.06'19		retrograde	-479 Mar 22 j 17:46	14°A.37'19	
opposition	-487 May 23 j 20:26	25°M.43'31	1°33'18	opposition	-479 Jun 11 j 04:16	13°A.13'58	1°04'34
min. Earth dist.	-487 May 23 j 23:29	25°M.43'19	29.26483 AU	min. Earth dist.	-479 Jun 11 j 00:42	13°A.14'12	29.19732 AU
direct	-487 Aug 12 j 07:14	24°M.20'05		direct	-479 Aug 30 j 04:11	11°A.50'42	
conjunction	-487 Nov 23 j 20:52	26°M.48'28	1°25'52	conjunction	-479 Dec 10 j 22:58	14°A.18'31	0°58'33
minimum elong	-487 Nov 23 j 20:52	26°M.48'28	1°25'51	minimum elong	-479 Dec 10 j 22:59	14°A.18'31	0°58'32
max. Earth dist.	-487 Nov 23 j 18:44	26°M.48'16	31.26182 AU	max. Earth dist.	-479 Dec 11 j 01:56	14°A.18'48	31.19141 AU
retrograde	-486 Mar 07 j 11:03	29°M.17'24		retrograde	-478 Mar 25 j 06:52	16°A.48'34	
opposition	-486 May 26 j 09:17	27°M.54'36	1°30'08	opposition	-478 Jun 13 j 17:18	15°A.25'06	1°00'30
min. Earth dist.	-486 May 26 j 11:08	27°M.54'28	29.26002 AU	min. Earth dist.	-478 Jun 13 j 13:19	15°A.25'23	29.18640 AU
direct	-486 Aug 14 j 20:19	26°M.31'14		direct	-478 Sep 01 j 14:43	14°A.01'51	
conjunction	-486 Nov 26 j 05:56	28°M.59'34	1°22'50	conjunction	-478 Dec 13 j 08:21	16°A.29'37	0°54'42
minimum elong	-486 Nov 26 j 05:57	28°M.59'34	1°22'49	minimum elong	-478 Dec 13 j 08:22	16°A.29'37	0°54'42
max. Earth dist.	-486 Nov 26 j 03:39	28°M.59'21	31.25686 AU	max. Earth dist.	-478 Dec 13 j 13:26	16°A.30'06	31.18095 AU
retrograde	-486 Dec 23 j 14:49	0°A		retrograde	-477 Mar 27 j 18:25	18°A.59'49	
opposition	-485 Mar 09 j 23:07	1°A.28'41		opposition	-477 Jun 16 j 06:14	17°A.36'17	0°56'21
min. Earth dist.	-485 May 28 j 22:16	0°A.05'50	1°26'49	min. Earth dist.	-477 Jun 16 j 00:41	17°A.36'39	29.17635 AU
direct	-485 May 28 j 23:23	0°A.05'46	29.25473 AU	direct	-477 Sep 04 j 03:13	16°A.13'03	
retrograde	-485 Jun 01 j 13:04	30°R.M.		conjunction	-477 Dec 15 j 17:33	18°A.40'46	0°50'47
direct	-485 Aug 17 j 06:36	28°M.42'32		minimum elong	-477 Dec 15 j 17:33	18°A.40'46	0°50'46
direct	-485 Oct 27 j 02:51	0°A		max. Earth dist.	-477 Dec 15 j 22:44	18°A.41'15	31.17149 AU
conjunction	-485 Nov 28 j 15:12	1°A.10'49	1°19'41	retrograde	-476 Mar 29 j 07:15	21°A.11'08	
minimum elong	-485 Nov 28 j 15:12	1°A.10'49	1°19'40	opposition	-476 Jun 17 j 19:11	19°A.47'33	0°52'06
max. Earth dist.	-485 Nov 28 j 14:39	1°A.10'46	31.25104 AU	min. Earth dist.	-476 Jun 17 j 12:36	19°A.47'59	29.16737 AU
retrograde	-484 Mar 11 j 08:51	3°A.40'05		direct	-476 Sep 05 j 13:23	18°A.24'22	
opposition	-484 May 30 j 11:19	2°A.17'12	1°23'24	conjunction	-476 Dec 17 j 03:02	20°A.52'04	0°46'46
min. Earth dist.	-484 May 30 j 12:06	2°A.17'08	29.24823 AU	minimum elong	-476 Dec 17 j 03:03	20°A.52'04	0°46'46
direct	-484 Aug 18 j 19:56	0°A.53'57		max. Earth dist.	-476 Dec 17 j 10:13	20°A.52'45	31.16287 AU
conjunction	-484 Nov 30 j 00:29	3°A.22'10	1°16'25	retrograde	-475 Mar 31 j 17:56	23°A.22'36	
minimum elong	-484 Nov 30 j 00:29	3°A.22'10	1°16'24	opposition	-475 Jun 20 j 08:02	21°A.58'59	0°47'47
max. Earth dist.	-484 Nov 29 j 23:32	3°A.22'05	31.24397 AU	min. Earth dist.	-475 Jun 20 j 00:47	21°A.59'28	29.15902 AU
retrograde	-483 Mar 13 j 21:35	5°A.51'34		direct	-475 Sep 08 j 02:17	20°A.35'51	
opposition	-483 Jun 02 j 00:10	4°A.28'38	1°19'51	conjunction	-475 Dec 19 j 12:25	23°A.03'33	0°42'42
min. Earth dist.	-483 Jun 01 j 23:41	4°A.28'39	29.24039 AU	minimum elong	-475 Dec 19 j 12:26	23°A.03'33	0°42'41
direct	-483 Aug 21 j 07:02	3°A.05'24		max. Earth dist.	-475 Dec 19 j 19:45	23°A.04'15	31.15494 AU
conjunction	-483 Dec 02 j 09:56	5°A.33'34	1°13'02	retrograde	-474 Apr 03 j 07:43	25°A.34'17	
minimum elong	-483 Dec 02 j 09:57	5°A.33'34	1°13'02	opposition	-474 Jun 22 j 21:02	24°A.10'38	0°43'23
max. Earth dist.	-483 Dec 02 j 10:11	5°A.33'35	31.23534 AU	min. Earth dist.	-474 Jun 22 j 12:08	24°A.11'14	29.15124 AU
retrograde	-482 Mar 16 j 07:15	8°A.03'06		direct	-474 Sep 10 j 13:08	22°A.47'34	
opposition	-482 Jun 04 j 13:21	6°A.40'05	1°16'11	conjunction	-474 Dec 21 j 21:56	25°A.15'15	0°38'33
min. Earth dist.	-482 Jun 04 j 13:10	6°A.40'05	29.23096 AU	minimum elong	-474 Dec 21 j 21:56	25°A.15'15	0°38'32
direct	-482 Aug 23 j 18:43	5°A.16'52		max. Earth dist.	-474 Dec 22 j 06:43	25°A.16'05	31.14717 AU

Planetary Phenomena of Neptune from -900 through -400 (UT), AstroDienst AG 14-Nov-2015 16:11, page 28

Attention, astronomical year style is used: The year -473 in astronomical counting style is the year 474 BCE in historical counting style.

retrograde	-473 Apr 05 j 17:58	27° 2 46'11		conjunction	-465 Jan 08 j 05:18	12° 3 53'22	0°03'52
opposition	-473 Jun 25 j 10:13	26° 2 22'31	0°38'55	minimum elong	-465 Jan 08 j 05:17	12° 3 53'22	0°03'52
min. Earth dist.	-473 Jun 25 j 01:26	26° 2 23'06	29.14341 AU	behind sun begin	-465 Jan 07 j 22:57	12° 3 52'48	
direct	-473 Sep 13 j 00:21	24° 2 59'31		behind sun end	-465 Jan 08 j 11:38	12° 3 53'57	
				max. Earth dist.	-465 Jan 08 j 19:13	12° 3 54'41	31.06138 AU
conjunction	-473 Dec 24 j 07:39	27° 2 27'12	0°34'20	retrograde	-465 Apr 23 j 23:50	15° 3 25'30	
minimum elong	-473 Dec 24 j 07:39	27° 2 27'12	0°34'20	opposition	-465 Jul 13 j 18:34	14° 3 01'10	0°01'39
max. Earth dist.	-473 Dec 24 j 17:03	27° 2 28'05	31.13927 AU	min. Earth dist.	-465 Jul 13 j 03:22	14° 3 02'12	29.05608 AU
retrograde	-472 Apr 07 j 06:07	29° 2 58'19		direct	-465 Sep 30 j 18:08	12° 3 38'09	
opposition	-472 Jun 26 j 23:04	28° 2 34'36	0°34'23	desc. node	-465 Nov 18 j 15:28	13° 3 17'53	
min. Earth dist.	-472 Jun 26 j 12:42	28° 2 35'19	29.13517 AU				
direct	-472 Sep 14 j 11:04	27° 2 11'39		conjunction	-464 Jan 10 j 15:30	15° 3 05'38	0°00'-39
				minimum elong	-464 Jan 10 j 15:30	15° 3 05'38	0°00'40
conjunction	-472 Dec 25 j 17:27	29° 2 39'21	0°30'05	behind sun begin	-464 Jan 10 j 09:06	15° 3 05'03	
minimum elong	-472 Dec 25 j 17:27	29° 2 39'21	0°30'04	behind sun end	-464 Jan 10 j 21:54	15° 3 06'12	
max. Earth dist.	-472 Dec 26 j 03:15	29° 2 40'16	31.13055 AU	max. Earth dist.	-464 Jan 11 j 06:49	15° 3 07'04	31.05080 AU
	-471 Jan 03 j 19:42	0° 3		retrograde	-464 Apr 25 j 10:18	17° 3 37'53	
retrograde	-471 Apr 09 j 18:12	2° 3 10'39		opposition	-464 Jul 15 j 07:24	16° 3 13'30	0°-3'-5
opposition	-471 Jun 29 j 12:18	0° 3 46'54	0°29'49	min. Earth dist.	-464 Jul 14 j 16:10	16° 3 14'32	29.04614 AU
min. Earth dist.	-471 Jun 29 j 02:24	0° 3 47'34	29.12601 AU	direct	-464 Oct 02 j 05:37	14° 3 50'29	
	-471 Jul 30 j 02:29	30° R					
direct	-471 Sep 16 j 20:08	29° 2 23'59		conjunction	-463 Jan 12 j 01:45	17° 3 17'57	0°-5'-8
	-471 Nov 02 j 13:28	0° 3		minimum elong	-463 Jan 12 j 01:44	17° 3 17'57	0°05'09
				behind sun begin	-463 Jan 11 j 19:31	17° 3 17'23	
conjunction	-471 Dec 28 j 03:20	1° 3 51'39	0°25'47	behind sun end	-463 Jan 12 j 07:58	17° 3 18'31	
minimum elong	-471 Dec 28 j 03:20	1° 3 51'39	0°25'47	max. Earth dist.	-463 Jan 12 j 17:54	17° 3 19'28	31.04152 AU
max. Earth dist.	-471 Dec 28 j 14:13	1° 3 52'41	31.12086 AU	retrograde	-463 Apr 27 j 23:00	19° 3 50'21	
retrograde	-470 Apr 12 j 06:36	4° 3 23'08		opposition	-463 Jul 17 j 20:14	18° 3 25'55	0°-7'-50
opposition	-470 Jul 02 j 01:25	2° 3 59'19	0°25'11	min. Earth dist.	-463 Jul 17 j 03:09	18° 3 27'05	29.03737 AU
min. Earth dist.	-470 Jul 01 j 13:57	3° 3 00'06	29.11562 AU	direct	-463 Oct 04 j 17:06	17° 3 02'55	
direct	-470 Sep 19 j 08:35	1° 3 36'24					
				conjunction	-462 Jan 14 j 11:53	19° 3 30'24	0°-9'-33
conjunction	-470 Dec 30 j 13:16	4° 3 04'03	0°21'26	minimum elong	-462 Jan 14 j 11:53	19° 3 30'24	0°09'34
minimum elong	-470 Dec 30 j 13:17	4° 3 04'03	0°21'26	behind sun begin	-462 Jan 14 j 06:32	19° 3 29'55	
max. Earth dist.	-470 Dec 30 j 23:49	4° 3 05'03	31.10989 AU	behind sun end	-462 Jan 14 j 17:14	19° 3 30'53	
retrograde	-469 Apr 14 j 20:26	6° 3 35'41		max. Earth dist.	-462 Jan 15 j 04:42	19° 3 31'59	31.03316 AU
opposition	-469 Jul 04 j 14:37	5° 3 11'47	0°20'31	retrograde	-462 Apr 30 j 11:15	22° 3 02'59	
min. Earth dist.	-469 Jul 04 j 03:19	5° 3 12'33	29.10415 AU	opposition	-462 Jul 20 j 09:18	20° 3 38'30	0°-12'-34
direct	-469 Sep 21 j 18:31	3° 3 48'51		min. Earth dist.	-462 Jul 19 j 16:27	20° 3 39'39	29.02951 AU
				direct	-462 Oct 07 j 02:47	19° 3 15'33	
conjunction	-468 Jan 01 j 23:21	6° 3 16'28	0°17'04				
minimum elong	-468 Jan 01 j 23:22	6° 3 16'28	0°17'04	conjunction	-461 Jan 16 j 22:24	21° 3 43'02	0°-13'-58
max. Earth dist.	-468 Jan 02 j 11:31	6° 3 17'37	31.09795 AU	minimum elong	-461 Jan 16 j 22:24	21° 3 43'02	0°14'00
retrograde	-468 Apr 16 j 08:19	8° 3 48'14		behind sun begin	-461 Jan 16 j 19:03	21° 3 42'44	
opposition	-468 Jul 06 j 03:38	7° 3 24'13	0°15'50	behind sun end	-461 Jan 17 j 01:44	21° 3 43'20	
min. Earth dist.	-468 Jul 05 j 15:19	7° 3 25'03	29.09174 AU	max. Earth dist.	-461 Jan 17 j 16:36	21° 3 44'45	31.02567 AU
direct	-468 Sep 23 j 06:41	6° 3 01'16		retrograde	-461 May 02 j 23:32	24° 3 15'47	
				opposition	-461 Jul 22 j 22:06	22° 3 51'17	0°-17'-18
conjunction	-467 Jan 03 j 09:16	8° 3 28'50	0°12'41	min. Earth dist.	-461 Jul 22 j 03:40	22° 3 52'33	29.02219 AU
minimum elong	-467 Jan 03 j 09:16	8° 3 28'50	0°12'40	direct	-461 Oct 09 j 14:28	21° 3 28'21	
behind sun begin	-467 Jan 03 j 05:07	8° 3 28'27					
behind sun end	-467 Jan 03 j 13:24	8° 3 29'13		conjunction	-460 Jan 19 j 08:56	23° 3 55'53	0°-18'-23
max. Earth dist.	-467 Jan 03 j 21:08	8° 3 29'57	31.08538 AU	minimum elong	-460 Jan 19 j 08:55	23° 3 55'53	0°18'24
retrograde	-467 Apr 18 j 21:48	11° 3 00'43		max. Earth dist.	-460 Jan 20 j 02:49	23° 3 57'35	31.01839 AU
opposition	-467 Jul 08 j 16:36	9° 3 36'35	0°11'07	retrograde	-460 May 04 j 13:08	26° 3 28'48	
min. Earth dist.	-467 Jul 08 j 03:40	9° 3 37'28	29.07921 AU	opposition	-460 Jul 24 j 11:06	25° 3 04'17	0°-22'-1
direct	-467 Sep 25 j 17:22	8° 3 13'36		min. Earth dist.	-460 Jul 23 j 16:56	25° 3 05'32	29.01495 AU
				direct	-460 Oct 10 j 23:36	23° 3 41'24	
conjunction	-466 Jan 05 j 19:20	10° 3 41'08	0°08'17				
minimum elong	-466 Jan 05 j 19:21	10° 3 41'08	0°08'16	conjunction	-459 Jan 20 j 19:43	26° 3 08'58	0°-22'-46
behind sun begin	-466 Jan 05 j 13:40	10° 3 40'37		minimum elong	-459 Jan 20 j 19:43	26° 3 08'58	0°22'48
behind sun end	-466 Jan 06 j 01:02	10° 3 41'39		max. Earth dist.	-459 Jan 21 j 15:09	26° 3 10'49	31.01089 AU
max. Earth dist.	-466 Jan 06 j 09:05	10° 3 42'25	31.07296 AU	retrograde	-459 May 07 j 01:37	28° 3 42'03	
retrograde	-466 Apr 21 j 09:51	13° 3 13'07		opposition	-459 Jul 26 j 23:59	27° 3 17'31	0°-26'-42
opposition	-466 Jul 11 j 05:38	11° 3 48'53	0°06'24	min. Earth dist.	-459 Jul 26 j 05:01	27° 3 18'49	29.00711 AU
min. Earth dist.	-466 Jul 10 j 16:02	11° 3 49'49	29.06711 AU	direct	-459 Oct 13 j 11:04	25° 3 54'39	
direct	-466 Sep 28 j 06:51	10° 3 25'53					

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 29

Attention, astronomical year style is used: The year -458 in astronomical counting style is the year 459 BCE in historical counting style.

conjunction	-458 Jan 23 j 06:36	28°☾22'16	0°-27'-8	direct	-451 Oct 31 j 05:39	13°♁43'16	
minimum elong	-458 Jan 23 j 06:36	28°☾22'16	0°27'09		-450 Jan 08 j 10:52	15°♁	
max. Earth dist.	-458 Jan 24 j 01:20	28°☾24'03	31.00268 AU				
	-458 Mar 10 j 20:53	0°♁		conjunction	-450 Feb 10 j 00:43	16°♁11'06	-1°00'-5
retrograde	-458 May 09 j 16:29	0°♁55'31		minimum elong	-450 Feb 10 j 00:43	16°♁11'06	1°00'06
	-458 Jul 11 j 11:46	30°♁☾		max. Earth dist.	-450 Feb 11 j 00:07	16°♁13'18	30.92193 AU
opposition	-458 Jul 29 j 13:03	29°☾30'56	0°-31'-21	retrograde	-450 May 27 j 23:09	18°♁45'15	
min. Earth dist.	-458 Jul 28 j 17:58	29°☾32'15	28.99849 AU	opposition	-450 Aug 16 j 19:08	17°♁20'10	-1°-6'-19
direct	-458 Oct 15 j 21:23	28°☾08'05		min. Earth dist.	-450 Aug 15 j 20:36	17°♁21'44	28.91903 AU
	-457 Jan 09 j 21:20	0°♁		direct	-450 Nov 02 j 16:40	15°♁57'09	
conjunction	-457 Jan 25 j 17:42	0°♁35'44	0°-31'-27	conjunction	-449 Feb 12 j 12:16	18°♁25'01	-1°-3'-52
minimum elong	-457 Jan 25 j 17:42	0°♁35'44	0°31'29	minimum elong	-449 Feb 12 j 12:15	18°♁25'01	1°03'54
max. Earth dist.	-457 Jan 26 j 13:38	0°♁37'37	30.99337 AU	max. Earth dist.	-449 Feb 13 j 11:08	18°♁27'11	30.91520 AU
retrograde	-457 May 12 j 05:45	3°♁09'07		retrograde	-449 May 30 j 13:36	20°♁59'18	
min. Earth dist.	-457 Jul 31 j 07:01	1°♁45'48	28.98857 AU	min. Earth dist.	-449 Aug 18 j 09:08	19°♁35'46	28.91277 AU
opposition	-457 Aug 01 j 02:05	1°♁44'29	0°-35'-57	opposition	-449 Aug 19 j 07:47	19°♁34'12	-1°-10'-19
direct	-457 Oct 18 j 10:24	0°♁21'37		direct	-449 Nov 05 j 02:51	18°♁11'11	
conjunction	-456 Jan 28 j 04:52	2°♁49'18	0°-35'-44	conjunction	-448 Feb 15 j 00:11	20°♁39'08	-1°-7'-34
minimum elong	-456 Jan 28 j 04:52	2°♁49'18	0°35'45	minimum elong	-448 Feb 15 j 00:10	20°♁39'08	1°07'34
max. Earth dist.	-456 Jan 29 j 00:13	2°♁51'08	30.98296 AU	max. Earth dist.	-448 Feb 16 j 00:20	20°♁41'25	30.90909 AU
retrograde	-456 May 13 j 20:20	5°♁22'48		retrograde	-448 Jun 01 j 02:43	23°♁13'31	
opposition	-456 Aug 02 j 14:51	3°♁58'06	0°-40'-30	opposition	-448 Aug 20 j 20:15	21°♁48'25	-1°-14'-12
min. Earth dist.	-456 Aug 01 j 19:01	3°♁59'27	28.97769 AU	min. Earth dist.	-448 Aug 19 j 21:40	21°♁49'59	28.90686 AU
direct	-456 Oct 19 j 21:46	2°♁35'12		direct	-448 Nov 06 j 14:48	20°♁25'25	
conjunction	-455 Jan 29 j 16:04	5°♁02'54	0°-39'-58	conjunction	-447 Feb 16 j 12:06	22°♁53'26	-1°-11'-9
minimum elong	-455 Jan 29 j 16:04	5°♁02'54	0°39'59	minimum elong	-447 Feb 16 j 12:05	22°♁53'26	1°11'11
max. Earth dist.	-455 Jan 30 j 12:10	5°♁04'48	30.97161 AU	max. Earth dist.	-447 Feb 17 j 11:40	22°♁55'40	30.90331 AU
retrograde	-455 May 16 j 08:03	7°♁36'30		retrograde	-447 Jun 03 j 17:37	25°♁27'56	
min. Earth dist.	-455 Aug 04 j 08:26	6°♁13'03	28.96618 AU	min. Earth dist.	-447 Aug 22 j 09:39	24°♁04'26	28.90107 AU
opposition	-455 Aug 05 j 03:47	6°♁11'43	0°-44'-59	opposition	-447 Aug 23 j 08:51	24°♁02'50	-1°-18'00
direct	-455 Oct 22 j 09:49	4°♁48'47		direct	-447 Nov 09 j 01:24	22°♁39'49	
conjunction	-454 Feb 01 j 03:10	7°♁16'29	0°-44'-7	conjunction	-446 Feb 19 j 00:09	25°♁07'55	-1°-14'-39
minimum elong	-454 Feb 01 j 03:10	7°♁16'29	0°44'09	minimum elong	-446 Feb 19 j 00:09	25°♁07'55	1°14'39
max. Earth dist.	-454 Feb 01 j 23:47	7°♁18'26	30.96015 AU	max. Earth dist.	-446 Feb 20 j 00:13	25°♁10'12	30.89713 AU
retrograde	-454 May 18 j 21:54	9°♁50'11		retrograde	-446 Jun 06 j 07:00	27°♁42'32	
opposition	-454 Aug 07 j 16:33	8°♁25'19	0°-49'-25	opposition	-446 Aug 25 j 21:33	26°♁17'24	-1°-21'-40
min. Earth dist.	-454 Aug 06 j 19:46	8°♁26'45	28.95487 AU	min. Earth dist.	-446 Aug 24 j 23:14	26°♁18'56	28.89462 AU
direct	-454 Oct 24 j 22:15	7°♁02'21		direct	-446 Nov 11 j 13:38	24°♁54'23	
conjunction	-453 Feb 03 j 14:25	9°♁30'03	0°-48'-14	conjunction	-445 Feb 21 j 12:33	27°♁22'32	-1°-18'-1
minimum elong	-453 Feb 03 j 14:25	9°♁30'03	0°48'15	minimum elong	-445 Feb 21 j 12:33	27°♁22'32	1°18'02
max. Earth dist.	-453 Feb 04 j 11:18	9°♁32'02	30.94899 AU	max. Earth dist.	-445 Feb 22 j 12:26	27°♁24'48	30.89027 AU
retrograde	-453 May 21 j 10:15	12°♁03'52		retrograde	-445 Jun 08 j 22:25	29°♁57'13	
min. Earth dist.	-453 Aug 09 j 09:04	10°♁40'19	28.94426 AU	min. Earth dist.	-445 Aug 27 j 10:56	28°♁33'39	28.88725 AU
opposition	-453 Aug 10 j 05:16	10°♁38'55	0°-53'-45	opposition	-445 Aug 28 j 09:58	28°♁32'03	-1°-25'-13
direct	-453 Oct 27 j 08:35	9°♁15'55		direct	-445 Nov 14 j 02:34	27°♁09'00	
conjunction	-452 Feb 06 j 01:51	11°♁43'39	0°-52'-15	conjunction	-444 Feb 24 j 00:59	29°♁37'13	-1°-21'-17
minimum elong	-452 Feb 06 j 01:51	11°♁43'39	0°52'16	minimum elong	-444 Feb 24 j 00:59	29°♁37'13	1°21'17
max. Earth dist.	-452 Feb 06 j 23:56	11°♁45'45	30.93885 AU	max. Earth dist.	-444 Feb 25 j 00:19	29°♁39'25	30.88222 AU
retrograde	-452 May 22 j 21:56	14°♁17'34			-444 Mar 05 j 02:47	0°♁	
opposition	-452 Aug 11 j 17:50	12°♁52'34	0°-58'-2	retrograde	-444 Jun 10 j 11:07	2°♁11'57	
min. Earth dist.	-452 Aug 10 j 20:07	12°♁54'04	28.93465 AU	opposition	-444 Aug 29 j 22:35	0°♁46'43	-1°-28'-38
direct	-452 Oct 28 j 20:39	11°♁29'33		min. Earth dist.	-444 Aug 29 j 00:50	0°♁48'14	28.87875 AU
					-444 Sep 28 j 14:34	30°♁	
conjunction	-451 Feb 07 j 13:06	13°♁57'19	0°-56'-13	direct	-444 Nov 15 j 13:49	29°♁23'38	
minimum elong	-451 Feb 07 j 13:06	13°♁57'19	0°56'14		-444 Dec 31 j 22:02	0°♁	
max. Earth dist.	-451 Feb 08 j 10:51	13°♁59'22	30.92975 AU				
	-451 Mar 07 j 22:37	15°♁		conjunction	-443 Feb 25 j 13:26	1°♁51'52	-1°-24'-25
retrograde	-451 May 25 j 10:38	16°♁31'21		minimum elong	-443 Feb 25 j 13:25	1°♁51'52	1°24'27
min. Earth dist.	-451 Aug 13 j 09:00	15°♁07'47	28.92629 AU	max. Earth dist.	-443 Feb 26 j 13:17	1°♁54'07	30.87330 AU
opposition	-451 Aug 14 j 06:33	15°♁06'18	-1°-2'-13	retrograde	-443 Jun 12 j 23:44	4°♁26'38	
	-451 Aug 18 j 01:44	15°♁		opposition	-443 Sep 01 j 10:57	3°♁01'20	-1°-31'-55

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 30

Attention, astronomical year style is used: The year -443 in astronomical counting style is the year 444 BCE in historical counting style.

min. Earth dist.	-443 Aug 31 j 12:20	3° \mathring{K} 02'55	28.86951 AU	conjunction	-434 Mar 18 j 08:34	22° \mathring{K} 03'36	-1°-46'-23
direct	-443 Nov 18 j 02:35	1° \mathring{K} 38'11		minimum elong	-434 Mar 18 j 08:34	22° \mathring{K} 03'36	1°46'24
				max. Earth dist.	-434 Mar 19 j 08:54	22° \mathring{K} 05'53	30.82214 AU
conjunction	-442 Feb 28 j 01:51	4° \mathring{K} 06'27	-1°-27'-25	retrograde	-434 Jul 04 j 00:40	24° \mathring{K} 38'43	
minimum elong	-442 Feb 28 j 01:51	4° \mathring{K} 06'27	1°27'26	opposition	-434 Sep 21 j 23:34	23° \mathring{K} 13'19	-1°-54'-42
max. Earth dist.	-442 Mar 01 j 00:46	4° \mathring{K} 08'37	30.86389 AU	min. Earth dist.	-434 Sep 21 j 01:21	23° \mathring{K} 14'52	28.82252 AU
retrograde	-442 Jun 15 j 12:45	6° \mathring{K} 41'14		direct	-434 Dec 08 j 08:59	21° \mathring{K} 49'55	
opposition	-442 Sep 03 j 23:20	5° \mathring{K} 15'52	-1°-35'-4				
min. Earth dist.	-442 Sep 03 j 01:33	5° \mathring{K} 17'23	28.86024 AU	conjunction	-433 Mar 20 j 22:00	24° \mathring{K} 18'55	-1°-48'-4
direct	-442 Nov 20 j 12:39	3° \mathring{K} 52'38		minimum elong	-433 Mar 20 j 22:00	24° \mathring{K} 18'55	1°48'05
				max. Earth dist.	-433 Mar 21 j 20:54	24° \mathring{K} 21'05	30.82018 AU
conjunction	-441 Mar 02 j 14:30	6° \mathring{K} 20'56	-1°-30'-18	retrograde	-433 Jul 06 j 15:12	26° \mathring{K} 54'04	
minimum elong	-441 Mar 02 j 14:30	6° \mathring{K} 20'56	1°30'20	opposition	-433 Sep 24 j 11:38	25° \mathring{K} 28'41	-1°-56'-24
max. Earth dist.	-441 Mar 03 j 14:35	6° \mathring{K} 23'13	30.85474 AU	min. Earth dist.	-433 Sep 23 j 14:44	25° \mathring{K} 30'09	28.82034 AU
retrograde	-441 Jun 18 j 00:47	8° \mathring{K} 55'45		direct	-433 Dec 10 j 19:30	24° \mathring{K} 05'16	
opposition	-441 Sep 06 j 11:31	7° \mathring{K} 30'19	-1°-38'-4				
min. Earth dist.	-441 Sep 05 j 13:08	7° \mathring{K} 31'53	28.85137 AU	conjunction	-432 Mar 22 j 11:40	26° \mathring{K} 34'22	-1°-49'-34
direct	-441 Nov 23 j 00:38	6° \mathring{K} 07'01		minimum elong	-432 Mar 22 j 11:40	26° \mathring{K} 34'22	1°49'34
				max. Earth dist.	-432 Mar 23 j 10:58	26° \mathring{K} 36'34	30.81753 AU
conjunction	-440 Mar 04 j 03:03	8° \mathring{K} 35'22	-1°-33'-2	retrograde	-432 Jul 08 j 03:13	29° \mathring{K} 09'30	
minimum elong	-440 Mar 04 j 03:03	8° \mathring{K} 35'22	1°33'03	opposition	-432 Sep 25 j 23:26	27° \mathring{K} 44'07	-1°-57'-55
max. Earth dist.	-440 Mar 05 j 02:12	8° \mathring{K} 37'33	30.84628 AU	min. Earth dist.	-432 Sep 25 j 02:32	27° \mathring{K} 45'36	28.81720 AU
retrograde	-440 Jun 19 j 13:56	11° \mathring{K} 10'13		direct	-432 Dec 12 j 07:56	26° \mathring{K} 20'40	
opposition	-440 Sep 07 j 23:36	9° \mathring{K} 44'44	-1°-40'-55				
min. Earth dist.	-440 Sep 07 j 01:23	9° \mathring{K} 46'17	28.84359 AU	conjunction	-431 Mar 25 j 01:12	28° \mathring{K} 49'50	-1°-50'-55
direct	-440 Nov 24 j 10:51	8° \mathring{K} 21'22		minimum elong	-431 Mar 25 j 01:12	28° \mathring{K} 49'49	1°50'56
				max. Earth dist.	-431 Mar 25 j 22:49	28° \mathring{K} 51'52	30.81405 AU
conjunction	-439 Mar 06 j 15:46	10° \mathring{K} 49'47	-1°-35'-38		-431 Apr 26 j 06:02	0° \mathring{V}	
minimum elong	-439 Mar 06 j 15:46	10° \mathring{K} 49'47	1°35'40	retrograde	-431 Jul 10 j 16:01	1° \mathring{V} 24'57	
max. Earth dist.	-439 Mar 07 j 16:09	10° \mathring{K} 52'05	30.83901 AU	opposition	-431 Sep 28 j 11:21	29° \mathring{K} 59'33	-1°-59'-16
retrograde	-439 Jun 22 j 02:00	13° \mathring{K} 24'40		min. Earth dist.	-431 Sep 27 j 15:16	0° \mathring{V} 00'58	28.81347 AU
opposition	-439 Sep 10 j 11:42	11° \mathring{K} 59'09	-1°-43'-37		-431 Sep 28 j 04:53	30° \mathring{R} \mathring{K}	
min. Earth dist.	-439 Sep 09 j 13:28	12° \mathring{K} 00'43	28.83706 AU	direct	-431 Dec 14 j 18:29	28° \mathring{K} 36'01	
direct	-439 Nov 26 j 22:26	10° \mathring{K} 35'46			-430 Feb 25 j 18:36	0° \mathring{V}	
conjunction	-438 Mar 09 j 04:22	13° \mathring{K} 04'14	-1°-38'-5	conjunction	-430 Mar 27 j 14:51	1° \mathring{V} 05'14	-1°-52'-5
minimum elong	-438 Mar 09 j 04:22	13° \mathring{K} 04'14	1°38'06	minimum elong	-430 Mar 27 j 14:51	1° \mathring{V} 05'14	1°52'06
max. Earth dist.	-438 Mar 10 j 04:08	13° \mathring{K} 06'29	30.83328 AU	max. Earth dist.	-430 Mar 28 j 13:03	1° \mathring{V} 07'20	30.81003 AU
retrograde	-438 Jun 24 j 16:36	15° \mathring{K} 39'10		retrograde	-430 Jul 13 j 03:29	3° \mathring{V} 40'18	
opposition	-438 Sep 12 j 23:46	14° \mathring{K} 13'39	-1°-46'-10	opposition	-430 Sep 30 j 23:06	2° \mathring{V} 14'53	-2°00'-26
min. Earth dist.	-438 Sep 12 j 00:54	14° \mathring{K} 15'15	28.83212 AU	min. Earth dist.	-430 Sep 30 j 03:40	2° \mathring{V} 16'15	28.80929 AU
direct	-438 Nov 29 j 08:47	12° \mathring{K} 50'14		direct	-430 Dec 17 j 06:01	0° \mathring{V} 51'17	
conjunction	-437 Mar 11 j 17:17	15° \mathring{K} 18'49	-1°-40'-24	conjunction	-429 Mar 30 j 04:32	3° \mathring{V} 20'32	-1°-53'-6
minimum elong	-437 Mar 11 j 17:16	15° \mathring{K} 18'49	1°40'25	minimum elong	-429 Mar 30 j 04:32	3° \mathring{V} 20'32	1°53'07
max. Earth dist.	-437 Mar 12 j 17:38	15° \mathring{K} 21'06	30.82891 AU	max. Earth dist.	-429 Mar 31 j 01:21	3° \mathring{V} 22'30	30.80597 AU
retrograde	-437 Jun 27 j 05:47	17° \mathring{K} 53'47		retrograde	-429 Jul 15 j 17:20	5° \mathring{V} 55'32	
opposition	-437 Sep 15 j 11:43	16° \mathring{K} 28'17	-1°-48'-33	opposition	-429 Oct 03 j 10:37	4° \mathring{V} 30'05	-2°-1'-25
min. Earth dist.	-437 Sep 14 j 13:35	16° \mathring{K} 29'50	28.82847 AU	min. Earth dist.	-429 Oct 02 j 15:11	4° \mathring{V} 31'27	28.80543 AU
direct	-437 Dec 01 j 20:43	15° \mathring{K} 04'51		direct	-429 Dec 19 j 16:35	3° \mathring{V} 06'23	
conjunction	-436 Mar 13 j 06:17	17° \mathring{K} 33'32	-1°-42'-33	conjunction	-428 Mar 31 j 18:16	5° \mathring{V} 35'43	-1°-53'-56
minimum elong	-436 Mar 13 j 06:17	17° \mathring{K} 33'32	1°42'33	minimum elong	-428 Mar 31 j 18:16	5° \mathring{V} 35'43	1°53'56
max. Earth dist.	-436 Mar 14 j 06:32	17° \mathring{K} 35'49	30.82595 AU	max. Earth dist.	-428 Apr 01 j 15:19	5° \mathring{V} 37'41	30.80230 AU
retrograde	-436 Jun 28 j 21:24	20° \mathring{K} 08'33		retrograde	-428 Jul 17 j 04:50	8° \mathring{V} 10'39	
opposition	-436 Sep 16 j 23:39	18° \mathring{K} 43'05	-1°-50'-46	opposition	-428 Oct 04 j 22:13	6° \mathring{V} 45'09	-2°-2'-13
min. Earth dist.	-436 Sep 16 j 00:40	18° \mathring{K} 44'41	28.82602 AU	min. Earth dist.	-428 Oct 04 j 03:47	6° \mathring{V} 46'28	28.80223 AU
direct	-436 Dec 03 j 09:24	17° \mathring{K} 19'40		direct	-428 Dec 21 j 04:57	5° \mathring{V} 21'24	
conjunction	-435 Mar 15 j 19:13	19° \mathring{K} 48'28	-1°-44'-33	conjunction	-427 Apr 03 j 07:49	7° \mathring{V} 50'46	-1°-54'-36
minimum elong	-435 Mar 15 j 19:12	19° \mathring{K} 48'28	1°44'35	minimum elong	-427 Apr 03 j 07:49	7° \mathring{V} 50'46	1°54'37
max. Earth dist.	-435 Mar 16 j 19:14	19° \mathring{K} 50'43	30.82379 AU	max. Earth dist.	-427 Apr 04 j 04:24	7° \mathring{V} 52'42	30.79973 AU
retrograde	-435 Jul 01 j 10:25	22° \mathring{K} 23'33		retrograde	-427 Jul 19 j 18:59	10° \mathring{V} 25'38	
opposition	-435 Sep 19 j 11:44	20° \mathring{K} 58'06	-1°-52'-49	opposition	-427 Oct 07 j 09:39	9° \mathring{V} 00'08	-2°-2'-50
min. Earth dist.	-435 Sep 18 j 14:02	20° \mathring{K} 59'37	28.82422 AU	min. Earth dist.	-427 Oct 06 j 14:33	9° \mathring{V} 01'29	28.80027 AU
direct	-435 Dec 05 j 20:24	19° \mathring{K} 34'42		direct	-427 Dec 23 j 17:42	7° \mathring{V} 36'18	

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 31

Attention, astronomical year style is used: The year -426 in astronomical counting style is the year 427 BCE in historical counting style.

conjunction	-426 Apr 05 j 21:36	10°♃05'44	-1°-55'-5		-418 Jun 19 j 07:34	0°♄	
minimum elong	-426 Apr 05 j 21:36	10°♃05'44	1°55'05	retrograde	-418 Aug 09 j 16:43	0°♄42'10	
max. Earth dist.	-426 Apr 06 j 17:50	10°♃07'38	30.79838 AU		-418 Oct 01 j 05:01	30°♃♃	
retrograde	-426 Jul 22 j 07:30	12°♃40'32		opposition	-418 Oct 27 j 15:25	29°♃17'06	-1°-59'-48
opposition	-426 Oct 09 j 21:06	11°♃15'03	-2°-3'-15	min. Earth dist.	-418 Oct 27 j 02:00	29°♃18'03	28.82027 AU
min. Earth dist.	-426 Oct 09 j 03:18	11°♃16'18	28.79974 AU	direct	-417 Jan 13 j 02:52	27°♃53'02	
direct	-426 Dec 26 j 04:46	9°♃51'10			-417 Apr 16 j 19:12	0°♄	
conjunction	-425 Apr 08 j 11:32	12°♃20'41	-1°-55'-23	conjunction	-417 Apr 27 j 05:30	0°♄23'20	-1°-51'-28
minimum elong	-425 Apr 08 j 11:32	12°♃20'41	1°55'25	minimum elong	-417 Apr 27 j 05:30	0°♄23'20	1°51'30
max. Earth dist.	-425 Apr 09 j 07:56	12°♃22'36	30.79866 AU	max. Earth dist.	-417 Apr 27 j 19:17	0°♄24'38	30.81952 AU
retrograde	-425 Jul 24 j 21:56	14°♃55'25		retrograde	-417 Aug 12 j 04:37	2°♄57'30	
opposition	-425 Oct 12 j 08:25	13°♃29'57	-2°-3'-29	opposition	-417 Oct 30 j 02:37	1°♄32'28	-1°-58'-32
min. Earth dist.	-425 Oct 11 j 13:57	13°♃31'15	28.80070 AU	min. Earth dist.	-417 Oct 29 j 15:03	1°♄33'17	28.82122 AU
direct	-425 Dec 28 j 18:03	12°♃06'03		direct	-416 Jan 15 j 14:08	0°♄08'20	
conjunction	-424 Apr 10 j 01:20	14°♃35'39	-1°-55'-31	conjunction	-416 Apr 28 j 19:51	2°♄38'41	-1°-50'-12
minimum elong	-424 Apr 10 j 01:20	14°♃35'39	1°55'32	minimum elong	-416 Apr 28 j 19:51	2°♄38'41	1°50'13
max. Earth dist.	-424 Apr 10 j 20:34	14°♃37'27	30.80031 AU	max. Earth dist.	-416 Apr 29 j 09:13	2°♄39'56	30.82058 AU
retrograde	-424 Jul 26 j 11:56	17°♃10'20		retrograde	-416 Aug 13 j 18:29	5°♄12'43	
opposition	-424 Oct 13 j 19:49	15°♃44'55	-2°-3'-32	opposition	-416 Oct 31 j 13:32	3°♄47'41	-1°-57'-6
min. Earth dist.	-424 Oct 13 j 02:29	15°♃46'09	28.80309 AU	min. Earth dist.	-416 Oct 31 j 01:43	3°♄48'31	28.82234 AU
direct	-424 Dec 30 j 05:08	14°♃21'00		direct	-415 Jan 17 j 04:15	2°♄23'29	
conjunction	-423 Apr 12 j 15:23	16°♃50'43	-1°-55'-28	conjunction	-415 May 01 j 10:08	4°♄53'54	-1°-48'-46
minimum elong	-423 Apr 12 j 15:24	16°♃50'43	1°55'30	minimum elong	-415 May 01 j 10:09	4°♄53'54	1°48'48
max. Earth dist.	-423 Apr 13 j 11:13	16°♃52'35	30.80334 AU	max. Earth dist.	-415 May 01 j 22:06	4°♄55'01	30.82200 AU
retrograde	-423 Jul 29 j 00:25	19°♃25'21		retrograde	-415 Aug 16 j 07:39	7°♄27'48	
opposition	-423 Oct 16 j 07:04	18°♃00'01	-2°-3'-23	opposition	-415 Nov 03 j 00:29	6°♄02'47	-1°-55'-29
min. Earth dist.	-423 Oct 15 j 13:38	18°♃01'15	28.80650 AU	min. Earth dist.	-415 Nov 02 j 14:05	6°♄03'31	28.82423 AU
direct	-422 Jan 01 j 17:40	16°♃36'06		direct	-414 Jan 19 j 16:17	4°♄38'30	
conjunction	-422 Apr 15 j 05:24	19°♃05'55	-1°-55'-15	conjunction	-414 May 04 j 00:34	7°♄09'00	-1°-47'-11
minimum elong	-422 Apr 15 j 05:24	19°♃05'55	1°55'15	minimum elong	-414 May 04 j 00:34	7°♄09'00	1°47'11
max. Earth dist.	-422 Apr 15 j 23:33	19°♃07'37	30.80713 AU	max. Earth dist.	-414 May 04 j 12:44	7°♄10'08	30.82440 AU
retrograde	-422 Jul 31 j 14:05	21°♃40'31		retrograde	-414 Aug 18 j 19:51	9°♄42'45	
opposition	-422 Oct 18 j 18:26	20°♃15'15	-2°-3'-3	opposition	-414 Nov 05 j 11:19	8°♄17'46	-1°-53'-41
min. Earth dist.	-422 Oct 18 j 01:59	20°♃16'25	28.81046 AU	min. Earth dist.	-414 Nov 05 j 00:53	8°♄18'30	28.82706 AU
direct	-421 Jan 04 j 04:05	18°♃51'21		direct	-413 Jan 22 j 05:33	6°♄53'26	
conjunction	-421 Apr 17 j 19:50	21°♃21'17	-1°-54'-50	conjunction	-413 May 06 j 14:51	9°♄23'59	-1°-45'-25
minimum elong	-421 Apr 17 j 19:50	21°♃21'17	1°54'51	minimum elong	-413 May 06 j 14:51	9°♄23'59	1°45'26
max. Earth dist.	-421 Apr 18 j 14:16	21°♃23'01	30.81097 AU	max. Earth dist.	-413 May 07 j 01:16	9°♄24'58	30.82790 AU
retrograde	-421 Aug 03 j 02:10	23°♃55'50		retrograde	-413 Aug 21 j 09:32	11°♄57'36	
opposition	-421 Oct 21 j 05:39	22°♃30'39	-2°-2'-31	opposition	-413 Nov 07 j 22:05	10°♄32'40	-1°-51'-43
min. Earth dist.	-421 Oct 20 j 14:13	22°♃31'44	28.81405 AU	min. Earth dist.	-413 Nov 07 j 12:29	10°♄33'21	28.83127 AU
direct	-420 Jan 06 j 15:25	21°♃06'44		direct	-412 Jan 24 j 16:45	9°♄08'18	
conjunction	-420 Apr 19 j 10:10	23°♃36'47	-1°-54'-15	conjunction	-412 May 08 j 05:16	11°♄38'56	-1°-43'-30
minimum elong	-420 Apr 19 j 10:10	23°♃36'47	1°54'15	minimum elong	-412 May 08 j 05:16	11°♄38'56	1°43'30
max. Earth dist.	-420 Apr 20 j 02:38	23°♃38'19	30.81434 AU	max. Earth dist.	-412 May 08 j 16:14	11°♄39'57	30.83280 AU
retrograde	-420 Aug 04 j 15:52	26°♃11'16		retrograde	-412 Aug 22 j 21:23	14°♄12'24	
opposition	-420 Oct 22 j 17:00	24°♃46'08	-2°-1'-48	opposition	-412 Nov 09 j 08:56	12°♄47'32	-1°-49'-34
min. Earth dist.	-420 Oct 22 j 01:59	24°♃47'12	28.81702 AU	min. Earth dist.	-412 Nov 08 j 23:56	12°♄48'10	28.83676 AU
direct	-419 Jan 08 j 02:03	23°♃22'11		direct	-411 Jan 26 j 04:41	11°♄23'08	
conjunction	-419 Apr 22 j 00:30	25°♃52'20	-1°-53'-30	conjunction	-411 May 10 j 19:25	13°♄53'50	-1°-41'-25
minimum elong	-419 Apr 22 j 00:31	25°♃52'20	1°53'31	minimum elong	-411 May 10 j 19:25	13°♄53'50	1°41'26
max. Earth dist.	-419 Apr 22 j 16:40	25°♃53'51	30.81678 AU	max. Earth dist.	-411 May 11 j 04:45	13°♄54'43	30.83910 AU
retrograde	-419 Aug 07 j 02:57	28°♃26'44			-411 Jun 10 j 06:50	15°♄	
opposition	-419 Oct 25 j 04:23	27°♃01'39	-2°00'-53	retrograde	-411 Aug 25 j 09:59	16°♄27'12	
min. Earth dist.	-419 Oct 24 j 14:56	27°♃02'36	28.81897 AU	opposition	-411 Nov 11 j 19:41	15°♄02'25	-1°-47'-15
direct	-418 Jan 10 j 14:18	25°♃37'39		min. Earth dist.	-411 Nov 11 j 10:53	15°♄03'03	28.84359 AU
conjunction	-418 Apr 24 j 15:00	28°♃07'53	-1°-52'-34	direct	-410 Jan 28 j 15:43	13°♄38'00	
minimum elong	-418 Apr 24 j 15:00	28°♃07'53	1°52'35		-410 Apr 11 j 13:26	15°♄	
max. Earth dist.	-418 Apr 25 j 05:42	28°♃09'15	30.81848 AU				

Planetary Phenomena of Neptune from -900 through -400 (UT), Astrodienst AG 14-Nov-2015 16:11, page 32

Attention, astronomical year style is used: The year -410 in astronomical counting style is the year 411 BCE in historical counting style.

conjunction	-410 May 13 j 09:57	16°♃08'48	-1°-39'-10	conjunction	-402 Jun 01 j 05:42	4°♃06'59	-1°-16'-13
minimum elong	-410 May 13 j 09:57	16°♃08'48	1°39'11	minimum elong	-402 Jun 01 j 05:42	4°♃06'59	1°16'13
max. Earth dist.	-410 May 13 j 19:17	16°♃09'40	30.84633 AU	max. Earth dist.	-402 Jun 01 j 05:29	4°♃06'58	30.89295 AU
retrograde	-410 Aug 27 j 20:20	18°♃42'02		retrograde	-402 Sep 14 j 22:35	6°♃38'52	
opposition	-410 Nov 14 j 06:23	17°♃17'21	-1°-44'-47	opposition	-402 Dec 01 j 19:09	5°♃14'37	-1°-19'-40
min. Earth dist.	-410 Nov 13 j 23:07	17°♃17'52	28.85104 AU	min. Earth dist.	-402 Dec 01 j 18:46	5°♃14'38	28.89634 AU
direct	-409 Jan 31 j 03:01	15°♃52'56		direct	-401 Feb 18 j 06:00	3°♃49'44	
conjunction	-409 May 16 j 00:30	18°♃23'49	-1°-36'-47	conjunction	-401 Jun 03 j 20:00	6°♃21'04	-1°-12'-48
minimum elong	-409 May 16 j 00:30	18°♃23'49	1°36'48	minimum elong	-401 Jun 03 j 20:00	6°♃21'04	1°12'48
max. Earth dist.	-409 May 16 j 08:15	18°♃24'33	30.85405 AU	max. Earth dist.	-401 Jun 03 j 19:57	6°♃21'04	30.89897 AU
retrograde	-409 Aug 30 j 10:02	20°♃56'56		retrograde	-401 Sep 17 j 08:33	8°♃52'46	
opposition	-409 Nov 16 j 17:05	19°♃32'21	-1°-42'-8	opposition	-401 Dec 04 j 05:38	7°♃28'34	-1°-15'-57
min. Earth dist.	-409 Nov 16 j 09:53	19°♃32'51	28.85863 AU	min. Earth dist.	-401 Dec 04 j 06:31	7°♃28'31	28.90295 AU
direct	-408 Feb 02 j 14:28	18°♃07'54		direct	-400 Feb 20 j 17:28	6°♃03'39	
conjunction	-408 May 17 j 14:58	20°♃38'53	-1°-34'-14	conjunction	-400 Jun 05 j 09:55	8°♃35'02	-1°-9'-16
minimum elong	-408 May 17 j 14:58	20°♃38'53	1°34'15	minimum elong	-400 Jun 05 j 09:55	8°♃35'02	1°09'17
max. Earth dist.	-408 May 17 j 21:50	20°♃39'31	30.86136 AU	max. Earth dist.	-400 Jun 05 j 08:31	8°♃34'54	30.90639 AU
retrograde	-408 Aug 31 j 20:45	23°♃11'52		retrograde	-400 Sep 18 j 21:19	11°♃06'35	
opposition	-408 Nov 18 j 03:56	21°♃47'21	-1°-39'-21	opposition	-400 Dec 05 j 15:57	9°♃42'27	-1°-12'-8
min. Earth dist.	-408 Nov 17 j 22:46	21°♃47'43	28.86565 AU	min. Earth dist.	-400 Dec 05 j 16:24	9°♃42'26	28.91105 AU
direct	-407 Feb 04 j 01:21	20°♃22'52					
conjunction	-407 May 20 j 05:35	22°♃53'55	-1°-31'-33				
minimum elong	-407 May 20 j 05:36	22°♃53'56	1°31'34				
max. Earth dist.	-407 May 20 j 11:26	22°♃54'28	30.86808 AU				
retrograde	-407 Sep 03 j 09:35	25°♃26'45					
opposition	-407 Nov 20 j 14:33	24°♃02'18	-1°-36'-24				
min. Earth dist.	-407 Nov 20 j 09:32	24°♃02'39	28.87180 AU				
direct	-406 Feb 06 j 15:26	22°♃37'46					
conjunction	-406 May 22 j 20:10	25°♃08'53	-1°-28'-44				
minimum elong	-406 May 22 j 20:10	25°♃08'53	1°28'45				
max. Earth dist.	-406 May 23 j 00:09	25°♃09'15	30.87378 AU				
retrograde	-406 Sep 05 j 21:48	27°♃41'33					
opposition	-406 Nov 23 j 01:19	26°♃17'08	-1°-33'-19				
min. Earth dist.	-406 Nov 22 j 22:10	26°♃17'21	28.87707 AU				
direct	-405 Feb 09 j 03:29	24°♃52'31					
conjunction	-405 May 25 j 10:47	27°♃23'42	-1°-25'-47				
minimum elong	-405 May 25 j 10:47	27°♃23'42	1°25'48				
max. Earth dist.	-405 May 25 j 14:21	27°♃24'02	30.87873 AU				
retrograde	-405 Sep 08 j 09:56	29°♃56'09					
opposition	-405 Nov 25 j 11:50	28°♃31'47	-1°-30'-6				
min. Earth dist.	-405 Nov 25 j 09:06	28°♃31'59	28.88161 AU				
direct	-404 Feb 11 j 17:07	27°♃07'07					
conjunction	-404 May 27 j 01:08	29°♃38'19	-1°-22'-43				
minimum elong	-404 May 27 j 01:08	29°♃38'19	1°22'43				
max. Earth dist.	-404 May 27 j 02:35	29°♃38'27	30.88323 AU				
retrograde	-404 Jun 05 j 18:33	0°♃					
opposition	-404 Sep 09 j 23:17	2°♃10'36					
min. Earth dist.	-404 Nov 26 j 22:23	0°♃46'15	-1°-26'-45				
direct	-404 Nov 26 j 20:46	0°♃46'22	28.88612 AU				
	-404 Dec 25 j 15:00	30°♃					
direct	-403 Feb 13 j 05:11	29°♃21'30					
	-403 Apr 02 j 21:12	0°♃					
conjunction	-403 May 29 j 15:27	1°♃52'45	-1°-19'-31				
minimum elong	-403 May 29 j 15:28	1°♃52'45	1°19'32				
max. Earth dist.	-403 May 29 j 17:10	1°♃52'55	30.88783 AU				
retrograde	-403 Sep 12 j 10:26	4°♃24'50					
opposition	-403 Nov 29 j 08:52	3°♃00'31	-1°-23'-16				
min. Earth dist.	-403 Nov 29 j 08:12	3°♃00'34	28.89080 AU				
direct	-402 Feb 15 j 18:15	1°♃35'42					