Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 1 Attention, astronomical year style is used: The year -3400 in astronomical counting style is the year 3401 BCE in historical counting style. -3400 Mar 25 i 04:26 27°M05'22 retrograde -3394 Apr 03 j 21:28 6°**х** 23′55 retrograde 25°ML56'48 35.37535 AU -3400 Jun 12 j 14:28 min. Earth dist. -3394 Jun 22 j 14:23 5° ₹17'05 36.90518 AU min. Earth dist. -3400 Jun 15 j 17:48 opposition -3394 Jun 25 j 21:30 5°\$\square\$12'38 -8°11'26 25°M52'27 -5°29'20 opposition -3394 Sep 14 j 07:55 direct -3400 Sep 04 j 01:45 24°M41'03 direct 4° ×703'01 -3394 Dec 09 j 18:00 evening set -3400 Nov 28 j 20:57 26°ML13′02 evening set 5°**х** 32'55 -3400 Dec 13 j 02:34 26°M39'19 -5°25'14 -3394 Dec 22 j 17:59 conjunction conjunction 5°**х** 55'58 -7°57'52 -3394 Dec 22 j 17:47 minimum elong -3400 Dec 13 j 02:24 26°M39'18 5°25'21 minimum elong 5°**х** 55′57 7°57′58 -3400 Dec 16 j 05:50 max. Earth dist. 26°M45'09 37.49427 AU max. Earth dist. -3394 Dec 26 j 01:01 6° ₹01'51 39.01283 AU morning rise -3400 Dec 27 j 10:08 27°M05'45 morning rise -3393 Jan 04 j 19:48 6°**х** 19′10 retrograde -3399 Mar 27 j 01:19 28°M41'27 retrograde -3393 Apr 05 j 14:33 7°**х** 53′09 -3399 Jun 14 j 10:59 -3393 Jun 24 j 10:00 min. Earth dist. 27°M33'14 35.63105 AU min. Earth dist. 6°**х** 46'32 37.16094 AU -3393 Jun 27 j 16:28 opposition -3399 Jun 17 j 15:36 27° ML $28'50 - 5^{\circ}58'03$ opposition 6°**х** 42′08 -8°36′03 direct -3399 Sep 05 j 23:11 26°M17'44 direct -3393 Sep 16 j 02:57 5°**х**³32'51 evening set -3399 Nov 30 j 20:58 27°M49'18 evening set -3393 Dec 11 j 17:01 7°**х** 02′31 conjunction -3399 Dec 14 j 22:17 28°M15'04 -5°52'15 conjunction -3393 Dec 24 j 11:11 7°**₹**'25'00 -8°21'05 minimum elong -3399 Dec 14 j 22:07 28°M15'03 5°52'20 minimum elong -3393 Dec 24 j 10:59 7°**₹**24'59 8°21'12 max. Earth dist. -3399 Dec 18 j 02:09 28°M20'54 37.74785 AU max. Earth dist. -3393 Dec 27 j 18:19 7°**х** 30′51 39.26666 AU morning rise -3399 Dec 29 j 01:43 28°M41'00 morning rise -3392 Jan 06 j 07:00 7°**∡**¹47'37 -3398 Feb 21 j 20:01 0°×7 retrograde -3392 Apr 06 j 09:17 9°×21'26 -3398 Mar 28 j 22:57 0°**х** 16′19 min. Earth dist. -3392 Jun 25 i 03:18 8° ₹15'09 37.41660 AU retrograde -3398 May 03 j 19:56 30°RM opposition -3392 Jun 28 j 10:54 8°**х** 10'43 -8°59'59 min. Earth dist. -3398 Jun 16 j 08:51 29°M08'20 35.88600 AU direct -3392 Sep 16 j 20:10 7°**₹**01'44 -3398 Jun 19 j 13:10 29°M03'58 -6°26'05 -3392 Dec 12 j 16:02 8°**х** 31'14 opposition evening set -3398 Sep 07 j 19:09 27°ML53'11 direct -3398 Dec 02 j 20:33 29°M24'20 -3392 Dec 25 j 03:57 8°**×**⁷53'07 -8°43'41 conjunction evening set -3392 Dec 25 j 03:43 8°\$\square\$153'07 8°43'48 minimum elong -3398 Dec 16 j 17:31 29°M49'35 -6°18'38 -3392 Dec 28 j 11:16 conjunction max. Earth dist. 8° ₹ 58'57 39.51998 AU 9°**∡**15′09 -3398 Dec 16 j 17:20 -3391 Jan 06 j 17:42 minimum elong 29°M-49'34 6°18'44 morning rise -3398 Dec 19 j 22:08 -3391 Apr 08 j 05:02 10°**∡**¹48'50 max. Earth dist. 29°M55'26 38.00080 AU retrograde -3398 Dec 22 j 10:03 -3391 Jun 26 j 21:35 9°**∡**′42'48 37.67174 AU 0°×7 min. Earth dist. 0°**х** 14′59 morning rise -3398 Dec 30 j 16:16 -3391 Jun 30 j 04:58 9°**х** 38′25 -9°23′15 opposition 1°**∡**¹49'58 -3397 Mar 30 j 17:41 -3391 Sep 18 j 11:15 8°×29'44 retrograde direct -3397 Jun 18 j 05:06 -3391 Dec 14 j 14:51 9°**∡**759′05 min. Earth dist. 0°**х** 42′15 36.14041 AU evening set -3397 Jun 21 j 10:02 opposition 0°**х** 37′53 -6°53′27 -3391 Dec 26 j 20:31 10°**₹**20'23 -9°05'40 -3397 Jul 20 j 15:20 30°R,ML conjunction direct -3397 Sep 09 j 16:55 29°M27'22 minimum elong -3391 Dec 26 j 20:19 10°**х** 20'23 9°05'47 -3397 Oct 28 j 19:46 0°⊀ max. Earth dist. -3391 Dec 30 j 04:40 10°**✗**26'14 39.77250 AU evening set -3397 Dec 04 j 20:16 0°**х** 58′09 morning rise -3390 Jan 08 j 03:41 10°**∡**'41'49 retrograde -3390 Apr 09 j 20:17 12°**х** 15′23 -3397 Dec 18 j 12:15 1°**₹**22'52 -6°44'23 -3390 Jun 28 j 15:23 11°**渘**09'38 37.92557 AU conjunction min. Earth dist. -3397 Dec 18 j 12:04 -3390 Jul 01 j 22:39 11°**₹**05'16 -9°45'52 minimum elong 1°×22'51 6°44'29 opposition 9°**∡**¹56'53 -3397 Dec 21 j 16:43 1°**₹**'28'40 38.25335 AU -3390 Sep 20 j 06:32 max. Earth dist. direct -3396 Jan 01 j 06:20 1°**×**747'44 -3390 Dec 16 j 13:41 morning rise evening set 11°**₹**26′07 retrograde -3396 Mar 31 j 12:20 3°×22'24 -3390 Dec 28 i 12:35 min. Earth dist. -3396 Jun 19 i 00:40 2° ₹ 14'58 36.39498 AU conjunction 11°**∡** 46'48 -9°27'02 opposition -3396 Jun 22 i 06:18 2°**х** 10'34 -7°20'08 minimum elong -3390 Dec 28 i 12:22 11°**∡** 46'47 9°27'09 direct -3396 Sep 10 j 13:39 1°**х** 00′22 max. Earth dist. -3390 Dec 31 i 19:46 11°**₹**52'33 40.02337 AU -3396 Dec 05 j 19:37 2°**х** 30′48 -3389 Jan 09 i 13:12 12°**₹**'07'38 evening set morning rise -3389 Apr 11 j 12:10 13°**₹**'41'07 retrograde -3396 Dec 19 j 06:40 2°**x** 54'59 -7°09'31 -3389 Jun 30 j 08:23 12°**₹**35'38 38.17761 AU conjunction min. Earth dist. -3396 Dec 19 j 06:28 -3389 Jul 03 j 16:02 12°**₹**'31'15 -10°07'50 minimum elong 2° 27 54'58 7°09'38 opposition max. Earth dist. -3396 Dec 22 j 12:46 3°**尽**00'52 38.50611 AU direct -3389 Sep 22 j 00:38 11°×23'09 -3389 Dec 18 j 12:29 morning rise -3395 Jan 01 j 19:29 3°**х** 19′18 evening set 12°**х** 52′17 -3395 Apr 02 j 03:36 4°**х** 53′42 retrograde 13°**҂**12'22 -9°47'49 min. Earth dist. -3395 Jun 20 j 20:38 3°**≯**46'31 36.64981 AU conjunction -3389 Dec 30 j 04:39 -3395 Jun 24 j 02:08 3°**х** 42'08 -7°46'08 -3389 Dec 30 j 04:27 13° ₹ 12'21 9°47'56 opposition minimum elong -3395 Sep 12 j 12:29 2°×32'13 -3388 Jan 02 j 12:45 13°**✗**18'09 40.27196 AU direct max. Earth dist. -3395 Dec 07 j 18:54 4°**∡**02'22 -3388 Jan 10 j 22:17 evening set morning rise 13°**∡** 32'34 -3388 Apr 12 j 01:45 retrograde 15°**₹**05'59 conjunction -3395 Dec 21 j 00:27 4° \$\square 25'59 -7°34'01 min. Earth dist. -3388 Jul 01 j 02:33 14°**✗**00'40 38.42703 AU minimum elong -3395 Dec 21 j 00:16 4°**҂**25'58 7°34'07 opposition -3388 Jul 04 j 08:53 13°**∡** 56'23 -10°29'11 max. Earth dist. -3395 Dec 24 j 06:07 4°**✗**31'48 38.75928 AU direct -3388 Sep 22 j 19:56 12°**х** 48'33 morning rise -3394 Jan 03 j 07:55 4°**х** 49'45 evening set -3388 Dec 19 j 11:20 14°**х** 17′35

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3388 in astronomical counting style is the year 3389 BCE in historical counting style. -3388 Dec 30 i 20:19 14°**₹**37'03 -10°08'01 direct -3381 Oct 03 i 10:16 22°×20'23 conjunction -3388 Dec 30 j 20:06 14°**₹**37'02 10°08'07 evening set -3381 Dec 31 j 23:51 23°× 49'27 minimum elong max. Earth dist. -3387 Jan 03 j 03:13 14°**∡**′42'42 40.51784 AU -3387 Jan 11 j 06:43 24°**₹**04'17 -12°13'19 14°**х** 56'37 -3380 Jan 10 j 00:09 conjunction morning rise -3387 Apr 13 j 16:55 16°**∡**¹29'58 -3380 Jan 09 j 23:57 24°**х** 04'16 12°13'26 retrograde minimum elong 15°**∡**′24′55 38.67356 AU 24°**₹**09'43 42.17802 AU -3387 Jul 02 j 18:19 -3380 Jan 13 j 07:03 min. Earth dist. max. Earth dist. -3380 Jan 19 j 01:12 15°**х** 20'37 -10°49'54 24°**х** 19′11 opposition -3387 Jul 06 j 01:24 morning rise -3380 Apr 22 j 19:06 25°**х** 52'44 direct -3387 Sep 24 j 12:54 14°**х** 13′01 retrograde -3387 Dec 21 j 09:49 -3380 Jul 12 j 04:33 evening set 15°**х** 41′58 min. Earth dist. 24°**✗**49'03 40.34279 AU -3380 Jul 15 j 10:27 opposition 24°**х** 44'54 -12°57'50 conjunction -3386 Jan 01 j 11:27 16°**₹**00'48 -10°27'39 direct -3380 Oct 03 j 23:43 23°×738'53 -3386 Jan 01 j 11:15 -3379 Jan 01 j 22:11 minimum elong 16°**₹**00'47 10°27'46 evening set 25°**х** 08′06 -3386 Jan 04 j 18:29 max. Earth dist. 16°**∡**¹06′26 40.76068 AU morning rise -3386 Jan 12 j 14:33 16°**∡**19'44 conjunction -3379 Jan 10 j 13:13 25°**∡**122'14 -12°28'56 retrograde -3386 Apr 15 j 08:38 17°**х** 53′03 minimum elong -3379 Jan 10 j 13:02 25° 22'13 12°29'03 min. Earth dist. -3386 Jul 04 j 11:49 16°**∡**′48′08 38.91726 AU max. Earth dist. -3379 Jan 13 j 19:37 25°**✗**27'36 42.40953 AU morning rise opposition -3386 Jul 07 j 17:42 16° **₹**43'54 -11°10'01 -3379 Jan 19 j 05:07 25°**х** 36′26 direct -3386 Sep 26 j 04:48 15°**х** 36'31 retrograde -3379 Apr 24 j 10:55 27°**₹**10'09 evening set -3386 Dec 23 j 08:20 17°**х** 05′25 min. Earth dist. -3379 Jul 13 j 18:59 26°**✗**06'39 40.57550 AU opposition -3379 Jul 17 j 00:13 26°**х** 02'34 -13°13'43 conjunction -3385 Jan 03 j 02:27 17°**₹**23'36 -10°46'42 direct -3379 Oct 05 j 11:00 24° x 56'49 minimum elong -3385 Jan 03 i 02:14 17°**х** 23′35 10°46'48 evening set -3378 Jan 03 j 20:25 26°**х** 26′12 max. Earth dist. -3385 Jan 06 i 09:29 17°**₹**29'12 41.00098 AU morning rise -3385 Jan 13 j 21:43 17°**х** 41′53 conjunction -3378 Jan 12 i 02:03 26° 2739'38 -12°44'01 retrograde -3385 Apr 17 j 00:25 19°**х** 15′09 -3378 Jan 12 i 01:51 26° x 39'37 12°44'09 minimum elong -3385 Jul 06 j 03:17 18°**≯**10'26 39.15847 AU max. Earth dist. -3378 Jan 15 j 09:05 26° ₹ 45'01 42.63912 AU min. Earth dist. -3385 Jul 09 j 09:21 18°**₹**06'13 -11°29'31 -3378 Jan 20 j 08:16 26° **₹** 53'06 morning rise opposition -3385 Sep 27 j 19:51 16°**х** 59′03 -3378 Apr 25 j 23:46 retrograde 28° × 27'01 direct -3385 Dec 25 j 06:48 18°**∡**27'54 -3378 Jul 15 j 09:03 27°**҂**23'44 40.80577 AU min. Earth dist. evening set -3378 Jul 18 j 13:37 27°**∡**19'41 -13°29'02 opposition -3384 Jan 04 j 16:57 18°**∡**¹45'27 -11°05'10 -3378 Oct 07 j 00:27 conjunction 26° **₹**14'11 direct -3384 Jan 04 j 16:45 -3377 Jan 05 j 19:07 27°**∡**¹43'47 18°**∡**'45'26 11°05'18 minimum elong evening set -3384 Jan 07 j 23:17 max. Earth dist. 18°**∡**50'57 41.23902 AU 19°**х**⁴03'04 -3384 Jan 15 j 04:26 -3377 Jan 13 j 14:45 27°**₹**56'29 -12°58'35 morning rise conjunction -3384 Apr 17 j 16:12 20°**х** 36′20 -3377 Jan 13 j 14:34 retrograde minimum elong 27° × 56'28 12°58'42 -3384 Jul 06 j 18:45 19°**✗**31'47 39.39788 AU -3377 Jan 16 j 20:20 28°**✗**01'45 42.86603 AU min. Earth dist. max. Earth dist. -3384 Jul 10 j 00:45 19°**∡**127'35 -11°48'24 -3377 Jan 21 j 11:02 opposition morning rise 28°**х** 09′13 direct -3384 Sep 28 j 10:00 18°**∡** 20'38 retrograde -3377 Apr 27 j 12:58 29°**х** 43′21 -3384 Dec 26 j 05:04 19°**∡**¹49'29 min. Earth dist. -3377 Jul 16 j 22:06 28°**✗¹**40'18 41.03315 AU evening set opposition -3377 Jul 20 j 02:44 28°**∡**136'17 -13°43'48 conjunction -3383 Jan 05 j 07:14 20°**₹**06'22 -11°23'04 direct -3377 Oct 08 j 13:01 27°**х** 31′00 -3383 Jan 05 j 07:02 20°**₹**06'21 11°23'11 -3376 Jan 07 j 17:55 29°**х¹**00′52 minimum elong evening set -3383 Jan 08 j 14:32 20°**✗**11'54 41.47545 AU max. Earth dist. -3383 Jan 15 j 10:26 20°**х** 23′19 -3376 Jan 15 j 03:23 29°**∡**12'48 -13°12'39 morning rise conjunction -3383 Apr 19 j 03:37 21°**х** 56′36 -3376 Jan 15 j 03:11 29°**х** 12'48 13°12'46 retrograde minimum elong -3383 Jul 08 j 10:14 29°**≯**18'04 43.08960 AU min. Earth dist. 20° ₹ 52'13 39.63576 AU max. Earth dist. -3376 Jan 18 i 09:17 29°**х** 24'47 opposition -3383 Jul 11 j 15:38 20°×748'03 -12°06'40 morning rise -3376 Jan 22 j 13:21 direct -3383 Sep 30 i 03:28 19°**√**41'19 -3376 Feb 14 i 08:42 0°궁 evening set -3383 Dec 28 i 03:25 21°**尽**10′13 retrograde -3376 Apr 27 j 22:21 0°る59'11 -3376 Jul 14 i 13:07 30°R*X* -3382 Jan 06 j 21:07 21°×726'25 -11°40'23 min. Earth dist. -3376 Jul 17 j 12:49 29° ₹ 56'15 41.25677 AU conjunction -3382 Jan 06 i 20:55 21°×726'24 11°40'31 -3376 Jul 20 j 15:40 29° \$\square\$ 52'19 -13°58'04 minimum elong opposition -3382 Jan 10 j 03:26 21°**₹**31'52 41.71071 AU direct -3376 Oct 09 j 05:02 28°**х** 47'17 max. Earth dist. morning rise -3382 Jan 16 j 15:53 21°×742'42 -3376 Dec 28 j 16:19 0°궁 retrograde -3382 Apr 20 j 16:26 23°**х** 16′02 evening set -3375 Jan 08 j 17:08 0°る17'25 22°**∡**11'55 39.87265 AU min. Earth dist. -3382 Jul 09 j 23:58 22°**₹**07'43 -12°24'20 -3382 Jul 13 j 06:16 conjunction -3375 Jan 15 j 15:45 0°る28'34 -13°26'13 opposition -3382 Oct 01 j 19:07 21°× 01'12 -3375 Jan 15 j 15:35 0°る28'34 13°26'20 direct minimum elong -3382 Dec 30 j 01:30 22°**х** 30′10 -3375 Jan 18 j 20:12 0°**궁**33'43 43.30931 AU evening set max. Earth dist. -3375 Jan 22 j 14:46 0°る39'46 morning rise -3381 Jan 08 j 10:41 22°**x**¹45'42 -11°57'08 -3375 Apr 29 j 10:19 2°る14'26 conjunction retrograde minimum elong -3381 Jan 08 j 10:29 22°**✓**45'41 11°57'15 min. Earth dist. -3375 Jul 19 j 01:11 1°る11'43 41.47625 AU max. Earth dist. -3381 Jan 11 j 17:54 22°**尽**51'11 41.94490 AU opposition -3375 Jul 22 j 04:11 1°る07'47 -14°11'49 morning rise -3381 Jan 17 j 20:49 23°× 01'17 direct -3375 Oct 10 j 18:21 0°る02'57 retrograde -3381 Apr 22 j 05:21 24°**₹**34'44 evening set -3374 Jan 10 j 16:30 1°る33'23 -3381 Jul 11 j 15:26 23°**x** 30'46 40.10841 AU min. Earth dist.

-3381 Jul 14 j 20:40

opposition

23°**∡**¹26'38 -12°41'23

-3374 Jan 17 j 03:50

conjunction

1°る43'44 -13°39'19

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Planetary Pheno						, ,	
Attention, astronomi	cal year style is used: Th	e year -3374 i	n astronomical cou	nting style is the year	3375 BCE in historical co		
minimum elong	-3374 Jan 17 j 03:39	1° る 43'43	13°39'26	evening set	-3367 Jan 24 j 07:07	10° る 10'04	
max. Earth dist.	-3374 Jan 20 j 07:36	1° る 48'48	43.52480 AU				
morning rise	-3374 Jan 23 j 15:33	1°る54'07		conjunction	-3367 Jan 25 j 09:38	10° ට 11'46	-14°57'40
retrograde	-3374 Apr 30 j 23:54	3° ට 29'05		minimum elong	-3367 Jan 25 j 09:32	10° ට 11'46	
-			41 CO1CT ATT	Č	3		14 37 40
min. Earth dist.	-3374 Jul 20 j 15:14		41.69167 AU	morning rise	-3367 Jan 26 j 11:59	10° る 13'28	
opposition	-3374 Jul 23 j 16:40	2° る 22'38	-14°25'04	max. Earth dist.	-3367 Jan 28 j 09:44	10° ℃ 16′26	44.94739 AU
direct	-3374 Oct 12 j 05:27	1° る 17'59		retrograde	-3367 May 09 j 04:59	11° る 53'45	
evening set	-3373 Jan 12 j 16:21	2° る 48'44		min. Earth dist.	-3367 Jul 29 j 01:19	10° る 52'07	43.11663 AU
_				opposition	-3367 Jul 31 j 23:16	10° る 48'33	-15°43'53
conjunction	-3373 Jan 18 i 15:43	2° ප 58'15	-13°51'56	direct	-3367 Oct 20 j 12:35	9° ප 45'06	
	,	2°る58'14		direct	-3307 Oct 20 j 12.33	7 043 00	
minimum elong	-3373 Jan 18 j 15:34					🗕	
max. Earth dist.	-3373 Jan 21 j 19:22		43.73644 AU	conjunction	-3366 Jan 26 j 20:03	11° පි 22'10	
morning rise	-3373 Jan 24 j 15:18	3° る 07'47		minimum elong	-3366 Jan 26 j 19:57	11° る 22'09	15°07'07
retrograde	-3373 May 02 j 11:45	4°る43'04		max. Earth dist.	-3366 Jan 29 j 20:35	11° る 26'50	45.14075 AU
min. Earth dist.	-3373 Jul 22 j 03:41	3°₹40'36	41.90317 AU	retrograde	-3366 May 10 j 14:04	13° る 03'43	
opposition	-3373 Jul 25 j 04:40	3° ට 36'48		min. Earth dist.	-3366 Jul 30 j 12:52		43.30981 AU
	3	2°る32'19	-14 3/49		-		
direct	-3373 Oct 13 j 17:43			opposition	-3366 Aug 02 j 09:36	11° る 58'43	-15°53'12
evening set	-3372 Jan 14 j 16:49	4° る 03'27		direct	-3366 Oct 21 j 23:50	10° る 55'27	
conjunction	-3372 Jan 20 j 03:17	4°る12'05	-14°04'05	conjunction	-3365 Jan 28 j 06:13	12°る32'08	-15°15'54
minimum elong		4° ප 12'04		minimum elong	-3365 Jan 28 j 06:07	12°る32'07	
	-3372 Jan 20 j 03:07			C	,		
max. Earth dist.	-3372 Jan 23 j 05:19		43.94448 AU	max. Earth dist.	-3365 Jan 31 j 04:58		45.33082 AU
morning rise	-3372 Jan 25 j 13:58	4°る20'42		retrograde	-3365 May 11 j 23:36	14° る 13'16	
retrograde	-3372 May 03 j 00:33	5° る 56'22		min. Earth dist.	-3365 Jul 31 j 23:07	13° る 11'57	43.49934 AU
min. Earth dist.	-3372 Jul 22 j 15:42	4°₹54'02	42.11151 AU	opposition	-3365 Aug 03 j 19:43	13° る 08'28	-16°02'06
opposition	-3372 Jul 25 j 16:19	4° ප 50'16		direct	-3365 Oct 23 j 10:34	12° ට 05'23	
		3°₹45'57	-14 30 03	direct	-5505 Oct 25 j 10.54	12 003 23	
direct	-3372 Oct 14 j 03:56					🗕	
evening set	-3371 Jan 15 j 18:03	5° る 17'33		conjunction	-3364 Jan 29 j 16:25	13° ⋜ 41'41	
				minimum elong	-3364 Jan 29 j 16:19	13° る 41'41	15°24'30
conjunction	-3371 Jan 20 j 14:40	5° る 25'13	-14°15'45	max. Earth dist.	-3364 Feb 01 j 14:47	13° る 46'11	45.51677 AU
minimum elong	-3371 Jan 20 j 14:32	5° る 25'13	14°15'53	retrograde	-3364 May 12 j 08:23	15° る 22'27	
max. Earth dist.	-3371 Jan 23 j 17:22		44.14960 AU	min. Earth dist.	-3364 Aug 01 j 11:09		43.68447 AU
	-		44.14900 AU				
morning rise	-3371 Jan 25 j 11:23	5° る 32'54		opposition	-3364 Aug 04 j 05:36	14° る 17'49	-16°10'34
retrograde	-3371 May 04 j 09:59	7° る 09'01		direct	-3364 Oct 23 j 21:52	13° る 14'54	
min. Earth dist.	-3371 Jul 24 j 04:31	6° る 06'46	42.31707 AU				
opposition	-3371 Jul 27 j 03:48	6° ප 03'05	-15°01'50	conjunction	-3363 Jan 30 j 02:29	14°る50'50	-15°32'29
direct	-3371 Oct 15 j 17:00	4° る 58'55		minimum elong	-3363 Jan 30 j 02:23	14°る50'49	15°32'36
evening set	-3370 Jan 17 j 20:27	6° ට 31'05		max. Earth dist.	-3363 Feb 01 i 23:44		45.69825 AU
evening set	-33/0 Jan 1/120.2/	0 03103				14 033 14	
	,				· · · · · · · · · · · · · · · · · · ·	1.00 701111	15.07025 110
	,	_		retrograde	-3363 May 13 j 17:56	16° පි 31'11	
conjunction	-3370 Jan 22 j 01:36	6° る 37'43	-14°26'57		· · · · · · · · · · · · · · · · · · ·		43.86472 AU
conjunction minimum elong	-3370 Jan 22 j 01:36 -3370 Jan 22 j 01:27	6°ප37'43 6°ප37'42		retrograde	-3363 May 13 j 17:56		43.86472 AU
•	-3370 Jan 22 j 01:27	6° ප 37'42		retrograde min. Earth dist.	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18	15° පි 30'05 15° පි 26'44	43.86472 AU
minimum elong max. Earth dist.	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08	6° ප 37'42 6° ප 42'32	14°27'04	retrograde min. Earth dist. opposition	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11	15° පි 30'05	43.86472 AU
minimum elong max. Earth dist. morning rise	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45	6° පි37'42 6° පි42'32 6° පි44'20	14°27'04	retrograde min. Earth dist. opposition direct	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17	15° පි30'05 15° පි26'44 14° පි23'58	43.86472 AU -16°18'38
minimum elong max. Earth dist. morning rise retrograde	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37	6° පි37'42 6° පි42'32 6° පි44'20 8° පි21'01	14°27'04 44.35234 AU	retrograde min. Earth dist. opposition direct conjunction	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07	15° ට 30'05 15° ට 26'44 14° ට 23'58 15° ට 59'31	43.86472 AU -16°18'38 -15°40'12
minimum elong max. Earth dist. morning rise retrograde min. Earth dist.	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04	6°37'42 6°342'32 6°344'20 8°321'01 7°318'58	14°27'04 44.35234 AU 42.52037 AU	retrograde min. Earth dist. opposition direct conjunction minimum elong	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03	15° ට 30'05 15° ට 26'44 14° ට 23'58 15° ට 59'31 15° ට 59'31	43.86472 AU -16°18'38 -15°40'12 15°40'18
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02	6° පි37'42 6° පි42'32 6° පි44'20 8° පි21'01 7° පි18'58 7° පි15'16	14°27'04 44.35234 AU 42.52037 AU	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist.	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38	15° ට 30'05 15° ට 26'44 14° ට 23'58 15° ට 59'31 15° ට 59'31 16° ට 03'48	43.86472 AU -16°18'38 -15°40'12
minimum elong max. Earth dist. morning rise retrograde min. Earth dist.	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04	6°37'42 6°342'32 6°344'20 8°321'01 7°318'58	14°27'04 44.35234 AU 42.52037 AU	retrograde min. Earth dist. opposition direct conjunction minimum elong	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03	15° පි30'05 15° පි26'44 14° පි23'58 15° පි59'31 15° පි59'31 16° පි03'48 17° පි39'29	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02	6° පි37'42 6° පි42'32 6° පි44'20 8° පි21'01 7° පි18'58 7° පි15'16	14°27'04 44.35234 AU 42.52037 AU	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist.	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38	15° පි30'05 15° පි26'44 14° පි23'58 15° පි59'31 15° පි59'31 16° පි03'48 17° පි39'29	43.86472 AU -16°18'38 -15°40'12 15°40'18
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56	6° ප37'42 6° ප42'32 6° ප44'20 8° ප21'01 7° ප18'58 7° ප15'16 6° ප11'16	14°27'04 44.35234 AU 42.52037 AU	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist.	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16	15° පි30'05 15° පි26'44 14° පි23'58 15° පි59'31 15° පි59'31 16° පි03'48 17° පි39'29	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00	6° ත37'42 6° ත42'32 6° ත44'20 8° ත21'01 7° ත18'58 7° ත15'16 6° ත11'16 7° ත44'09	14°27'04 44.35234 AU 42.52037 AU -15°13'05	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16 -3362 Aug 07 j 00:59	15° ට 30'05 15° ට 26'44 14° ට 23'58 15° ට 59'31 15° ට 59'31 16° ට 03'48 17° ට 39'29 16° ට 38'27 16° ට 35'11	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00	6° ප37'42 6° ප42'32 6° ප44'20 8° ප21'01 7° ප18'58 7° ප15'16 6° ප11'16 7° ප44'09	14°27'04 44.35234 AU 42.52037 AU -15°13'05	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist.	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16	15° ට 30'05 15° ට 26'44 14° ට 23'58 15° ට 59'31 15° ට 59'31 16° ට 03'48 17° ට 39'29 16° ට 38'27	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00 -3369 Jan 23 j 12:29 -3369 Jan 23 j 12:21	6°\overline{337'42} 6°\overline{342'32} 6°\overline{342'20} 8°\overline{321'01} 7°\overline{318'58} 7°\overline{311'16} 6°\overline{311'16} 7°\overline{344'09} 7°\overline{349'36} 7°\overline{349'35}	14°27'04 44.35234 AU 42.52037 AU -15°13'05	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16 -3362 Aug 07 j 00:59 -3362 Oct 26 j 15:35	15° ට 30'05 15° ට 26'44 14° ට 23'58 15° ට 59'31 15° ට 59'31 16° ට 03'48 17° ට 39'29 16° ට 38'27 16° ට 35'11 15° ට 32'33	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU -16°26'19
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong morning rise	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00 -3369 Jan 23 j 12:29 -3369 Jan 23 j 12:21 -3369 Jan 26 j 23:56	6°\overline{337'42} 6°\overline{342'32} 6°\overline{344'20} 8°\overline{321'01} 7°\overline{315'16} 6°\overline{311'16} 7°\overline{344'09} 7°\overline{349'36} 7°\overline{349'35} 7°\overline{355'02}	14°27'04 44.35234 AU 42.52037 AU -15°13'05 -14°37'39 14°37'47	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16 -3362 Aug 07 j 00:59 -3362 Oct 26 j 15:35 -3361 Feb 01 j 21:52	15° 云30'05 15° 云26'44 14° 云23'58 15° 云59'31 15° 云59'31 16° 云03'48 17° 云39'29 16° 云38'27 16° 云35'11 15° 云32'33	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU -16°26'19
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00 -3369 Jan 23 j 12:29 -3369 Jan 23 j 12:21	6°\overline{337'42} 6°\overline{342'32} 6°\overline{344'20} 8°\overline{321'01} 7°\overline{315'16} 6°\overline{311'16} 7°\overline{344'09} 7°\overline{349'36} 7°\overline{349'35} 7°\overline{355'02}	14°27'04 44.35234 AU 42.52037 AU -15°13'05	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16 -3362 Aug 07 j 00:59 -3362 Oct 26 j 15:35	15° ට 30'05 15° ට 26'44 14° ට 23'58 15° ට 59'31 15° ට 59'31 16° ට 03'48 17° ට 39'29 16° ට 38'27 16° ට 35'11 15° ට 32'33	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU -16°26'19
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong morning rise max. Earth dist.	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00 -3369 Jan 23 j 12:29 -3369 Jan 23 j 12:21 -3369 Jan 26 j 23:56 -3369 Jan 26 j 23:56 -3369 Jan 26 j 14:00	6°\overline{337'42} 6°\overline{342'32} 6°\overline{344'20} 8°\overline{321'01} 7°\overline{315'16} 6°\overline{311'16} 7°\overline{344'09} 7°\overline{349'36} 7°\overline{349'35} 7°\overline{355'02}	14°27'04 44.35234 AU 42.52037 AU -15°13'05 -14°37'39 14°37'47	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16 -3362 Aug 07 j 00:59 -3362 Oct 26 j 15:35 -3361 Feb 01 j 21:52 -3361 Feb 01 j 21:46	15° 云30'05 15° 云26'44 14° 云23'58 15° 云59'31 15° 云59'31 16° 云03'48 17° 云39'29 16° 云35'11 15° 云32'33 17° 云07'44 17° 云07'44	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU -16°26'19
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong morning rise max. Earth dist. retrograde	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00 -3369 Jan 23 j 12:29 -3369 Jan 23 j 12:21 -3369 Jan 26 j 23:56 -3369 Jan 26 j 14:00 -3369 May 07 j 05:02	6°\overline{337'42} 6°\overline{342'32} 6°\overline{344'20} 8°\overline{321'01} 7°\overline{315'16} 6°\overline{311'16} 7°\overline{344'09} 7°\overline{349'35} 7°\overline{35'02} 7°\overline{35'02} 7°\overline{35'27}	14°27'04 44.35234 AU 42.52037 AU -15°13'05 -14°37'39 14°37'47 44.55285 AU	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist.	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16 -3362 Aug 07 j 00:59 -3362 Oct 26 j 15:35 -3361 Feb 01 j 21:52 -3361 Feb 01 j 21:46 -3361 Feb 04 j 17:17	15° 云30'05 15° 云26'44 14° 云23'58 15° 云59'31 15° 云59'31 16° 云03'48 17° 云39'29 16° 云38'27 16° 云35'11 15° 云32'33 17° 云07'44 17° 云07'44 17° 云11'59	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU -16°26'19 -15°47'32 15°47'39
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong morning rise max. Earth dist. retrograde min. Earth dist.	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00 -3369 Jan 23 j 12:21 -3369 Jan 23 j 12:21 -3369 Jan 26 j 23:56 -3369 Jan 26 j 14:00 -3369 May 07 j 05:02 -3369 Jul 27 j 03:28	6°\overline{337'42} 6°\overline{342'32} 6°\overline{344'20} 8°\overline{321'01} 7°\overline{315'16} 6°\overline{311'16} 7°\overline{344'09} 7°\overline{349'36} 7°\overline{349'36} 7°\overline{355'02} 7°\overline{355'02} 7°\overline{352'27} 8°\overline{330'30}	14°27'04 44.35234 AU 42.52037 AU -15°13'05 -14°37'39 14°37'47 44.55285 AU 42.72153 AU	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16 -3362 Aug 07 j 00:59 -3362 Oct 26 j 15:35 -3361 Feb 01 j 21:52 -3361 Feb 01 j 21:46 -3361 Feb 04 j 17:17 -3361 May 16 j 15:28	15° 云30'05 15° 云26'44 14° 云23'58 15° 云59'31 15° 云59'31 16° 云03'48 17° 云39'29 16° 云38'27 16° 云35'11 15° 云32'33 17° 云07'44 17° 云07'44 17° 云11'59 18° 云47'17	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU -16°26'19 -15°47'32 15°47'39 46.04658 AU
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong morning rise max. Earth dist. retrograde min. Earth dist. opposition	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00 -3369 Jan 23 j 12:29 -3369 Jan 23 j 12:21 -3369 Jan 26 j 23:56 -3369 Jan 26 j 14:00 -3369 May 07 j 05:02 -3369 Jul 27 j 03:28 -3369 Jul 30 j 02:01	6°\overline{337'42} 6°\overline{342'32} 6°\overline{344'20} 8°\overline{321'01} 7°\overline{315'16} 6°\overline{311'16} 7°\overline{344'09} 7°\overline{349'36} 7°\overline{349'36} 7°\overline{355'02} 7°\overline{352'27} 8°\overline{330'30} 8°\overline{326'52}	14°27'04 44.35234 AU 42.52037 AU -15°13'05 -14°37'39 14°37'47 44.55285 AU 42.72153 AU	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist.	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16 -3362 Aug 07 j 00:59 -3362 Oct 26 j 15:35 -3361 Feb 01 j 21:52 -3361 Feb 01 j 21:46 -3361 Feb 04 j 17:17 -3361 May 16 j 15:28 -3361 Aug 05 j 18:54	15° 云30'05 15° 云26'44 14° 云23'58 15° 云59'31 15° 云59'31 16° 云03'48 17° 云39'29 16° 云38'27 16° 云35'11 15° 云32'33 17° 云07'44 17° 云07'43 17° 云11'59 18° 云47'17 17° 云46'19	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU -16°26'19 -15°47'32 15°47'39 46.04658 AU 44.21082 AU
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong morning rise max. Earth dist. retrograde min. Earth dist. opposition direct	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00 -3369 Jan 23 j 12:29 -3369 Jan 26 j 23:56 -3369 Jan 26 j 14:00 -3369 May 07 j 05:02 -3369 Jul 27 j 03:28 -3369 Jul 30 j 02:01 -3369 Oct 18 j 18:04	6°\overline{337'42} 6°\overline{342'32} 6°\overline{344'20} 8°\overline{321'01} 7°\overline{315'16} 6°\overline{311'16} 7°\overline{344'09} 7°\overline{349'35} 7°\overline{355'02} 7°\overline{352'27} 8°\overline{330'30} 8°\overline{323'03}	14°27'04 44.35234 AU 42.52037 AU -15°13'05 -14°37'39 14°37'47 44.55285 AU 42.72153 AU	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16 -3362 Aug 07 j 00:59 -3362 Oct 26 j 15:35 -3361 Feb 01 j 21:52 -3361 Feb 01 j 21:46 -3361 Feb 04 j 17:17 -3361 May 16 j 15:28 -3361 Aug 05 j 18:54 -3361 Aug 08 j 10:12	15° 云30'05 15° 云26'44 14° 云23'58 15° 云59'31 15° 云59'31 16° 云03'48 17° 云39'29 16° 云35'11 15° 云32'33 17° 云07'44 17° 云07'43 17° 云11'59 18° 云47'17 17° 云46'19 17° 云43'08	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU -16°26'19 -15°47'32 15°47'39 46.04658 AU 44.21082 AU
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong morning rise max. Earth dist. retrograde min. Earth dist. opposition	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00 -3369 Jan 23 j 12:29 -3369 Jan 23 j 12:21 -3369 Jan 26 j 23:56 -3369 Jan 26 j 14:00 -3369 May 07 j 05:02 -3369 Jul 27 j 03:28 -3369 Jul 30 j 02:01	6°\overline{337'42} 6°\overline{342'32} 6°\overline{344'20} 8°\overline{321'01} 7°\overline{315'16} 6°\overline{311'16} 7°\overline{344'09} 7°\overline{349'36} 7°\overline{349'36} 7°\overline{355'02} 7°\overline{352'27} 8°\overline{330'30} 8°\overline{326'52}	14°27'04 44.35234 AU 42.52037 AU -15°13'05 -14°37'39 14°37'47 44.55285 AU 42.72153 AU	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist.	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16 -3362 Aug 07 j 00:59 -3362 Oct 26 j 15:35 -3361 Feb 01 j 21:52 -3361 Feb 01 j 21:46 -3361 Feb 04 j 17:17 -3361 May 16 j 15:28 -3361 Aug 05 j 18:54	15° 云30'05 15° 云26'44 14° 云23'58 15° 云59'31 15° 云59'31 16° 云03'48 17° 云39'29 16° 云38'27 16° 云35'11 15° 云32'33 17° 云07'44 17° 云07'43 17° 云11'59 18° 云47'17 17° 云46'19	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU -16°26'19 -15°47'32 15°47'39 46.04658 AU 44.21082 AU
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minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong morning rise max. Earth dist. retrograde min. Earth dist. opposition direct evening set	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00 -3369 Jan 23 j 12:29 -3369 Jan 23 j 12:21 -3369 Jan 26 j 23:56 -3369 Jan 26 j 14:00 -3369 Jul 27 j 03:28 -3369 Jul 27 j 03:28 -3369 Jul 30 j 02:01 -3369 Oct 18 j 18:04 -3368 Jan 24 j 23:17 -3368 Jan 24 j 23:09	6°\overline{337'42} 6°\overline{342'32} 6°\overline{342'32} 8°\overline{321'01} 7°\overline{318'58} 7°\overline{311'16} 6°\overline{311'16} 7°\overline{349'36} 7°\overline{349'35} 7°\overline{355'02} 7°\overline{352'27} 8°\overline{330'30} 8°\overline{326'52} 7°\overline{323'03} 8°\overline{326'52} 7°\overline{323'03} 8°\overline{356'56} 9°\overline{300'56} 9°\overline{300'56}	14°27'04 44.35234 AU 42.52037 AU -15°13'05 -14°37'39 14°37'47 44.55285 AU 42.72153 AU -15°23'50	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. retrograde conjunction direct conjunction minimum elong	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16 -3362 Aug 07 j 00:59 -3362 Oct 26 j 15:35 -3361 Feb 01 j 21:52 -3361 Feb 01 j 21:46 -3361 Feb 04 j 17:17 -3361 May 16 j 15:28 -3361 Aug 05 j 18:54 -3361 Aug 08 j 10:12 -3360 Feb 03 j 07:16 -3360 Feb 03 j 07:16	15° 云30'05 15° 云26'44 14° 云23'58 15° 云59'31 15° 云59'31 16° 云03'48 17° 云39'29 16° 云35'11 15° 云32'33 17° 云07'44 17° 云07'43 17° 云11'59 18° 云47'17 17° 云46'19 17° 云43'08 16° 云40'37	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU -16°26'19 -15°47'32 15°47'39 46.04658 AU 44.21082 AU -16°33'36 -15°54'28 15°54'35
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minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong morning rise max. Earth dist. retrograde min. Earth dist. opposition direct evening set conjunction minimum elong morning rise max. Earth dist.	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00 -3369 Jan 23 j 12:21 -3369 Jan 26 j 23:56 -3369 Jan 26 j 23:56 -3369 Jan 26 j 23:56 -3369 Jan 27 j 05:02 -3369 Jul 27 j 03:28 -3369 Jul 30 j 02:01 -3369 Oct 18 j 18:04 -3368 Jan 24 j 23:17 -3368 Jan 24 j 23:09 -3368 Jan 27 j 12:44 -3368 Jan 28 j 00:33	6°\overline{337'42} 6°\overline{342'32} 6°\overline{342'32} 8°\overline{321'01} 7°\overline{315'16} 6°\overline{311'16} 7°\overline{344'09} 7°\overline{349'36} 7°\overline{349'36} 7°\overline{355'02} 7°\overline{352'27} 8°\overline{330'30} 8°\overline{326'52} 7°\overline{323'03} 8°\overline{326'52} 7°\overline{323'03} 8°\overline{326'56} 9°\overline{300'56} 9°\overline{300'56} 9°\overline{300'56} 9°\overline{300'542}	14°27'04 44.35234 AU 42.52037 AU -15°13'05 -14°37'39 14°37'47 44.55285 AU 42.72153 AU -15°23'50	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16 -3362 Aug 07 j 00:59 -3362 Oct 26 j 15:35 -3361 Feb 01 j 21:52 -3361 Feb 01 j 21:46 -3361 Feb 01 j 21:46 -3361 Feb 04 j 17:17 -3361 May 16 j 15:28 -3361 Aug 05 j 18:54 -3361 Aug 08 j 10:12 -3360 Feb 03 j 07:16 -3360 Feb 03 j 07:13 -3360 Feb 06 j 00:46 -3360 May 16 j 23:53	15° 云30'05 15° 云26'44 14° 云23'58 15° 云59'31 15° 云59'31 16° 云03'48 17° 云39'29 16° 云35'11 15° 云32'33 17° 云07'44 17° 云07'44 17° 云07'43 17° 云11'59 18° 云47'17 17° 云46'19 17° 云46'19 17° 云43'08 16° 云40'37 18° 云15'25 18° 云15'25 18° 云15'25 18° 云15'25	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU -16°26'19 -15°47'32 15°47'39 46.04658 AU 44.21082 AU -16°33'36 -15°54'28 15°54'35 46.21411 AU
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong morning rise max. Earth dist. retrograde min. Earth dist. opposition direct evening set	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00 -3369 Jan 23 j 12:29 -3369 Jan 23 j 12:21 -3369 Jan 26 j 23:56 -3369 Jan 26 j 23:56 -3369 Jan 26 j 23:56 -3369 Jan 27 j 05:02 -3369 Jul 27 j 03:28 -3369 Jul 30 j 02:01 -3369 Oct 18 j 18:04 -3368 Jan 24 j 23:17 -3368 Jan 24 j 23:09 -3368 Jan 27 j 12:44	6°\overline{337'42} 6°\overline{342'32} 6°\overline{342'32} 8°\overline{321'01} 7°\overline{315'16} 6°\overline{311'16} 7°\overline{349'36} 7°\overline{349'35} 7°\overline{355'02} 7°\overline{355'02} 7°\overline{352'27} 8°\overline{30'30} 8°\overline{326'52} 7°\overline{323'03} 8°\overline{326'52} 7°\overline{323'03} 8°\overline{326'56} 9°\overline{300'56} 9°\overline{300'56} 9°\overline{300'56} 9°\overline{300'56}	14°27'04 44.35234 AU 42.52037 AU -15°13'05 -14°37'39 14°37'47 44.55285 AU 42.72153 AU -15°23'50 -14°47'54 14°48'00	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist.	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16 -3362 Aug 07 j 00:59 -3362 Oct 26 j 15:35 -3361 Feb 01 j 21:52 -3361 Feb 01 j 21:46 -3361 Feb 04 j 17:17 -3361 May 16 j 15:28 -3361 Aug 05 j 18:54 -3361 Aug 08 j 10:12 -3360 Feb 03 j 07:16 -3360 Feb 03 j 07:16 -3360 Feb 03 j 07:13 -3360 Feb 06 j 00:46	15° 云30'05 15° 云26'44 14° 云23'58 15° 云59'31 15° 云59'31 16° 云03'48 17° 云39'29 16° 云35'11 15° 云32'33 17° 云07'44 17° 云07'44 17° 云07'43 17° 云11'59 18° 云47'17 17° 云46'19 17° 云46'19 17° 云43'08 16° 云40'37 18° 云15'25 18° 云15'25 18° 云15'25 18° 云15'25	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU -16°26'19 -15°47'32 15°47'39 46.04658 AU 44.21082 AU -16°33'36 -15°54'28 15°54'35
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong morning rise max. Earth dist. retrograde min. Earth dist. opposition direct evening set conjunction minimum elong morning rise max. Earth dist.	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00 -3369 Jan 23 j 12:21 -3369 Jan 26 j 23:56 -3369 Jan 26 j 23:56 -3369 Jan 26 j 23:56 -3369 Jan 27 j 05:02 -3369 Jul 27 j 03:28 -3369 Jul 30 j 02:01 -3369 Oct 18 j 18:04 -3368 Jan 24 j 23:17 -3368 Jan 24 j 23:09 -3368 Jan 27 j 12:44 -3368 Jan 28 j 00:33	6°\overline{337'42} 6°\overline{342'32} 6°\overline{342'32} 8°\overline{321'01} 7°\overline{315'16} 6°\overline{311'16} 7°\overline{349'36} 7°\overline{349'36} 7°\overline{349'35} 7°\overline{355'02} 7°\overline{355'02} 7°\overline{352'27} 8°\overline{30'30} 8°\overline{322'27} 8°\overline{30'30} 8°\overline{326'52} 7°\overline{323'03} 8°\overline{326'52} 7°\overline{323'03} 8°\overline{356'56} 9°\overline{300'56} 9°\overl	14°27'04 44.35234 AU 42.52037 AU -15°13'05 -14°37'39 14°37'47 44.55285 AU 42.72153 AU -15°23'50 -14°47'54 14°48'00	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16 -3362 Aug 07 j 00:59 -3362 Oct 26 j 15:35 -3361 Feb 01 j 21:52 -3361 Feb 01 j 21:46 -3361 Feb 01 j 21:46 -3361 Feb 04 j 17:17 -3361 May 16 j 15:28 -3361 Aug 05 j 18:54 -3361 Aug 08 j 10:12 -3360 Feb 03 j 07:16 -3360 Feb 03 j 07:13 -3360 Feb 06 j 00:46 -3360 May 16 j 23:53	15° 云30'05 15° 云26'44 14° 云23'58 15° 云59'31 15° 云59'31 16° 云03'48 17° 云39'29 16° 云35'11 15° 云32'33 17° 云07'44 17° 云07'44 17° 云07'43 17° 云11'59 18° 云47'17 17° 云46'19 17° 云46'19 17° 云43'08 16° 云40'37 18° 云15'25 18° 云15'25 18° 云15'25 18° 云15'25	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU -16°26'19 -15°47'32 15°47'39 46.04658 AU 44.21082 AU -16°33'36 -15°54'28 15°54'35 46.21411 AU 44.37757 AU
minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong morning rise max. Earth dist. retrograde min. Earth dist. opposition direct evening set conjunction minimum elong morning rise max. Earth dist. opposition direct evening set	-3370 Jan 22 j 01:27 -3370 Jan 25 j 03:08 -3370 Jan 26 j 06:45 -3370 May 05 j 18:37 -3370 Jul 25 j 15:04 -3370 Jul 28 j 15:02 -3370 Oct 17 j 05:56 -3369 Jan 20 j 01:00 -3369 Jan 23 j 12:29 -3369 Jan 23 j 12:21 -3369 Jan 26 j 23:56 -3369 Jan 26 j 14:00 -3369 May 07 j 05:02 -3369 Jul 27 j 03:28 -3369 Jul 27 j 03:28 -3369 Jul 30 j 02:01 -3369 Oct 18 j 18:04 -3368 Jan 24 j 23:17 -3368 Jan 24 j 23:09 -3368 Jan 27 j 12:44 -3368 Jan 28 j 00:33 -3368 May 07 j 16:45	6°\overline{337'42} 6°\overline{342'32} 6°\overline{342'32} 8°\overline{321'01} 7°\overline{315'16} 6°\overline{311'16} 7°\overline{349'36} 7°\overline{349'36} 7°\overline{349'35} 7°\overline{355'02} 7°\overline{355'02} 7°\overline{352'27} 8°\overline{30'30} 8°\overline{322'27} 8°\overline{30'30} 8°\overline{326'52} 7°\overline{323'03} 8°\overline{326'52} 7°\overline{323'03} 8°\overline{356'56} 9°\overline{300'56} 9°\overl	14°27′04 44.35234 AU 42.52037 AU -15°13′05 -14°37′39 14°37′47 44.55285 AU 42.72153 AU -15°23′50 -14°47′54 14°48′00 44.75136 AU 42.92033 AU	retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. opposition direct conjunction minimum elong max. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist. retrograde min. Earth dist.	-3363 May 13 j 17:56 -3363 Aug 02 j 21:11 -3363 Aug 02 j 21:11 -3363 Aug 05 j 15:18 -3363 Oct 25 j 08:17 -3362 Jan 31 j 12:07 -3362 Jan 31 j 12:03 -3362 Feb 03 j 07:38 -3362 May 15 j 06:21 -3362 Aug 04 j 08:16 -3362 Aug 07 j 00:59 -3362 Oct 26 j 15:35 -3361 Feb 01 j 21:52 -3361 Feb 01 j 21:46 -3361 Feb 04 j 17:17 -3361 May 16 j 15:28 -3361 Aug 05 j 18:54 -3361 Aug 08 j 10:12 -3360 Feb 03 j 07:16 -3360 Feb 03 j 07:13 -3360 Feb 03 j 07:13 -3360 Feb 06 j 00:46 -3360 May 16 j 23:53 -3360 Aug 06 j 04:09	15° で30'05 15° で30'05 15° で326'44 14° で323'58 15° で559'31 16° で33'48 17° で39'29 16° で335'11 15° で32'33 17° で07'44 17° で07'44 17° で07'43 17° で11'59 18° で47'17 17° で46'19 17° で44'08 16° で40'37 18° で15'25 18° で15'25 18° で15'32 19° で55'4'35 18° で53'4'3	43.86472 AU -16°18'38 -15°40'12 15°40'18 45.87476 AU 44.04013 AU -16°26'19 -15°47'32 15°47'39 46.04658 AU 44.21082 AU -16°33'36 -15°54'28 15°54'35 46.21411 AU 44.37757 AU

direct

-3368 Oct 19 j 03:58

8°**る**34'18

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3359 in astronomical counting style is the year 3360 BCE in historical counting style. -3359 Feb 03 i 16:25 19°る22'36 -16°01'02 retrograde -3351 May 27 j 02:27 29°る42'44 conjunction 28°る42'44 45.73922 AU -3359 Feb 03 j 16:20 19°る22'36 16°01'09 min. Earth dist. -3351 Aug 16 j 14:23 minimum elong 19°る26'42 46.37787 AU -3359 Feb 06 j 09:51 opposition -3351 Aug 18 j 20:57 28°る40'03 -17°24'27 max. Earth dist. 21°る01'23 -3351 Nov 07 j 15:26 27°る38'51 -3359 May 18 j 05:43 direct retrograde -3359 Aug 07 j 14:48 min. Earth dist. 20°る00'34 44.54084 AU -3359 Aug 10 j 04:11 -3350 Feb 13 j 21:00 29°る10'38 -16°42'51 opposition 19°る57'30 -16°46'57 conjunction -3359 Oct 29 j 22:39 -3350 Feb 13 j 21:00 direct 18°**る**55'14 minimum elong 29°**る**10'38 16°42'58 max. Earth dist. -3350 Feb 16 j 05:37 29°る14'04 47.71676 AU conjunction -3358 Feb 05 j 01:28 20°る29'19 -16°07'11 -3350 Mar 21 j 10:46 0°≈ 16°07'18 minimum elong -3358 Feb 05 j 01:26 20°る29'19 retrograde -3350 May 28 j 11:51 0°≈46'32 max. Earth dist. -3358 Feb 07 j 18:02 20°る33'21 46.53871 AU -3350 Aug 06 j 10:48 30°Ŗる -3358 May 19 j 14:03 min. Earth dist. -3350 Aug 17 j 22:50 retrograde 22°**る**07'44 29°る46'36 45.87050 AU min. Earth dist. -3358 Aug 08 j 23:10 21°る07'04 44.70125 AU opposition -3350 Aug 20 j 04:28 29°る43'58 -17°27'33 opposition -3358 Aug 11 j 12:46 21°る03'59 -16°53'01 direct -3350 Nov 08 j 21:31 28°る42'52 direct -3358 Oct 31 j 08:25 20°る01'50 -3349 Feb 05 j 06:49 0°≈ conjunction -3357 Feb 06 j 10:15 21°る35'36 -16°12'57 conjunction -3349 Feb 15 j 05:02 0°≈14'22 -16°45'47 21°**る**35'36 minimum elong -3357 Feb 06 j 10:11 16°13'04 minimum elong -3349 Feb 15 j 05:03 0°≈14'22 16°45'53 max. Earth dist. -3357 Feb 09 j 01:47 21°**る**39'33 46.69680 AU max. Earth dist. -3349 Feb 17 j 13:16 0°≈17'46 47.84499 AU retrograde -3357 May 21 j 00:36 23°る13'40 retrograde -3349 May 29 j 16:51 1°≈49'57 min. Earth dist. -3357 Aug 10 j 09:01 22°る13'05 44.85910 AU min. Earth dist. -3349 Aug 19 j 08:11 0°≈50'01 45.99682 AU opposition -3357 Aug 12 j 21:22 22°る10'04 -16°58'39 opposition -3349 Aug 21 i 11:49 0°≈47'29 -17°30'19 direct -3357 Nov 01 j 15:24 21°る08'03 -3349 Oct 06 j 12:08 30°Rる direct -3349 Nov 10 i 07:06 29°る46'28 conjunction -3356 Feb 07 i 19:06 22°る41'30 -16°18'19 -3349 Dec 14 j 16:13 0°≈ -3356 Feb 07 i 19:04 22°る41'30 16°18'26 minimum elong max. Earth dist. -3356 Feb 10 j 10:51 22°る45'27 46.85243 AU -3348 Feb 16 j 12:54 1°≈17'41 -16°48'24 conjunction -3356 May 21 j 09:37 24°る19'14 -3348 Feb 16 j 12:54 1°≈17'41 16°48'31 retrograde minimum elong -3356 Aug 10 j 17:51 23°る18'45 45.01425 AU -3348 Feb 18 j 19:27 1°≈20'59 47.96870 AU min. Earth dist. max. Earth dist. -3356 Aug 13 j 05:31 -3348 May 29 j 21:56 opposition 23°る15'47 -17°03'54 retrograde 2°≈52'56 -3356 Nov 01 j 23:08 -3348 Aug 19 j 15:19 direct 22°**る**13'55 min. Earth dist. 1°≈53'06 46.11882 AU -3348 Aug 21 j 18:46 1°≈50'34 -17°32'46 opposition -3348 Nov 10 j 16:12 -3355 Feb 08 j 03:36 23°**ප්**47'04 -16°23'18 conjunction direct 0°≈49'37 -3355 Feb 08 j 03:33 23°る47'04 16°23'24 minimum elong 2°≈20'34 -16°50'42 -3355 Feb 10 j 17:32 23°る50'53 47.00550 AU -3347 Feb 16 j 20:31 max. Earth dist. conjunction -3355 May 22 j 19:08 25°**る**24'28 -3347 Feb 16 j 20:33 retrograde minimum elong 2°≈20'34 16°50'48 -3347 Feb 19 j 01:59 min. Earth dist. -3355 Aug 12 j 02:11 24°る24'08 45.16679 AU max. Earth dist. 2°≈23'47 48.08834 AU opposition -3355 Aug 14 j 13:43 24°る21'11 -17°08'44 retrograde -3347 May 31 j 05:18 3°≈55'32 direct -3355 Nov 03 j 05:44 23°る19'27 min. Earth dist. -3347 Aug 21 j 00:08 2°≈55'41 46.23716 AU opposition -3347 Aug 23 j 01:48 2°≈53'15 -17°34'52 conjunction -3354 Feb 09 j 11:56 24°る52'20 -16°27'54 direct -3347 Nov 12 j 00:02 1°≈52'22 -3354 Feb 09 j 11:55 24°පි52'20 16°28'01 minimum elong max. Earth dist. -3354 Feb 12 j 02:06 24°る56'09 47.15569 AU -3346 Feb 18 j 03:59 3°≈23'03 -16°52'39 conjunction -3354 May 24 j 01:40 26°**る**29'26 -3346 Feb 18 j 04:00 3°≈23'03 16°52'45 retrograde minimum elong -3354 Aug 13 j 12:10 25°る29'10 45.31612 AU max. Earth dist. -3346 Feb 20 j 09:19 3°≈26'15 48.20471 AU min. Earth dist. opposition -3354 Aug 15 j 21:49 25°る26'18 -17°13'12 retrograde -3346 Jun 01 j 12:27 4°≈57'43 -3354 Nov 04 j 14:58 direct 24°る24'44 min. Earth dist. -3346 Aug 22 i 07:21 3°≈57'57 46.35223 AU opposition -3346 Aug 24 i 08:35 3°≈55'32 -17°36'37 -3353 Feb 10 j 20:23 conjunction 25°る57'20 -16°32'08 direct -3346 Nov 13 i 07:24 2°≈54'44 minimum elong -3353 Feb 10 i 20:21 25°る57'20 16°32'14 max. Earth dist. -3353 Feb 13 i 09:14 26°る01'04 47.30260 AU -3345 Feb 19 i 11:22 4°≈25'11 -16°54'17 conjunction -3353 May 25 j 07:39 27°る34'08 minimum elong -3345 Feb 19 i 11:26 4°≈25'11 16°54'22 retrograde -3353 Aug 14 j 19:58 26°る34'01 45.46174 AU max. Earth dist. -3345 Feb 21 j 14:48 4°≈28'15 48.31807 AU min. Earth dist. retrograde opposition -3353 Aug 17 j 05:31 26° පි31'10 -17°17'17 -3345 Jun 02 j 22:05 5°2259'34 direct -3353 Nov 06 j 01:15 25°る29'44 min. Earth dist. -3345 Aug 23 j 14:36 4°≈59'52 46.46452 AU opposition -3345 Aug 25 j 15:12 4°≈57'30 -17°38'02 conjunction -3352 Feb 12 j 04:42 27°る02'04 -16°36'02 direct -3345 Nov 14 j 11:25 3°≈56'47 -3352 Feb 12 j 04:41 27°る02'04 16°36'09 minimum elong -3352 Feb 14 j 16:05 27°る05'42 47.44537 AU -3344 Feb 20 j 18:47 5°≈27'01 -16°55'34 max. Earth dist. conjunction 28°る38'35 -3344 Feb 20 j 18:48 retrograde -3352 May 25 j 17:23 minimum elong 5°≈27'01 16°55'40 27°る38'31 45.60300 AU min. Earth dist. -3352 Aug 15 j 05:45 max. Earth dist. -3344 Feb 22 j 22:21 5°≈30'05 48.42867 AU opposition -3352 Aug 17 j 13:22 27°る35'46 -17°21'02 retrograde -3344 Jun 03 j 04:34 7°≈01'09 direct -3352 Nov 06 j 08:48 26°る34'28 min. Earth dist. -3344 Aug 23 j 22:48 6°≈01'29 46.57392 AU opposition -3344 Aug 25 j 21:49 5°≈59'12 -17°39'06 conjunction -3351 Feb 12 j 12:56 28°**る**06'31 -16°39'36 direct -3344 Nov 14 j 18:24 4°≈58'35 minimum elong -3351 Feb 12 j 12:56 28° ති06'31 16°39'42 max. Earth dist. -3343 Feb 21 j 01:52 6°≈28'36 -16°56'32 conjunction

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 5

-	omena of Pluto fron		•	* * ·		, ,	e 5
		-			3344 BCE in historical co		
minimum elong	-3343 Feb 21 j 01:56	6° ≈ 28'37		max. Earth dist.	-3335 Mar 03 j 00:57		49.25094 AU
max. Earth dist.	-3343 Feb 23 j 04:06	6° ≈ 31'36	48.53658 AU		-3335 Mar 18 j 20:25	15° ≈	
retrograde	-3343 Jun 04 j 09:19	8° ≈ 02'31		retrograde	-3335 Jun 12 j 16:24	16° ≈ 08'03	
min. Earth dist.	-3343 Aug 25 j 05:03	7° ≈ 02'59	46.68046 AU	min. Earth dist.	-3335 Sep 02 j 16:00	15° ≈ 08'50	47.37593 AU
opposition	-3343 Aug 27 j 04:15	7° ≈ 00'42	-17°39'49	opposition	-3335 Sep 04 j 04:38	15° ≈ 07'04	-17°34'59
direct	-3343 Nov 16 j 02:23	6° ≈ 00'12			-3335 Sep 10 j 07:41	15° R ≈	
				direct	-3335 Nov 24 j 03:58	14° ≈ 07'13	
conjunction	-3342 Feb 22 j 08:58	7° ≈ 30'01	-16°57'10		-3334 Feb 04 j 11:14	15° ≈	
minimum elong	-3342 Feb 22 j 09:01	7° ≈ 30'02	16°57'15		·		
max. Earth dist.	-3342 Feb 24 i 10:08		48.64142 AU	conjunction	-3334 Mar 02 j 16:08	15° ≈ 35'41	-16°52'01
retrograde	-3342 Jun 05 j 15:58	9° ≈ 03'44	10.011.2110	minimum elong	-3334 Mar 02 j 16:15	15° ≈ 35'41	
min. Earth dist.	-3342 Aug 26 j 13:21		46.78379 AU	max. Earth dist.	-3334 Mar 04 j 07:36		49.31955 AU
					3		49.31933 AU
opposition	-3342 Aug 28 j 10:41		-17°40'13	retrograde	-3334 Jun 13 j 23:17	17°≈07'43	45 44045 444
direct	-3342 Nov 17 j 10:01	7° ≈ 01'40		min. Earth dist.	-3334 Sep 03 j 23:05		47.44247 AU
				opposition	-3334 Sep 05 j 10:10	16° ≈ 06'48	-17°33'06
conjunction	-3341 Feb 23 j 16:10	8° ≈ 31'19	-16°57'29	direct	-3334 Nov 25 j 08:55	15° ≈ 06'59	
minimum elong	-3341 Feb 23 j 16:15	8° ≈ 31'20	16°57'36				
max. Earth dist.	-3341 Feb 25 j 16:58	8° ≈ 34'13	48.74290 AU	conjunction	-3333 Mar 03 j 22:37	16° ≈ 35'17	-16°50'08
retrograde	-3341 Jun 07 j 00:05	10° ≈ 04'50		minimum elong	-3333 Mar 03 j 22:42	16° ≈ 35'17	16°50'13
min. Earth dist.	-3341 Aug 27 j 20:20	9° ≈ 05'27	46.88317 AU	max. Earth dist.	-3333 Mar 05 j 12:21	16° ≈ 37'29	49.38486 AU
opposition	-3341 Aug 29 j 16:54	9° ≈ 03'17	-17°40'19	retrograde	-3333 Jun 15 j 03:51	18° ≈ 07'08	
direct	-3341 Nov 18 j 15:40	8° ≈ 03'01		min. Earth dist.	-3333 Sep 05 j 04:34	17°≈07'57	47.50582 AU
ancet	33 11 1101 10 13.10	0 / 0 / 0 / 0 / 0 / 0		opposition	-3333 Sep 06 j 15:37	17° ≈ 06'16	
conjunction	-3340 Feb 24 j 23:13	9° ≈ 32'31	16057131	direct	-3333 Nov 26 j 14:58	16°≈06'30	-17 30 33
	v			direct	-3333 NOV 20 J 14.36	10 ≈00 30	
minimum elong	-3340 Feb 24 j 23:17		16°57'36		2222 14 04:04.50	170 - 2420	1.60.47157
max. Earth dist.	-3340 Feb 26 j 21:42		48.84011 AU	conjunction	-3332 Mar 04 j 04:59	17°≈34'39	
retrograde	-3340 Jun 07 j 09:28	11° ≈ 05'49		minimum elong	-3332 Mar 04 j 05:07	17° ≈ 34'40	16°48'02
min. Earth dist.	-3340 Aug 28 j 03:45		46.97810 AU	max. Earth dist.	-3332 Mar 05 j 17:44		49.44695 AU
opposition	-3340 Aug 29 j 23:03	10° ≈ 04'25	-17°40'06	retrograde	-3332 Jun 15 j 06:54	19° ≈ 06'19	
direct	-3340 Nov 18 j 19:24	9° ≈ 04'16		min. Earth dist.	-3332 Sep 05 j 11:48	18° ≈ 07'08	47.56606 AU
				opposition	-3332 Sep 06 j 21:01	18° ≈ 05'32	-17°28'27
conjunction	-3339 Feb 25 j 06:21	10° ≈ 33'36	-16°57'16	direct	-3332 Nov 26 j 23:31	17° ≈ 05'49	
minimum elong	-3339 Feb 25 j 06:25	10° ≈ 33'36	16°57'22				
max. Earth dist.	-3339 Feb 27 j 04:22	10° ≈ 36'18	48.93251 AU	conjunction	-3331 Mar 05 j 11:21	18° ≈ 33'50	-16°45'29
retrograde	-3339 Jun 08 j 15:05	12° ≈ 06'42		minimum elong	-3331 Mar 05 j 11:28	18° ≈ 33'50	
min. Earth dist.	-3339 Aug 29 j 11:54		47.06782 AU	max. Earth dist.	-3331 Mar 06 j 23:43		49.50620 AU
opposition	-3339 Aug 31 j 05:14	11°≈05'24		retrograde	-3331 Jun 16 j 12:01	20°≈05'20	47.50020710
		11 ≈05 24 10°≈05'20	-1/ 3936	Č	•		47 (2222 AII
direct	-3339 Nov 20 j 02:17	10°≈05′20		min. Earth dist.	-3331 Sep 06 j 17:20		47.62322 AU
				opposition	-3331 Sep 08 j 02:17	19° ≈ 04'38	-17°25'40
conjunction	-3338 Feb 26 j 13:14	11° ≈ 34'30		direct	-3331 Nov 28 j 06:28	18° ≈ 04'59	
minimum elong	-3338 Feb 26 j 13:19	11° ≈ 34'31	16°56'50				
max. Earth dist.	-3338 Feb 28 j 09:07	11° ≈ 37'05	49.01976 AU	conjunction	-3330 Mar 06 j 17:28	19° ≈ 32'52	-16°42'43
retrograde	-3338 Jun 09 j 19:53	13° ≈ 07'24		minimum elong	-3330 Mar 06 j 17:36	19° ≈ 32'53	16°42'48
min. Earth dist.	-3338 Aug 30 j 18:26	12° ≈ 08'10	47.15221 AU	max. Earth dist.	-3330 Mar 08 j 03:53	19° ≈ 34'52	49.56227 AU
opposition	-3338 Sep 01 j 11:16	12° ≈ 06′12	-17°38'53	retrograde	-3330 Jun 17 j 20:30	21° ≈ 04'13	
direct	-3338 Nov 21 j 09:58	11° ≈ 06'12		min. Earth dist.	-3330 Sep 07 j 23:54	20°≈05'07	47.67710 AU
	,			opposition	-3330 Sep 09 j 07:36	20° ≈ 03'36	
conjunction	-3337 Feb 27 j 20:10	12° ≈ 35'12	-16°55'59	direct	-3330 Nov 29 j 09:35	19° ≈ 04'01	
minimum elong	-3337 Feb 27 j 20:15	12°≈35'13	16°56'05	4.1.000	33301101 25 1 05.32	19 10 10 10 1	
max. Earth dist.	-3337 Mar 01 j 14:36		49.10158 AU	conjunction	-3329 Mar 07 j 23:53	20° ≈ 31'48	16020141
	•		49.10136 AU		·		
retrograde	-3337 Jun 11 j 01:10	14°≈07'53	47.00106 ATT	minimum elong	-3329 Mar 08 j 00:00	20°≈31'48	16°39'45
min. Earth dist.	-3337 Sep 01 j 02:46		47.23136 AU	max. Earth dist.	-3329 Mar 09 j 10:02		49.61478 AU
opposition	-3337 Sep 02 j 17:10	13° ≈ 06'46	-17°37'51	retrograde	-3329 Jun 19 j 02:52	22° ≈ 03'00	
direct	-3337 Nov 22 j 17:46	12° ≈ 06′50		min. Earth dist.	-3329 Sep 09 j 06:39	21° ≈ 03'55	47.72700 AU
				opposition	-3329 Sep 10 j 12:41	21° ≈ 02'29	-17°19'16
conjunction	-3336 Feb 29 j 03:04	13° ≈ 35'38	-16°54'56	direct	-3329 Nov 30 j 14:32	20° ≈ 02'57	
minimum elong	-3336 Feb 29 j 03:10	13° ≈ 35'39	16°55'01				
max. Earth dist.	-3336 Mar 01 j 20:43	13° ≈ 38′05	49.17851 AU	conjunction	-3328 Mar 08 j 06:12	21° ≈ 30′38	-16°36'23
	-3336 May 14 j 15:31	15° ≈		minimum elong	-3328 Mar 08 j 06:21	21° ≈ 30'39	16°36'28
retrograde	-3336 Jun 11 j 06:49	15° ≈ 08'07		max. Earth dist.	-3328 Mar 09 j 14:19		49.66316 AU
0	-3336 Jul 09 j 06:19	15°R≈		retrograde	-3328 Jun 19 j 08:41	23°≈01'42	
min. Earth dist.	-3336 Sep 01 j 09:04		47.30568 AU	opposition	-3328 Sep 10 j 17:48	22°≈01'16	-17°15'40
opposition	-3336 Sep 02 j 22:54	14°≈07'04	-1/ 30 34	min. Earth dist.	-3328 Sep 09 j 12:22		47.77243 AU
direct	-3336 Nov 23 j 01:05	13° ≈ 07'10		direct	-3328 Nov 30 j 19:34	21° ≈ 01'47	
			4 60				
conjunction	-3335 Mar 01 j 09:31	14° ≈ 35'48		conjunction	-3327 Mar 09 j 12:21	22° ≈ 29'24	
minimum elong	-3335 Mar 01 j 09:36	14° ≈ 35'48	16°53'43	minimum elong	-3327 Mar 09 j 12:29	22° ≈ 29'24	16°32'54

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3327 in astronomical counting style is the year 3328 BCE in historical counting style. -3327 Mar 10 j 19:05 22°≈31'10 49.70662 AU max. Earth dist. -3319 Mar 18 i 09:38 0°¥15'24 49.88857 AU max. Earth dist. -3319 Jun 28 j 09:55 -3327 Jun 20 j 13:06 1°**)**44'13 retrograde 24°≈00'20 retrograde 22°≈59'57 -17°11'49 opposition -3327 Sep 11 j 23:03 -3319 Sep 19 j 13:24 0°\dagger44'12 -16°31'52 opposition min. Earth dist. 23°≈01'15 47.81272 AU -3319 Sep 18 j 19:20 0°**)** 45′03 47.97233 AU min. Earth dist. -3327 Sep 10 j 20:00 -3327 Dec 02 j 02:14 -3319 Nov 02 j 02:19 direct 22°**≈**00'32 30°R≈ -3319 Dec 09 j 19:07 29°≈44'55 direct -3318 Jan 16 j 05:48 conjunction -3326 Mar 10 j 18:43 23°≈28'02 -16°29'03 0°**∀** -3326 Mar 10 j 18:52 minimum elong 23°≈28'03 16°29'08 max. Earth dist. -3326 Mar 12 j 00:22 23°≈29'45 49.74494 AU conjunction -3318 Mar 18 j 18:19 1°**米**11'52 -15°49'45 -3318 Mar 18 j 18:29 retrograde -3326 Jun 21 j 17:23 24°≈58'51 minimum elong 1°**升**11'52 15°49'48 -3318 Mar 19 j 13:40 min. Earth dist. -3326 Sep 12 j 01:41 23°≈59'47 47.84759 AU max. Earth dist. 1° **★**12'58 49.89616 AU -3318 Jun 29 j 15:59 opposition -3326 Sep 13 j 04:01 23°≈58'32 -17°07'43 retrograde 2°\dagger41'48 -3326 Dec 03 j 09:23 -3318 Sep 20 j 17:54 direct 22°≈59'08 opposition 1°**¥**41'50 -16°25'39 min. Earth dist. -3318 Sep 20 j 00:11 1°**)** 42'41 47.97732 AU conjunction -3325 Mar 12 j 00:55 24°≈26'32 -16°25'02 direct -3318 Dec 10 j 22:39 0°\ 42'36 minimum elong -3325 Mar 12 j 01:04 24°≈26'33 16°25'06 max. Earth dist. -3325 Mar 13 j 03:57 24°≈28'05 49.77787 AU conjunction -3317 Mar 20 j 00:12 2°\mathbf{1}09'33 -15°43'39 retrograde -3325 Jun 23 j 01:34 25°≈57'12 minimum elong -3317 Mar 20 j 00:23 2°\(\mathbf{H}\) 09'33 15°43'43 min. Earth dist. -3325 Sep 13 j 08:26 24°≈58'07 47.87725 AU max. Earth dist. -3317 Mar 20 j 18:29 2°**升**10'35 49.90036 AU opposition -3325 Sep 14 j 09:05 24°≈56′56 -17°03′23 retrograde -3317 Jun 30 j 19:57 3°\(\)39'25 direct -3325 Dec 04 j 12:54 23°≈57'33 opposition -3317 Sep 21 j 22:32 2°\dagger39'32 -16°19'10 min. Earth dist. -3317 Sep 21 i 07:01 2°\;\;40'16 47.97865 AU conjunction -3324 Mar 12 j 07:07 25°≈24'52 -16°20'46 direct -3317 Dec 12 j 04:39 1° **)**(40'20 minimum elong -3324 Mar 12 j 07:16 25°≈24'53 16°20'51 max. Earth dist. -3324 Mar 13 j 09:46 25°≈26'24 49.80572 AU conjunction -3316 Mar 20 i 06:06 3°**¥**07'16 -15°37'17 retrograde -3324 Jun 23 i 07:59 26°≈55'24 -3316 Mar 20 j 06:17 3°**¥**07'16 15°37'20 minimum elong -3324 Sep 14 j 13:55 25°≈55'10 -16°58'49 max. Earth dist. -3316 Mar 20 j 23:30 3°¥08'15 49.90071 AU opposition -3324 Sep 13 j 14:59 -3316 Jun 30 j 23:06 4° **37**'06 min. Earth dist. 25°≈56'15 47.90197 AU retrograde -3324 Dec 04 j 17:09 24°≈55'48 -3316 Sep 21 j 11:54 3°**)** 47.97564 AU direct min. Earth dist. -3316 Sep 22 j 02:58 opposition 3°**¥**37'16 -16°12'26 26°**≈**23'01 -16°16'16 -3316 Dec 12 j 11:47 conjunction -3323 Mar 13 j 13:06 direct 2°\(\mathbf{3}\)38'05 minimum elong -3323 Mar 13 j 13:16 26°≈23'01 16°16'20 -3323 Mar 14 j 13:45 -3315 Mar 21 j 11:57 4°¥05'01 -15°30'42 max. Earth dist. 26°≈24'26 49.82918 AU conjunction -3323 Jun 24 j 13:46 -3315 Mar 21 j 12:08 4°**¥**05'01 15°30'46 retrograde 27°≈53'24 minimum elong -3323 Sep 15 j 18:40 -3315 Mar 22 j 02:52 4°**₭**05'52 49.89641 AU opposition 26°≈53'12 -16°53'58 max. Earth dist. -3323 Sep 14 j 20:01 -3315 Jul 02 j 06:14 5°**)** 34'49 min. Earth dist. 26°≈54'17 47.92263 AU retrograde -3323 Dec 05 j 21:14 -3315 Sep 23 j 07:34 4°**¥**35′01 -16°05′28 direct 25°≈53'51 opposition min. Earth dist. -3315 Sep 22 j 18:24 4°**升**35'38 47.96782 AU conjunction -3322 Mar 14 j 18:58 27°≈20'59 -16°11'30 direct -3315 Dec 13 j 15:41 3°\ 35'51 minimum elong -3322 Mar 14 j 19:06 27°≈21'00 16°11'34 max. Earth dist. -3322 Mar 15 j 18:31 27°≈22'20 49.84870 AU conjunction -3314 Mar 22 j 17:55 5°\mathcal{H}02'46 -15°23'53 -3322 Jun 25 j 16:08 28°≈51'15 minimum elong -3314 Mar 22 j 18:06 5°\cdot\dot02'46 15°23'55 retrograde -3322 Sep 16 j 23:30 27°≈51'05 -16°48'52 max. Earth dist. -3314 Mar 23 j 08:17 5°¥03'35 49.88702 AU opposition min. Earth dist. -3322 Sep 16 j 02:53 27°≈52'04 47.93962 AU retrograde -3314 Jul 03 j 13:24 6°**)** 32'30 -3322 Dec 07 j 05:16 26°≈51'45 -3314 Sep 24 j 12:10 5°**¥**32'44 -15°58'16 direct opposition min. Earth dist. -3314 Sep 24 i 00:40 5°**)** 33'17 47.95456 AU -3321 Mar 16 j 00:59 28°≈18'49 -16°06'28 conjunction direct -3314 Dec 14 i 19:06 4° **)** 33'34 minimum elong -3321 Mar 16 j 01:10 28°≈18'49 16°06'31 -3313 Mar 23 j 23:54 6°\(\pi\)00'28 -15°16'51 max. Earth dist. -3321 Mar 17 j 00:04 28°≈20'08 49.86495 AU conjunction retrograde -3321 Jun 26 i 19:49 29°≈48'59 minimum elong -3313 Mar 24 i 00:05 6°¥00'28 15°16'54 -3321 Sep 17 j 07:38 28°≈49'50 47.95339 AU max. Earth dist. -3313 Mar 24 j 11:47 6°¥01'08 49.87234 AU min. Earth dist. -3321 Sep 18 j 04:01 28°≈48'51 -16°43'28 retrograde -3313 Jul 04 j 20:59 7°**₩**30'08 opposition direct -3321 Dec 08 j 12:23 27°≈49'31 -3313 Sep 25 j 16:33 6°¥30'22 -15°50'50 opposition min. Earth dist. -3313 Sep 25 j 05:51 6°**升**30'53 47.93609 AU conjunction -3320 Mar 16 j 06:48 29°≈16'32 -16°01'10 direct -3313 Dec 15 j 21:40 5°**X**31'10 minimum elong -3320 Mar 16 j 06:57 29°≈16'33 16°01'13 max. Earth dist. -3320 Mar 17 j 03:49 29°≈17'44 49.87816 AU conjunction -3312 Mar 24 j 05:50 6°¥58'03 -15°09'35 -3320 Apr 18 j 08:13 0°**∀** -3312 Mar 24 j 06:02 6°\\$58'04 15°09'37 minimum elong -3320 Jun 27 j 03:51 0°**)** 46'37 -3312 Mar 24 j 16:17 retrograde max. Earth dist. 6°**¥**58'39 49.85247 AU -3320 Sep 06 j 11:39 -3312 Jul 04 j 23:36 30°R≈ retrograde 8°**H**27'39 opposition -3320 Sep 18 j 08:44 29°**≈**46'33 -16°37'48 opposition -3312 Sep 25 j 21:08 7°**¥**27'53 -15°43'11 min. Earth dist. -3320 Sep 17 j 13:34 29°≈47'27 47.96435 AU min. Earth dist. -3312 Sep 25 j 12:43 7°**∺**28'17 47.91269 AU direct -3320 Dec 08 j 14:49 28°≈47'14 direct -3312 Dec 16 j 04:42 6°**∺**28'40 -3319 Mar 07 j 02:28 0°**∀** conjunction -3311 Mar 25 j 11:36 7°**¥**55'31 -15°02'05 -3319 Mar 17 j 12:32 0°¥14'12 -15°55'35 minimum elong -3311 Mar 25 j 11:46 7°**¥**55'32 15°02'08 conjunction -3319 Mar 17 j 12:43 0°¥14'13 15°55'39 max. Earth dist. -3311 Mar 25 j 21:17 7°**¥**56'04 49.82809 AU minimum elong

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3311 in astronomical counting style is the year 3312 BCE in historical counting style. -3311 Jul 06 i 01:29 9°**)** 25'04 minimum elong -3304 Apr 01 i 04:47 14°**)**(36'42 14°02'34 retrograde 14°**)** 36'46 49.56129 AU -3311 Sep 27 j 01:32 8°\colon 25'17 -15°35'16 -3304 Apr 01 j 05:56 opposition max. Earth dist. -3311 Sep 26 j 17:31 8°**升**25'40 47.88495 AU -3304 Apr 06 j 22:03 14°\ 44'30 min. Earth dist. morning rise -3304 Jul 12 j 17:27 16°**)**€06'14 -3311 Dec 17 j 12:38 7° ¥ 26'01 direct retrograde -3310 Mar 24 j 22:05 -3304 Oct 03 j 08:24 15°**₭**06'33 -14°32'36 evening set 8°**¥**50′24 opposition -3304 Oct 03 j 08:39 15°**₭**06'32 47.59689 AU min. Earth dist. -3310 Mar 26 j 17:22 -3304 Dec 23 j 19:23 8°\\$52'52 -14°54'20 conjunction direct 14°**)** 07'11 -3303 Mar 27 j 07:09 minimum elong -3310 Mar 26 j 17:34 8°\dagger52'52 14°54'23 evening set 15°**¥**26′03 max. Earth dist. -3310 Mar 27 j 00:48 8°**¥**53'17 49.79963 AU 15°**)** 34′25 -13°53′01 morning rise -3310 Mar 28 j 13:07 8° ¥ 55'21 conjunction -3303 Apr 02 j 10:25 retrograde -3310 Jul 07 j 07:56 10°**¥**22'21 minimum elong -3303 Apr 02 j 10:37 15° **★**34'25 13°53'02 -3303 Apr 02 j 09:27 opposition -3310 Sep 28 j 05:54 9°¥22'34 -15°27'07 max. Earth dist. 15°**₭**34'21 49.50852 AU 9°**¥**22'52 47.85352 AU -3303 Apr 08 j 14:25 min. Earth dist. -3310 Sep 27 j 23:26 morning rise 15°**)** 42'49 -3303 Jul 14 j 02:17 direct -3310 Dec 18 j 16:36 8°**¥**23′16 retrograde 17°**)** 04'01 evening set -3309 Mar 25 j 03:57 9°**¥**46'17 opposition -3303 Oct 04 j 12:56 16°**₭**04'20 -14°22'38 min. Earth dist. -3303 Oct 04 j 13:59 16°**¥**04'17 47.54015 AU conjunction -3309 Mar 27 j 23:19 9°\\$50'06 -14°46'21 direct -3303 Dec 24 j 21:08 15°**₩**04'57 minimum elong -3309 Mar 27 j 23:30 9°\\$50'07 14°46'23 evening set -3302 Mar 28 j 03:18 16°**¥**23'21 max. Earth dist. -3309 Mar 28 j 06:33 9°**)** €50'31 49.76767 AU morning rise -3309 Mar 30 j 19:07 9° ¥ 53'57 conjunction -3302 Apr 03 j 16:35 16°**¥**32'17 -13°43'18 retrograde -3309 Jul 08 j 13:21 11°**)** 19'34 minimum elong -3302 Apr 03 j 16:47 16°**)** 32′18 13°43′20 opposition -3309 Sep 29 i 10:19 10°**)** 19'46 -15°18'41 max. Earth dist. -3302 Apr 03 i 14:02 16°**)** 32'09 49.45042 AU min. Earth dist. -3309 Sep 29 i 05:00 10°**)** €20'01 47.81865 AU morning rise -3302 Apr 10 i 06:36 16°**)** 41′15 direct -3309 Dec 19 j 21:24 9°**¥**20′26 retrograde -3302 Jul 15 i 06:25 18°**¥**01'56 evening set -3308 Mar 24 j 15:53 10°**)** 42′28 opposition -3302 Oct 05 j 17:30 17°**)**€02'15 -14°12'26 -3302 Oct 05 j 21:07 17°**)** €02'05 47.47793 AU min. Earth dist. -3308 Mar 28 j 05:01 10°**¥**47'18 -14°38'05 -3302 Dec 26 j 02:59 conjunction direct 16° ¥ 02'50 -3308 Mar 28 j 05:14 10°**¥**47'19 14°38'08 evening set -3301 Mar 29 j 00:11 17°**¥**20'47 minimum elong -3308 Mar 28 j 10:32 10°**)** 47'37 49.73261 AU max. Earth dist. -3308 Mar 31 j 18:43 10°**¥**52'09 -3301 Apr 04 j 22:51 17°**¥**30′16 -13°33′21 morning rise conjunction -3308 Jul 08 j 20:10 -3301 Apr 04 j 23:04 12°**)** 16′44 17°**¥**30′16 13°33′22 retrograde minimum elong -3308 Sep 29 j 14:39 11°¥16′56 -15°10′00 -3301 Apr 04 j 19:05 max. Earth dist. 17°**¥**30′03 49.38696 AU opposition -3308 Sep 29 j 09:39 -3301 Apr 11 j 22:12 min. Earth dist. 11°**₭**17'11 47.78084 AU 17°**)** 39'46 morning rise -3308 Dec 20 j 00:05 10°**)** 17'35 -3301 Jul 16 j 08:30 18°**¥**59'56 direct retrograde 11°**)**€38'48 -3307 Mar 25 j 06:34 -3301 Oct 06 j 22:03 18°**¥**00'15 -14°02'01 evening set opposition -3301 Oct 07 j 02:16 18°**₭**00'02 47.41023 AU min. Earth dist. 17°**₩**00'46 -3307 Mar 29 j 10:48 11°\(\dagger44'30\) -14°29'35 -3301 Dec 27 j 11:28 conjunction direct minimum elong -3307 Mar 29 j 10:59 11°\(\dagger44'30\) 14°29'37 evening set -3300 Mar 28 j 21:14 18°**¥**18'18 max. Earth dist. -3307 Mar 29 j 15:17 11°**)** 44'45 49.69458 AU morning rise -3307 Apr 02 j 15:36 11°**¥**50′12 conjunction -3300 Apr 05 j 04:52 18°**¥**28'17 -13°23'10 retrograde -3307 Jul 10 j 00:45 13°**)** 13′55 minimum elong -3300 Apr 05 j 05:04 18°**¥**28'18 13°23'13 -3307 Sep 30 j 19:08 12°**)** 14'09 -15°01'02 max. Earth dist. -3300 Apr 04 j 22:25 18°**升**27'55 49.31809 AU opposition min. Earth dist. -3307 Sep 30 j 15:59 12°**升**14'18 47.74010 AU -3300 Apr 12 j 13:21 18°**)** 38'19 morning rise -3307 Dec 21 j 05:23 11°**)** 14'47 -3300 Jul 16 j 14:21 19°**)** 58'00 direct retrograde -3306 Mar 25 j 23:08 12°**)** 35'19 -3300 Oct 07 j 02:38 18°**¥**58'16 -13°51'22 evening set opposition -3300 Oct 07 i 08:48 min. Earth dist. 18°**)** 57'59 47.33747 AU 12°\(\frac{1}{4}\)1'45 -14°20'49 conjunction -3306 Mar 30 i 16:38 direct -3300 Dec 27 j 16:22 17°**)** 58'44 minimum elong -3306 Mar 30 j 16:50 12°**)**(41'46 14°20'51 evening set -3299 Mar 29 j 18:42 19°**)** 15'51 max. Earth dist. -3306 Mar 30 j 20:32 12°**)**(41'59 49.65375 AU -3306 Apr 04 i 10:42 12°**)** 48'13 -3299 Apr 06 i 11:03 19°**¥**26′19 -13°12′46 morning rise conjunction -3306 Jul 11 i 03:58 14°**H**11'12 -3299 Apr 06 i 11:17 19°**¥**26'20 13°12'48 retrograde minimum elong -3306 Oct 01 j 23:30 13°**升** 11'27 -14°51'49 -3299 Apr 06 j 04:13 19°**¥**25'56 49.24444 AU opposition max. Earth dist. -3306 Oct 01 j 20:30 13°**)** 11'36 47.69620 AU -3299 Apr 14 j 04:09 19°**)** 36'51 min. Earth dist. morning rise -3299 Jul 17 j 19:48 direct -3306 Dec 22 j 12:05 12°\ 12'05 retrograde 20°¥56'05 -3305 Mar 26 j 16:54 evening set 13°**¥**32′01 opposition -3299 Oct 08 j 07:09 19°**¥**56'19 -13°40'28 min. Earth dist. -3299 Oct 08 j 14:34 19°**¥**55'57 47.26012 AU conjunction -3305 Mar 31 j 22:30 13°**)** (39'08 -14°11'47 -3299 Dec 28 j 21:16 18°**¥**56'42 direct 20°**)** 13′25 -3305 Mar 31 j 22:42 13°**¥**39′09 14°11′49 -3298 Mar 30 j 16:31 minimum elong evening set -3305 Apr 01 j 00:12 13°**¥**39'14 49.60948 AU max. Earth dist. -3305 Apr 06 j 04:46 -3298 Apr 07 j 17:07 20°**₭**24'22 -13°02'08 morning rise 13°**) (**46′18 conjunction -3305 Jul 12 j 10:27 15°**)**€08'38 retrograde minimum elong -3298 Apr 07 j 17:19 20°**X**24'23 13°02'09 opposition -3305 Oct 03 j 03:54 14°**₭**08'55 -14°42'20 max. Earth dist. -3298 Apr 07 j 08:14 20°**₭**23'52 49.16662 AU min. Earth dist. -3305 Oct 03 j 02:42 14°**₭**08'58 47.64874 AU morning rise -3298 Apr 15 j 18:36 20°**∺**35′23 direct -3305 Dec 23 j 16:00 13°**)**€09'33 retrograde -3298 Jul 19 j 03:49 21°**X**54'10 opposition evening set -3304 Mar 26 j 11:42 14°**)** 28'56 -3298 Oct 09 j 11:40 20°**¥**54'21 -13°29'19 min. Earth dist. -3298 Oct 09 j 19:47 20°**升**53'57 47.17890 AU -3304 Apr 01 j 04:34 14°**)** (36'41 -14°02'31 -3298 Dec 29 j 23:41 19°**¥**54'39 conjunction direct

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 8 Attention, astronomical year style is used: The year -3297 in astronomical counting style is the year 3298 BCE in historical counting style.

Attention, astronom	nical year style is used: Th	ne year -3297 in astronomical	counting style is the year		ounting style.	
evening set	-3297 Mar 31 j 14:35	21° ∺ 11'00	opposition	-3291 Oct 15 j 20:45	27°) 43′15 -12°	03'45
			min. Earth dist.	-3291 Oct 16 j 12:41	27°) 42'29 46.5	52007 AU
conjunction	-3297 Apr 08 j 23:21	21° 升 22′25 -12°51′14	direct	-3290 Jan 05 j 12:39	26°) 43′04	
minimum elong	-3297 Apr 08 j 23:34	21° ¥ 22′26 12°51′15	evening set	-3290 Apr 05 j 08:55	27°) € 57'33	
max. Earth dist.	-3297 Apr 08 j 13:17	21° 米 21′51 49.08499 AU				
morning rise	-3297 Apr 17 j 08:58	21°) 33′54	conjunction	-3290 Apr 15 j 20:06	28° ∺ 11′57 -11°	27'47
retrograde	-3297 Jul 20 j 09:17	22° 升 52′16	minimum elong	-3290 Apr 15 j 20:19	28° ¥ 11′57 11°	
opposition	-3297 Oct 10 j 16:14	21° 米 52′24 -13°17′54	max. Earth dist.	-3290 Apr 15 j 00:30	28°) 10′49 48.4	12443 AU
min. Earth dist.	-3297 Oct 11 j 02:17	21° 米 51′55 47.09417 AU	morning rise	-3290 Apr 26 j 08:18	28° ∺ 26′24	
direct	-3297 Dec 31 j 05:01	20° 升 52′37	retrograde	-3290 Jul 27 j 00:08	29°) (42′34	
evening set	-3296 Mar 31 j 13:01	22° ႘ 08'38	opposition	-3290 Oct 17 j 01:52	28°) 42′25 -11°	
			min. Earth dist.	-3290 Oct 17 j 19:54	28°) 41′32 46.4	10982 AU
conjunction	-3296 Apr 09 j 05:34	22° ∺ 20'31 -12°40'06	direct	-3289 Jan 06 j 18:47	27° ¥ 42′08	
minimum elong	-3296 Apr 09 j 05:46	22° ∺ 20'31 12°40'06	evening set	-3289 Apr 06 j 09:15	28° ¥ 56′25	
max. Earth dist.	-3296 Apr 08 j 18:53	22° 升 19'54 49.00029 AU	max. Earth dist.	-3289 Apr 16 j 06:49	29° ₭ 10'02 48.3	31308 AU
morning rise	-3296 Apr 17 j 22:54	22° ∺ 32′26				
retrograde	-3296 Jul 20 j 12:14	23° ¥ 50′25	conjunction	-3289 Apr 17 j 03:03	29° 米 11′12 -11°	
opposition	-3296 Oct 10 j 20:50	22°¥50'30 -13°06'13	minimum elong	-3289 Apr 17 j 03:16	29° ∺ 11'13 11°	14'53
min. Earth dist.	-3296 Oct 11 j 06:51	22° 升 50′01 47.00646 AU	morning rise	-3289 Apr 27 j 21:35	29° ∺ 26′03	
direct	-3296 Dec 31 j 12:14	21° ∺ 50'38		-3289 May 24 j 06:54	0° Υ	
evening set	-3295 Apr 01 j 11:28	23° ¥ 06′21	retrograde	-3289 Jul 28 j 05:30	0° Υ 41'58	
				-3289 Oct 02 j 07:38	30° ₹	
conjunction	-3295 Apr 10 j 11:34	23°¥18'39 -12°28'41	opposition	-3289 Oct 18 j 06:55	29°) 41′44 -11°	
minimum elong	-3295 Apr 10 j 11:47	23°¥18'40 12°28'42	min. Earth dist.	-3289 Oct 19 j 02:18	29°) 40'48 46.2	29428 AU
max. Earth dist.	-3295 Apr 09 j 22:56	23°¥17'56 48.91268 AU		-3288 Jan 08 j 00:46	28° ¥ 41′22	
morning rise	-3295 Apr 19 j 12:40	23° ∺ 31′01	evening set	-3288 Apr 06 j 09:54	29° ¥ 55′27	
retrograde	-3295 Jul 21 j 17:22	24° ∺ 48'40		-3288 Apr 09 j 17:34	0° Y	
opposition	-3295 Oct 12 j 01:36	23°\dagger48'41 -12°54'15	max. Earth dist.	-3288 Apr 16 j 11:16	0° Υ 09'18 48.1	19676 AU
min. Earth dist.	-3295 Oct 12 j 13:12	23°¥48'08 46.91600 AU				
direct	-3294 Jan 01 j 17:38	22°) 48'46	conjunction	-3288 Apr 17 j 09:52	0°Υ10'37 -11°	
evening set	-3294 Apr 02 j 10:21	24° 米 04'11	minimum elong	-3288 Apr 17 j 10:04	0°Υ10'37 11°	01'44
			morning rise	-3288 Apr 28 j 10:46	0° Υ 25'51	
conjunction	-3294 Apr 11 j 17:58	24° X 16'55 -12°17'01	retrograde	-3288 Jul 28 j 14:04	1° Υ 41'31	
minimum elong	-3294 Apr 11 j 18:11	24° X 16'56 12°17'01	opposition	-3288 Oct 18 j 12:03	0°Υ41'13 -11°	
max. Earth dist.	-3294 Apr 11 j 05:14	24°₩16′12 48.82230 AU	min. Earth dist.	-3288 Oct 19 j 08:23	0° Υ 40'14 46.1	17404 AU
morning rise	-3294 Apr 21 j 02:21	24°) 29'44	1	-3288 Nov 26 j 09:53	30° ₹	
retrograde	-3294 Jul 22 j 22:55	25°) (47'02	direct	-3287 Jan 08 j 03:54	29°) 40'43 0° Υ	
opposition	-3294 Oct 13 j 06:15	24°\(\frac{1}{4}\)47'02 -12°42'01		-3287 Feb 19 j 17:42	* .	
min. Earth dist.	·	24° X 46'25 46.82255 AU	evening set	-3287 Apr 07 j 10:24	0° Ƴ 54'37	
direct	-3293 Jan 02 j 23:00	23°) (47'03	·	2207 4 10:16:20	100010110 100	1001
evening set	-3293 Apr 03 j 09:40	25°\(\frac{1}{1}\)	conjunction	-3287 Apr 18 j 16:38	1°Υ10'10 -10°	
max. Earth dist.	-3293 Apr 12 j 09:38	25° ∺ 14'31 48.72892 AU		-3287 Apr 18 j 16:50	1°Υ10'11 10°	
i 4 i	2202 A 12:00.21	250W15122 12005105	max. Earth dist.	-3287 Apr 17 j 16:45	1° Υ 08'47 48.0 1° Υ 25'47	7/5/3 AU
conjunction	-3293 Apr 13 j 00:21 -3293 Apr 13 j 00:35	25° 光 15'22 -12°05'05 25° 光 15'22 12°05'06	morning rise	-3287 Apr 29 j 23:42 -3287 Jul 29 j 20:55	1 γ 23 47 2° Υ 41'13	
minimum elong	-3293 Apr 13 j 00.33	25°\(\frac{1}{2}\)28'36	retrograde	-3287 Oct 19 j 17:20	2 γ 41 13 1° Υ 40'49 -11°	200112
morning rise retrograde	-3293 Apr 22 j 10.01 -3293 Jul 24 j 08:17	26°\(\)45'35	opposition min. Earth dist.	-3287 Oct 19 j 17.20	1° Υ 39'44 46.0	
opposition	-3293 Jul 24 j 08.17 -3293 Oct 14 j 11:00	25°\(\frac{4}{4}5'33\) -12°29'31	direct	-3286 Jan 09 j 09:22	0° Υ 40'13	14930 AU
min. Earth dist.	-3293 Oct 14 j 11:00 -3293 Oct 15 j 00:13	25°\(\frac{43}{33}\) -12 2931 25°\(\frac{44}{35}\) 46.72591 AU		-3286 Apr 08 j 11:26	1° Υ 53'57	
direct	-3292 Jan 04 j 00:39	24°\(\frac{44}{45}\)31	evening set	3200 Apr 00 j 11.20	1 1 33 37	
evening set	-3292 Jan 04 j 00:39 -3292 Apr 03 j 09:00	26°\(\frac{1}{4}\)31 26°\(\frac{1}{4}\)00'25	conjunction	-3286 Apr 19 j 23:39	2° Υ '09'52 -10°	34'42
evening set	32)2 Apr 03 j 07.00	20 7(0023	minimum elong	-3286 Apr 19 j 23:52	2°Υ09'53 10°	
conjunction	-3292 Apr 13 j 06:48	26°) 14'00 -11°52'54	max. Earth dist.	-3286 Apr 18 j 22:55	2° Υ 08'26 47.9	
minimum elong	-3292 Apr 13 j 07:00	26°\(\)14'01 11°52'54	morning rise	-3286 May 01 j 12:38	2°Υ25'51	75075710
max. Earth dist.	-3292 Apr 13 j 07:00	26° X 13'06 48.63183 AU		-3286 Jul 31 j 01:48	3° Υ 41'04	
morning rise	-3292 Apr 12 j 14.30 -3292 Apr 23 j 05:28	26°)(27'39	opposition	-3286 Oct 20 j 22:25	2° Υ 40'35 -10°	54'57
retrograde	-3292 Jul 24 j 14:55	27°) 44'21	min. Earth dist.	-3286 Oct 20 j 22:23	2° Υ 39'29 45.9	
opposition	-3292 Jul 24 j 14:55	26°\(\frac{44}{21}\)	direct	-3285 Jan 10 j 16:43	1° Υ 39'50	2077 110
min. Earth dist.	-3292 Oct 14 j 13:33 -3292 Oct 15 j 07:20	26°\(\frac{44}{18}\) -12 1646 26°\(\frac{43}{33}\) 46.62526 AU		-3285 Apr 09 j 12:40	2° Υ 53'27	
direct	-3291 Jan 04 j 04:50	25°) 44'11	max. Earth dist.	-3285 Apr 20 j 03:46	3° Υ 08'10 47.8	32213 ATT
evening set	-3291 Jan 04 j 04.30 -3291 Apr 04 j 08:50	26° X 58'52	max. Earth dist.	-5205 Apr 20 J 05.40	J 1 UO 1U 4/.0	12213 AU
evening set	5271 Apr 0+ J 00.30	20 10002	conjunction	-3285 Apr 21 j 06:40	3° Y 09'44 -10°	20'48
conjunction	-3291 Apr 14 j 13:26	27° 升 12'52 -11°40'28	minimum elong	-3285 Apr 21 j 06:52		2048
minimum elong	-3291 Apr 14 j 13:20	27° X 12'53 11°40'29	morning rise	-3285 May 03 j 01:36	3° Υ 26'04	20 70
max. Earth dist.	-3291 Apr 14 j 13:39	27°) 11'54 48.53059 AU		-3285 May 03 j 01:30	4° Υ 41'06	
morning rise	-3291 Apr 13 j 20:33	27° X 26'55	opposition	-3285 Oct 22 j 03:49	3° Υ 40'32 -10°	240'23
retrograde	-3291 Apr 24 j 18:39	28°) (43'21	min. Earth dist.	-3285 Oct 22 j 03:49 -3285 Oct 23 j 04:15	3° Υ 39'20 45.7	
- Un o Brudo	5=7.1 vai 25 j 10.57		Darui dist.	5255 OC 25 j OT.15	5 . 57 20 45.7	

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3284 in astronomical counting style is the year 3285 BCE in historical counting style. 2°**Υ**39'40 -3284 Jan 11 j 22:53 retrograde -3278 Aug 08 i 09:25 11°Y50'04 direct -3284 Apr 09 j 13:53 3°Y53'09 -3278 Oct 28 j 20:03 10°**Y**'48'57 -8°50'31 opposition evening set max. Earth dist. -3284 Apr 20 j 10:47 4°**Υ**08'13 47.69054 AU min. Earth dist. -3278 Oct 30 j 03:55 10°**Y**47'22 44.78484 AU -3277 Jan 18 j 15:13 9°**Y**47'17 direct 11°**Υ**00'28 4°Υ09'47 -10°06'38 conjunction -3284 Apr 21 j 13:43 evening set -3277 Apr 16 j 07:20 4°**Υ**09'48 10°06'38 -3284 Apr 21 j 13:56 11°Υ17'21 46.68402 AU minimum elong max. Earth dist. -3277 Apr 28 j 06:23 -3284 May 03 j 14:10 4°Υ26'30 morning rise -3284 Aug 01 j 12:29 5°**Y**41′22 11°Υ19'32 -8°19'53 retrograde conjunction -3277 Apr 29 j 19:16 4°**Υ**40'42 -10°25'33 11°**Y**19'33 -3284 Oct 22 j 09:14 opposition minimum elong -3277 Apr 29 j 19:27 8°19'51 4°**Υ**39'28 45.65483 AU min. Earth dist. -3284 Oct 23 j 10:14 morning rise -3277 May 13 j 07:36 11°**Y**38'39 12°**Y**52'52 direct -3283 Jan 12 j 05:47 3°Y39'44 retrograde -3277 Aug 09 j 18:42 4°Υ53'05 -3277 Oct 30 j 02:30 11°Y51'37 -8°33'44 evening set -3283 Apr 10 j 15:33 opposition -3277 Oct 31 j 12:27 min. Earth dist. 11°**Y**49'56 44.62478 AU conjunction -3283 Apr 22 j 20:48 5°Υ10'06 -9°52'12 direct -3276 Jan 19 j 20:22 10°**Y**49'48 minimum elong -3283 Apr 22 j 21:00 5°Υ10'06 9°52'11 evening set -3276 Apr 16 j 10:57 12°Y02'59 max. Earth dist. -3283 Apr 21 j 15:59 5°**Υ**08'25 47.55641 AU max. Earth dist. -3276 Apr 28 j 13:18 12°**Y**20′06 46.52305 AU morning rise -3283 May 05 j 02:55 5°Y27'09 retrograde -3283 Aug 02 j 22:23 6°Y41'53 conjunction -3276 Apr 30 j 03:26 12°Y22'22 -8°03'35 opposition -3283 Oct 23 j 14:39 5°Υ41'08 -10°10'25 minimum elong -3276 Apr 30 j 03:36 12°**Y**'22'23 8°03'35 min. Earth dist. -3283 Oct 24 j 16:13 5°**Y**39'53 45.51797 AU morning rise -3276 May 13 j 20:17 12° **Y**41'48 direct -3282 Jan 13 j 07:57 4°Y40'03 retrograde -3276 Aug 10 j 03:47 13°Y55'58 evening set -3282 Apr 11 j 17:19 5°**Y**53′21 opposition -3276 Oct 30 i 08:53 12°Υ54'35 -8°16'39 max. Earth dist. -3282 Apr 22 j 22:33 6°**Y**08'59 47.41972 AU min. Earth dist. -3276 Oct 31 i 19:15 12°**Υ**52'52 44.45999 AU direct -3275 Jan 20 j 03:10 11°Y52'35 -3282 Apr 24 i 04:09 6°Υ10'42 -9°37'29 evening set -3275 Apr 17 j 14:56 13°Y05'47 conjunction -3282 Apr 24 j 04:22 6°Υ10'43 9°37'28 max. Earth dist. -3275 Apr 29 j 19:19 13°**Y**23'05 46.35743 AU minimum elong -3282 May 06 j 15:40 6°**Y**28′08 morning rise -3282 Aug 04 j 07:14 7°**Y**42'44 -3275 May 01 j 11:47 13°**Y**25'29 -7°47'02 conjunction retrograde -3282 Oct 24 j 20:22 6°**Y**41'55 -9°55'00 -3275 May 01 j 11:58 13°**Y**25'30 minimum elong 7°47'00 opposition 6°**Υ**40'34 45.37844 AU -3282 Oct 25 j 23:43 -3275 May 15 j 09:08 13°Y45'14 min. Earth dist. morning rise -3281 Jan 14 j 11:30 -3275 Aug 11 j 10:46 5°Υ40'44 14° **Y** 59'21 direct retrograde -3275 Oct 31 j 15:24 6°Y53'58 -3281 Apr 12 j 19:33 13°**Y**57'49 -7°59'18 evening set opposition 13°**Y**55'59 44.29093 AU -3281 Apr 24 j 05:16 7°**Y**09'54 47.28039 AU min. Earth dist. -3275 Nov 02 j 04:00 max. Earth dist. -3274 Jan 21 j 10:45 12°**Y**55'37 direct -3281 Apr 25 j 11:39 7°**Y**11'41 -9°22'29 -3274 Apr 18 j 19:04 14°**Y**08'51 conjunction evening set 7°Υ11'42 9°22'28 -3274 May 01 j 03:33 14°**Y**26'25 46.18776 AU minimum elong -3281 Apr 25 j 11:51 max. Earth dist. -3281 May 08 j 04:22 7°**Y**29′27 morning rise retrograde -3281 Aug 05 j 12:47 8°Y43'56 conjunction -3274 May 02 j 20:24 14°Υ28'52 -7°30'12 -3281 Oct 26 j 01:58 7° Y 43'04 -9°39'18 minimum elong -3274 May 02 j 20:34 14°**Υ**28'52 7°30'11 opposition min. Earth dist. -3281 Oct 27 j 05:27 7°**Υ**41'43 45.23601 AU morning rise -3274 May 16 j 21:51 14°**Y**48'56 -3280 Jan 15 j 19:35 6°**Y**41'46 retrograde -3274 Aug 12 j 15:12 16°**Y**03′00 direct -3280 Apr 12 j 22:02 7°Y55'00 -3274 Nov 01 j 22:04 15°**Y**01'19 -7°41'40 evening set opposition -3280 Apr 24 j 10:37 8°**Υ**11'08 47.13776 AU min. Earth dist. -3274 Nov 03 j 11:20 14°**Υ**59'26 44.11800 AU max. Earth dist. -3273 Jan 22 j 20:36 13°Y58'55 direct -3280 Apr 25 j 19:13 8°Y13'03 -9°07'14 -3273 Apr 19 j 23:40 15°**Y**12'11 conjunction evening set minimum elong -3280 Apr 25 i 19:25 8°Υ13'04 9°07'13 max. Earth dist. -3273 May 02 i 09:56 15°**Y**29'56 46.01453 AU morning rise -3280 May 08 j 17:11 8°Y31'10 -3273 May 04 i 04:58 15°**Y**'32'31 -7°13'06 retrograde -3280 Aug 05 j 18:34 9°Y45'34 conjunction 8°Y44'38 -9°23'19 opposition -3280 Oct 26 i 07:54 minimum elong -3273 May 04 i 05:09 15°**Υ**32'32 7°13'04 min. Earth dist. -3280 Oct 27 j 13:24 8°**Υ**43'10 45.09010 AU -3273 May 18 i 10:40 15°**Y**52'53 morning rise direct -3279 Jan 16 j 03:08 7°**Y**43'14 -3273 Aug 14 j 00:01 17°**Y**06′57 retrograde 8°Y56'26 -3273 Nov 03 j 04:48 16°**Y**°05'06 -7°23'44 evening set -3279 Apr 14 j 00:38 opposition 9°Υ12'54 46.99125 AU min. Earth dist. -3273 Nov 04 j 19:03 16°Υ03'11 43.94192 AU max. Earth dist. -3279 Apr 25 j 18:05 15°**Y**02'31 direct -3272 Jan 24 j 02:19 conjunction -3279 Apr 27 j 02:59 9°Υ14'50 -8°51'42 evening set -3272 Apr 20 j 04:22 16°Y15'50 minimum elong -3279 Apr 27 j 03:11 9°Y14'51 8°51'40 max. Earth dist. -3272 May 02 j 18:08 16°**Ƴ**33'51 45.83824 AU -3279 May 10 j 05:46 9°Y33'17 morning rise -3279 Aug 07 j 00:06 10°**Ƴ**47'38 -3272 May 04 j 13:48 16°**Υ**36'28 -6°55'44 retrograde conjunction -3279 Oct 27 j 13:58 9°**Y**46'36 -9°07'03 -3272 May 04 j 13:57 16°**Ƴ**36'29 6°55'42 opposition minimum elong -3279 Oct 28 j 20:30 9°**Y**45'05 44.93982 AU -3272 May 18 j 23:18 16°**Y**57′09 min. Earth dist. morning rise 8°Y45'05 18°**Υ**11'14 direct -3278 Jan 17 j 10:52 retrograde -3272 Aug 14 j 09:14 -3278 Apr 15 j 03:54 9°**Y**58′16 opposition -3272 Nov 03 j 11:53 17°**Y**′09'13 -7°05'30 evening set max. Earth dist. -3278 Apr 26 j 23:32 10°**Y**14'54 46.84016 AU min. Earth dist. -3272 Nov 05 j 03:39 17°**Y**07'13 43.76306 AU direct -3271 Jan 24 j 07:41 16°**Y**06′27 conjunction -3278 Apr 28 j 10:58 10°**Y**17′00 -8°35′55 evening set -3271 Apr 21 j 09:19 17°**Y**19′52 -3278 Apr 28 j 11:10 10°**Y**17′01 8°35'55 max. Earth dist. -3271 May 04 j 02:03 17°**Υ**38'06 45.65952 AU minimum elong

-3278 May 11 j 18:44

morning rise

10°**Y**35'48

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3271 in astronomical counting style is the year 3272 BCE in historical counting style. 17°**Y**40'48 -6°38'04 -3271 May 05 i 22:35 evening set -3264 Apr 28 i 07:36 25°**Y**03'17 conjunction max. Earth dist. -3271 May 05 j 22:45 17°**Y**'40'48 6°38'02 -3264 May 11 j 13:39 25°Υ22'53 44.32180 AU minimum elong -3271 May 20 j 11:56 18°**Y**01'46 morning rise -3271 Aug 15 j 18:37 19°**Υ**15'54 -3264 May 13 j 19:28 25°**Y**'26'14 -4°26'28 conjunction retrograde -3271 Nov 04 j 19:00 18°**Y**13'44 -6°46'57 -3264 May 13 j 19:35 25°Y26'15 4°26'24 opposition minimum elong 25°**Y**49'12 -3271 Nov 06 j 10:43 -3264 May 29 j 06:40 min. Earth dist. 18°**Υ**11'44 43.58185 AU morning rise 27°**Y**04'17 17°**Y**10'46 -3264 Aug 23 j 12:55 direct -3270 Jan 25 j 14:53 retrograde 18°**Y**24'19 -3264 Nov 12 j 02:45 26°Y01'04 -4°28'43 evening set -3270 Apr 22 j 14:47 opposition 18°**Ƴ**42'45 45.47833 AU max. Earth dist. -3270 May 05 j 09:18 min. Earth dist. -3264 Nov 14 j 03:15 25°**Y**58'34 42.22354 AU direct -3263 Feb 02 j 00:49 24°Y56'44 conjunction -3270 May 07 j 07:43 18°**Y**45'34 -6°20'07 evening set -3263 Apr 29 j 15:46 26°**Y**11′50 -3270 May 07 j 07:51 -3263 May 12 j 21:43 26°**Y**31'31 44.11433 AU minimum elong 18°**Y**45'34 6°20'05 max. Earth dist. -3270 May 22 j 00:45 morning rise 19°**Y**06′50 retrograde -3270 Aug 17 j 03:22 20°Y21'01 conjunction -3263 May 15 j 06:03 26°Y35'03 -4°06'32 opposition -3270 Nov 06 j 02:19 19°**Y**18'43 -6°28'07 minimum elong -3263 May 15 j 06:09 26°Y35'03 4°06'30 min. Earth dist. -3270 Nov 07 j 19:53 19°**Y**16'37 43.39829 AU morning rise -3263 May 30 j 19:53 26°Y58'16 direct -3269 Jan 26 j 23:07 18°**Y**15'35 retrograde -3263 Aug 24 j 22:04 28°Y13'33 evening set -3269 Apr 23 j 20:33 19°**Y**29'18 opposition -3263 Nov 13 j 11:35 27° \boldsymbol{\gamma} 10'08 -4° 07' 47 max. Earth dist. -3269 May 06 j 18:46 19°**Y**48'00 45.29472 AU min. Earth dist. -3263 Nov 15 j 13:40 27°**Y**07'32 42.01327 AU direct -3262 Feb 03 j 10:18 26°Y05'32 conjunction -3269 May 08 j 17:09 19°Υ50'50 -6°01'52 evening set -3262 May 01 j 00:21 27°Y20'54 minimum elong -3269 May 08 j 17:19 19°**Y**50'51 6°01'51 max. Earth dist. -3262 May 14 j 08:19 27°Υ40'48 43.90306 AU morning rise -3269 May 23 j 13:32 20°**Y**12′24 retrograde -3269 Aug 18 j 10:04 21°Y26'41 conjunction -3262 May 16 i 17:09 27°Y44'23 -3°46'20 opposition -3269 Nov 07 i 09:53 20°Y24'16 -6°08'58 minimum elong -3262 May 16 j 17:15 27°**Y**'44'23 3°46'17 -3269 Nov 09 j 03:52 20°**Υ**22'08 43.21205 AU -3262 Jun 01 j 09:05 28°Y07'51 min. Earth dist. morning rise -3268 Jan 28 j 09:01 19°Y20'58 -3262 Aug 26 j 07:23 29°Y23'22 direct retrograde -3268 Apr 24 j 02:42 20°Y34'51 -3262 Nov 14 j 20:35 28°**Y**19'43 -3°46'31 opposition evening set -3268 May 07 j 01:55 20°Υ′53'42 45.10822 AU -3262 Nov 17 j 00:04 28°Υ17'02 41.79953 AU max. Earth dist. min. Earth dist. -3261 Feb 04 j 19:03 27°**Y**14'51 direct 20°**Υ**56'41 -5°43'21 -3268 May 09 j 02:30 -3261 May 02 j 09:27 28°Y30'30 conjunction evening set 20°**Υ**56'41 5°43'19 -3268 May 09 j 02:38 -3261 May 15 j 18:02 28°Υ50'33 43.68879 AU max. Earth dist. minimum elong -3268 May 24 j 02:20 21°Υ18'32 morning rise 28°**Y**'54'14 -3°25'51 -3268 Aug 18 j 20:06 22°**Y**32'58 -3261 May 18 j 04:18 retrograde conjunction -3268 Nov 07 j 17:36 21°**Y**'30'25 -5°49'31 -3261 May 18 j 04:24 28°Y54'14 3°25'48 opposition minimum elong 21°**Υ**′28'12 43.02277 AU -3268 Nov 09 j 12:53 -3261 Jun 02 j 22:27 29°**Y**17′57 min. Earth dist. morning rise -3267 Jan 28 j 15:24 20°**Y**26′56 -3261 Jul 04 j 06:41 direct 0°8 evening set -3267 Apr 25 j 09:13 21°**Υ**41'02 retrograde -3261 Aug 27 j 19:55 0°833'42 max. Earth dist. -3267 May 08 j 10:59 22°Υ00'07 44.91812 AU -3261 Oct 22 j 03:31 30°RY opposition -3261 Nov 16 j 05:49 29°Y29'49 -3°24'58 conjunction -3267 May 10 j 12:23 22°Y03'09 -5°24'33 min. Earth dist. -3261 Nov 18 j 09:34 29°Υ27'07 41.58320 AU -3267 May 10 j 12:32 22°Υ03'10 5°24'31 direct -3260 Feb 06 j 02:28 28°Y24'41 minimum elong -3267 May 25 j 15:13 22°**Y**25′18 -3260 May 02 j 18:43 29° **Y**40'40 morning rise evening set -3267 Aug 20 j 06:04 23°**Y**39'53 -3260 May 15 j 14:26 retrograde 0°8 -3267 Nov 09 j 01:32 22°**Y**37'11 -5°29'46 max. Earth dist. -3260 May 16 j 03:54 0°800'51 43.47193 AU opposition min. Earth dist. -3267 Nov 10 j 22:35 22°**Υ**34'53 42.82958 AU -3266 Jan 29 j 22:11 -3260 May 18 j 15:33 0°804'38 -3°05'05 direct 21° Y 33'32 conjunction evening set -3266 Apr 26 i 16:20 22°\dagger47'51 minimum elong -3260 May 18 j 15:38 0°804'39 3°05'01 max. Earth dist. -3266 May 09 i 19:31 23°**Υ**07'07 44.72396 AU morning rise -3260 Jun 03 j 11:30 0°828'36 retrograde -3260 Aug 28 j 08:37 1°844'37 -3266 May 11 i 22:30 23°Y10'15 -5°05'28 -3260 Nov 16 i 15:26 0°840'30 -3°03'05 conjunction opposition -3266 May 11 j 22:38 23°Y10'16 5°05'25 min. Earth dist. -3260 Nov 18 j 20:53 0°**8**37'42 41.36471 AU minimum elong -3266 May 27 j 04:24 23°Y32'41 -3260 Dec 21 j 07:54 30°RY morning rise 24°**Y**47'25 29°Y35'05 retrograde -3266 Aug 21 j 18:43 direct -3259 Feb 06 j 11:36 opposition -3266 Nov 10 j 09:41 23°Y44'34 -5°09'43 -3259 Mar 25 j 08:39 0°8 min. Earth dist. -3266 Nov 12 j 07:18 23°**Y**42'14 42.63207 AU evening set -3259 May 04 j 04:30 0°851'26 -3265 Jan 31 j 04:49 22°\dagger40'42 max. Earth dist. -3259 May 17 j 15:34 1°**8**11'50 43.25326 AU direct 23°**Y**55'17 -3265 Apr 27 j 23:49 evening set -3265 May 11 j 03:38 24°Υ14'40 44.52509 AU -3259 May 20 j 03:12 1°**8**15'38 -2°44'01 max. Earth dist. conjunction 1°**8**15'39 2°43'58 minimum elong -3259 May 20 j 03:16 -3265 May 13 j 08:51 24°**Y**17'58 -4°46'06 1°**8**39'49 conjunction morning rise -3259 Jun 05 j 00:47 minimum elong -3265 May 13 j 08:59 24°**Y**17'58 4°46'04 retrograde -3259 Aug 29 j 20:04 2°**8**56'07 morning rise -3265 May 28 j 17:31 24°**Y**40′39 opposition -3259 Nov 18 j 01:05 1°**8**51'47 -2°40'54 retrograde -3265 Aug 23 j 05:39 25°**Y**55'34 min. Earth dist. -3259 Nov 20 j 06:26 1°**8**48'58 41.14458 AU opposition -3265 Nov 11 j 18:09 24°**Y**52'33 -4°49'22 direct -3258 Feb 07 j 23:26 0°**8**46'05 min. Earth dist. -3265 Nov 13 j 18:11 24°Υ′50'05 42.42998 AU -3258 May 05 j 14:57 2°802'51 evening set -3264 Feb 01 j 12:59 23°**Y**'48'27 max. Earth dist. -3258 May 19 j 01:26 2°823'20 43.03298 AU direct

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3258 in astronomical counting style is the year 3259 BCE in historical counting style. opposition -3258 May 21 j 15:06 2°**8**27'17 -2°22'40 -3252 Nov 26 i 06:34 10°**8**32'59 0°03'02 conjunction min. Earth dist. -3258 May 21 j 15:10 2°**8**27'18 2°22'36 -3252 Nov 28 i 19:32 10°**8**29'40 39.54286 AU minimum elong -3258 Jun 06 j 14:17 2°**8**51'42 -3251 Feb 16 j 05:11 9°**8**25'18 direct morning rise -3258 Aug 31 j 07:32 4°808'20 -3251 May 14 j 07:08 10°845'43 retrograde evening set -3258 Nov 19 j 11:11 3°803'46 -2°18'24 -3251 May 27 j 14:09 11°**8**06'52 41.42350 AU opposition max. Earth dist. min. Earth dist. -3258 Nov 21 j 17:55 3°**8**00'52 40.92305 AU 1°**8**57'49 -3257 Feb 09 j 09:26 11°811'34 0°14'43 direct conjunction -3251 May 30 j 11:59 3°**8**14'59 -3251 May 30 j 11:58 11°**8**11'34 evening set -3257 May 07 j 01:43 minimum elong 0°14'47 -3251 May 30 j 09:39 max. Earth dist. -3257 May 20 j 13:43 3°**8**35'40 42.81110 AU behind sun begin 11°**8**11'25 behind sun end -3251 May 30 j 14:17 11°**8**11'42 -3251 Jun 15 j 15:08 conjunction -3257 May 23 j 03:23 3°**8**39'40 -2°01'02 morning rise 11°**8**37'19 -3257 May 23 j 03:26 3°839'40 2°00'58 -3251 Sep 09 j 02:01 minimum elong retrograde 12°**8**57'07 -3257 Jun 08 j 03:39 4°**8**04'18 -3251 Nov 27 j 18:49 morning rise opposition 11°**8**50'51 0°27'39 retrograde -3257 Sep 01 j 16:22 5°**8**21'17 min. Earth dist. -3251 Nov 30 j 08:51 11°**8**47'27 39.30194 AU opposition -3257 Nov 20 j 21:35 4°816'31 -1°55'36 direct -3250 Feb 17 j 16:38 10°842'49 min. Earth dist. -3257 Nov 23 j 05:02 4°**8**13'34 40.69980 AU evening set -3250 May 15 j 22:08 12°803'53 direct -3256 Feb 10 j 21:22 3°**8**10'18 max. Earth dist. -3250 May 29 j 04:04 12°**8**25'05 41.18106 AU evening set -3256 May 07 j 13:11 4°**8**27'56 max. Earth dist. -3256 May 21 j 00:41 4°**8**48'43 42.58746 AU conjunction -3250 Jun 01 j 02:48 12°**8**29'52 0°38'16 minimum elong -3250 Jun 01 j 02:47 12°**8**29'52 0°38'19 conjunction -3256 May 23 j 15:51 4°852'50 -1°39'06 morning rise -3250 Jun 17 j 05:24 12°**8**55'47 minimum elong -3256 May 23 j 15:54 4°852'50 1°39'02 retrograde -3250 Sep 10 j 15:56 14°816'08 morning rise -3256 Jun 08 j 17:19 5°817'41 opposition -3250 Nov 29 i 07:41 13°**8**09'34 0°52'33 retrograde -3256 Sep 02 i 05:53 6°**8**35'05 min. Earth dist. -3250 Dec 01 i 23:16 13°**8**06'05 39.05847 AU opposition -3256 Nov 21 j 08:10 5°**8**30'05 -1°32'29 direct -3249 Feb 19 j 04:18 12°**8**01'11 -3256 Nov 23 i 16:08 5°**8**27'06 40.47466 AU -3249 May 17 j 13:46 13°**8**22'56 min. Earth dist. evening set -3255 Feb 11 j 05:42 4°**8**23'36 max. Earth dist. -3249 May 30 j 18:22 13°**8**44'12 40.93647 AU direct -3255 May 09 j 01:04 5°**8**41'45 evening set -3255 May 22 j 12:23 6°**8**02'39 42.36128 AU -3249 Jun 02 j 17:45 13°849'03 1°02'05 max. Earth dist. conjunction -3249 Jun 02 j 17:44 13°**8**49'03 1°02'10 minimum elong -3255 May 25 j 04:44 -3249 Jun 18 j 19:44 14°**8**15'06 conjunction 6°**8**06'51 -1°16'54 morning rise minimum elong -3255 May 25 j 04:46 -3249 Jul 19 j 23:17 6°**8**06'51 1°16'50 15°8 -3255 Jun 10 j 06:56 -3249 Sep 12 j 08:41 6°**8**31'54 retrograde 15°**8**36'04 morning rise -3255 Sep 03 j 19:51 7°**8**49'44 -3249 Nov 06 j 15:57 15°R retrograde -3255 Nov 22 j 19:17 6°**8**44'31 -1°09'03 -3249 Nov 30 j 20:44 14°**8**29'11 1°17'45 opposition opposition -3255 Nov 25 j 05:18 6°**8**41'25 40.24672 AU -3249 Dec 03 j 12:13 14°**8**25'41 38.81327 AU min. Earth dist. min. Earth dist. 5°**8**37'46 -3248 Feb 20 j 16:07 13°**8**20'26 direct -3254 Feb 12 j 14:04 direct evening set -3254 May 10 j 13:43 6°**8**56'26 evening set -3248 May 18 j 06:03 14°**8**42'55 max. Earth dist. -3254 May 24 j 01:00 7°**8**17'27 42.13207 AU -3248 May 28 j 19:04 15°8 max. Earth dist. -3248 May 31 j 08:10 15°**8**04'11 40.69024 AU conjunction -3254 May 26 j 18:06 7°**8**21'44 -0°54'25 -3254 May 26 j 18:07 7°**8**21'44 0°54'21 -3248 Jun 03 j 09:07 15°809'10 1°26'09 minimum elong conjunction -3254 Jun 11 j 20:53 7°**8**46'59 -3248 Jun 03 j 09:04 15°**8**09'10 morning rise minimum elong 1°26'13 -3254 Sep 05 j 09:44 9°**8**05'16 -3248 Jun 19 j 10:06 15°**8**35'20 retrograde morning rise -3254 Nov 24 j 06:34 7°**8**59'49 -0°45'19 -3248 Sep 13 j 00:51 16°**8**56'56 opposition retrograde -3254 Nov 26 i 16:51 -3248 Dec 01 i 10:18 15°**8**49'45 1°43'13 min. Earth dist. 7°**8**56'41 40.01554 AU opposition 6°**8**52'46 -3248 Dec 04 i 03:28 15°846'09 38.56700 AU direct -3253 Feb 14 i 02:45 min. Earth dist. evening set -3253 May 12 j 03:03 8°812'00 -3247 Jan 12 j 04:23 15°R₩ 14°**8**40'39 max. Earth dist. -3253 May 25 j 12:12 8°833'02 41.89931 AU direct -3247 Feb 21 i 04:40 -3247 Apr 02 j 00:44 15°8 -3253 May 28 i 07:45 8°837'30 -0°31'40 evening set -3247 May 19 j 22:51 16°803'54 conjunction -3253 May 28 i 07:46 8°837'30 0°31'35 max. Earth dist. -3247 Jun 02 j 00:16 16°**8**25'15 40.44315 AU minimum elong -3253 Jun 13 j 10:56 9°**8**02'55 morning rise 16°**8**30'16 1°50'28 retrograde -3253 Sep 07 j 00:13 10°821'41 conjunction -3247 Jun 05 j 00:53 opposition -3253 Nov 25 j 18:25 9°**8**15'58 -0°21'18 minimum elong -3247 Jun 05 j 00:49 16°**8**30'15 1°50'34 min. Earth dist. -3253 Nov 28 j 06:39 9°**8**12'43 39.78093 AU morning rise -3247 Jun 21 j 00:33 16°**8**56'32 -3247 Sep 14 j 15:36 direct -3252 Feb 15 j 14:59 8°808'37 retrograde 18°**8**18'49 -3252 May 12 j 16:38 9°**8**28'26 -3247 Dec 03 j 00:17 17°**8**11'20 2°08'57 evening set opposition -3252 May 26 j 01:58 9°**8**49'36 41.66303 AU -3247 Dec 05 j 17:16 17°**8**07'43 38.32006 AU max. Earth dist. min. Earth dist. -3246 Feb 22 j 21:15 16°**8**01'53 direct 9°**8**54'06 -0°08'40 -3246 May 21 j 16:41 17°**8**25'57 conjunction -3252 May 28 j 21:41 evening set -3246 Jun 03 j 14:40 17°**8**47'15 40.19553 AU minimum elong -3252 May 28 j 21:41 9°**8**54'06 0°08'36 max. Earth dist. 9°**8**53'45 behind sun begin -3252 May 28 j 16:02 behind sun end -3252 May 29 j 03:21 9°**8**54'28 conjunction -3246 Jun 06 j 17:03 17°**8**52'25 2°15'01 morning rise -3252 Jun 14 j 00:50 10°**8**19'42 minimum elong -3246 Jun 06 j 16:59 17°**8**52'25 2°15'06 -3252 Sep 07 j 12:03 11°**8**38'58 -3246 Jun 22 j 15:16 18°**8**18'46 retrograde morning rise

-3252 Oct 11 j 22:02

asc. node

11°**8**24'27

-3246 Sep 16 j 07:48

retrograde

19°**8**41'48

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Earth dist. 29°**8**29'15 38.17475 AU -3245 Jun 24 j 05:59 19°**8**42'10 morning rise 21°**8**05'59 retrograde -3245 Sep 17 j 23:01 conjunction -3238 Jun 18 j 20:55 29°**8**35'16 5°38'43 opposition -3245 Dec 06 j 05:37 19°**8**57'56 3°01'12 minimum elong -3238 Jun 18 j 20:44 29°**8**35'15 5°38'49 -3245 Dec 09 j 00:14 -3238 Jul 02 j 19:46 min. Earth dist. 19°**8**54'10 37.82547 AU $0^{\circ}\Pi$ 18°**8**47'47 -3238 Jul 03 j 18:01 0°**I**101'37 direct -3244 Feb 26 j 02:08 morning rise evening set -3244 May 24 j 06:17 20°813'39 retrograde -3238 Sep 28 j 12:34 1°**Ⅲ**32'14 max. Earth dist. -3244 Jun 05 j 23:41 20°**8**34'58 39.69919 AU opposition -3238 Dec 16 j 04:17 0°**Ⅲ**21'50 6°11'02 min. Earth dist. -3238 Dec 19 j 05:06 0°**Д**17'33 36.05570 AU conjunction -3244 Jun 09 j 02:45 20°840'16 3°04'47 -3238 Dec 31 j 21:54 30°R₩ minimum elong -3244 Jun 09 j 02:39 20°**8**40'16 3°04'52 direct -3237 Mar 07 j 20:26 29°808'54 morning rise -3244 Jun 24 j 20:51 21°806'46 -3237 May 10 j 20:26 $0^{\circ}\Pi$ retrograde -3244 Sep 18 j 16:48 22°831'26 evening set -3237 Jun 05 j 22:35 0°**I**I42'35 opposition -3244 Dec 06 j 20:54 21°**8**23'06 3°27'41 max. Earth dist. -3237 Jun 17 j 08:30 1°**Д**02'53 37.91539 AU min. Earth dist. -3244 Dec 09 i 15:36 21°819'19 37.57751 AU direct -3243 Feb 26 i 15:18 20°812'37 conjunction -3237 Jun 20 j 17:43 1°**Д**08'58 6°04'53 evening set -3243 May 26 j 02:25 21°839'28 minimum elong -3237 Jun 20 j 17:30 1°**Ⅱ**08'57 6°05'00 max. Earth dist. -3243 Jun 07 j 16:11 22°800'42 39.44970 AU morning rise -3237 Jul 05 i 10:04 1°**Ⅲ**35'12 -3237 Sep 30 j 09:49 3°**Ⅱ**06'58 retrograde -3243 Jun 10 j 20:28 22°806'08 3°29'59 -3237 Dec 17 j 23:26 1°**II**56'10 6°38'51 conjunction opposition -3243 Jun 10 j 20:21 22°**8**06'07 -3237 Dec 20 j 23:54 1°**Д**51'53 35.79792 AU 3°30'05 min. Earth dist. minimum elong -3243 Jun 26 j 11:57 22°**8**32'40 -3236 Mar 08 j 14:34 0°**Ⅱ**42'46 direct morning rise -3243 Sep 20 j 12:13 23°**8**58'14 -3236 Jun 07 j 01:02 2°**Ⅱ**17'46 evening set retrograde -3243 Dec 08 j 12:44 22°**8**49'36 3°54'24 -3236 Jun 18 j 04:37 max. Earth dist. 2°**Д**37'47 37.65583 AU opposition -3243 Dec 11 j 09:17 min. Earth dist. 22°**8**45'42 37.32830 AU 2°**I**I44'00 6°31'09 -3242 Feb 28 j 04:26 -3236 Jun 21 j 14:55 21°**8**38'45 conjunction direct -3236 Jun 21 j 14:42 -3242 May 27 j 23:31 23°**8**06'38 2°**Ⅱ**43'59 evening set minimum elong 6°31'15 -3242 Jun 09 j 10:16 23°**8**27'50 39.19869 AU -3236 Jul 06 j 01:56 3°**Ⅱ**10'05 max. Earth dist. morning rise -3236 Oct 01 j 08:37 4°**Ⅱ**43'05 retrograde -3242 Jun 12 j 14:45 23°**8**33'20 3°55'23 -3236 Dec 18 j 19:15 3°**П**31'51 7°06'46 conjunction opposition minimum elong -3242 Jun 12 j 14:38 23°**8**33'19 3°55'28 min. Earth dist. -3236 Dec 21 j 21:05 3°**П**27'28 35.54054 AU morning rise -3242 Jun 28 j 03:19 23°**8**59'53 direct -3235 Mar 10 j 07:56 2°**I**17′59 retrograde -3242 Sep 22 j 08:04 25°**8**26'22 evening set -3235 Jun 09 j 04:42 3°**I**I54'22 -3242 Dec 10 j 05:09 24°**8**17'26 4°21'20 max. Earth dist. -3235 Jun 20 j 03:16 4°**П**14'12 37.39699 AU opposition min. Earth dist. -3242 Dec 13 j 01:39 24°**8**13'31 37.07736 AU -3241 Mar 01 j 20:48 23°**8**06'13 -3235 Jun 23 j 12:52 4°П20'25 6°57'28 direct conjunction -3241 May 29 j 21:31 24°835'10 -3235 Jun 23 j 12:37 4°**Ⅱ**20'24 6°57'34 evening set minimum elong -3241 Jun 11 j 02:52 24°856'10 38.94558 AU -3235 Jul 07 j 18:04 4°**Ⅱ**46′18 max. Earth dist. morning rise -3235 Oct 03 i 06:41 6°**Ⅱ**20'35 retrograde -3241 Jun 14 i 09:25 25°**8**01'51 4°20'59 5°**П**08'57 7°34'44 conjunction opposition -3235 Dec 20 j 15:30 -3241 Jun 14 i 09:16 5°**П**04'35 35.28424 AU minimum elong 25°**8**01'51 4°21'04 min. Earth dist. -3235 Dec 23 j 16:41 -3241 Jun 29 j 18:46 25°**8**28'24 3°**I**I54'37 morning rise direct -3234 Mar 12 j 05:09 -3241 Sep 24 i 03:52 26°**8**55'52 -3234 Jun 11 j 09:34 5°**Ⅲ**32'29 retrograde evening set -3241 Dec 11 i 22:10 25°**8**46'35 4°48'29 max. Earth dist. -3234 Jun 22 j 00:32 5°**П**51'56 37.13942 AU opposition min. Earth dist. -3241 Dec 14 j 20:24 25°**8**42'33 36.82447 AU -3240 Mar 02 j 13:15 24°834'59 -3234 Jun 25 j 11:22 5°II58'19 7°23'49 direct conjunction 5°**П**58'17 7°23'55 evening set -3240 May 30 j 20:18 26°805'03 minimum elong -3234 Jun 25 j 11:07 max. Earth dist. -3240 Jun 11 j 22:16 26°**8**25'58 38.69039 AU morning rise -3234 Jul 09 j 10:26 6°**Ⅲ**23'58 retrograde -3234 Oct 05 j 07:10 7°**I**59'36 conjunction -3240 Jun 15 j 04:46 26°**8**31'42 4°46'44 opposition -3234 Dec 22 j 12:35 6°II47'35 8°02'45 -3240 Jun 15 j 04:37 26°**8**31'42 4°46'49 min. Earth dist. -3234 Dec 25 j 14:25 6°**Д**43'09 35.02971 AU minimum elong -3240 Jun 30 j 10:20 26°**8**58'13 -3233 Mar 14 j 01:44 5°**Ⅱ**32'48 morning rise direct -3240 Sep 24 j 21:52 28°**8**26'41 -3233 Jun 13 j 15:20 7°**Ⅱ**12'14 retrograde evening set 27°**8**17'03 5°15'50 -3233 Jun 24 j 00:39 opposition -3240 Dec 12 j 15:40 max. Earth dist. 7°**Д**31'25 36.88359 AU min. Earth dist. -3240 Dec 15 j 14:29 27°**8**12'57 36.56961 AU direct -3239 Mar 04 j 09:18 26°**8**05'01 conjunction -3233 Jun 27 j 10:30 7°**I**37'47 7°50'10 minimum elong evening set -3239 Jun 01 j 20:09 27°**8**36'14 -3233 Jun 27 j 10:14 7°**I**37'46 7°50'16 max. Earth dist. -3239 Jun 13 j 16:07 27°**8**56'55 38.43338 AU morning rise -3233 Jul 11 j 02:38 8°**Ⅲ**03′10 -3233 Oct 07 j 05:48 9°**Ⅱ**40'16 retrograde -3239 Jun 17 j 00:29 28°**8**02'51 5°12'39 -3233 Dec 24 j 10:22 8°II27'52 8°30'46 conjunction opposition

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Earth dist. 21°**Д**52'33 34.88512 AU 9°**Ⅱ**44'02 morning rise -3232 Jul 11 j 19:16 11°**Ⅲ**22'40 retrograde -3232 Oct 08 j 06:57 conjunction -3225 Jul 12 j 05:06 21°**I**59'35 11°16'51 -3225 Jul 12 j 04:43 21°**Ⅲ**59'33 opposition -3232 Dec 25 j 08:37 10°**Ⅱ**09'54 8°58'44 minimum elong 11°16'57 -3225 Jul 22 j 18:10 min. Earth dist. -3232 Dec 28 j 10:16 10°**Д**05'25 34.52638 AU morning rise 22°**Ⅱ**20'49 -3225 Oct 22 j 08:48 direct -3231 Mar 16 j 20:54 8°**I**I54'16 retrograde 24°**Ⅲ**12′26 -3224 Jan 07 j 19:09 evening set -3231 Jun 17 j 06:45 10°**Ⅲ**37′04 opposition 22°**Ⅲ**56′50 12°10'41 max. Earth dist. -3231 Jun 27 j 00:13 10°**Ц**55'25 36.37730 AU min. Earth dist. -3224 Jan 10 j 22:08 22°**Д**52'03 32.80612 AU direct -3224 Mar 29 j 01:01 21°**Ⅲ**37'55 conjunction -3231 Jun 30 j 10:49 11°**Ⅲ**01'58 8°42'42 evening set -3224 Jul 03 j 08:02 23°**Ⅲ**35'10 minimum elong -3231 Jun 30 j 10:30 11°**Ⅲ**01'56 8°42'49 max. Earth dist. -3224 Jul 10 j 00:02 23°**Ⅱ**48'42 34.64276 AU morning rise -3231 Jul 13 j 11:57 11°**Ⅲ**26′40 retrograde -3231 Oct 10 j 06:29 13°**Ⅱ**06'55 conjunction -3224 Jul 13 j 10:43 23°**II**55'44 11°41'33 opposition -3231 Dec 27 j 07:51 11°**Д**53'48 9°26'39 minimum elong -3224 Jul 13 j 10:20 23°**II**55'42 11°41'39 min. Earth dist. -3231 Dec 30 j 10:32 11°**II**49'13 34.27709 AU morning rise -3224 Jul 23 j 11:04 24°**Ⅱ**16′07 direct -3230 Mar 18 j 17:56 10°**Ⅲ**37'44 retrograde -3224 Oct 23 i 13:25 26°**Ⅱ**09'57 -3230 Jun 19 j 16:33 12°**Ⅲ**22'21 opposition -3223 Jan 08 i 23:47 24°**Ⅱ**53'53 12°36'57 evening set max. Earth dist. -3230 Jun 29 j 01:34 12°**Ⅱ**40'13 36.12611 AU min. Earth dist. -3223 Jan 12 j 03:10 24°II49'02 32.56868 AU direct -3223 Mar 31 j 03:57 23°**Ⅲ**34'28 -3230 Jul 02 j 12:02 12°**Ⅱ**46′50 9°08'51 -3223 Jul 06 j 04:03 25°**Ⅲ**34'09 conjunction evening set -3230 Jul 02 j 11:44 12°**Ⅱ**46'48 9°08'58 -3223 Jul 12 j 06:56 25°**П**46'42 34.40423 AU max. Earth dist. minimum elong -3230 Jul 15 j 04:49 13°**Ⅱ**11'07 morning rise -3230 Oct 12 j 09:03 -3223 Jul 15 j 16:55 25°**I**53'45 12°05'48 14°**I**53′05 conjunction retrograde -3230 Dec 29 j 07:42 13°**Ⅲ**39'35 9°54'29 -3223 Jul 15 j 16:31 minimum elong 25°**Ⅱ**53'43 12°05'54 opposition -3229 Jan 01 j 09:47 13°**Д**35'00 34.02891 AU -3223 Jul 25 j 03:43 min. Earth dist. 26°**Ⅲ**13'11 morning rise 12°**Ⅲ**23′04 -3223 Oct 25 j 20:47 -3229 Mar 20 j 16:04 28°**Ⅱ**09'20 direct retrograde -3222 Jan 11 j 05:14 -3229 Jun 22 j 03:34 14°**Ⅱ**09'36 26°**I**52'50 13°02'43 evening set opposition 14°**Ⅲ**26′51 35.87567 AU 26°**耳**48'03 32.33546 AU -3229 Jul 01 j 02:36 -3222 Jan 14 j 07:01 max. Earth dist. min. Earth dist. -3222 Apr 02 j 07:33 25°**Ⅲ**32'55 direct -3229 Jul 04 j 14:04 14°**Ⅲ**33'36 -3222 Jul 09 j 01:40 27°**Ⅲ**35′10 conjunction 9°34'52 evening set -3229 Jul 04 j 13:44 -3222 Jul 14 j 14:20 minimum elong 14°**Ⅲ**33'34 9°34'59 max. Earth dist. 27°**Ⅱ**46'37 34.17012 AU morning rise -3229 Jul 16 j 21:52 14°**Ⅲ**57'25 retrograde -3229 Oct 14 j 12:35 16°**Ⅱ**41'10 conjunction -3222 Jul 17 j 23:55 27°II53'42 12°29'31 opposition -3229 Dec 31 j 08:32 15°**Ⅲ**27'16 10°22'10 minimum elong -3222 Jul 17 j 23:31 27°**Ⅲ**53'40 12°29'39 min. Earth dist. -3228 Jan 03 j 11:56 15°**Д**22'36 33.78166 AU morning rise -3222 Jul 26 j 20:11 28°**Ⅲ**12'05 -3228 Mar 21 j 13:47 14°**Ⅱ**10′19 -3222 Oct 02 j 11:05 0ಂತಾ direct -3228 Jun 23 j 15:53 15°**Ⅲ**58'49 -3222 Oct 28 j 03:42 0°9510'41 evening set retrograde -3228 Jul 02 j 06:01 16°**Д**15'31 35.62612 AU -3222 Nov 23 j 08:03 30°R∏ max. Earth dist. -3221 Jan 13 j 11:44 28°**I**53'44 13°27'55 opposition 16°**Ⅱ**22'16 conjunction -3228 Jul 05 i 16:42 10°00'44 min. Earth dist. -3221 Jan 16 i 13:46 28°**Д**48'55 32.10718 AU minimum elong -3228 Jul 05 i 16:22 16°**Ⅲ**22'15 10°00'50 direct -3221 Apr 04 j 11:43 27° II 33'20 -3228 Jul 17 j 14:48 16°**Ⅱ**45'34 morning rise evening set -3221 Jul 12 j 01:24 29°**Ⅲ**38'18 -3228 Oct 15 i 16:41 retrograde 18°**Ⅲ**31′09 max. Earth dist. -3221 Jul 17 j 00:03 29°**Ц**48'39 33.94141 AU -3227 Jan 01 j 10:02 17°**Ⅲ**16'51 10°49'42 opposition min. Earth dist. -3227 Jan 04 j 12:52 17°**Ⅲ**12'11 33.53528 AU -3221 Jul 20 i 07:41 29°**I**155'39 12°52'40 conjunction -3227 Mar 23 j 16:21 15°**Ⅱ**59'26 -3221 Jul 20 j 07:16 29°**Ⅱ**55'36 12°52'46 direct minimum elong -3227 Jun 26 j 05:46 17°**Ⅱ**49'59 -3221 Jul 22 j 09:18 0ಂತಾ evening set -3227 Jul 04 j 08:05 18°**Д**05'55 35.37749 AU max. Earth dist. morning rise -3221 Jul 28 j 12:08 0°9512'50 retrograde -3221 Oct 30 j 12:45 2°9514'02 -3227 Jul 07 j 20:08 18°**Ⅲ**12'51 10°26'23 opposition -3220 Jan 15 j 18:59 0°956'40 13°52'27 conjunction 10°26'29 -3227 Jul 07 j 19:46 18°**Ⅲ**12'49 min. Earth dist. -3220 Jan 18 j 19:10 0°951'56 31.88443 AU minimum elong -3227 Jul 19 j 08:04 18°**Ⅲ**35'32 -3220 Feb 24 j 19:11 30°R∏ morning rise -3227 Oct 17 j 23:16 20°**Ⅲ**23′02 -3220 Apr 05 j 18:24 29°**I**35'49 retrograde direct -3226 Jan 03 j 12:11 19°**I**08'19 11°16'59 -3220 May 15 j 22:51 0ംഉ opposition -3220 Jul 14 j 03:00 min. Earth dist. -3226 Jan 06 j 15:42 19°**Ⅱ**03'34 33.29023 AU evening set 1°5643'40 -3226 Mar 25 j 18:23 17°**Ⅲ**50′24 max. Earth dist. -3220 Jul 18 j 08:32 1°952'37 33.71831 AU direct evening set -3226 Jun 28 j 21:05 19°**Ⅱ**43′06 max. Earth dist. -3226 Jul 06 j 13:26 19°**Д**58'22 35.13025 AU conjunction -3220 Jul 21 j 16:05 1°959'40 13°15'08 minimum elong -3220 Jul 21 j 15:42 1°959'38 13°15'15 -3226 Jul 10 j 00:26 20°II05'17 10°51'46 -3220 Jul 29 j 03:35 2°9515'32 conjunction morning rise -3226 Jul 10 j 00:05 20°**II**05'15 10°51'53 -3220 Oct 31 j 23:34 4°9519'30 minimum elong retrograde

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3219 in astronomical counting style is the year 3220 BCE in historical counting style. -3219 Jan 17 j 03:10 3°501'43 14°16'16 min. Earth dist. -3212 Feb 05 i 07:44 18°532'41 30.29597 AU opposition 2°556'59 31.66738 AU -3219 Jan 20 i 03:12 -3212 Apr 23 j 02:44 17°9513'06 min. Earth dist. direct 19°542'10 32.12878 AU -3219 Apr 07 j 23:56 1°9540'27 -3212 Aug 05 j 21:37 direct max. Earth dist. -3219 Jul 17 j 07:25 3°951'22 evening set max. Earth dist. -3219 Jul 20 j 20:12 3°958'55 33.50082 AU conjunction -3212 Aug 08 j 17:38 19°9548'39 15°43'02 -3212 Aug 08 j 17:19 minimum elong 19°9548'38 15°43'08 -3212 Nov 19 j 11:39 conjunction -3219 Jul 24 j 01:34 4°905'50 13°36'52 retrograde 22°9519'29 -3219 Jul 24 j 01:09 -3211 Feb 04 j 06:01 16°51'58 minimum elong 4°905'48 13°36'58 opposition 20°958'43 morning rise -3219 Jul 30 j 18:10 4°9520'12 min. Earth dist. -3211 Feb 06 j 20:43 20°554'25 30.12373 AU retrograde -3219 Nov 03 j 10:18 6°9527'06 direct -3211 Apr 25 j 17:51 19°534'19 opposition -3218 Jan 19 j 12:11 5°**©**08'57 14°39'17 max. Earth dist. -3211 Aug 08 j 14:05 22°504'43 31.95803 AU min. Earth dist. -3218 Jan 22 j 11:00 5°904'16 31.45571 AU -3211 Aug 11 j 09:01 direct -3218 Apr 10 j 08:58 3°5647'17 conjunction 22°9511'09 15°56'23 -3211 Aug 11 j 08:42 evening set -3218 Jul 20 j 14:48 6°901'30 minimum elong 22°9511'07 15°56'29 max. Earth dist. -3218 Jul 23 j 06:26 6°507'14 33.28872 AU retrograde -3211 Nov 22 j 04:43 24°9543'12 opposition -3210 Feb 06 j 22:14 23°522'04 17°05'48 conjunction -3218 Jul 26 j 11:44 6°5514'13 13°57'49 min. Earth dist. -3210 Feb 09 j 11:45 23°9517'50 29.95940 AU minimum elong -3218 Jul 26 j 11:21 6°9514'10 13°57'56 direct -3210 Apr 28 j 07:22 21°957'19 morning rise -3218 Aug 01 j 07:27 6°526'49 max. Earth dist. -3210 Aug 11 j 09:38 24°529'14 31.79584 AU retrograde -3218 Nov 06 j 00:14 8°936'55 opposition -3217 Jan 21 j 22:16 7°9518'23 15°01'27 conjunction -3210 Aug 14 j 01:06 24°535'22 16°08'19 min. Earth dist. -3217 Jan 24 i 20:13 7°513'44 31.24938 AU minimum elong -3210 Aug 14 i 00:51 24°935'21 16°08'25 direct -3217 Apr 12 j 18:21 5°956'19 retrograde -3210 Nov 24 i 21:52 27°9508'37 evening set -3217 Jul 24 j 02:11 8°9514'09 opposition -3209 Feb 09 i 15:26 25°9547'09 17°18'02 max. Earth dist. -3217 Jul 25 j 19:31 8°517'55 33.08173 AU min. Earth dist. -3209 Feb 12 i 02:21 25°5643'05 29.80371 AU -3209 May 01 j 00:33 24°9522'07 direct -3217 Jul 28 j 22:46 8°924'46 14°17'55 max. Earth dist. -3209 Aug 14 j 03:31 26°55'16 31.64300 AU conjunction -3217 Jul 28 j 22:22 8°9324'44 14°18'01 minimum elong -3217 Aug 02 j 18:10 -3209 Aug 16 j 17:31 8°935'17 conjunction 27°901'19 16°18'43 morning rise -3217 Nov 08 j 11:45 -3209 Aug 16 j 17:15 10°9548'54 minimum elong 27°**©**01'18 16°18'48 retrograde -3216 Jan 24 j 09:25 -3209 Nov 27 j 17:45 29°535'42 9°530'00 15°22'40 retrograde opposition -3216 Jan 27 j 06:54 -3208 Feb 12 j 09:18 17°28'36 min. Earth dist. 9°525'21 31.04799 AU 28°9513'56 opposition -3208 Feb 14 j 17:51 -3216 Apr 14 j 04:34 8°907'32 min. Earth dist. 28°910'01 29.65753 AU direct -3216 Jul 26 j 20:15 10°529'33 -3208 May 02 j 17:34 evening set direct 26°9548'38 29°523'14 31.50003 AU -3216 Jul 27 j 07:56 -3208 Aug 16 j 00:34 max. Earth dist. 10°530'37 32.87992 AU max. Earth dist. 10°537'29 14°37'06 -3216 Jul 30 j 10:35 -3208 Aug 18 j 10:48 conjunction conjunction 29°528'57 16°27'30 minimum elong -3216 Jul 30 j 10:12 10°937'27 14°37'12 minimum elong -3208 Aug 18 j 10:36 29°**5**28'56 16°27'35 morning rise -3216 Aug 02 j 23:59 10°9545'21 -3208 Aug 31 j 16:37 $0^{\circ}\Omega$ retrograde -3216 Nov 10 j 01:42 13°903'01 retrograde -3208 Nov 29 j 11:17 $2^{\circ}\Omega 04'25$ opposition -3215 Jan 25 j 21:11 11°5643'45 15°42'54 opposition -3207 Feb 14 j 03:50 0°**Ω**42'24 17°37'24 min. Earth dist. -3215 Jan 28 j 17:06 11°539'11 30.85173 AU min. Earth dist. -3207 Feb 16 j 10:21 0°Ω38'37 29.52097 AU -3215 Apr 16 j 15:21 10°ഇ20'53 -3207 Mar 12 j 16:58 30°Rூ direct -3215 Jul 29 j 22:05 12°545'30 32.68321 AU -3207 May 05 j 11:10 29°516'53 max. Earth dist. direct -3215 Jul 31 j 08:08 12°5548'40 -3207 Jun 26 j 01:33 evening set 0° Ω max. Earth dist. -3207 Aug 18 j 20:08 1°Ω52'40 31.36718 AU -3215 Aug 01 j 23:23 conjunction 12°952'19 14°55'16 -3207 Aug 21 i 04:32 minimum elong -3215 Aug 01 j 23:00 12°952'17 14°55'22 conjunction 1°Ω58'15 16°34'37 -3215 Aug 03 j 13:51 minimum elong -3207 Aug 21 j 04:20 morning rise 12°955'53 1°Ω58'14 16°34'43 -3215 Nov 12 i 14:47 15°919'13 retrograde -3207 Dec 02 i 08:39 4°Ω34'45 retrograde -3214 Jan 28 j 10:11 13°959'34 16°02'02 opposition -3206 Feb 16 i 23:09 3°Ω12'31 17°44'23 opposition min. Earth dist. -3214 Jan 31 j 05:57 13°555'00 30.66061 AU min. Earth dist. -3206 Feb 19 j 02:39 3°**Ω**08'55 29.39422 AU 12°936'19 -3206 May 08 j 05:38 1°Ω46'49 direct -3214 Apr 19 j 02:00 direct max. Earth dist. -3214 Aug 01 j 12:57 15°502'26 32.49212 AU max. Earth dist. -3206 Aug 21 j 18:00 4°**Ω**23'53 31.24415 AU conjunction -3214 Aug 04 j 12:44 15°909'10 15°12'23 conjunction -3206 Aug 23 j 22:48 4°Ω29'08 16°40'01 -3206 Aug 23 j 22:41 16°40'06 -3214 Aug 04 j 12:24 15°909'08 15°12'29 minimum elong 4°**Ω**29′07 minimum elong -3214 Nov 15 j 05:51 17°537'24 -3206 Dec 05 j 04:26 7°**Ω**06'36 retrograde retrograde -3213 Jan 30 j 23:55 -3205 Feb 19 j 19:21 5°**Ω**44'09 17°49'29 opposition 16°9517'24 16°19'59 opposition -3213 Feb 02 j 17:27 5°**Ω**40'40 29.27689 AU min. Earth dist. 16°9512'56 30.47514 AU min. Earth dist. -3205 Feb 21 j 21:13 direct -3213 Apr 21 j 14:27 14°953'45 direct -3205 May 11 j 00:44 4°**Ω**18'19 max. Earth dist. -3213 Aug 04 j 04:13 17°521'17 32.30700 AU max. Earth dist. -3205 Aug 24 j 14:59 6°**£**56'26 31.13092 AU conjunction -3213 Aug 07 j 02:55 17°9527'58 15°28'20 conjunction -3205 Aug 26 j 17:30 7°**Ω**01'29 16°43'38 minimum elong -3213 Aug 07 j 02:33 17°9527'56 15°28'26 minimum elong -3205 Aug 26 j 17:23 7°**Ω**01′28 16°43'44 -3213 Nov 17 j 20:03 19°957'32 -3205 Dec 08 j 01:36 9°**£**39'49 retrograde retrograde

-3212 Feb 02 j 14:36

opposition

18°937'08 16°36'40

opposition

-3204 Feb 22 j 15:58

8° Ω17'12 17°52'40

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•	nical year style is used: Th		•	/ /		, ,	e 13
min. Earth dist.	-3204 Feb 24 j 14:22	•	29.16892 AU	builting style is the year	-3196 Feb 11 j 05:53	30°RΩ	
direct	-3204 Nev 24 j 14.22 -3204 May 12 j 20:54	6° Ω 51'15	29.10092 AU	opposition	-3196 Mar 15 j 04:42	29°Ω08'18	17905112
max. Earth dist.	-3204 May 12 j 20.34 -3204 Aug 26 j 13:09		31.02707 AU	min. Earth dist.	-3196 Mar 16 j 04:15		28.64698 AU
max. Earm dist.	-3204 Aug 20 J 13.09	9 6630 23	31.02/07 AU	direct	-3196 Jun 03 j 02:22	29 ∂ 100 39 27° Ω 41'58	28.04098 AU
· · · · · · · · · · · · ·	2204 A 20: 12-44	9° Ω 35'09	16°45'28	direct	,		
conjunction	-3204 Aug 28 j 12:44	9° Ω 35'09		Fauth diat	-3196 Sep 06 j 23:27	0° m/25109	20 55500 ATT
minimum elong	-3204 Aug 28 j 12:41		16°45'33	max. Earth dist.	-3196 Sep 17 j 06:52	0°110/25'08	30.55588 AU
retrograde	-3204 Dec 09 j 21:19	12° Ω 14'17	17052152		2107 8 10:04.40	00 m 27/22	15952102
opposition	-3203 Feb 24 j 13:23	10° Ω 51'29		conjunction	-3196 Sep 18 j 04:48	0° m 27'22	15°52'03
min. Earth dist.	-3203 Feb 26 j 10:22		29.06995 AU	minimum elong	-3196 Sep 18 j 05:03	0° m/27'24	15°52'05
direct	-3203 May 15 j 16:10	9° Ω 25'25	20.02264.444	retrograde	-3196 Dec 30 j 20:31	3° Mp 08'55	1.0040154
max. Earth dist.	-3203 Aug 29 j 11:33	12°8705′26	30.93264 AU	opposition	-3195 Mar 18 j 03:54	1° Mp 45'12	
	2202 4 21:00:10	120 000157	1 60 45107	min. Earth dist.	-3195 Mar 18 j 23:09	1° Mp 43'51	28.63118 AU
conjunction	-3203 Aug 31 j 08:18	12° Ω 09'57		direct	-3195 Jun 06 j 00:44	0° m 18'59	20.54056.433
minimum elong	-3203 Aug 31 j 08:15	12° Ω 09'57	16°45'32	max. Earth dist.	-3195 Sep 20 j 07:27	3°11002°20	30.54876 AU
retrograde	-3203 Dec 12 j 19:27	14° Ω 49'45	15052100		2107.0	207 0405	1.500 (140
opposition	-3202 Feb 27 j 11:11	13° Ω 26'48		conjunction	-3195 Sep 21 j 00:38	3° Mp 04'05	15°36'43
min. Earth dist.	-3202 Mar 01 j 04:34		28.97994 AU	minimum elong	-3195 Sep 21 j 00:54	3° Mp 04'07	15°36'46
direct	-3202 May 18 j 13:33	12° Ω 00'38		retrograde	-3194 Jan 02 j 16:54	5° m 45'30	
max. Earth dist.	-3202 Sep 01 j 10:04	14° {\2 41'24	30.84749 AU	opposition	-3194 Mar 21 j 03:11	4°₩21'50	
		_		min. Earth dist.	-3194 Mar 21 j 19:34	•	28.62748 AU
conjunction	-3202 Sep 03 j 04:15	14° Ω 45'40		direct	-3194 Jun 09 j 00:29	2° ™ 55'47	
minimum elong	-3202 Sep 03 j 04:16	14° Ω 45'40	16°43'39				
	-3202 Sep 09 j 02:02	15° Ω		conjunction	-3194 Sep 23 j 20:07	5° Mp 40′28	
retrograde	-3202 Dec 15 j 15:13	17° Ω 26′02		minimum elong	-3194 Sep 23 j 20:26	5° Mp 40′30	
opposition	-3201 Mar 02 j 09:37	16° Ω 02'55		max. Earth dist.	-3194 Sep 23 j 05:53	-•	30.55408 AU
min. Earth dist.	-3201 Mar 04 j 01:17	16° Ω 00'08	28.89913 AU	retrograde	-3193 Jan 05 j 14:47	8° Mp 21'40	
	-3201 Apr 13 j 03:14	15°R Ω		opposition	-3193 Mar 24 j 02:14	6° Mp 58′04	16°13'15
direct	-3201 May 21 j 09:37	14° Ω 36'40		min. Earth dist.	-3193 Mar 24 j 13:58	6° Mp 57′15	28.63578 AU
	-3201 Jun 27 j 13:40	15° Ω		direct	-3193 Jun 11 j 23:36	5°₩32'14	
max. Earth dist.	-3201 Sep 04 j 09:42	17° Ω 18′09	30.77205 AU				
				conjunction	-3193 Sep 26 j 15:23	8° Mp 16′25	15°00'34
conjunction	-3201 Sep 06 j 00:16	17° Ω 22'04	16°39'49	minimum elong	-3193 Sep 26 j 15:43	8°Mp16′27	15°00'37
minimum elong	-3201 Sep 06 j 00:18	17° Ω 22'04	16°39'53	max. Earth dist.	-3193 Sep 26 j 05:26	8° Mp 15′24	30.57125 AU
retrograde	-3201 Dec 18 j 11:33	20° Ω 02'53		retrograde	-3192 Jan 08 j 10:34	10° m ∕57'18	
opposition	-3200 Mar 04 j 08:15	18° Ω 39'38	17°45'29	opposition	-3192 Mar 26 j 01:14	9° ™ 33'49	15°52'03
min. Earth dist.	-3200 Mar 05 j 20:20	18° Ω 37'05	28.82764 AU	min. Earth dist.	-3192 Mar 26 j 10:35	9° m 33'10	28.65547 AU
direct	-3200 May 23 j 08:50	17° Ω 13'19		direct	-3192 Jun 13 j 21:43	8°Mp08'14	
max. Earth dist.	-3200 Sep 06 j 08:11	19° Ω 55'15	30.70645 AU	evening set	-3192 Sep 25 j 04:29	10° Mp 43'53	
conjunction	-3200 Sep 07 j 20:28	19° Ω 58'57	16°34'08	conjunction	-3192 Sep 28 j 10:23	10° m ∕51'47	14°39'54
minimum elong	-3200 Sep 07 j 20:34	19° Ω 58'57	16°34'12	minimum elong	-3192 Sep 28 j 10:44	10° m 51'49	14°39'55
retrograde	-3200 Dec 20 j 08:48	22° Ω 40′07		max. Earth dist.	-3192 Sep 28 j 03:32	10° m 51'05	30.59985 AU
opposition	-3199 Mar 07 j 07:02	21° Ω 16'42	17°38'34	morning rise	-3192 Oct 01 j 16:55	10° m 59'45	
min. Earth dist.	-3199 Mar 08 j 16:43	21° Ω 14'20	28.76607 AU	retrograde	-3191 Jan 10 j 08:05	13°M 32'16	
direct	-3199 May 26 j 05:15	19° Ω 50'19		opposition	-3191 Mar 28 j 23:42	12°Mp08'55	15°29'02
max. Earth dist.	-3199 Sep 09 j 08:43	22° Ω 32'48	30.65141 AU	min. Earth dist.	-3191 Mar 29 j 04:42	12°Mp08'34	28.68603 AU
				direct	-3191 Jun 16 j 21:27	10° m 43'34	
conjunction	-3199 Sep 10 j 16:47	22° Ω 36′05	16°26'32	evening set	-3191 Sep 26 j 12:35	13° m 15'04	
minimum elong	-3199 Sep 10 j 16:54	22° Ω 36′05	16°26'36		-		
retrograde	-3199 Dec 23 j 04:51	25° Ω 17′28		conjunction	-3191 Oct 01 j 05:04	13° Mp 26'26	14°17'37
opposition	-3198 Mar 10 j 06:11	23° Ω 53'57	17°29'33	minimum elong	-3191 Oct 01 j 05:27	13° Mp 26'28	14°17'39
min. Earth dist.	-3198 Mar 11 j 12:25	23° Ω 51'49	28.71489 AU	max. Earth dist.	-3191 Oct 01 j 01:49	13° Mp 26'06	30.63915 AU
direct	-3198 May 29 j 04:55	22° Ω 27'33		morning rise	-3191 Oct 05 j 22:09	13° m 37'51	
max. Earth dist.	-3198 Sep 12 j 07:17	25° Ω 10'16	30.60748 AU	retrograde	-3190 Jan 13 j 03:04	16° Mp 06'25	
	1 3			opposition	-3190 Mar 31 j 22:13	14° mp 43'12	15°04'20
conjunction	-3198 Sep 13 j 12:46	25° Ω 13'17	16°16'59	min. Earth dist.	-3190 Apr 01 j 00:53	-•	28.72707 AU
minimum elong	-3198 Sep 13 j 12:57	25° Ω 13'18		direct	-3190 Jun 19 j 18:52	13° m) 18'08	
retrograde	-3198 Dec 26 j 02:26	27° Ω 54'49		evening set	-3190 Sep 28 j 03:47	15° Mp 46'07	
opposition	-3197 Mar 13 j 05:27	26° Ω 31'11	17°18'26	<i>5</i>	r -J	4 '* " '	
min. Earth dist.	-3197 Mar 14 j 08:12		28.67505 AU	conjunction	-3190 Oct 03 j 23:16	16° Mp 00'10	13°53'47
direct	-3197 Jun 01 j 03:13	25° Ω 04'47		minimum elong	-3190 Oct 03 j 23:40	16° Mp 00'12	13°53'48
max. Earth dist.	-3197 Sep 15 j 08:15		30.57547 AU	max. Earth dist.	-3190 Oct 03 j 23:32	16° Mp 00'12	
Larur dist.	517, 50p 15 J 00.15	_, UC1755	50.57517110	morning rise	-3190 Oct 09 j 19:17	16° Mp 14'16	20.00077110
conjunction	-3197 Sep 16 j 08:56	27° Ω 50'25	16°05'29	retrograde	-3189 Jan 15 j 21:26	18° Mp 39'33	
minimum elong	-3197 Sep 16 j 09:08	27° Ω 50'26		opposition	-3189 Apr 03 j 20:15	17° mp 16'30	14°38'01
	-3197 Nov 16 j 14:23	0° mp	10 00 00	min. Earth dist.	-3189 Apr 03 j 18:46		28.77808 AU
retrograde	-3197 Nov 10 j 14:23	0°Mp31'59		direct	-3189 Jun 22 j 18:04	17 mg 10 30 15° mg 51'43	20.77000 AU
	517, Dec 20 j 22.17	ς η ₍ , σ 1 σ)			510, Juli 22 j 10.04	בר ועטוי טו	

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3189 in astronomical counting style is the year 3190 BCE in historical counting style. -3189 Sep 29 j 22:24 18° m 16'31 max. Earth dist. -3183 Oct 21 i 13:32 3° **2**19'36 31.31869 AU evening set -3183 Oct 31 j 12:58 3°**£**42'43 morning rise -3189 Oct 06 j 17:04 18° mp 32'50 13°28'31 -3182 Feb 01 j 12:35 5°**£**50'31 retrograde conjunction -3189 Oct 06 j 17:28 -3182 Apr 21 j 14:27 18° m 32'52 13°28'33 4°**£**28'42 10°56'49 minimum elong opposition -3189 Oct 06 j 20:06 -3182 Apr 20 j 13:06 4°**೨**30'25 29.41694 AU max. Earth dist. 18° Mp 33'08 30.74862 AU min. Earth dist. -3182 Jul 10 j 11:53 -3189 Oct 13 j 12:15 morning rise 18° m/49'11 direct 3°₽06'06 retrograde -3188 Jan 18 j 15:56 21° m 11'32 evening set -3182 Oct 11 j 17:23 5°**£**12'33 14°10'10 opposition -3188 Apr 05 j 17:44 19° **m** 48'37 -3182 Oct 23 j 03:43 min. Earth dist. -3188 Apr 05 j 13:36 19° Mp 48'54 28.83896 AU conjunction 5°**£**38'52 9°58'37 direct -3188 Jun 24 j 14:13 18° Mp 24'06 minimum elong -3182 Oct 23 j 04:06 5°**£**38'54 9°58'36 evening set -3188 Sep 30 j 19:14 20° m/45'57 max. Earth dist. -3182 Oct 24 j 06:47 5°**-**41'28 31.45070 AU -3182 Nov 03 j 14:26 morning rise 6°**£**05'14 -3188 Oct 08 j 10:24 -3181 Feb 04 j 01:38 conjunction 21° mg 04'13 13° 01'53 retrograde 8°**£**10'58 minimum elong -3188 Oct 08 j 10:48 21°Mp04'16 13°01'54 min. Earth dist. -3181 Apr 23 j 04:04 6°**£**51'17 29.55043 AU max. Earth dist. -3188 Oct 08 j 17:14 21° Mp 04'54 30.81819 AU opposition -3181 Apr 24 j 07:40 6°**₽**49'26 10°21'09 morning rise -3188 Oct 16 j 01:56 21° m/22'31 direct -3181 Jul 13 j 04:27 5°**£**27'15 retrograde -3187 Jan 20 j 08:21 23° Mp 42'09 evening set -3181 Oct 13 j 18:40 7°**£**31'29 opposition -3187 Apr 08 j 14:46 22°M) 19'23 13°40'56 min. Earth dist. -3187 Apr 08 j 07:08 22°M) 19'55 28.90939 AU conjunction -3181 Oct 25 j 16:17 7°**£**58'41 9°25'02 direct -3187 Jun 27 j 12:30 20° m 55'09 minimum elong -3181 Oct 25 j 16:39 7°**≏**58'43 9°25'01 evening set -3187 Oct 02 j 17:13 23° m 14'09 max. Earth dist. -3181 Oct 26 j 22:03 8°**2**01'32 31.59279 AU morning rise -3181 Nov 06 j 14:21 8°**£**25'56 conjunction -3187 Oct 11 i 02:53 23° m 34'10 12°34'00 retrograde -3180 Feb 06 i 15:46 10°**£**29'42 minimum elong -3187 Oct 11 i 03:18 23° m 34'12 12°34'01 opposition -3180 Apr 25 i 23:48 9°**₽**08'28 9°44'48 max. Earth dist. -3187 Oct 11 i 12:09 23° m 35'05 30.89745 AU min. Earth dist. -3180 Apr 24 j 16:10 9°**2**10'34 29.69366 AU -3187 Oct 19 j 13:05 23° m 54'12 -3180 Jul 14 j 22:41 7°**£**46'42 morning rise direct -3186 Jan 23 j 00:42 26° m 11'15 -3180 Oct 14 j 20:08 9°**£**48'50 retrograde evening set -3186 Apr 11 j 11:17 24° mp 48'38 13°10'22 opposition -3186 Apr 11 j 00:18 24° m/49'23 28.98980 AU -3180 Oct 27 j 04:10 10°**♀**16'49 8°50'51 min. Earth dist. conjunction -3186 Jun 30 j 08:15 23° m 24'41 -3180 Oct 27 j 04:31 10°**♀**16'51 minimum elong 8°50'50 direct -3186 Oct 04 j 16:12 25° m/40'58 -3180 Oct 28 j 13:01 max. Earth dist. 10°**£**19'56 31.74397 AU evening set -3180 Nov 08 j 12:45 10°**£**44′50 morning rise -3186 Oct 13 j 18:55 26° m 02'32 12°04'55 -3179 Feb 08 j 04:57 12°**£**46'43 conjunction retrograde 11°**2**28'03 29.84590 AU -3186 Oct 13 j 19:20 26° m 02'34 12°04'56 -3179 Apr 27 j 05:44 minimum elong min. Earth dist. -3186 Oct 14 j 08:35 26° Mp 03'53 30.98684 AU -3179 Apr 28 j 15:33 11°**≏**25'48 max. Earth dist. opposition 9°07'54 -3186 Oct 22 j 21:55 26° My 24'07-3179 Jul 17 j 14:22 morning rise direct 10°**♀**04'29 -3185 Jan 25 j 15:10 28° Mp 38'41 -3179 Oct 16 j 21:43 retrograde evening set 12°**♀**04'35 opposition -3185 Apr 14 j 07:09 27° m 16'14 12°38'34 min. Earth dist. -3185 Apr 13 j 17:08 27° m 17'12 29.08040 AU conjunction -3179 Oct 29 j 15:20 12°**2**33'14 8°16'12 -3185 Jul 03 j 04:22 25° m 52'35 minimum elong -3179 Oct 29 j 15:40 12°**△**33'16 8°16'11 direct -3185 Oct 06 j 15:49 28° Mp 06'15 max. Earth dist. -3179 Oct 31 j 03:10 12°**2**36'37 31.90364 AU evening set -3179 Nov 11 j 09:23 13°**♀**01'57 morning rise -3185 Oct 16 j 10:02 28° m/29'12 11°34'45 -3178 Feb 10 j 15:31 15°**♀**02'02 conjunction retrograde -3185 Oct 16 j 10:27 28° m 29'14 11°34'46 -3178 Apr 29 j 17:28 13°**♀**43'53 30.00619 AU minimum elong min. Earth dist. -3185 Oct 17 j 02:08 28° Mp 30'47 31.08666 AU -3178 May 01 j 06:30 13°**≗**41'27 max. Earth dist. opposition 8°30'32 -3185 Oct 26 i 04:46 morning rise 28° m 52'11 direct -3178 Jul 20 i 06:54 12°**♀**20'34 -3185 Nov 26 j 12:41 0°Ω evening set -3178 Oct 18 j 23:39 14°**£**18'43 retrograde -3184 Jan 28 i 07:32 1°**2**04'24 -3178 Nov 01 i 01:51 -3184 Apr 05 i 00:40 30°R ₩ conjunction 14°**2**47'57 7°41'09 min. Earth dist. -3184 Apr 15 i 08:03 29° m 43'22 29.18174 AU minimum elong -3178 Nov 01 i 02:09 14°**£**47'58 7°41'07 -3184 Apr 16 j 02:15 29° m 42'08 12°05'38 max. Earth dist. -3178 Nov 02 i 15:39 14°**2**51'29 32.07077 AU opposition direct -3184 Jul 04 j 22:39 28° m 18'47 -3178 Nov 14 j 04:48 15°**£**17'15 morning rise -3184 Sep 24 j 10:20 0∘**⊽** -3177 Feb 13 j 02:23 17°**♀**15'36 retrograde -3184 Oct 07 j 15:56 evening set 0°**£**29'57 min. Earth dist. -3177 May 02 j 05:18 15°**♀**57'55 30.17401 AU opposition -3177 May 03 j 20:45 15°**♀**55'20 7°52'49 conjunction -3184 Oct 18 j 00:41 0° **2**54'08 11°03'35 direct -3177 Jul 22 j 20:39 14°**£**34'54 minimum elong -3184 Oct 18 j 01:05 0°**£**54'11 11°03'34 evening set -3177 Oct 21 j 01:34 16°**£**31'10 -3184 Oct 18 j 21:13 0°**£**56'09 31.19721 AU max. Earth dist. -3184 Oct 28 j 09:43 -3177 Nov 03 j 11:49 17°**⊆**00'54 7°05'49 morning rise 1°**♀**18′23 conjunction -3183 Jan 29 j 21:04 -3177 Nov 03 j 12:07 retrograde 3°**£**28′20 minimum elong 17°**♀**00'56 7°05'47 opposition -3183 Apr 18 j 20:41 2°**2**06'17 11°31'41 max. Earth dist. -3177 Nov 05 j 04:48 17°**£**04'43 32.24478 AU min. Earth dist. -3183 Apr 17 j 23:50 2°**♀**07'41 29.29388 AU morning rise -3177 Nov 16 j 22:35 17°**£**30'42 direct -3183 Jul 07 j 18:08 0°**£**43'18 retrograde -3176 Feb 15 j 10:54 19°**£**27'23

evening set

conjunction

minimum elong

-3183 Oct 09 j 16:37

-3183 Oct 20 j 14:32

-3183 Oct 20 j 14:56

2°**£**52'03

3°**₽**17'22

3°**≏**17'24

10°31'30

10°31'30

min. Earth dist.

opposition

evening set

direct

-3176 May 03 j 16:40

-3176 May 05 j 10:11

-3176 Jul 24 j 11:26

-3176 Oct 22 j 03:44

18°**♀**10'09 30.34832 AU

7°14'51

18°**≏**07'27

16°**♀**47'27

18°**-**41'55

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3176 in astronomical counting style is the year 3177 BCE in historical counting style. -3176 Nov 04 i 20:56 19°**£**12'03 6°30'16 retrograde -3169 Mar 01 j 12:27 3°M57'56 conjunction -3176 Nov 04 j 21:11 19°**£**12'05 6°30'13 min. Earth dist. -3169 May 19 j 00:15 2°M-43'49 31.74222 AU minimum elong max. Earth dist. -3176 Nov 06 j 15:08 19°**2**15'57 32.42485 AU opposition -3169 May 21 j 10:04 2°ML40'12 2°48'56 -3176 Nov 18 j 15:02 19°**-**42′16 direct -3169 Aug 09 j 13:38 1°M23'03 morning rise -3175 Feb 16 j 20:35 -3169 Nov 04 j 16:48 retrograde 21°**♀**37'22 evening set 3°M07'03 min. Earth dist. -3175 May 06 j 02:20 20°**£**20'37 30.52884 AU -3169 Nov 19 j 16:41 opposition -3175 May 07 j 22:48 20°**₽**17'45 6°36'44 conjunction 3°M38'06 2°21'33 -3169 Nov 19 j 16:47 direct -3175 Jul 26 j 23:33 18°**♀**58'09 minimum elong 3°**M**⋅38'07 2°21'30 evening set -3175 Oct 24 j 05:46 20°**♀**50'53 max. Earth dist. -3169 Nov 22 j 02:22 3°M43'07 33.85259 AU morning rise -3169 Dec 04 j 18:03 4°ML09'18 conjunction -3175 Nov 07 j 05:31 21°**₽**21'21 5°54'35 retrograde -3168 Mar 02 j 16:41 5°M55'12 -3175 Nov 07 j 05:46 minimum elong 21°**₽**21′23 5°54'33 min. Earth dist. -3168 May 20 j 05:19 4°M41'32 31.96630 AU max. Earth dist. -3175 Nov 09 j 02:57 21°**≏**25'31 32.61074 AU opposition -3168 May 22 j 17:19 4°M37'49 2°11'43 morning rise -3175 Nov 21 j 05:56 21°**£**51'54 direct -3168 Aug 10 j 21:09 3°M21'07 retrograde -3174 Feb 19 j 03:21 23°**£**45'29 evening set -3168 Nov 05 j 18:18 5°M03'55 min. Earth dist. -3174 May 08 j 12:55 22°**♀**29'07 30.71525 AU opposition -3174 May 10 j 10:46 22°**♀**26'10 5°58'33 conjunction -3168 Nov 20 j 20:15 5°**M**34'54 1°46'46 direct -3174 Jul 29 j 11:59 21°**≏**06'58 minimum elong -3168 Nov 20 j 20:19 5°M34'54 1°46'41 evening set -3174 Oct 26 j 07:46 22°**♀**58'02 max. Earth dist. -3168 Nov 23 j 08:47 5°ML40'07 34.07999 AU morning rise -3168 Dec 05 j 23:27 6°ML06'00 conjunction -3174 Nov 09 j 13:04 23°**≏**28'46 5°18'51 retrograde -3167 Mar 04 j 18:25 7°M50'53 minimum elong -3174 Nov 09 j 13:17 23°**₽**28'47 5°18'48 min. Earth dist. -3167 May 22 j 10:38 6°MJ37'39 32.19524 AU max. Earth dist. -3174 Nov 11 j 11:42 23°**△**33'00 32.80240 AU opposition -3167 May 24 j 23:50 6°M33'52 1°34'53 morning rise -3174 Nov 23 j 19:23 23°**♀**59'34 direct -3167 Aug 13 i 05:23 5°M17'37 retrograde -3173 Feb 21 j 12:00 25°**♀**51'42 evening set -3167 Nov 07 j 19:57 6°M59'17 -3173 May 10 j 20:39 24°**△**35'48 30.90775 AU min. Earth dist. -3173 May 12 j 21:47 24°**₽**32'40 5°20'21 -3167 Nov 22 j 23:09 7°ML30'08 1°12'19 conjunction opposition -3173 Jul 31 j 22:10 -3167 Nov 22 j 23:12 7°ML30'08 1°12'16 23°**£**13'52 minimum elong direct -3173 Oct 28 j 09:42 -3167 Nov 25 j 12:23 25°**♀**03'21 max. Earth dist. 7°M35'23 34.31174 AU evening set -3167 Dec 08 j 03:57 morning rise 8°ML01'06 -3173 Nov 11 j 20:05 -3166 Mar 06 j 22:11 conjunction 25°**2**34'16 4°43'08 retrograde 9°M-45'02 -3166 May 24 j 13:56 -3173 Nov 11 j 20:17 25°**£**34'17 4°43'05 min. Earth dist. 8°M32'17 32.42849 AU minimum elong max. Earth dist. -3173 Nov 13 j 21:44 25°**♀**38'43 32.99990 AU -3166 May 27 j 05:43 8°M28'22 0°58'28 opposition -3173 Nov 26 j 07:25 -3166 Aug 15 j 10:31 7°M12'33 morning rise 26°**£**05'16 direct -3172 Feb 23 j 18:25 -3166 Nov 09 j 21:23 retrograde 27°**£**56'00 evening set 8°M53'10 min. Earth dist. -3172 May 12 j 05:40 26°**2**40'28 31.10656 AU -3166 Nov 25 j 01:33 9°M23'50 0°38'16 opposition -3172 May 14 j 07:58 26°**₽**37'16 4°42'14 conjunction direct -3172 Aug 02 j 08:10 25°**♀**18'51 minimum elong -3166 Nov 25 j 01:34 9°M23'50 0°38'11 -3172 Oct 29 j 11:37 27°**2**06'51 max. Earth dist. -3166 Nov 27 j 17:17 9°M29'15 34.54701 AU evening set morning rise -3166 Dec 10 j 07:13 9°M54'39 conjunction -3172 Nov 13 j 02:18 27°**△**37'52 4°07'29 retrograde -3165 Mar 08 j 23:29 11°M37'40 -3172 Nov 13 j 02:28 27°**♀**37'53 4°07'25 min. Earth dist. -3165 May 26 j 18:54 10°M25'16 32.66499 AU minimum elong -3172 Nov 15 j 05:46 27°**△**42'28 33.20372 AU -3165 May 29 j 11:00 10°M21'22 0°22'30 max. Earth dist. opposition -3172 Nov 27 j 18:02 28°**♀**09'00 -3165 Aug 17 j 15:37 9°M05'58 morning rise direct -3171 Feb 25 j 01:51 29°**♀**58'25 -3165 Nov 11 j 22:58 10°M45'35 retrograde evening set min. Earth dist. -3171 May 14 j 11:46 28°**2**43'23 31.31191 AU -3165 Nov 27 i 03:29 opposition -3171 May 16 j 17:23 28°**₽**40'00 4°04'15 conjunction 11°M16'02 0°04'42 direct -3171 Aug 04 j 19:27 27°**£**22'00 minimum elong -3165 Nov 27 i 03:28 11°ML16'02 0°04'38 evening set -3171 Oct 31 j 13:22 29°**₽**08'34 behind sun begin -3165 Nov 26 j 21:14 11°M15'32 behind sun end -3165 Nov 27 j 09:42 11°ML16'32 -3171 Nov 15 i 07:40 29°**£**39'40 3°31'57 max. Earth dist. -3165 Nov 29 j 19:35 11°M21'26 34.78499 AU conjunction morning rise -3171 Nov 15 i 07:49 29°**£**39'41 3°31'55 -3165 Dec 12 j 09:34 11°ML46'37 minimum elong max. Earth dist. -3171 Nov 17 j 13:35 29°**£**44'26 33.41383 AU desc. node -3164 Jan 16 j 23:08 12°M48'44 -3171 Nov 24 j 22:16 0°M retrograde -3164 Mar 10 j 02:37 13°M28'46 morning rise -3171 Nov 30 j 03:14 0°M10'52 min. Earth dist. -3164 May 27 j 21:04 12°M16'50 32.90398 AU 12°M12'49 -0°12'57 -3170 Feb 27 j 09:00 1°ML59'03 opposition -3164 May 30 j 15:18 retrograde min. Earth dist. -3170 May 16 j 18:51 0°M44'25 31.52395 AU direct -3164 Aug 18 j 18:56 10°M57'48 -3170 May 19 j 02:14 0°ML40'57 3°26'27 -3164 Nov 13 j 00:28 12°M36'30 opposition evening set -3170 Jun 16 j 15:43 29°**₽**23'22 -3164 Nov 28 j 04:47 direct -3170 Aug 07 j 04:05 conjunction 13°M06'41 -0°28'35 -3170 Sep 25 j 09:16 0° M minimum elong -3164 Nov 28 j 04:46 13°M06'41 0°28'39 evening set -3170 Nov 02 j 15:04 1°M08'37 max. Earth dist. -3164 Nov 30 j 22:25 13°M12'10 35.02483 AU morning rise -3164 Dec 13 j 10:52 13°M37'01 conjunction -3170 Nov 17 j 12:36 1°M39'43 2°56'38 -3163 Feb 04 j 10:37 15°M minimum elong -3170 Nov 17 j 12:43 1°MJ39'44 2°56'34 retrograde -3163 Mar 12 j 04:29 15°M18'22 -3170 Nov 19 j 20:57 1°ML44'40 33.63035 AU -3163 Apr 17 j 23:35 max. Earth dist. 15°RM -3170 Dec 02 j 11:12 min. Earth dist. -3163 May 30 j 00:48 morning rise 2°M10'56 14°ML06'44 33.14490 AU

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3163 in astronomical counting style is the year 3164 BCE in historical counting style. -3163 Jun 01 j 19:19 14°M02'43 -0°47'53 conjunction -3157 Dec 10 j 21:28 25°M17'45 -4°06'04 opposition minimum elong direct -3163 Aug 20 j 21:57 -3157 Dec 10 j 21:20 25°ML17'44 4°06'08 12°M48'06 25°M23'33 36.75208 AU -3163 Nov 15 j 01:38 14°M25'52 -3157 Dec 13 j 22:57 evening set max. Earth dist. -3157 Dec 25 j 15:09 25°M45'31 morning rise 27°M22'21 -3163 Nov 30 j 05:30 -3156 Mar 23 j 19:22 conjunction 14°M55'46 -1°01'16 retrograde -3163 Nov 30 j 05:28 minimum elong 14°M55'46 1°01'20 min. Earth dist. -3156 Jun 11 j 01:33 26°M13'06 34.88507 AU -3163 Dec 02 j 08:32 15°M opposition -3156 Jun 14 j 03:52 26°M08'46 -4°35'40 max. Earth dist. -3163 Dec 03 j 00:17 15°M01'18 35.26627 AU direct -3156 Sep 02 j 10:47 24°M56'35 -3156 Nov 27 j 05:56 morning rise -3163 Dec 15 j 10:58 15°M25'49 evening set 26°M29'29 retrograde -3162 Mar 14 j 05:16 17°M06'22 min. Earth dist. -3162 Jun 01 j 02:28 15°M55'07 33.38726 AU conjunction -3156 Dec 11 j 18:23 26°M56'38 -4°34'48 -3156 Dec 11 j 18:14 opposition -3162 Jun 03 j 22:32 15°M51'02 -1°22'16 minimum elong 26°M56'37 4°34'53 -3156 Dec 14 j 21:01 -3162 Jul 12 j 20:58 15°RM max. Earth dist. 27°ML02'29 37.00732 AU direct -3162 Aug 23 j 03:27 14°MJ36'46 morning rise -3156 Dec 26 j 08:38 27°M23'56 -3162 Oct 02 j 00:49 15°M₀ retrograde -3155 Mar 25 j 17:15 29°M00'19 evening set -3162 Nov 17 j 02:52 16°M13'41 min. Earth dist. -3155 Jun 12 j 23:06 27°M51'28 35.14236 AU opposition -3155 Jun 16 j 02:42 27°M47'05 -5°05'36 conjunction -3162 Dec 02 j 05:35 16°M43'16 -1°33'27 direct -3155 Sep 04 j 09:57 26°M35'16 minimum elong -3162 Dec 02 j 05:32 16°M43'16 1°33'32 evening set -3155 Nov 29 j 05:58 28°M07'41 max. Earth dist. -3162 Dec 05 j 00:53 16°M48'48 35.50894 AU morning rise -3162 Dec 17 j 10:17 17°ML13'00 conjunction -3155 Dec 13 j 14:37 28°M34'22 -5°02'55 retrograde -3161 Mar 16 j 06:22 18°M52'48 minimum elong -3155 Dec 13 i 14:28 28°M34'21 5°03'00 min. Earth dist. -3161 Jun 03 i 03:55 17°M41'52 33.63132 AU max. Earth dist. -3155 Dec 16 i 17:37 28°M40'13 37.26380 AU opposition -3161 Jun 06 j 01:01 17°M37'44 -1°56'04 morning rise -3155 Dec 28 i 01:23 29°M01'12 direct -3161 Aug 25 j 06:20 16°M23'48 -3154 Feb 02 j 07:19 0°×7 -3161 Nov 19 j 03:43 17°M59'55 -3154 Mar 27 j 15:15 0°**х** 37′12 evening set retrograde -3154 May 22 j 02:19 30°RM. -3161 Dec 04 j 05:11 18°M29'09 -2°05'07 -3154 Jun 14 j 20:41 conjunction min. Earth dist. 29°M28'42 35.40088 AU -3161 Dec 04 j 05:07 -3154 Jun 18 j 01:10 18°M29'09 2°05'11 opposition 29°M24'17 -5°34'51 minimum elong -3161 Dec 07 j 02:23 -3154 Sep 06 j 07:29 max. Earth dist. 18°M34'48 35.75322 AU direct 28°M-12'51 -3161 Dec 19 j 08:19 -3154 Dec 01 j 05:54 morning rise 18°M58'32 29°M44'50 evening set -3160 Mar 17 j 03:40 retrograde -3154 Dec 09 j 12:19 20°M37'38 0°×7 -3160 Jun 04 j 05:09 19°M26'59 33.87715 AU min. Earth dist. -3154 Dec 15 j 10:45 -3160 Jun 07 j 02:49 0° ₹11'01 -5°30'25 opposition 19°M22'51 -2°29'16 conjunction -3160 Aug 26 j 10:21 -3154 Dec 15 j 10:35 direct 18°ML09'15 minimum elong 0° **₹**11'01 5°30'31 -3160 Nov 20 j 04:29 -3154 Dec 18 j 15:20 evening set 19°M44'36 max. Earth dist. 0°**х** 16'57 37.52098 AU -3154 Dec 29 j 17:24 morning rise 0°**х** 37′23 conjunction -3160 Dec 05 j 03:56 20°M13'27 -2°36'14 retrograde -3153 Mar 29 j 08:48 2°×13'00 minimum elong -3160 Dec 05 j 03:50 20°M13'27 2°36'19 min. Earth dist. -3153 Jun 16 j 18:33 1°**х** 04'48 35.65968 AU max. Earth dist. -3160 Dec 08 j 01:19 20°M19'04 35.99935 AU opposition -3153 Jun 19 j 22:52 1°**∡**100'25 -6°03'26 morning rise -3160 Dec 20 j 05:23 20° M42'28 -3153 Aug 11 j 04:13 30°RML retrograde -3159 Mar 19 j 01:39 22°M20'55 -3153 Sep 08 j 07:28 29°M49'21 direct -3159 Jun 06 j 04:17 21°M10'39 34.12536 AU -3153 Oct 05 j 19:08 0°**∡**7 min. Earth dist. -3159 Jun 09 j 04:00 21°ML06'25 -3°01'51 -3153 Dec 03 j 05:56 1°×720'56 opposition evening set -3159 Aug 28 j 11:58 19°**™**53'09 direct -3153 Dec 17 i 06:21 1°**∡**¹46'37 -5°57'17 evening set -3159 Nov 22 j 05:02 21°M27'48 conjunction minimum elong -3153 Dec 17 i 06:11 1°**х** 46'36 5°57'23 -3159 Dec 07 i 02:19 conjunction 21°M56'15 -3°06'46 max. Earth dist. -3153 Dec 20 i 10:16 1° ₹ 52'28 37.77803 AU minimum elong -3159 Dec 07 i 02:13 21°M 56'15 3°06'50 morning rise -3153 Dec 31 i 08:48 2°**х** 12′28 max. Earth dist. -3159 Dec 10 i 02:01 22°ML02'01 36.24784 AU retrograde -3152 Mar 30 i 03:54 3°**х** 47'46 -3159 Dec 22 j 01:28 22°M24'53 min. Earth dist. -3152 Jun 17 i 14:40 2° ₹ 39'56 35.91818 AU morning rise -3158 Mar 20 j 22:30 24°M02'44 -3152 Jun 20 j 20:12 2°\$\square\$35'30 -6°31'19 retrograde opposition -3158 Jun 08 j 04:40 22°M52'46 34.37616 AU direct 1°**х** 24'46 min. Earth dist. -3152 Sep 09 j 05:28 opposition -3158 Jun 11 j 04:37 22°M48'31 -3°33'47 evening set -3152 Dec 04 j 05:39 2°×755'59 direct -3158 Aug 30 j 13:09 21°M35'37 evening set -3158 Nov 24 j 05:27 23°ML09'36 conjunction -3152 Dec 18 j 01:32 3°**₹**'21'09 -6°23'33 minimum elong -3152 Dec 18 j 01:21 3°**₹**′21′08 6°23'39 -3158 Dec 09 j 00:08 -3152 Dec 21 j 06:46 3°**≯**27'04 38.03421 AU conjunction 23°M37'39 -3°36'43 max. Earth dist. -3158 Dec 09 j 00:01 -3152 Dec 31 j 23:19 3°**х** 46′28 minimum elong 23°M37'38 3°36'49 morning rise -3158 Dec 12 j 00:13 max. Earth dist. 23°M43'24 36.49888 AU retrograde -3151 Mar 31 j 22:08 5°×21'29 4°**✗**13'53 36.17561 AU morning rise -3158 Dec 23 j 20:44 24°M05'51 min. Earth dist. -3151 Jun 19 j 12:28 retrograde -3157 Mar 22 j 21:04 25°M43'10 opposition -3151 Jun 22 j 17:11 4°**х**¹09'31 -6°58'33 min. Earth dist. -3157 Jun 10 j 02:23 24°M33'37 34.62948 AU direct -3151 Sep 11 j 02:56 2°×759'07 opposition -3157 Jun 13 j 04:31 24°M29'16 -4°05'03 evening set -3151 Dec 06 j 05:23 4°×29'58 direct -3157 Sep 01 j 12:13 23°M16'43 -3157 Nov 26 j 05:49 24°M50'08 -3151 Dec 19 j 20:26 4°**∡**754'36 -6°49'11 evening set conjunction

-3151 Dec 19 j 20:15

minimum elong

4°**∡**754'35 6°49'16

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3151 in astronomical counting style is the year 3152 BCE in historical counting style. -3151 Dec 23 i 01:16 5°**х** 00'26 38.28921 AU conjunction -3144 Dec 29 i 20:22 15°**х** 17'26 -9°31'12 max. Earth dist. minimum elong -3150 Jan 02 j 13:17 5° **₹**19'23 -3144 Dec 29 j 20:09 15°**∡**17'25 9°31'18 morning rise -3150 Apr 02 j 17:39 6°**х** 54'07 -3143 Jan 02 j 04:04 15°**₹**'23'13 40.04993 AU retrograde max. Earth dist. -3143 Jan 10 j 19:22 -3150 Jun 21 j 07:38 15°**х** 38′08 min. Earth dist. 5° ₹ 46'50 36.43167 AU morning rise -3150 Jun 24 j 13:31 5°**∡**142'25 -7°25'07 -3143 Apr 12 j 16:16 17°**∡**11'32 opposition retrograde 4°×32'19 -3143 Jul 01 j 15:00 16°**✗**05'59 38.20510 AU direct -3150 Sep 12 j 22:51 min. Earth dist. -3150 Dec 08 j 04:57 -3143 Jul 04 j 22:44 evening set 6°**х** 02'51 opposition 16°**✗**'01'36 -10°12'07 -3143 Sep 23 j 10:21 direct 14° **₹** 53'25 -3143 Dec 19 j 21:27 conjunction -3150 Dec 21 j 14:48 6°**х** 26'56 -7°14'13 evening set 16°**х** 22′30 -3150 Dec 21 j 14:36 minimum elong 6°**∡**126'55 7°14'18 max. Earth dist. -3150 Dec 24 j 19:54 6°**✗**32'44 38.54262 AU conjunction -3143 Dec 31 j 12:01 16°**х** 42′28 -9°51′51 -3149 Jan 04 j 02:37 -3143 Dec 31 j 11:49 morning rise 6°**₰**751'10 minimum elong 16°**х** 42'27 9°51'57 -3149 Apr 04 j 14:04 -3142 Jan 03 j 19:37 retrograde 8°**∡**¹25'37 max. Earth dist. 16°**∡**′48′12 40.30015 AU -3142 Jan 12 j 04:13 min. Earth dist. -3149 Jun 23 j 04:08 7°**х** 18'32 36.68639 AU morning rise 17°**х** 02′32 opposition -3149 Jun 26 j 09:30 7°**∡**14'11 -7°51'00 retrograde -3142 Apr 14 j 10:49 18°**∡**35'53 direct -3149 Sep 14 j 17:15 6°**х** 04′21 min. Earth dist. -3142 Jul 03 j 08:02 17°**∡**30'35 38.45708 AU evening set -3149 Dec 10 j 04:17 7°**х¹**34'34 opposition -3142 Jul 06 j 15:35 17°**≯**26'14 -10°33'18 direct -3142 Sep 25 j 00:39 16°**≯**18'20 17°**∡**¹47'22 conjunction -3149 Dec 23 j 08:50 7°**∡**158'06 -7°38'37 evening set -3142 Dec 21 j 19:56 minimum elong -3149 Dec 23 j 08:39 7°**х** 58′05 7°38′43 max. Earth dist. -3149 Dec 26 j 14:35 8°**尽**03'55 38.79479 AU conjunction -3141 Jan 02 j 03:32 18°**₹**06'42 -10°11'54 morning rise -3148 Jan 05 i 15:02 8°**х** 21'46 minimum elong -3141 Jan 02 i 03:19 18°**∡**06'41 10°12'00 retrograde -3148 Apr 05 i 08:13 9° 🖈 55'57 max. Earth dist. -3141 Jan 05 i 11:58 18°**✗**12'27 40.54929 AU min. Earth dist. -3148 Jun 23 i 23:02 8° ₹ 49'07 36.93995 AU morning rise -3141 Jan 13 j 12:23 18°**≯**26′09 opposition -3148 Jun 27 j 04:42 8°**х**⁴44'46 -8°16'13 retrograde -3141 Apr 16 j 01:30 19°**х** 59′27 -3148 Sep 15 j 12:52 7°**х** 35′12 -3141 Jul 05 j 00:56 18°**≯**54'24 38.70742 AU direct min. Earth dist. -3148 Dec 11 j 03:34 9°×05'09 -3141 Jul 08 j 07:59 18°**₹**50'05 -10°53'51 evening set opposition -3141 Sep 26 j 18:03 17°**х** 42′29 direct -3148 Dec 24 j 02:16 9°×28'06 -8°02'23 -3141 Dec 23 j 18:37 19°**∡**11′28 conjunction evening set -3148 Dec 24 j 02:03 9°**х** 28′05 8°02′30 minimum elong -3148 Dec 27 j 07:38 -3140 Jan 03 j 18:39 19°**∡**30'11 -10°31'21 max. Earth dist. 9°**∡**33'51 39.04605 AU conjunction -3147 Jan 06 j 02:52 -3140 Jan 03 j 18:26 9°**х** 51′11 minimum elong 19°**∡**′30′10 10°31′28 morning rise -3147 Apr 07 j 01:52 -3140 Jan 07 j 01:57 11°**х** 25'09 max. Earth dist. 19°**₰**35'49 40.79644 AU retrograde -3140 Jan 14 j 20:06 10°**∡**18'34 37.19315 AU 19°**∡**¹48'59 -3147 Jun 25 j 17:14 min. Earth dist. morning rise 10°**√**14'12 -8°40'45 -3147 Jun 28 j 23:41 -3140 Apr 16 j 16:17 21°×22'17 opposition retrograde 9°**х¹**04'53 20°**∡**17'30 38.95559 AU -3147 Sep 17 j 07:41 -3140 Jul 05 j 16:33 direct min. Earth dist. -3147 Dec 13 j 02:25 10°**х** 34'36 -3140 Jul 09 j 00:01 20°**∡**13'12 -11°13'47 evening set opposition direct -3140 Sep 27 j 10:26 19°**х** 05′52 conjunction -3147 Dec 25 j 19:20 10°**∡** 56′58 -8°25′32 evening set -3140 Dec 24 j 17:07 20°**х** 34′51 minimum elong -3147 Dec 25 j 19:08 10°**∡** 56′57 8°25′38 max. Earth dist. -3147 Dec 29 j 02:18 11°**✗**02'48 39.29705 AU conjunction -3139 Jan 04 j 09:38 20°**₹**52'55 -10°50'14 -3146 Jan 07 j 13:51 11°**х** 19'28 -3139 Jan 04 j 09:25 20°**₹** 52'54 10°50'20 morning rise minimum elong -3146 Apr 08 j 15:27 12°**₹**53'14 max. Earth dist. -3139 Jan 07 j 17:39 20°**✗**58'35 41.04103 AU retrograde -3146 Jun 27 j 12:05 11°**✗¹**46'52 37.44617 AU -3139 Jan 15 j 03:21 21°**渘**11′04 min. Earth dist. morning rise -3146 Jun 30 j 18:09 11°**∡**′42'31 -9°04'36 -3139 Apr 18 j 05:11 22°**∡**¹44'24 opposition retrograde 10°**х** 33′29 -3139 Jul 07 i 09:47 21°**尽**39'47 39.20087 AU direct -3146 Sep 19 i 05:28 min. Earth dist. evening set -3146 Dec 15 i 01:27 12°**х** 02'59 opposition -3139 Jul 10 j 15:53 21° x 35'34 -11°33'07 direct -3139 Sep 29 i 04:21 20°**х** 28'30 -3146 Dec 27 j 12:04 12°**x**⁷24'45 -8°48'03 conjunction evening set -3139 Dec 26 j 15:40 21°×757'29 -3146 Dec 27 i 11:51 12°**₹**24'45 8°48'09 minimum elong max. Earth dist. -3146 Dec 30 j 18:26 12°**尽**30'31 39.54807 AU conjunction -3138 Jan 06 i 00:16 22°**₹**14'54 -11°08'34 -3145 Jan 09 j 00:23 12°**х** 46'40 minimum elong -3138 Jan 06 i 00:03 22° 🖈 14'53 11°08'40 morning rise max. Earth dist. -3145 Apr 10 j 07:29 14°**∡**°20′16 -3138 Jan 09 j 07:10 22°**尽**20'27 41.28257 AU retrograde -3145 Jun 29 j 04:32 13°**∡**14'13 37.69931 AU -3138 Jan 16 i 09:59 22°**х** 32'24 min. Earth dist. morning rise -3145 Jul 02 j 11:58 -3138 Apr 19 j 19:59 24°**₹**05'45 opposition 13°**₹**09'49 -9°27'47 retrograde 12°**₹**'01'03 23°**尽**01'24 39.44280 AU direct -3145 Sep 21 j 00:03 min. Earth dist. -3138 Jul 09 j 00:45 evening set -3145 Dec 17 j 00:13 13°**х** 30′23 opposition -3138 Jul 12 j 07:19 22°**₹**57'10 -11°51'51 direct -3138 Sep 30 j 19:52 21°×750'21 -3145 Dec 29 j 04:27 13°**₹**51'33 -9°09'56 -3138 Dec 28 j 14:13 23°×19'21 conjunction evening set -3145 Dec 29 j 04:14 13°**₹**51'32 9°10'02 minimum elong -3144 Jan 01 j 11:55 13°**✗**57′21 39.79904 AU -3137 Jan 07 j 14:40 23°**∡** 36′06 -11°26′20 max. Earth dist. conjunction morning rise -3137 Jan 07 j 14:28 -3144 Jan 10 j 10:19 14°**⋌**12'51 minimum elong 23°**х** 36′06 11°26'25 retrograde -3144 Apr 10 j 23:34 15°**∡** 46′21 max. Earth dist. -3137 Jan 10 j 21:12 23°**х** 41'36 41.52060 AU min. Earth dist. -3144 Jun 29 j 22:53 14°**∡**′40′30 37.95241 AU morning rise -3137 Jan 17 j 16:19 23° 🖍 52'57 opposition -3144 Jul 03 j 05:36 14°**∡** 36′09 -9°50′17 retrograde -3137 Apr 21 j 11:24 25°**₹**26'21 -3144 Sep 21 j 17:44 13°**∡**27'41 -3137 Jul 10 j 17:07 24°**✗**22'07 39.68139 AU direct min. Earth dist. -3144 Dec 17 j 22:47 14°**∡**756′52 -3137 Jul 13 j 22:22 24°**∡**17′59 -12°10′00 evening set opposition

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3137 in astronomical counting style is the year 3138 BCE in historical counting style. direct -3137 Oct 02 i 09:55 23°**∡**11′23 conjunction -3130 Jan 16 j 10:32 2°**ප්**42'55 -13°15'26 minimum elong -3137 Dec 30 j 12:39 24°**∡**¹40′25 -3130 Jan 16 j 10:21 2°**ප්**42'54 13°15'33 evening set -3130 Jan 19 j 15:27 2°る48'06 43.12011 AU max. Earth dist. -3136 Jan 09 j 04:48 24°**x**¹56'30 -11°43'34 -3130 Jan 23 j 18:16 2°る54'44 conjunction morning rise -3136 Jan 09 j 04:36 24° 🗷 56'30 11°43'40 -3130 Apr 30 j 07:45 4°る29'09 minimum elong retrograde 25°**∡**01'58 41.75548 AU -3136 Jan 12 j 11:26 -3130 Jul 19 j 18:44 3°る26'16 41.28803 AU max. Earth dist. min. Earth dist. -3136 Jan 18 j 21:49 -3130 Jul 22 j 22:23 3°る22'18 -14°00'53 morning rise 25°**х** 12′40 opposition 26°**х** 46′07 -3136 Apr 22 j 01:50 -3130 Oct 11 j 09:55 2°る17'14 retrograde direct -3136 Jul 11 j 07:57 25°**∡**′42'05 39.91681 AU -3129 Jan 11 j 02:24 3°る47'25 min. Earth dist. evening set opposition -3136 Jul 14 j 13:00 25°**∡**'37'58 -12°27'35 direct -3136 Oct 03 j 00:26 24°×731'35 conjunction -3129 Jan 17 j 22:50 3°**る**58'26 -13°28'53 -3136 Dec 31 j 10:58 26°**х**¹00'41 -3129 Jan 17 j 22:41 3°る58'25 13°29'00 evening set minimum elong -3129 Jan 21 j 04:24 4°る03'38 43.34096 AU max. Earth dist. -3129 Jan 24 j 19:37 conjunction -3135 Jan 09 j 18:17 26° ₹ 16'05 -12°00'15 morning rise 4°る09'28 minimum elong -3135 Jan 09 j 18:05 26°**∡**16′04 12°00′20 retrograde -3129 May 01 j 19:09 5°る44'09 max. Earth dist. -3135 Jan 12 j 23:50 26°**✗**21'27 41.98749 AU min. Earth dist. -3129 Jul 21 j 08:09 4°る41'26 41.50931 AU morning rise -3135 Jan 19 j 02:37 26°**∡**31'33 opposition -3129 Jul 24 j 10:46 4°る37'32 -14°14'30 retrograde -3135 Apr 23 j 16:54 28°**х** 05′04 direct -3129 Oct 12 j 22:57 3°る32'42 min. Earth dist. -3135 Jul 12 j 22:16 27°**₹**01'14 40.14985 AU evening set -3128 Jan 13 j 01:52 5°る03'12 opposition -3135 Jul 16 j 03:26 26°**₹**57'08 -12°44'34 direct -3135 Oct 04 j 13:43 25° × 50'57 conjunction -3128 Jan 19 j 10:47 5°る13'24 -13°41'51 evening set -3134 Jan 02 i 09:16 27°×20'09 minimum elong -3128 Jan 19 j 10:37 5°る13'24 13°41'57 max. Earth dist. -3128 Jan 22 j 14:42 5°る18'28 43.55888 AU conjunction -3134 Jan 11 i 07:45 27° 🗷 34'52 -12°16'22 morning rise -3128 Jan 25 i 20:03 5°る23'37 -3134 Jan 11 i 07:33 27° 🗷 34'51 12°16'29 retrograde -3128 May 02 j 07:35 6°る58'38 minimum elong -3134 Jan 14 j 14:12 27°**∡**′40′15 42.21735 AU -3128 Jul 21 j 20:16 5°る56'08 41.72740 AU max. Earth dist. min. Earth dist. -3134 Jan 20 j 07:01 27°×749'37 -3128 Jul 24 j 23:03 5° ප් 52'14 -14°27'36 morning rise opposition -3134 Apr 25 j 03:40 29°×723'15 -3128 Oct 13 j 10:51 4°₹47'37 retrograde direct -3134 Jul 14 j 13:19 28°**✗**19'33 40.38084 AU -3127 Jan 14 j 01:36 6°る18'29 min. Earth dist. evening set -3134 Jul 17 j 17:24 28°**∡**15'31 -13°00'59 opposition -3134 Oct 06 j 05:40 27°**х** 09′33 -3127 Jan 19 j 22:30 6°る27'50 -13°54'19 direct conjunction -3133 Jan 04 j 07:47 28°**х** 38′53 -3127 Jan 19 j 22:21 6°る27'49 13°54'26 minimum elong evening set -3127 Jan 23 j 02:33 6°る32'53 43.77317 AU max. Earth dist. -3133 Jan 12 j 20:52 28°**₹**'52'52 -12°31'57 -3127 Jan 25 j 19:40 6°る37'12 conjunction morning rise -3133 Jan 12 j 20:41 -3127 May 03 j 16:30 8°る12'35 minimum elong 28° x 52'51 12°32'03 retrograde -3133 Jan 16 j 02:17 28°**₹**'58'10 42.44550 AU -3127 Jul 23 j 10:20 7°る10'11 41.94154 AU max. Earth dist. min. Earth dist. -3133 Jan 21 j 10:44 29°**х¹**06'55 -3127 Jul 26 j 11:13 7°**る**06'23 -14°40'12 morning rise opposition -3133 Feb 26 j 01:07 0°ರ direct -3127 Oct 15 j 01:30 6°る01'58 retrograde -3133 Apr 26 j 14:50 0°る40'42 evening set -3126 Jan 16 j 02:19 7°る33'15 -3133 Jun 27 j 13:57 30°₹**⋌**7 min. Earth dist. -3133 Jul 16 j 02:06 29°**✗**37'15 40.61021 AU conjunction -3126 Jan 21 j 10:14 7°る41'42 -14°06'20 -3133 Jul 19 j 07:01 29°**∡**133'10 -13°16'49 -3126 Jan 21 j 10:05 7°る41'41 14°06'25 opposition minimum elong -3133 Oct 07 j 21:10 28°**х** 27′25 max. Earth dist. -3126 Jan 24 j 13:06 7°る46'39 43.98344 AU direct -3132 Jan 06 j 06:07 29° 🖍 56'54 -3126 Jan 26 j 18:16 7°る50'10 evening set morning rise -3132 Jan 08 j 03:50 0°る -3126 May 05 j 03:32 9°る25'58 retrograde -3126 Jul 24 j 22:06 8°る23'44 42.15131 AU min. Earth dist. -3132 Jan 14 j 09:40 0°る10'11 -12°46'59 -3126 Jul 27 j 22:53 8°る19'57 -14°52'20 conjunction opposition -3132 Jan 14 i 09:28 minimum elong 0°る10'10 12°47'06 direct -3126 Oct 16 j 14:19 7°る15'42 0°る15'29 42.67196 AU max. Earth dist. -3132 Jan 17 j 15:32 evening set -3125 Jan 18 j 03:56 8°る47'29 morning rise -3132 Jan 22 i 13:55 0°る23'31 conjunction retrograde -3132 Apr 27 j 03:50 1°る57'28 -3125 Jan 22 j 21:41 8°**궁**54'58 -14°17'54 min. Earth dist. -3132 Jul 16 j 16:37 0°る54'09 40.83798 AU minimum elong -3125 Jan 22 j 21:33 8° ප් 54'57 14°18'00 max. Earth dist. -3132 Jul 19 j 20:25 0°る50'09 -13°32'04 -3125 Jan 25 j 23:22 8°る59'49 44.18919 AU opposition -3125 Jan 27 j 15:35 9°る02'27 -3132 Sep 02 j 18:13 30°R **✓** morning rise 29°**х**⁴44'38 direct -3132 Oct 08 j 10:51 retrograde -3125 May 06 j 17:21 10°る38'44 -3125 Jul 26 j 11:09 -3132 Nov 12 j 06:07 0°정 min. Earth dist. 9°る36'34 42.35664 AU -3131 Jan 07 j 04:44 1°る14'19 opposition -3125 Jul 29 j 10:32 9°る32'53 -15°03'59 evening set direct -3125 Oct 17 j 23:52 8°る28'48 -3131 Jan 14 j 22:18 1°る26'51 -13°01'29 -3124 Jan 20 j 06:54 10°る01'09 conjunction evening set -3131 Jan 14 j 22:08 1°る26'50 13°01'35 minimum elong 1°る32'07 42.89700 AU -3124 Jan 24 j 08:55 10°る07'34 -14°29'01 max. Earth dist. -3131 Jan 18 j 04:01 conjunction morning rise -3131 Jan 22 j 16:24 1°**る**39'26 minimum elong -3124 Jan 24 j 08:46 10°る07'33 14°29'07 retrograde -3131 Apr 28 j 17:00 3°る13'36 max. Earth dist. -3124 Jan 27 j 10:30 10°る12'23 44.39067 AU min. Earth dist. -3131 Jul 18 j 05:13 2°る10'32 41.06400 AU morning rise -3124 Jan 28 j 10:54 10°る13'59 opposition -3131 Jul 21 j 09:27 2°る06'31 -13°46'45 retrograde -3124 May 07 j 03:22 11°る50'50 -3131 Oct 09 j 23:06 1°る01'13 -3124 Jul 26 j 23:12 10°る48'46 42.55770 AU direct min. Earth dist. -3130 Jan 09 j 03:21 2°る31'08 -3124 Jul 29 j 21:42 10°る45'09 -15°15'11 evening set opposition

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3124 in astronomical counting style is the year 3125 BCE in historical counting style. direct -3124 Oct 18 j 12:08 9°**ප්**41'12 retrograde -3116 May 16 j 08:44 21°る07'18 -3123 Jan 21 j 12:13 11°る14'18 min. Earth dist. -3116 Aug 05 j 12:54 20°중06'21 44.06661 AU evening set opposition -3116 Aug 08 j 06:57 20°る03'01 -16°27'50 -3123 Jan 24 j 19:46 11°る19'29 -14°39'41 -3116 Oct 28 j 00:19 19°る00'25 direct conjunction -3123 Jan 24 j 19:39 11°**る**19'29 14°39'48 minimum elong -3123 Jan 28 j 03:17 11°る24'40 -3115 Feb 03 j 03:59 20°る35'34 -15°48'55 morning rise conjunction -3123 Jan 27 j 19:40 -3115 Feb 03 j 03:53 max. Earth dist. 11°**る**24'10 44.58834 AU minimum elong 20°る35'33 15°49'01 -3123 May 08 j 14:20 retrograde 13°**る**02'15 max. Earth dist. -3115 Feb 05 j 23:46 20°る39'50 46.07485 AU -3123 Jul 28 j 10:23 12°る00'20 42.75539 AU min. Earth dist. retrograde -3115 May 17 j 18:54 22°る15'06 opposition -3123 Jul 31 j 08:43 11°る56'43 -15°25'54 min. Earth dist. -3115 Aug 07 j 00:16 21°る14'14 44.24139 AU direct -3123 Oct 19 j 22:41 10°る52'55 opposition -3115 Aug 09 j 16:20 21°る11'00 -16°34'56 -3122 Jan 23 j 22:10 12°る27'05 -3115 Oct 29 j 10:02 20°る08'34 evening set direct conjunction -3122 Jan 26 j 06:27 12°る30'45 -14°49'54 conjunction -3114 Feb 04 j 13:30 21°る43'22 -15°55'42 minimum elong -3122 Jan 26 j 06:20 12°る30'44 14°50'00 minimum elong -3114 Feb 04 j 13:26 21°る43'22 15°55'48 morning rise -3122 Jan 28 j 14:36 12°る34'23 max. Earth dist. -3114 Feb 07 j 08:33 21°る47'35 46.24622 AU max. Earth dist. -3122 Jan 29 j 06:51 12°**る**35'26 44.78284 AU retrograde -3114 May 19 j 04:21 23°る22'32 retrograde -3122 May 09 j 22:28 14°る13'02 min. Earth dist. -3114 Aug 08 j 09:58 22°る21'49 44.41137 AU min. Earth dist. -3122 Jul 29 j 22:39 13°る11'11 42.95006 AU opposition -3114 Aug 11 j 01:26 22°る18'37 -16°41'39 opposition -3122 Aug 01 j 19:30 13°る07'39 -15°36'09 direct -3114 Oct 30 j 19:10 21°る16'20 direct -3122 Oct 21 j 11:47 12°る03'59 conjunction -3113 Feb 05 i 22:47 22°る50'48 -16°02'08 conjunction -3121 Jan 27 j 17:00 13°る41'22 -14°59'40 minimum elong -3113 Feb 05 i 22:43 22°る50'47 16°02'13 minimum elong -3121 Jan 27 i 16:53 13°る41'22 14°59'46 max. Earth dist. -3113 Feb 08 i 15:42 22°る54'51 46.41268 AU evening set -3121 Jan 27 j 08:22 13°る40'49 retrograde -3113 May 20 j 16:09 24°る29'36 morning rise -3121 Jan 28 j 01:25 13°**る**41'55 -3113 Aug 09 j 20:03 23°る28'56 44.57653 AU min. Earth dist. -3121 Jan 30 j 16:18 13°る45'59 44.97475 AU opposition -3113 Aug 12 j 10:19 23°る25'50 -16°48'00 max Farth dist -3121 May 11 j 07:32 15°**る**23'12 -3113 Nov 01 j 01:38 22°る23'40 retrograde direct -3121 Jul 31 j 08:27 14°る21'32 43.14227 AU min. Earth dist. -3112 Feb 07 j 07:57 -3121 Aug 03 j 05:45 14°る17'59 -15°45'55 23°る57'47 -16°08'11 conjunction opposition -3121 Oct 22 j 23:16 -3112 Feb 07 j 07:55 direct 13°**る**14'29 minimum elong 23°る57'47 16°08'17 -3112 Feb 10 j 00:54 max. Earth dist. 24°る01'50 46.57442 AU 14°る51'26 -15°08'58 -3112 May 21 j 00:01 -3120 Jan 29 j 03:13 conjunction 25°**る**36'12 retrograde -3120 Jan 29 j 03:06 14°る51'26 15°09'03 -3112 Aug 10 j 06:28 24°る35'35 44.73695 AU minimum elong min. Earth dist. -3120 Feb 01 j 02:01 14°る55'59 45.16431 AU -3112 Aug 12 j 19:04 24°る32'34 -16°53'58 max. Earth dist. opposition -3120 May 11 j 18:39 16°**る**32'51 -3112 Nov 01 j 11:06 23°る30'31 retrograde direct -3120 Jul 31 j 20:00 15°る31'16 43.33229 AU min. Earth dist. -3111 Feb 07 j 16:41 opposition -3120 Aug 03 j 16:06 15°る27'48 -15°55'13 conjunction 25°**ප්**04'18 -16°13'53 direct -3120 Oct 23 j 09:11 14°る24'28 minimum elong -3111 Feb 07 j 16:38 25°る04'17 16°13'58 max. Earth dist. -3111 Feb 10 j 07:48 25°る08'13 46.73186 AU conjunction -3119 Jan 29 j 13:13 16°る01'01 -15°17'49 retrograde -3111 May 22 j 07:32 26°る42'20 -3119 Jan 29 j 13:06 16°**ට**01'01 15°17'55 min. Earth dist. -3111 Aug 11 j 14:56 25°る41'50 44.89335 AU minimum elong max. Earth dist. -3119 Feb 01 j 12:18 16°る05'34 45.35184 AU opposition -3111 Aug 14 j 03:34 25°る38'49 -16°59'34 -3119 May 13 j 05:42 17°る42'01 direct -3111 Nov 02 j 20:03 24°る36'53 retrograde -3119 Aug 02 j 06:17 16°る40'36 43.52000 AU min. Earth dist. -3119 Aug 05 i 02:07 16°る37'09 -16°04'02 -3110 Feb 09 i 01:26 opposition conjunction 26°る10'18 -16°19'12 -3119 Oct 24 j 18:05 -3110 Feb 09 i 01:25 direct 15°る34'00 minimum elong 26°る10'18 16°19'18 max. Earth dist. -3110 Feb 11 i 16:05 26°る14'11 46.88546 AU -3118 Jan 30 j 23:04 conjunction 17°る10'11 -15°26'13 retrograde -3110 May 23 j 13:22 27°る47'59 minimum elong -3118 Jan 30 i 22:58 17°る10'10 15°26'18 min. Earth dist. -3110 Aug 13 i 01:09 26°る47'30 45.04623 AU max. Earth dist. -3118 Feb 02 i 20:40 17°る14'37 45.53707 AU opposition -3110 Aug 15 j 11:51 26°₹44'35 -17°04'46 -3118 May 14 j 17:54 18°**ප**50'47 direct -3110 Nov 04 j 07:29 25°**る**42'45 retrograde -3118 Aug 03 j 16:19 17°る49'32 43.70538 AU min. Earth dist. opposition -3118 Aug 06 j 11:55 17°る46'07 -16°12'24 conjunction -3109 Feb 10 j 10:06 27°る15'50 -16°24'09 direct -3118 Oct 26 j 01:29 16°**ප්**43'08 minimum elong -3109 Feb 10 j 10:04 27°る15'50 16°24'14 max. Earth dist. -3109 Feb 13 j 00:15 27°る19'40 47.03597 AU conjunction -3117 Feb 01 j 08:55 18°る18'58 -15°34'12 retrograde -3109 May 24 j 21:28 28°る53'10 -3117 Feb 01 j 08:49 18°る18'57 15°34'18 min. Earth dist. -3109 Aug 14 j 09:15 27°る52'48 45.19603 AU minimum elong -3117 Feb 04 j 06:53 18°る23'24 45.71970 AU -3109 Aug 16 j 19:54 27°る49'53 -17°09'35 max. Earth dist. opposition -3117 May 16 j 01:07 19°**る**59'12 direct -3109 Nov 05 j 16:43 26°**る**48'09 retrograde 18°る58'04 43.88773 AU min. Earth dist. -3117 Aug 05 j 03:36 opposition -3117 Aug 07 j 21:34 18°る54'44 -16°20'20 conjunction -3108 Feb 11 j 18:21 28°る20'55 -16°28'43 direct -3117 Oct 27 j 12:58 17°**る**51'57 minimum elong -3108 Feb 11 j 18:19 28°る20'55 16°28'49 max. Earth dist. -3108 Feb 14 j 07:03 28°る24'39 47.18358 AU conjunction -3116 Feb 02 j 18:28 19°る27'25 -15°41'45 retrograde -3108 May 25 j 08:31 29°る57'55 minimum elong -3116 Feb 02 j 18:24 19°る27'25 15°41'51 -3108 Aug 14 j 18:07 28°る57'38 45.34318 AU min. Earth dist.

max. Earth dist.

-3116 Feb 05 j 14:58

19°る31'46 45.89921 AU

opposition

-3108 Aug 17 j 03:56

28°る54'46 -17°14'00

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 22 Attention, astronomical year style is used: The year -3108 in astronomical counting style is the year 3109 BCE in historical counting style.

Attention, astronom	nical year style is used: Th	ie year -3108 i	in astronomical co	unting style is the year	r 3109 BCE in historical c	ounting style.	
direct	-3108 Nov 05 j 21:54	27° る 53'09		direct	-3100 Nov 14 j 11:46	6° ≈ 22'32	
conjunction	-3107 Feb 12 j 02:42	29° る 25'37	-16°32'55	conjunction	-3099 Feb 20 j 17:40	7° ≈ 52'59	-16°54'12
minimum elong	-3107 Feb 12 j 02:41	29° る 25'37	16°32'59	minimum elong	-3099 Feb 20 j 17:43	7° ≈ 53'00	16°54'18
max. Earth dist.	-3107 Feb 14 j 15:43		47.32867 AU	max. Earth dist.	-3099 Feb 22 i 21:19	7°≈56'05	48.35700 AU
	-3107 Mar 08 j 00:20	0° ≈	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	retrograde	-3099 Jun 04 j 01:10	9° ≈ 27'25	
retrograde	-3107 May 26 j 16:01	1°≈02'17		min. Earth dist.	-3099 Aug 24 j 21:28		46.50202 AU
min. Earth dist.	-3107 Aug 16 j 02:58		45.48761 AU	opposition	-3099 Aug 26 j 21:33	8°≈25'28	
mm. Earm dist.	• •	0 ∞02 04 30°Rる	43.46701 AU	direct		7°≈24'53	-17 37 34
***	-3107 Aug 17 j 20:53		17010102	direct	-3099 Nov 15 j 20:50	/ ≈ 24 33	
opposition	-3107 Aug 18 j 11:43	29°る59'16	-1/01802		2000 F. J. 22:00 50	00 55106	1.605.510.0
direct	-3107 Nov 07 j 06:17	28° る 57'47		conjunction	-3098 Feb 22 j 00:59		-16°55'29
	-3106 Jan 23 j 15:38	0° ≈		minimum elong	-3098 Feb 22 j 01:00		16°55'34
				max. Earth dist.	-3098 Feb 24 j 02:51	8° ≈ 58'05	48.46463 AU
conjunction	-3106 Feb 13 j 10:49	0° ≈ 29'58	-16°36'44	retrograde	-3098 Jun 05 j 10:47	10° ≈ 29'16	
minimum elong	-3106 Feb 13 j 10:48	0° ≈ 29'58	16°36'50	min. Earth dist.	-3098 Aug 26 j 05:43	9° ≈ 29'40	46.60799 AU
max. Earth dist.	-3106 Feb 15 j 22:10	0° ≈ 33'35	47.47119 AU	opposition	-3098 Aug 28 j 04:15	9° ≈ 27'24	-17°38'58
retrograde	-3106 May 27 j 23:15	2°≈06'18		direct	-3098 Nov 17 j 01:51	8° ≈ 26'53	
min. Earth dist.	-3106 Aug 17 j 10:41	1°≈06'14	45.62930 AU		,		
opposition	-3106 Aug 19 j 19:24	1°≈03'26		conjunction	-3097 Feb 23 j 08:20	9°2256'53	-16°56'27
direct	-3106 Nov 08 j 13:59	0°≈02'05	1/ 21 41	minimum elong	-3097 Feb 23 j 08:23	9°≈56'53	
direct	-3100 NOV 00 J 13.39	0 ≈02 03		· ·	-		48.56854 AU
	2105 5 1 11:10 55	10 2400	1.60.4011.0	max. Earth dist.	-3097 Feb 25 j 10:11		48.30834 AU
conjunction	-3105 Feb 14 j 18:55		-16°40'12	retrograde	-3097 Jun 06 j 17:30	11° ≈ 30'47	
minimum elong	-3105 Feb 14 j 18:55		16°40'16	min. Earth dist.	-3097 Aug 27 j 13:03		46.71028 AU
max. Earth dist.	-3105 Feb 17 j 05:58	1° ≈ 37'36	47.61065 AU	opposition	-3097 Aug 29 j 10:34	10° ≈ 29'02	-17°39'43
retrograde	-3105 May 29 j 05:26	3° ≈ 10′03		direct	-3097 Nov 18 j 08:35	9° ≈ 28'35	
min. Earth dist.	-3105 Aug 18 j 20:07	2° ≈ 10'03	45.76772 AU				
opposition	-3105 Aug 21 j 02:54	2° ≈ 07'21	-17°24'59	conjunction	-3096 Feb 24 j 15:22	10° ≈ 58'22	-16°57'06
direct	-3105 Nov 09 j 23:09	1°≈06'08		minimum elong	-3096 Feb 24 j 15:25	10°≈58'22	16°57'10
				max. Earth dist.	-3096 Feb 26 j 15:18		48.66922 AU
conjunction	-3104 Feb 16 j 02:57	2°227'48	-16°43'18	retrograde	-3096 Jun 07 j 01:00	12° ≈ 32'01	.0.00722110
•			16°43'24	min. Earth dist.	•		46.80958 AU
minimum elong	-3104 Feb 16 j 02:56				-3096 Aug 27 j 19:39		
max. Earth dist.	-3104 Feb 18 j 13:05		47.74680 AU	opposition	-3096 Aug 29 j 16:56	11°≈30′22	-1/~40.0/
retrograde	-3104 May 29 j 12:26	4°≈13'34		direct	-3096 Nov 18 j 13:26	10° ≈ 30′00	
min. Earth dist.	-3104 Aug 19 j 03:43	3° ≈ 13'42	45.90234 AU				
opposition	-3104 Aug 21 j 10:16	3° ≈ 11'01	-17°27'55	conjunction	-3095 Feb 24 j 22:16	11° ≈ 59'36	-16°57'25
direct	-3104 Nov 10 j 07:45	2° ≈ 09'56		minimum elong	-3095 Feb 24 j 22:20	11° ≈ 59'36	16°57'30
				max. Earth dist.	-3095 Feb 26 j 22:06	12° ≈ 02'25	48.76690 AU
conjunction	-3103 Feb 16 j 10:41	3° ≈ 41'21	-16°46'06	retrograde	-3095 Jun 08 j 05:30	13° ≈ 33'00	
minimum elong	-3103 Feb 16 j 10:43	3° ≈ 41'21	16°46'10	min. Earth dist.	-3095 Aug 29 j 03:45	12° ≈ 33'34	46.90585 AU
max. Earth dist.	-3103 Feb 18 j 19:02		47.87879 AU	opposition	-3095 Aug 30 j 23:15	12° ≈ 31'27	
retrograde	-3103 May 30 j 22:35	5°≈16'52		direct	-3095 Nov 19 j 21:35	11° ≈ 31'11	
min. Earth dist.	-3103 Aug 20 j 12:47		46.03259 AU	4.1001	50,0110, 1, j 21.50	11 100111	
opposition	-3103 Aug 20 j 17:41		-17°30'32	conjunction	-3094 Feb 26 j 05:16	13° ≈ 00'35	16057126
**			-17 30 32	•	-		
direct	-3103 Nov 11 j 13:32	3° ≈ 13'30		minimum elong	-3094 Feb 26 j 05:20	13°≈00'35	
				max. Earth dist.	-3094 Feb 28 j 04:02		48.86179 AU
conjunction	-3102 Feb 17 j 18:43		-16°48'34	retrograde	-3094 Jun 09 j 10:03	14° ≈ 33'47	
minimum elong	-3102 Feb 17 j 18:43		16°48'39	min. Earth dist.	-3094 Aug 30 j 09:38		46.99911 AU
max. Earth dist.	-3102 Feb 20 j 02:47	4° ≈ 48'04	48.00608 AU	opposition	-3094 Sep 01 j 05:12	13° ≈ 32′21	-17°39'58
retrograde	-3102 Jun 01 j 06:54	6° ≈ 19'56		direct	-3094 Nov 21 j 05:39	12° ≈ 32'10	
min. Earth dist.	-3102 Aug 21 j 21:31	5° ≈ 20'10	46.15766 AU				
opposition	-3102 Aug 24 j 00:47	5° ≈ 17'40	-17°32'50	conjunction	-3093 Feb 27 j 12:07	14° ≈ 01'24	-16°57'07
direct	-3102 Nov 12 j 20:00	4° ≈ 16'49		minimum elong	-3093 Feb 27 j 12:11	14° ≈ 01'24	16°57'12
				max. Earth dist.	-3093 Mar 01 j 09:20	14°≈04'04	48.95349 AU
conjunction	-3101 Feb 19 j 02:32	5°≈47'46	-16°50'45		-3093 Apr 13 j 07:50	15° ≈	
minimum elong	-3101 Feb 19 j 02:35		16°50'49	retrograde	-3093 Jun 10 j 17:53	15° ≈ 34'24	
max. Earth dist.	-3101 Feb 21 j 08:07		48.12819 AU	retrograde	-3093 Aug 09 j 09:43	15°R≈	
		3 ≈31 00 7°≈22'44	70.12017 AU	min Forth dist			47 09011 ATT
retrograde	-3101 Jun 02 j 15:35		46 277 47 133	min. Earth dist.	-3093 Aug 31 j 17:29		47.08911 AU
min. Earth dist.	-3101 Aug 23 j 05:11		46.27747 AU	opposition	-3093 Sep 02 j 11:19	14° ≈ 33'05	-1/~39'24
opposition	-3101 Aug 25 j 07:52		-17°34'50	direct	-3093 Nov 22 j 11:44	13° ≈ 33'00	
direct	-3101 Nov 14 j 01:54	5° ≈ 19'50			-3092 Feb 27 j 07:48	15° ≈	
conjunction	-3100 Feb 20 j 10:06	6° ≈ 50'33	-16°52'37	conjunction	-3092 Feb 28 j 18:53	15° ≈ 02'04	-16°56'31
minimum elong	-3100 Feb 20 j 10:07	6° ≈ 50'33	16°52'42	minimum elong	-3092 Feb 28 j 18:58	15° ≈ 02'04	16°56'35
max. Earth dist.	-3100 Feb 22 j 14:53	6° ≈ 53'43	48.24496 AU	max. Earth dist.	-3092 Mar 01 j 16:06	15° ≈ 04'43	49.04177 AU
retrograde	-3100 Jun 02 j 19:42	8° ≈ 25'14		retrograde	-3092 Jun 11 j 02:03	16° ≈ 34'53	
min. Earth dist.	-3100 Aug 23 j 14:29		46.39206 AU	min. Earth dist.	-3092 Sep 01 j 00:26		47.17522 AU
opposition	-3100 Aug 25 j 14:54	7°≈23'12		opposition	-3092 Sep 02 j 17:15	15° ≈ 33'40	
opposition.	5100.146 25 J 17.57	, . 🔾 . 🗆 . 1 🗠	1, 5051	оррозноп	5072 50p 02 j 17.15	15 . 5 . 5 . 5 . 70	1, 3033

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 23 Attention, astronomical year style is used: The year -3092 in astronomical counting style is the year 3093 BCE in historical counting style.

Attention, astronom	nical year style is used: Th	e year -3092 in ast	stronomical cou	nting style is the year	3093 BCE in historical c	ounting style.	
	-3092 Oct 03 j 12:21	15°R ≈		conjunction	-3083 Mar 09 j 05:25	23° ≈ 58'30	-16°38'58
direct	-3092 Nov 22 j 16:35	14° ≈ 33'41		minimum elong	-3083 Mar 09 j 05:33	23° ≈ 58'31	16°39'01
	-3091 Jan 10 j 22:15	15° ≈		max. Earth dist.	-3083 Mar 10 j 14:19	24° ≈ 00′24	49.63106 AU
				retrograde	-3083 Jun 20 j 05:28	25° ≈ 29'36	
conjunction	-3091 Mar 01 j 01:38	16°≈02'35 -16	5°55'38	opposition	-3083 Sep 11 j 18:42	24° ≈ 29′00	-17°18'30
minimum elong	-3091 Mar 01 j 01:43	16°≈02'36 16	5°55'43	min. Earth dist.	-3083 Sep 10 j 12:49	24° ≈ 30′26	47.74235 AU
max. Earth dist.	-3091 Mar 02 j 20:30	16°≈05'06 49.	.12600 AU	direct	-3083 Dec 01 j 23:04	23° ≈ 29'26	
retrograde	-3091 Jun 12 j 11:39	17°≈35'12			·		
min. Earth dist.	-3091 Sep 02 j 07:06	16°≈36'02 47.	.25703 AU	conjunction	-3082 Mar 10 j 11:39	24° ≈ 56'59	-16°35'38
opposition	-3091 Sep 03 j 23:04	16°≈34'07 -17	7°37'24	minimum elong	-3082 Mar 10 j 11:47	24° ≈ 56'59	
direct	-3091 Nov 23 j 19:30	15° ≈ 34'12		max. Earth dist.	-3082 Mar 11 j 20:33		49.67808 AU
				retrograde	-3082 Jun 21 j 11:53	26° ≈ 27'56	
conjunction	-3090 Mar 02 j 08:31	17°≈02'57 -16	5°54'28	opposition	-3082 Sep 12 j 23:45	25°≈27'26	-17°14'50
minimum elong	-3090 Mar 02 j 08:37		5°54'32	min. Earth dist.	-3082 Sep 11 j 18:30		47.78722 AU
max. Earth dist.	-3090 Mar 04 j 02:38	17°≈05'25 49.		direct	-3082 Dec 03 j 04:14	24°≈27'55	17.70722710
retrograde	-3090 Jun 13 j 15:58	18°≈35'23	.203 10 110	uncet	3002 Dec 03 j 0 1.1 1	21702733	
min. Earth dist.	-3090 Sep 03 j 15:18	17°≈36'11 47.	33370 ATT	conjunction	-3081 Mar 11 j 17:39	25°≈55'23	-16°32'01
opposition	-3090 Sep 05 j 04:58	17°≈34'23 -17'		minimum elong	-3081 Mar 11 j 17:48	25°≈55'24	
direct	-3090 Nov 25 j 02:55	17 ≈3423 -17 16°≈34'32	33 39	max. Earth dist.	-3081 Mar 11 j 17:48		49.72212 AU
direct	-3090 NOV 23 J 02.33	10 ≈34 32		retrograde	-3081 Mai 13 j 00.24 -3081 Jun 22 j 21:00	23 ≈3710 27°≈26'13	49.72212 AU
agniumation	2000 Mar 02 : 15:10	1000002100 160	(952102	C			47.82904 AU
conjunction	-3089 Mar 03 j 15:19 -3089 Mar 03 j 15:24	18°≈03'08 -16		min. Earth dist.	-3081 Sep 13 j 00:07 -3081 Sep 14 j 04:43	26°≈25'49	
minimum elong	J		5°53'07	opposition			-1/-1034
max. Earth dist.	-3089 Mar 05 j 07:46	18°≈05'30 49.5	.27980 AU	direct	-3081 Dec 04 j 05:48	25° ≈ 26′22	
retrograde	-3089 Jun 14 j 19:00	19°≈35'20	40504 411		2000 34 11 22 44	260 - 52147	1.6020100
min. Earth dist.	-3089 Sep 04 j 21:24	18°≈36'12 47.		conjunction	-3080 Mar 11 j 23:44	26°≈53'47	
opposition	-3089 Sep 06 j 10:33	18°≈34'25 -17'	°34'19	minimum elong	-3080 Mar 11 j 23:52	26°≈53'47	
direct	-3089 Nov 26 j 11:48	17° ≈ 34'38		max. Earth dist.	-3080 Mar 13 j 06:09		49.76284 AU
				retrograde	-3080 Jun 23 j 02:17	28° ≈ 24'30	
conjunction	-3088 Mar 03 j 21:54	19° ≈ 03'03 -16		min. Earth dist.	-3080 Sep 13 j 07:06		47.86720 AU
minimum elong	-3088 Mar 03 j 22:01	19°≈03'03 16		opposition	-3080 Sep 14 j 09:43	27° ≈ 24'11	-17°06'41
max. Earth dist.	-3088 Mar 05 j 12:20	19° ≈ 05'18 49.	.34880 AU	direct	-3080 Dec 04 j 10:46	26° ≈ 24'49	
retrograde	-3088 Jun 15 j 01:32	20°≈35′04					
min. Earth dist.	-3088 Sep 05 j 05:08	19° ≈ 35'53 47.	.47126 AU	conjunction	-3079 Mar 13 j 05:44	27° ≈ 52′10	-16°23'59
opposition	-3088 Sep 06 j 16:16	19° ≈ 34'12 -17'	7°32'22	minimum elong	-3079 Mar 13 j 05:54	27° ≈ 52′10	16°24'02
direct	-3088 Nov 26 j 18:16	18° ≈ 34'27		max. Earth dist.	-3079 Mar 14 j 10:45	27° ≈ 53'50	49.79976 AU
				retrograde	-3079 Jun 24 j 05:10	29° ≈ 22'48	
conjunction	-3087 Mar 05 j 04:24	20°≈02'41 -16	5°49'26	opposition	-3079 Sep 15 j 14:35	28° ≈ 22'34	-17°02'13
minimum elong	-3087 Mar 05 j 04:30	20°≈02'42 16	6°49'30	min. Earth dist.	-3079 Sep 14 j 12:22	28° ≈ 23'49	47.90108 AU
max. Earth dist.	-3087 Mar 06 j 18:26	20°≈04'54 49.	.41297 AU	direct	-3079 Dec 05 j 18:25	27° ≈ 23'16	
retrograde	-3087 Jun 16 j 07:15	21° ≈ 34'30					
min. Earth dist.	-3087 Sep 06 j 11:40	20°≈35'19 47.	.53267 AU	conjunction	-3078 Mar 14 j 11:53	28° ≈ 50'33	-16°19'35
opposition	-3087 Sep 07 j 21:45	20° ≈ 33'41 -17'	7°30'10	minimum elong	-3078 Mar 14 j 12:01	28° ≈ 50'34	16°19'39
direct	-3087 Nov 28 j 00:36	19° ≈ 33'57		max. Earth dist.	-3078 Mar 15 j 14:49	28° ≈ 52′06	49.83193 AU
					-3078 May 10 j 21:37	0°) €	
conjunction	-3086 Mar 06 j 10:49	21°≈02'02 -16	5°47'14	retrograde	-3078 Jun 25 j 10:34	0°) €21'06	
minimum elong	-3086 Mar 06 j 10:56	21°≈02'02 16	6°47'19		-3078 Aug 10 j 12:34	30°R ≈	
max. Earth dist.	-3086 Mar 07 j 22:38	21°≈04'06 49.	.47272 AU	opposition	-3078 Sep 16 j 19:29	29° ≈ 20'57	-16°57'29
retrograde	-3086 Jun 17 j 15:21	22°≈33'38		min. Earth dist.	-3078 Sep 15 j 19:33	29° ≈ 22'05	47.93002 AU
min. Earth dist.	-3086 Sep 07 j 17:47	21°≈34'27 47.	.59007 AU	direct	-3078 Dec 07 j 00:42	28° ≈ 21'42	
opposition	-3086 Sep 09 i 03:01	21°≈32'52 -17'	7°27'41		,		
direct	-3086 Nov 29 j 03:57	20°≈33'10		conjunction	-3077 Mar 15 j 18:08	29° ≈ 48'55	-16°14'58
				minimum elong	-3077 Mar 15 j 18:18	29° ≈ 48'56	
conjunction	-3085 Mar 07 j 17:12	22°≈01'05 -16	6°44'46	max. Earth dist.	-3077 Mar 16 j 20:23		49.85901 AU
minimum elong	-3085 Mar 07 j 17:19		5°44'49	man Bartin dist.	-3077 Mar 23 j 19:43	0° ₩	19.00901110
max. Earth dist.	-3085 Mar 09 j 04:38	22°≈03'08 49.		retrograde	-3077 Jun 26 j 16:17	1° ∺ 19'22	
retrograde	-3085 Jun 18 j 20:05	22 ≈03 08 49 23°≈32'30	.22002 AU	min. Earth dist.	-3077 Sep 17 j 01:29		47.95352 AU
min. Earth dist.	-3085 Sep 09 j 00:54	23 ≈32 30 22°≈33'17 47.	64383 ATT	opposition	-3077 Sep 17 j 01:29	0° ∺ 19'17	
opposition	-3085 Sep 10 j 00:34	22 ≈33 17 47.5 22°≈31'47 -17'		оррознин	-3077 Oct 05 j 04:08	0 X 1917 30°R≈	10 32 32
direct	-3085 Nov 30 j 10:15	22 ≈3147 -17 21°≈32'07	27 JJ	direct	-3077 Dec 08 j 06:06	30 k≈ 29°≈20'03	
direct	-5005 NOV 50 J 10.15	∠1 ~ 3∠U/		uncci	-	29° ≈ 20'03	
aaniumatian	2004 Mar 07 : 22:10	2200050154 10	SO 4 2 1 0 1		-3076 Feb 08 j 18:04	υπ	
conjunction	-3084 Mar 07 j 23:18	22°≈59'54 -16'		aaminm -t:	2076 M 15 : 22 50	00W 47H2	16010106
minimum elong	-3084 Mar 07 j 23:26	22°≈59'54 16'		conjunction	-3076 Mar 15 j 23:59	0° ¥ 47'12	
max. Earth dist.	-3084 Mar 09 j 09:37	23°≈01'53 49	.38133 AU	minimum elong	-3076 Mar 16 j 00:08	0° ¥ 47'13	
retrograde	-3084 Jun 18 j 23:44	24°≈31'08	CO440 ATT	max. Earth dist.	-3076 Mar 16 j 23:40		49.88074 AU
min. Earth dist.	-3084 Sep 09 j 05:57	23°≈31'59 47.		retrograde	-3076 Jun 27 j 00:39	2° ★ 17'32	47.07102
opposition	-3084 Sep 10 j 13:31	23°≈30'28 -17'	21.21	min. Earth dist.	-3076 Sep 17 j 07:37		47.97182 AU
direct	-3084 Nov 30 j 16:59	22° ≈ 30′50		opposition	-3076 Sep 18 j 05:14	1° ¥ 17'30	-16~47/21

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 24 Attention, astronomical year style is used: The year -3076 in astronomical counting style is the year 3077 BCE in historical counting style.

diecet 9-876 Nec 93/98.8 0**H12*** or 19.00-10.00 minimum clong mode 3007 Mar 17) (6004 19.41622 - 16.9050 mode 4007 Mar 17) (6004 19.41622 - 16.9050 clongulation -3007 Mar 17) (6004 19.41622 - 16.9050 clongulation -3007 Mar 17) (6015 19.41622 - 16.9050 clongulation -3007 San 18 (3055) 29.41633 19.41621 -3007 San 28 (3055) 39.41634 4007 Mar 18 (3004) 29.41621 99.71634 4007 Mar 18 (3004) 29.41621 99.71634 4007 Mar 18 (3104) 29.41621 19.9173 19.9174 4007 Mar 18 (3112) 29.41621 - 15.95941 4007 Mar 18 (3112) 29.4161 - 15.95941 40007 Mar 18 (3112)	Attention, astronom	ical year style is used: The	year -3076 in astro	onomical coun	ting style is the year	3077 BCE in historical co	ounting style.	
conjunction - 0.975 Mart 17 j. 66.91 1.494.522 1.690.094 postpoation - 0.075 kg 2 j. 21.235 9.978.555 1.594.91 max Earth dist - 0.075 Mart 18 j. 65.05 1.994.91 48.98733 M. 1.007 kg 2 j. 21.05 9.974.552 4.794.44 M. opposition - 0.075 Sap 18 j. 196.75 2.981.91 2.981.92 2.981.92 1.007.00 9.075.00 1.007.00	direct	-3076 Dec 08 j 08:39	0°) 18'17		minimum elong	-3067 Mar 25 j 04:49	9°) €26'03	15°15'12
					max. Earth dist.	-3067 Mar 25 j 18:21	9°) 26'49	49.89644 AU
max Earth dist -0175 Max 18 jo.902 1244 Keff May 18 generating and composition of -0175 keg 19 jo.955 249 jo.351 487 jo.351	conjunction	-3075 Mar 17 j 06:04	1°) 45′22 -16°0	05'01	retrograde	-3067 Jul 05 j 20:30	10° ¥ 55'38	
retrograde opposition of 0.075 Sep 19.075 29.1933 1-64195	minimum elong	-3075 Mar 17 j 06:15	1°) 45′22 16°0)5'04	opposition	-3067 Sep 26 j 22:15	9° ¥ 55'53	-15°49'01
opposition 3075 Sps 19 (1) 99.77 2**/14523 1-0**145* conjunction -3066 Mar 26 (1) 633 10**2233 1-15*074* direct 3075 Sps 16 (2) 60 (9) (13 c) 1**P(1621 10 (1) 6	max. Earth dist.	-3075 Mar 18 j 05:02	1°) 46'40 49.89	9733 AU	min. Earth dist.	-3067 Sep 26 j 11:02	9° ¥ 56′25	47.96144 AU
min Earth dist 3975 Sep 9 js 1424 2974 (299 479854 AU conjunction 3006 Mar 26 j 1033 1972 (279 47985 AU conjunction 3006 Mar 26 j 1033 1974 (279 47985 AU 1970 (279 4798 AU 3006 Mar 26 j 1034 1970 (279 4798 AU 4970 (279 4798 AU 3006 Mar 26 j 1034 1970 (279 4798 AU 4970 (279 4798 AU 3006 Mar 26 j 1034 1970 (279 4798 AU 4970 (279 4798 AU 3006 Mar 26 j 1034 1970 (279 4798 AU 1970 (279 4798 AU 3006 Mar 26 j 1034 1970 (279 4798 AU 1970 (279 4798 AU 3006 Mar 26 j 1034 1970 (279 4798 AU 1970 (279 4798 AU 3006 Mar 27 j 1031 1970 (279 4798 AU 1970 (279 4798 AU 3006 Mar 27 j 1031 1970 (279 4798 AU 1970 (279 4798 AU 3006 Mar 27 j 1031 1970 (279 4798 AU 1970 (279 4798 AU 3006 Mar 27 j 1031 1970 (279 4798 AU 1970 (279 4798 AU 3006 Mar 27 j 1031 1970 (279 4798 AU 1970 (279 4798 AU 3006 Mar 27 j 1031 1970 (279 4798 AU	retrograde	-3075 Jun 28 j 05:54	3°) 15′34		direct	-3067 Dec 17 j 08:06	8°) 56'44	
Separation 1975 1976 1	opposition	-3075 Sep 19 j 09:57	2°) 15′33 -16°4	11'55				
	min. Earth dist.	-3075 Sep 18 j 14:24	2° 升 16′29 47.98	8514 AU	conjunction	-3066 Mar 26 j 10:33	10° ¥ 23'31	-15°07'47
conjunction 3-074 Mar Is 1/1204 2**/44*22* 1-5**-904 certograde -3066 Mar Is 1/1204 15**-15**-15**-15**-15** max. Earth dist. -3074 Mar 19/19-23 2***-14**-14**-14**-14**-14**-14**-14**-	direct	-3075 Dec 09 j 13:36	1°) 16′21		minimum elong	-3066 Mar 26 j 10:45	10° ¥ 23′32	15°07'49
minimam clong minimam clon					max. Earth dist.	-3066 Mar 26 j 21:38	10°) 24′09	49.87965 AU
max. Earth dist. -3074 Mar 19 j 0923 2**M3784 4909014 AU min. Earth dist. -3065 Sep 2 j 17-02 10**M5518 47 94091 AU opposition -3074 Sep 20 j 14-34 3**M1277 -16*3014 circle -3066 Sep 2 j 17-02 10**M5518 47 94091 AU opposition -3074 Sep 19 j 1916 3**M1277 -16*3014 conjunction -3065 Mar 20 j 16-11 11**M2103 -18**0017 conjunction -3073 Mar 19 j 17-53 3**M4110 15**54006 recogand -3065 Mar 20 j 10*-12 11**M2103 49 8738 AU conjunction -3073 Mar 19 j 18-04 3**M4110 15**9400 opposition -3065 Sep 2 j 10*-12 11**M2103 49 8738 AU recogande -3073 Mar 19 j 18-04 3**M110 16**9018 opposition -3065 Sep 2 j 10*-12 11**M504 -17**M504 11**M504 -18**M516 49**M574 11**M504 -18**M516 49**M574 11**M504 -18**M516 49**M574 11**M504 -18**M516 49**M574 11**M504 -18**M516 11**M504 -18**M516 11**M504 -18**M516 11**M504	conjunction	-3074 Mar 18 j 12:04	2° ¥ 43′21 -15°5	59'41	retrograde	-3066 Jul 07 j 04:31	11° ¥ 53′06	
croropade opposition or 3074 Sep 19 1943 a "PH 1925" of 1934 a ph 1945 a ph 1945 a ph 1945 a ph 1945 a "PH 1922 at 7.99412 AU or 1945 and 194	minimum elong	-3074 Mar 18 j 12:13	2°) 43′22 15°5	59'44	opposition	-3066 Sep 28 j 02:49	10° ¥ 53′23	-15°41'15
opposition in. Earth dist. -3074 Sep 19 j.1945 3°H 1277 - 16°3614 opposition of minimum clong -3065 Mar 27 j.16-31 1°H 2703 - 15°9012 description of minimum clong -3065 Mar 27 j.16-31 1°H 2703 - 15°9012 1°H 2703 -	max. Earth dist.	-3074 Mar 19 j 09:23	2°) 44'34 49.90	0941 AU	min. Earth dist.	-3066 Sep 27 j 17:02	10° ¥ 53'51	47.94091 AU
min. Earth dist. -9074 Sep 19 j 19 j 16 3°94 (172 j 162 st) 2°74 (174 st) -9074 (174 st) 19 j 17 j 17 j 19 j 19 j 19 j 19 j 19 j	retrograde	-3074 Jun 29 j 09:36	4°) 13′26		direct	-3066 Dec 18 j 10:40	9°) 54'14	
direct -9.074 Pec 10.j 19.55 29.1414 max Earth dist -3.065 Mar 27.j 16.41 19.2179 19.2178 48.8748 AU conjunction -3.073 Mar 19.j 17.53 39.44110 -15.5400 max Earth dist -3.065 Mar 28.j 12.54 19.2173 48.8748 AU retrograde -3.073 Mar 19.j 18.04 39.44111 15.5400 minimum clong -3.073 Mar 19.j 18.04 59.44118 49.91727 AU minimum clong -3.073 Mar 19.j 19.12 47.1170 47.9177 AU minimum clong -3.073 Mar 19.j 19.12 47.1170 47.9177 AU minimum clong -3.073 Mar 21.j 19.12 47.1170 47.9177 AU minimum clong -3.073 Mar 21.j 19.12 47.1170 47.9177 AU minimum clong -3.073 Mar 21.j 19.12 47.1170 47.9177 AU minimum clong -3.073 Mar 21.j 19.12 47.9187 AU minimum clong -3.072 Mar 19.j 23.66 47.9380 15.94818 minimum clong -3.064 Mar 27.j 22.38 12.9183 14.9226 AU max Earth dist -3.072 Mar 21.j 19.12 47.9487 AU minimum clong -3.072 Mar 21.j 19.12 57.9487 AU minimum clong -3.072 Mar 21.j 19.12 57.9487 AU minimum clong -3.072 Mar 21.j 19.52 57.9487 AU minimum clon	opposition	-3074 Sep 20 j 14:34	3° ¥ 13′27 -16°3	36'14				
conjunction 3073 Mar 19 j 17.53 3*H4110 - 15**5406 retograde 3065 Mar 28 j 07.36 11*21**17 49 28**578 AU minimum clong 3073 Mar 19 j 18.53 3*H4110 - 15**5409 opposition 3065 Sep 29 j 07:21 11*24*505 4 15**3116 max Earth dist 3073 Mar 20 j 1335 3*H4218 - 49*1727 AU minimum clong 3073 Mar 20 j 13317 4*H110 - 16**0108 croce of special control of spec	min. Earth dist.	-3074 Sep 19 j 19:16	3°) 14′22 47.99	9412 AU	conjunction	-3065 Mar 27 j 16:31	11° ∺ 21′03	-15°00'12
conjunction 3073 Mar 19 j 17.53 3*H4110 - 15**5406 retograde 3065 Mar 28 j 07.36 11*21**17 49 28**578 AU minimum clong 3073 Mar 19 j 18.53 3*H4110 - 15**5409 opposition 3065 Sep 29 j 07:21 11*24*505 4 15**3116 max Earth dist 3073 Mar 20 j 1335 3*H4218 - 49*1727 AU minimum clong 3073 Mar 20 j 13317 4*H110 - 16**0108 croce of special control of spec	direct		2°) 14'14		-		11° ∺ 21′04	15°00'14
		·			max. Earth dist.		11° ¥ 21'37	49.85748 AU
minimum elong max mart dist. max	conjunction	-3073 Mar 19 i 17:53	3°) 41′10 -15°5			3		
max. Earth dist 3073 Mar 20 j 13:35 3°H218 4 991727 AU min. Earth dist -3065 Sep 28 j 23:34 11°H51145 16°H51145 479.477 AU cretorgande -3073 Jan 30 j 13:17 5°H1179 direct -3065 Mar 25 j 23:16 12°H5144 min. Earth dist -3073 Sep 21 j 19:53 4°H1170 - 16°3018 conjunction -3073 Nar 19 j 23:46 4°H3170 - 479929 AU minimum closs -3064 Mar 27 j 22:26 12°H1893 - 14°5224 conjunction -3072 Mar 19 j 23:46 4°H3849 - 15°4816 morning rise -3064 Mar 27 j 22:38 12°H1893 - 14°5226 conjunction -3072 Mar 19 j 23:46 4°H3849 - 15°4816 morning rise -3064 Mar 27 j 22:38 12°H1893 - 14°5226 conjunction -3072 Mar 19 j 23:46 4°H3849 - 15°4816 morning rise -3064 Mar 30 j 01:04 12°H4824 - 15°2203 opposition -3072 Sep 21 j 23:43 5°H0842 opposition -3064 Sep 29 j 10:43 12°H4824 - 15°226 opposition -3072 Sep 21 j 23:43 5°H0842 opposition -3063 Mar 29 j 04:13 12°H4840 direct -3071 Mar 21 j 05:25 5°H3621 - 15°4210 conjunction <t< td=""><td>•</td><td>-</td><td></td><td></td><td>-</td><td></td><td>11°¥50'54</td><td>-15°33'16</td></t<>	•	-			-		11° ¥ 50'54	-15°33'16
Performance 3.073 Jam 3 0 j 13.17 5°H.11'09 concinuent 3.073 Sep 2 j 19.12 4°H.11'10 1.6°3 0718 concinuent 3.073 Sep 2 j 19.12 4°H.11'10 1.6°3 0718 concinuent 3.073 Sep 2 j 19.12 2°H.11'10 1.6°3 0718 concinuent 3.073 Sep 2 j 19.12 2°H.11'10 1.6°3 0718 concinuent 3.073 Sep 2 j 19.12 2°H.11'10 1.6°3 0718 concinuent 3.072 Mar 19 j 23.46 4°H.3849 1.5°48116 max. Earth dist. 3.064 Mar 2 j 10.218 1.3°H.15'03 48.2996 AU minimum clong 3.072 Mar 19 j 23.46 4°H.3850 1.5°48116 max. Earth dist. 3.064 Mar 2 j 10.01 1.2°H.12'12 1.3°H.15'03 1.3°H.15'03 1.4°522.4 1.3°H.15'03 1.3°H.15'03 1.4°522.4 1.3°H.15'03 1.3°H.15'03	· ·	-						
opposition in. Earth dist. 3073 Sep 21 j 1912 4"H1170 16'30'18 evening set -3064 Mar 25 j 20:16 2"H158 1-4'020 4"H2200 4799929 MT direct -3073 Dec 12 j 02:22 3"H157 5 conjunction -3064 Mar 27 j 22:32 12"H1835 14"5224 conjunction -3072 Mar 19 j 23:56 4"H3849 1-5'48'16 max. Earth dist. -3064 Mar 27 j 02:23 12"H1835 14"5220 max. Earth dist. -3072 Mar 19 j 23:56 4"H3859 15'48'18 morning rise -3064 Mar 20 j 01:04 12"H2727 retorgrade -3072 Jan 30 j 17:28 6"H0842 opposition -3064 Sep 29 j 11:47 12"H4844 4788326 AU retorgrade -3072 Jan 30 j 17:28 6"H0842 opposition -3064 Sep 29 j 10:49 12"H4844 4788326 AU direct -3072 Sep 21 j 23:48 5"H0843 1-6'2405 min. Earth dist. -3064 Sep 29 j 10:49 12"H4844 4788326 AU direct -3073 Mar 21 j 05:25 5"H3622 1-5'4210 conjunction -3063 Mar 2 j 00:413 13"H1604 1-4"4"423 minimum clong -3071 Mar 21 j 05:36 5"H3622 1-5'4212 minimum clong -3063 Mar 2 j 00:423 13"H1604 1-4"4"424 mix. E		-						
min. Earth dist. 3073 Sep 21 j 01:55 4*H 200 47.99929 AU conjunction -3064 Mar 27 j 22:26 12*H 35 14*52*26 coijunction -3072 Mar 19 j 23:46 4*M 3849 - 15*48*16 max. Earth dist. -3064 Mar 27 j 22:38 12*H 1835 14*52*26 coijunction -3072 Mar 19 j 23:56 4*M 3859 15*48*18 morning rise -3064 Mar 28 j 06:39 12*H 1903 49 82996 AU minimum elong -3072 Jun 30 j 17:28 6*M 3459 51 5*48*18 morning rise -3064 Mar 10 j 10:41 12*H 27*12*27 ectorgade -3072 Jun 30 j 17:28 6*M 5849 20 j 10:65 4*H 3855 16*24*05 min. Earth dist. -3064 Sep 29 j 11:47 12*H 4844 - 15*2503 opposition -3072 Sep 21 j 10:65 5*H 6933 48.00110 AU direct -3064 Sep 29 j 10:45 12*H 4844 4788326 AU direct -3072 Jun 30 J Mar 21 j 05:25 5*H 6933 48.00110 AU direct -3064 Sep 29 j 04:15 13*H 10*1 13*H 10*1 13*H 10*1 13*H 10*1 14*4424 13*H 10*1 14*4424 13*H 10*1 14*4444 13*H 10*1 14*4444 13*H 10*1 14*H 14*4433 13*H 10*1 13*H 10*1 14*H 14*4433	•					,		
direct -3073 Dec 12 j 02:22 3°£11'57 conjunction -3064 Mar 27 j 22:26 12°£18'35 14°52'26 minimum clong -3064 Mar 27 j 22:36 12°£18'35 14°52'26 minimum clong -3064 Mar 28 j 20:36 12°£18'35 14°52'26 Minimum clong -3007 Mar 19 j 23:36 4°¥38'49 -15°48'16 max. Earth dist. -3064 Mar 28 j 10:30 12°£19'03 498'296 AU 40°82'89 AU max. Earth dist. -3072 Jun 30 j 17:28 6°¥08'42 opposition -3064 Sep 29 j 10:30 13°¥48'44 15°25'03 opposition -3072 Sep 21 j 23'43 5°¥08'43 -16°24'05 min. Earth dist. -3064 Sep 29 j 10:43 13°¥48'24 -15°25'03 direct -3072 Dec 12 j 208.52 4°¥09'32 4°*H09'32 40°*H010 AU decening set -3063 Mar 29 j 04:15 13°¥16'04 -14°44'23 conjunction -3071 Mar 21 j 05:25 5°¥36'22 15°42'10 conjunction -3063 Mar 29 j 04:15 13°¥16'04 -14°44'23 minimum clong -3071 Mar 21 j 05:25 5°¥36'22 15°42'10 conjunction -3063 Mar 29 j 04:15 13°¥16'04 -14°44'23 minimum clong -3071 Mar 21 j 05:25 5°¥372'2 15°42'12 <t< td=""><td></td><td></td><td></td><td></td><td>evening sec</td><td>500</td><td>12 /(10</td><td></td></t<>					evening sec	500	12 /(10	
conjunction -3072 Mar 19 j 23:46 4°H 38:49 -15°48*16 max. Earth dist. -3064 Mar 27 j 22:38 12°H 1836 14°52266 max. Earth dist. -3064 Mar 28 j 06:39 12°H 278 49.82996 AU max. Earth dist. -3064 Mar 30 j 10:10 12°H 27203 49.82996 AU max. Earth dist. -3064 Mar 30 j 10:10 12°H 27203 49.82996 AU max. Earth dist. -3064 Mar 30 j 10:10 12°H 27203 49.82996 AU 49.8299					conjunction	-3064 Mar 27 i 22:26	12°₩ 18'35	-14°52'24
Conjunction -0.072 Mar 19 j 23.46 4°H3849 1.5°4816 morning rise -3.064 Mar 28 j 0.6.39 12°H2703 49.82996 AU minimum clong -3.072 Mar 19 j 19.16 4°H3850 15°4818 morning rise -3.064 Jul 0.8 j 15.18 13°H48705 12°H27127 retrograde -3.072 Mar 20 j 19.16 4°H38705 49 92.172 AU retrograde -3.064 Jul 0.8 j 15.18 13°H48705 13°H4	ancer	5075 Bec 12 J 02.22	3 7(113)					
minimum elong 3.072 Mar 1 y j 23.56 4°M3856 49°4818 moming rise 3.064 Mar 30 j 01-04 12°H2127 max. Earth dist. -3.072 Mar 20 j 19:16 4°M3956 49°9212 AU retrograde -3.064 Sap 29 j 11:47 12°H4824 -15°2503 opposition -3.072 Sep 21 j 36:55 5°M0933 48.00110 AU direct -3.064 Dec 19 j 20:04 11°H49413 478493 478356 AU conjunction -3.071 Mar 21 j 05:25 5°M3621 -15°42'10 conjunction -3.063 Mar 29 j 04:15 13°H16'03 14°44'23 minimum elong -3.071 Mar 21 j 05:25 5°M36'22 15°42'10 conjunction -3.063 Mar 29 j 04:15 13°H16'03 14°44'23 max. Earth dist. -3.071 Mar 21 j 05:36 5°M36'22 15°42'10 minimum elong -3.063 Mar 29 j 04:15 13°H16'03 14°44'23 max. Earth dist. -3.071 Mar 21 j 05:36 5°M36'22 15°42'10 minimum elong -3.063 Mar 29 j 10:26 13°H16'05 14°44'23 max. Earth dist. -3.071 Mar 21 j 05:36 6°M6'53 4799930 AU minimum elong -3.071 Mar 21 j 05:36	conjunction	-3072 Mar 19 i 23:46	1°¥38'10 -15°1	18'16				
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retrograde opposition -3072 Jun 30 j 17.28 6°¥0842 opposition -3072 Sep 21 j 3233 6°¥0842 sep 4005 opposition min. Earth dist. -3072 Sep 21 j 3233 -3072 Sep 21 j 3233 5°¥08933 48.0010 AU min. Earth dist. -3064 Sep 29 j 04:39 12°¥4824 -18°2500 conjunction minimum elong -3071 Mar 21 j 05:25 5°¥3621 -15°42'10 conjunction -3063 Mar 29 j 04:15 13°¥16'04 -14°44'23 minimum elong -3071 Mar 21 j 05:25 5°¥36'22 15°42'10 minimum elong -3063 Mar 29 j 04:15 13°¥16'04 -14°44'23 max. Earth dist. -3071 Mar 21 j 05:25 5°¥36'22 15°42'10 minimum elong -3063 Mar 29 j 04:15 13°¥16'04 -14°44'23 max. Earth dist. -3071 Mar 21 j 05:36 5°¥36'22 15°42'10 minimum elong -3063 Mar 29 j 04:26 13°¥16'04 -49'44'23 mertograde -3071 Jul 02 j 02:17 7°¥06'09 409.2030 AU max. Earth dist. -3063 Mar 29 j 04:26 13°¥16'03 14°44'24 opposition -3071 Loc 13 j 10:23 5°¥07'00 minimum elong -3063 Mar 29 j 04:26 13°¥16'01 43°46'33 difect </td <td>C</td> <td>-</td> <td></td> <td></td> <td>-</td> <td></td> <td></td> <td></td>	C	-			-			
opposition min. Earth dist. -3072 Sep 2 j j 2343 5° 9° 80° 33 48.00110 AU direct -3064 Sep 2 j 9 i 43:9 12° 848°44 47.88326 AU min. Earth dist. -30072 Dec 1 j 23:25 5° 9° 933 48.00110 AU direct -3064 Dec 1 j j 20.04 11° 849′13 13° 8′ 11° 5′ 8′ 11° 4′ 11° 4′ 11′ 11° 4′ 11′ 11° 4′ 11′ 11° 4′ 11′ 11° 4′ 11′ 11° 11° 11° 11° 11° 11° 11° 11° 11		-			•			15025102
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direct -3072 Dec 12 j 08:52 4*M0932 evening set -3063 Mar 26 j 04:13 13°*H159 conjunction -3071 Mar 21 j 05:25 5*M3621 -15°42'10 conjunction -3063 Mar 29 j 04:15 13°*H604 -14°44'23 minimum elong -3071 Mar 21 j 05:36 5*M3622 15°42'12 minimum elong -3063 Mar 29 j 04:26 13°*H1605 14°44'24 max. Earth dist. -3071 Mar 21 j 02:34'7 5*M3720 4992305 AU max. Earth dist. -3063 Mar 29 j 04:26 13°*H1605 14°44'24 opposition -3071 Sep 23 j 04:17 6*M0659 479992 AU morning rise -3063 Jul 09 j 19:17 14°*K4533 direct -3071 Dec 13 j 10:23 5*M0700 min. Earth dist. -3063 Sep 30 j 16:20 13°*M4605 47.84664 AU direct -3070 Mar 22 j 11:18 6*M3348 -15°35'48 evening set -3063 Dec 21 j 02:17 12°*M4639 max. Earth dist. -3070 Mar 22 j 11:29 6*M3348 -15°35'48 evening set -3062 Mar 20 j 10:15 14°*M19330 -14°36'07 max. Earth dist. -3070 Mar 22 j 11:29 6*M3348 -15°35'48 minimum elong -3062 Mar 30 j 10:15 14°*M19330 -14°36'07 max. Earth dist.								47.88320 AU
conjunction -3071 Mar 21 j 05:25 S°#3621 - 15°42'10 conjunction -3063 Mar 29 j 04:15 13°#16'04 - 14°44'24 max. Earth dist. -3071 Mar 21 j 05:25 S°#3720 49.92305 AU max. Earth dist. -3063 Mar 29 j 04:26 13°#16'05 48'44'24 max. Earth dist. -3071 Mar 21 j 02:247 7°#06'09 remoring rise -3063 Mar 29 j 10:26 13°#16'05 49'49'24 opposition -3071 Sep 23 j 04:17 7°#06'09 morning rise -3063 Apr 01 j 04:54 33°#40'15 13°#16'05 49'49'15 omin. Earth dist. -3071 Sep 22 j 12:18 6°#06'59 47'99992 AU opposition -3063 Sep 30 j 11:25 33°#4'55' -15°16'37 direct -3071 Dec 13 j 10:23 5°#07'00 6°#33'48 -15°35'48 creening set -3063 Dec 21 j 02:17 12°#46'39 12°#46'39 14°*46'39 14°*46'39								
minimum elong -3071 Mar 21 j 05:36 5° ¥36'22 15° 42'12 minimum elong -3063 Mar 29 j 04:26 13° ¥16'05 14° 44'24 max. Earth dist. -3071 Mar 21 j 22:47 7° ¥66'09 morning rise -3063 Mar 29 j 04:26 13° ¥16'05 49,79706 AU certograde -3071 Sep 23 j 04:17 6° ¥06'13 16°17'36 retrograde -3063 Jul 09 j 19:17 14° ¥4'53 15° 16'37 direct -3071 Dec 13 j 10:23 5° ¥07'00 min. Earth dist. -3063 Sep 30 j 11:23 13° ¥46'51 15° 16'37 conjunction -3070 Mar 22 j 11:18 6° ¥63'48 -15° 35'48 evening set -3062 Mar 26 j 17:22 14° ¥08'28 retrograde -3070 Mar 22 j 11:18 6° ¥63'48 -15° 35'48 evening set -3062 Mar 26 j 17:22 14° ¥13'30 -14° 36'07 retrograde -3070 Mar 22 j 11:18 6° ¥43'48 4992133 AU conjunction -3062 Mar 30 j 10:15 14° ¥13'30 -14° 36'07 retrograde -3070 Jul 03 j 08:34 8° ¥03'31 minimum elong -3062 Mar 30 j 10:15 14° ¥13'30 -14° 36'07 retrograde	direct	-30/2 Dec 12 J 08.32	4 X 09 32		evening set	-3003 Mai 20 J 04.13	13 Д11 39	
minimum elong -3071 Mar 21 j 05:36 5° ¥36'22 15° 42'12 minimum elong -3063 Mar 29 j 04:26 13° ¥16'05 14° 44'24 max. Earth dist. -3071 Mar 21 j 22:47 7° ¥66'09 morning rise -3063 Mar 29 j 04:26 13° ¥16'05 49,79706 AU certograde -3071 Sep 23 j 04:17 6° ¥06'13 16°17'36 retrograde -3063 Jul 09 j 19:17 14° ¥4'53 15° 16'37 direct -3071 Dec 13 j 10:23 5° ¥07'00 min. Earth dist. -3063 Sep 30 j 11:23 13° ¥46'51 15° 16'37 conjunction -3070 Mar 22 j 11:18 6° ¥63'48 -15° 35'48 evening set -3062 Mar 26 j 17:22 14° ¥08'28 retrograde -3070 Mar 22 j 11:18 6° ¥63'48 -15° 35'48 evening set -3062 Mar 26 j 17:22 14° ¥13'30 -14° 36'07 retrograde -3070 Mar 22 j 11:18 6° ¥43'48 4992133 AU conjunction -3062 Mar 30 j 10:15 14° ¥13'30 -14° 36'07 retrograde -3070 Jul 03 j 08:34 8° ¥03'31 minimum elong -3062 Mar 30 j 10:15 14° ¥13'30 -14° 36'07 retrograde	conjunction	3071 Mar 21 i 05:25	5°¥36'21 15°4	12'10	conjunction	3063 Mar 20 i 04:15	13° ¥ 16'04	1.404.4123
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retrograde -3071 Jul 02 j 02:17 7° ± 06'09 morning rise -3063 Apr 01 j 04:45 13° ± 20° 11 4° ± 4° ± 3° opposition -3071 Sep 22 j 12:18 6° ± 06'13 - 16° 1736 retrograde -3063 Jul 09 j 19:17 14° ± 45'33 15° 16'37 direct -3071 Dec 13 j 10:23 5° ± 07'00 min. Earth dist. -3063 Sep 30 j 10:20 13° ± 45'51 15° 16'37 conjunction -3070 Mar 22 j 11:18 6° ± 33'48 15° 35'48 evening set -3062 Mar 26 j 17:22 14° ± 06'828 4° ± 46'03 max. Earth dist. -3070 Mar 22 j 11:12 6° ± 33'48 15° 35'48 evening set -3062 Mar 30 j 10:15 14° ± 10° ± 06' ± 3'46' 40° ± 10° ±		·						
opposition -3071 Sep 23 j 04:17 (30°Hoft) 3 - 16°17'36 (30°Hoft) 3 - 16°17'36 (30°Hoft) 3 - 3063 Jul 09 j 19:17 (30°Hoft) 3 - 15°16'37 (30°Hoft) 3 10°Hoft) 3		-				·		49.79700 AU
min. Earth dist. -3071 Sep 22 j 12:18 6° \(\) 60659 47.99992 AU opposition -3063 Sep 30 j 16:20 13° \(\) \(\) 47.84664 AU direct -3061 Sep 30 j 16:20 13° \(\) \(\) 47.84664 AU direct -3063 Sep 30 j 11:35 13° \(\) \(\) 46:39 47.84664 AU direct -3063 Sep 30 j 11:35 13° \(\) \(\) 46:39 47.84664 AU direct -3063 Sep 30 j 11:35 13° \(\) \(\) 46:39 47.84664 AU direct -3063 Sep 30 j 11:35 13° \(\) \(\) 46:39 47.84664 AU direct -3063 Dec 2 j 17:22 12° \(\) \(\) 46:39 48:30 10.18 48° \(\) 40:30 4						1 0	- , .	
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conjunction minimum elong minimum elong minimum elong minimum elong minimum elong minimum elong and max 2 j 11:29 6° % 3348 a 15° 35′49 evening set -3062 Mar 2 j 17:22 14° %08′28 -40° 60′70 Mar 2 j 11:29 6° % 3348 a 15° 35′49 -3070 Mar 2 j 10:23 14° %13′30 a 14° 36′07 -14° 36′07 -3070 Mar 2 j 10:23 4° %13′31 a 14° 36′07 -40° 30′70 Mar 2 j 10:23 6° %43′44 49.92133 AU conjunction conjunction and minimum elong and min	direct	-30/1 Dec 13 J 10:23	3 π0/00					47.84004 AU
minimum elong -3070 Mar 22 j 11:29 6° ₩33'48 15°35'49 conjunction -3062 Mar 30 j 10:15 14° ₩13'30 -14°36'07 retrograde -3070 Mar 23 j 04:23 6° ₩34'46 49.92133 AU minimum elong -3062 Mar 30 j 10:15 14° ₩13'30 -14°36'07 opposition -3070 Sep 24 j 08:47 7° ₩03'37 - 16°10'51 max. Earth dist. -3062 Mar 30 j 10:28 14° ₩13'30 14° №13'31 14°36'09 min. Earth dist. -3070 Sep 24 j 08:47 7° ₩03'37 - 16°10'51 max. Earth dist. -3062 Mar 30 j 10:28 14° ₩13'30 41° №13'30 49.75938 AU direct -3070 Dec 14 j 14:02 6° ₩04'25 retrograde -3062 Mar 30 j 10:23 14° ₩13'85 47.95958 AU conjunction -3069 Mar 23 j 17:06 7° ₩31'11 - 15°29'10 min. Earth dist. -3062 Dec 10 j 20:35 14° ₩4'31'5 - 15°07'56 max. Earth dist. -3069 Mar 23 j 17:17 7° ₩31'12 15°29'13 direct -3062 Dec 10 j 16:33 14° £4'30'2 47.80539 AU max. Earth dist. -3069 Mar 24 j 08:52 7° ₩32'10 5° №31'3 direct -3061 Mar 31 j 16:02 15° ₩10'33 14° 27'38 <tr< td=""><td></td><td>2070 M 22 : 11 10</td><td>60V22140 1502</td><td>25140</td><td></td><td>3</td><td></td><td></td></tr<>		2070 M 22 : 11 10	60 V 22140 1502	25140		3		
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retrograde	_	·			. ,.	20/23/4 20:10.15	1.40 1.2120	1.402.6107
opposition -3070 Sep 24 j 08:47 7° ±0337 -16°10′51 max. Earth dist. -3062 Mar 30 j 15:52 14° ±13'49 49.75938 AU min. Earth dist. -3070 Sep 23 j 18:28 7° ±04'18 47.99561 AU morning rise -3062 Apr 03 j 03:39 14° ±18'35 14° ±18'35 direct -3070 Dec 14 j 14:02 6° ±04'25 retrograde -3062 Det 01 j 02:35 14° ±43'15 -15°07'56 conjunction -3069 Mar 23 j 17:06 7° ±31'11 -15°29'10 min. Earth dist. -3062 Det 01 j 16:33 14° ±43'27 47.80539 AU mininum elong -3069 Mar 23 j 17:17 7° ±31'11 -15°29'13 direct -3062 Det 01 j 16:33 14° ±43'27 47.80539 AU max. Earth dist. -3069 Mar 24 j 08:52 7° ±31'12 15°29'13 direct -3062 Det 01 j 16:33 14° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 18° ±4'00 <t< td=""><td></td><td></td><td></td><td>2133 AU</td><td></td><td>•</td><td></td><td></td></t<>				2133 AU		•		
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conjunction	direct	-30/0 Dec 14 j 14:02	6° 11 04'25					1.500.515.6
minimum elong max. Earth dist.		20/03/	70 \/2444			3		
max. Earth dist.	•	-				3		47.80539 AU
retrograde	_	-						
opposition				1666 AU	evening set	-3061 Mar 27 j 08:46	15° ∺ 05'02	
min. Earth dist3069 Sep 24 j 23:03 8° ★01'41 47.98815 AU direct -3069 Dec 15 j 19:55 7° ★01'49 max. Earth dist3061 Mar 31 j 16:14 15° ★10'53 14°27'39 max. Earth dist3061 Mar 31 j 19:14 15° ★11'04 49.71746 AU morning rise -3061 Apr 04 j 23:54 15° ★16'47 retrograde -3061 Mar 31 j 19:14 15° ★11'04 49.71746 AU morning rise -3061 Apr 04 j 23:54 15° ★16'47 retrograde -3061 Mar 31 j 19:14 15° ★11'04 49.71746 AU morning rise -3061 Apr 04 j 23:54 15° ★16'47 retrograde -3061 Mar 31 j 19:14 15° ★11'04 49.71746 AU morning rise -3061 Apr 04 j 23:54 15° ★16'47 retrograde -3061 Mar 31 j 19:14 15° ★11'04 49.71746 AU morning rise -3061 Apr 04 j 23:54 15° ★16'47 retrograde -3061 Mar 31 j 19:14 15° ★11'04 49.71746 AU morning rise -3061 Apr 04 j 23:54 15° ★16'47 retrograde -3061 Mar 31 j 19:14 15° ★11'04 49.71746 AU morning rise -3061 Apr 04 j 23:54 15° ★16'47 retrograde -3061 Mar 31 j 19:14 15° ★11'04 49.71746 AU morning rise -3061 Apr 04 j 23:54 15° ★16'47 retrograde -3061 Mar 31 j 19:14 15° ★11'04 49.71746 AU morning rise -3061 Apr 04 j 23:54 15° ★16'47 retrograde -3061 Mar 31 j 19:14 15° ★10'53 14° ★40'20 min. Earth dist3068 Mar 24 j 12:49 8° ★29'24 49.90850 AU min. Earth dist3061 Oct 02 j 22:04 15° ★40'36 14° ★0'45 47.76032 AU retrograde -3068 Sep 25 j 17:52 8° ★58'25 -15° 56'32 evening set -3060 Mar 27 j 01:32 16° ★01'39 min. Earth dist3068 Dec 16 j 02:15 7° ★59'15 conjunction minimum elong -3060 Mar 31 j 21:45 16° ★08'14 14° 18'55	•	5						
direct					·			
morning rise -3061 Apr 04 j 23:54 15° £16'47 conjunction -3068 Mar 23 j 22:41 8° £28'35 -15°22'17 retrograde -3061 Jul 12 j 07:01 16° £40'20 minimum elong -3068 Mar 23 j 22:53 8° £28'36 15°22'19 opposition -3061 Oct 03 j 01:00 15° £40'36 -14°59'00 max. Earth dist3068 Mar 24 j 12:49 8° £29'24 49.90850 AU min. Earth dist3061 Oct 02 j 22:04 15° £40'45 47.76032 AU retrograde -3068 Jul 04 j 15:54 9° £58'13 direct -3061 Dec 23 j 10:53 14° £41'19 opposition -3068 Sep 25 j 17:52 8° £58'25 -15°56'32 evening set -3060 Mar 27 j 01:32 16° £01'39 min. Earth dist3068 Sep 25 j 05:40 8° £59'00 47.97700 AU direct -3060 Mar 31 j 21:45 16° £08'14 -14° 18'53 minimum elong -3060 Mar 31 j 21:58 16° £08'14 14° 18'55	min. Earth dist.					3		
conjunction	direct	-3069 Dec 15 j 19:55	7° ∺ 01'49					49.71746 AU
minimum elong max. Earth dist.					_			
max. Earth dist.		·			-	3		
retrograde	minimum elong	-3068 Mar 23 j 22:53			opposition			
opposition	max. Earth dist.	-3068 Mar 24 j 12:49	8° 升 29′24 49.90	0850 AU	min. Earth dist.		15°) 40′45	47.76032 AU
min. Earth dist3068 Sep 25 j 05:40 8° ★ 59'00 47.97700 AU direct -3068 Dec 16 j 02:15 7° ★ 59'15 conjunction -3060 Mar 31 j 21:45 16° ★ 08'14 -14°18'53 minimum elong -3060 Mar 31 j 21:58 16° ★ 08'14 14°18'55	retrograde	-3068 Jul 04 j 15:54			direct	-3061 Dec 23 j 10:53		
direct -3068 Dec 16 j 02:15 7° ¥ 59'15 conjunction -3060 Mar 31 j 21:45 16° ¥ 08'14 -14° 18'53 minimum elong -3060 Mar 31 j 21:58 16° ¥ 08'14 14° 18'55	opposition	-3068 Sep 25 j 17:52			evening set	-3060 Mar 27 j 01:32	16° 米 01′39	
minimum elong -3060 Mar 31 j 21:58 16° ★ 08'14 14°18'55	min. Earth dist.	-3068 Sep 25 j 05:40		7700 AU				
· · · · · · · · · · · · · · · · · · ·	direct	-3068 Dec 16 j 02:15	7° ¥ 59'15		conjunction	-3060 Mar 31 j 21:45	16° ₩ 08'14	-14°18'53
conjunction -3067 Mar 25 j 04:38 9° ★26'02 -15°15'09 max. Earth dist3060 Apr 01 j 00:42 16° ★08'24 49.67186 AU					minimum elong		16° ₩ 08'14	14°18'55
	conjunction	-3067 Mar 25 j 04:38	9° ¥ 26′02 -15°1	15'09	max. Earth dist.	-3060 Apr 01 j 00:42	16°) €08'24	49.67186 AU

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3060 in astronomical counting style is the year 3061 BCE in historical counting style. -3060 Apr 05 i 18:33 16°**)** 14'51 conjunction -3053 Apr 08 i 15:28 22°**)** 51'34 -13°10'35 morning rise -3060 Jul 12 j 13:55 17°**)** 37'40 -3053 Apr 08 j 15:41 22°**H**51'35 13°10'35 retrograde minimum elong -3060 Oct 03 j 05:27 16°**)** 37′56 -14°49′49 -3053 Apr 08 j 08:43 22°**)** 51'11 49.26233 AU max. Earth dist. opposition -3053 Apr 16 j 10:21 -3060 Oct 03 j 04:08 16°**)** € 38'00 47.71176 AU min. Earth dist. 23°**)**€02'10 morning rise -3053 Jul 20 j 02:41 -3060 Dec 23 j 13:55 direct 15°**)** 38'36 retrograde 24°**)** 21'18 -3059 Mar 27 j 19:39 -3053 Oct 10 j 12:38 evening set 16°**)** 58'19 opposition 23°**¥**21'33 -13°38'08 -3053 Oct 10 j 19:40 23°**)** €21'13 47.27902 AU min. Earth dist. -3059 Apr 02 j 03:35 17°**)**€05'34 -14°09'53 conjunction direct -3053 Dec 31 j 00:29 22°**)** 22'00 -3059 Apr 02 j 03:47 minimum elong 17°**₭**05'35 14°09'54 evening set -3052 Mar 31 j 19:15 23°**)** ₹38'36 -3059 Apr 02 j 05:11 max. Earth dist. 17°**₭**05'40 49.62320 AU morning rise -3059 Apr 07 j 12:09 17°**)** 12'51 conjunction -3052 Apr 08 j 21:36 23°**)** 49'38 -12°59'52 -3059 Jul 13 j 17:58 -3052 Apr 08 j 21:48 retrograde 18°**)** 35′00 minimum elong 23°**H**49'39 12°59'53 -3052 Apr 08 j 14:04 opposition -3059 Oct 04 j 09:42 17°**¥**35′16 -14°40′21 max. Earth dist. 23°**)** 49.18665 AU -3052 Apr 17 j 00:39 min. Earth dist. -3059 Oct 04 j 08:26 17°**)** 35′20 47.66024 AU morning rise 24°**)**€00'44 direct -3059 Dec 24 j 19:06 16°**)** 35'54 retrograde -3052 Jul 20 j 05:10 25°**升**19′26 evening set -3058 Mar 28 j 14:31 17°**)** 55'03 opposition -3052 Oct 10 j 17:16 24°\mathbf{19'39} -13°26'55 min. Earth dist. -3052 Oct 11 j 01:02 24°**升**19'16 47.19916 AU conjunction -3058 Apr 03 j 09:27 18°**)** €02'56 -14°00'38 direct -3052 Dec 31 j 08:20 23°¥20'01 minimum elong -3058 Apr 03 j 09:39 18°**¥**02'57 14°00'40 evening set -3051 Apr 01 j 17:33 24°**)** 36'15 max. Earth dist. -3058 Apr 03 j 09:26 18°**升**02'56 49.57155 AU morning rise -3058 Apr 09 j 05:07 18°**¥**10'51 conjunction -3051 Apr 10 j 03:47 24°\(\frac{12}{47}\)'45 -12°48'56 retrograde -3058 Jul 14 j 20:58 19°**)** 32'24 minimum elong -3051 Apr 10 i 04:01 24°**)**(47'46 12°48'56 opposition -3058 Oct 05 j 14:13 18°**)** € 32'40 -14°30'37 max. Earth dist. -3051 Apr 09 i 17:37 24° **)** 47'10 49.10583 AU min. Earth dist. -3058 Oct 05 j 14:48 18°**)** € 32'38 47.60584 AU morning rise -3051 Apr 18 j 15:00 24° **)** 59'19 -3058 Dec 26 i 02:13 17°**)**€33'16 retrograde -3051 Jul 21 j 12:05 26°**)** 17'36 direct -3057 Mar 29 j 10:02 18°**¥**51'55 -3051 Oct 11 j 21:49 25°**)** 17'45 -13°15'27 evening set opposition -3051 Oct 12 j 07:10 25°**)** 17'18 47.11445 AU min. Earth dist. -3057 Apr 04 j 15:19 19°**)** € 00'23 -13°51'07 -3050 Jan 01 j 12:17 24° ¥ 18'03 conjunction direct -3057 Apr 04 j 15:32 -3050 Apr 02 j 16:01 25°**)**€33'55 19°**升**00′24 13°51′08 minimum elong evening set -3057 Apr 04 j 15:13 19°**₭**00'23 49.51709 AU max. Earth dist. -3057 Apr 10 j 21:15 -3050 Apr 11 j 10:10 25°**)** 45'52 -12°37'45 19°**₩**08'54 conjunction morning rise -3057 Jul 16 j 00:33 -3050 Apr 11 j 10:22 20°**∺**29'54 minimum elong 25°**)**45'53 12°37'46 retrograde -3057 Oct 06 j 18:35 -3050 Apr 10 j 23:18 19°**₭**30'10 -14°20'38 max. Earth dist. 25°**)** 45'15 49.02026 AU opposition -3057 Oct 06 j 19:33 19°**₭**30'07 47.54839 AU -3050 Apr 20 j 05:06 25°**)** €57'53 min. Earth dist. morning rise 18°**)** € 30'45 -3057 Dec 27 j 08:54 -3050 Jul 22 j 19:06 27°**)** 15′46 direct retrograde -3056 Mar 29 j 06:06 19°**)**48'56 -3050 Oct 13 j 02:31 26°**)** 15′52 -13°03′45 evening set opposition -3050 Oct 13 j 13:38 26°**₭**15'20 47.02519 AU min. Earth dist. conjunction -3056 Apr 04 j 21:07 19°**¥**57'57 -13°41'21 direct -3049 Jan 02 j 15:58 25°**)** 16′04 -3056 Apr 04 j 21:19 19°**¥**57'58 13°41'23 evening set -3049 Apr 03 j 14:46 26°**)** 31'37 minimum elong max. Earth dist. -3056 Apr 04 j 18:48 19°**)** 57'49 49.45956 AU morning rise -3056 Apr 11 j 12:57 20°**₭**07'02 conjunction -3049 Apr 12 j 16:18 26°\(\dagger44'00\) -12°26'20 -3056 Jul 16 j 08:17 21°**)** 27'31 -3049 Apr 12 j 16:31 26°\ 44'01 12°26'21 retrograde minimum elong -3056 Oct 06 j 23:00 20°**)** 27'48 -14°10'22 max. Earth dist. -3049 Apr 12 j 03:53 26°**)** 43'17 48.93059 AU opposition -3056 Oct 07 j 01:12 20°**)** €27'42 47.48776 AU -3049 Apr 21 j 18:44 26°**¥**56′27 min. Earth dist. morning rise -3056 Dec 27 j 11:19 19°**)**€28'23 -3049 Jul 24 j 01:25 28°**¥**13'58 direct retrograde -3055 Mar 30 i 02:39 -3049 Oct 14 i 07:05 27°**)** 14'00 -12°51'48 evening set 20°**)** 46′07 opposition 27°**)** 13'27 46.93213 AU min. Earth dist. -3049 Oct 14 i 18:26 conjunction -3055 Apr 06 i 03:09 20° ****55'41 -13°31'20 direct -3048 Jan 03 i 19:57 26°**)**€ 14'06 minimum elong -3055 Apr 06 i 03:22 20°**)** 55'41 13°31'20 evening set -3048 Apr 03 j 13:36 27°**)** 29'20 max. Earth dist. -3055 Apr 06 i 00:16 20°**)** 55'31 49.39838 AU -3055 Apr 13 i 04:23 21°\ 05'17 -3048 Apr 12 i 22:30 27°\dagger42'09 -12°14'40 morning rise conjunction -3055 Jul 17 j 15:25 22°\ 25'19 -3048 Apr 12 i 22:42 27°¥42'10 12°14'40 retrograde minimum elong -3055 Oct 08 j 03:31 21°****25'35 -13°59'52 -3048 Apr 12 j 08:26 27°**)** 41'21 48.83728 AU opposition max. Earth dist. 21°**)** 25'24 47.42300 AU -3048 Apr 22 j 08:22 min. Earth dist. -3055 Oct 08 j 07:31 morning rise 27°**)** 55'01 -3048 Jul 24 j 05:26 -3055 Dec 28 j 14:37 20°**¥**26′09 retrograde 29°\ 12'11 direct -3048 Oct 14 j 11:47 -3054 Mar 30 j 23:55 21°**)** 43'29 opposition 28°¥12'09 -12°39'35 evening set min. Earth dist. -3048 Oct 15 j 01:05 28° ¥11'31 46.83579 AU -3054 Apr 07 j 09:18 21°\dagger53'33 -13°21'04 -3047 Jan 04 j 02:41 27° ¥ 12'10 conjunction direct -3054 Apr 07 j 09:29 -3047 Apr 04 j 12:45 28°**)**27'08 minimum elong 21°**X**53'34 13°21'05 evening set -3054 Apr 07 j 04:37 max. Earth dist. 21°**X**53'18 49.33289 AU -3054 Apr 14 j 19:26 -3047 Apr 14 j 04:51 28°**)** 40′22 -12°02′45 morning rise 22°**)** 03'41 conjunction retrograde -3054 Jul 18 j 22:08 23°**H**23'14 minimum elong -3047 Apr 14 j 05:04 28°**)**40'23 12°02'45 opposition -3054 Oct 09 j 07:55 22°**H**23'31 -13°49'07 max. Earth dist. -3047 Apr 13 j 14:39 28°**¥**39'33 48.74097 AU min. Earth dist. -3054 Oct 09 j 12:33 22°**₭**23'18 47.35359 AU morning rise -3047 Apr 23 j 21:43 28°**X**53'39 direct -3054 Dec 29 j 18:40 21°**)** 24'01 -3047 Jun 23 j 21:52 0° Υ -3053 Mar 31 j 21:27 22°**)** 40'59 -3047 Jul 25 j 08:30 0°Y10'30 evening set retrograde

-3047 Aug 26 j 00:55

30°**₹**

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 26 Attention, astronomical year style is used: The year -3047 in astronomical counting style is the year 3048 BCE in historical counting style.

opposition -3047 Oct 15 j 16:30 29°\times 10'25 -12°27'05 max. Earth dist. -3040 Apr 20 j 03:46 5°\times 32'55 47.9754

		-			r 3048 BCE in historical c		
opposition	-3047 Oct 15 j 16:30	29° 升 10′25	-12°27'05	max. Earth dist.	-3040 Apr 20 j 03:46	5° Ƴ 32'55	47.97546 AU
min. Earth dist.	-3047 Oct 16 j 06:05	29° ∺ 09'46	46.73645 AU				
direct	-3046 Jan 05 j 10:19	28°) (10′21		conjunction	-3040 Apr 21 j 03:44	5° Ƴ 34'18	-10°32'01
evening set	-3046 Apr 05 j 12:16	29°) 25′04		minimum elong	-3040 Apr 21 j 03:57	5° Ƴ 34'19	10°32'00
•				morning rise	-3040 May 02 j 17:46	5° Y ′50′21	
conjunction	-3046 Apr 15 j 11:11	29°) 38'42	-11°50'33	retrograde	-3040 Aug 01 j 07:40	7° Υ ′05'36	
minimum elong	-3046 Apr 15 j 11:23	29°) 38'43		opposition	-3040 Oct 22 j 03:53	6° Υ 05'14	-10°52'06
max. Earth dist.	-3046 Apr 14 j 18:46		48.64183 AU	min. Earth dist.	-3040 Oct 22 j 03:33		45.94623 AU
		29° X 52'25	46.04163 AU		-	5° Υ 04'39	43.94023 AU
morning rise	-3046 Apr 25 j 11:08			direct	-3039 Jan 11 j 19:39		
_	-3046 May 01 j 01:58	0°Υ		evening set	-3039 Apr 10 j 15:49	6° Y 18'12	
retrograde	-3046 Jul 26 j 15:47	1° Y ′08'58		max. Earth dist.	-3039 Apr 21 j 08:50	6°°Y'33'03	47.84809 AU
opposition	-3046 Oct 16 j 21:15		-12°14'19				
min. Earth dist.	-3046 Oct 17 j 11:56	0° Υ 08'08	46.63448 AU	conjunction	-3039 Apr 22 j 10:51	6° Ƴ 34'33	
	-3046 Oct 24 j 12:58	30°Ŗ ℋ		minimum elong	-3039 Apr 22 j 11:03	6° Y 34'34	10°18'04
direct	-3045 Jan 06 j 13:43	29°) €08'42		morning rise	-3039 May 04 j 06:45	6° Ƴ 50'58	
	-3045 Mar 19 j 20:36	0° Y		retrograde	-3039 Aug 02 j 16:44	8° Y 06'01	
evening set	-3045 Apr 06 j 11:51	0° Y 23′11		opposition	-3039 Oct 23 j 09:14	7° Ƴ 05'34	-10°37'30
				min. Earth dist.	-3039 Oct 24 j 08:42	7° Y ′04'26	45.81477 AU
conjunction	-3045 Apr 16 j 17:42	0° Ƴ 37'14	-11°38'06	direct	-3038 Jan 12 j 22:50	6° ℃ 04'51	
minimum elong	-3045 Apr 16 j 17:54		11°38'07	evening set	-3038 Apr 11 j 17:22	7° Υ 18'17	
max. Earth dist.	-3045 Apr 16 j 01:00		48.53998 AU	evening sec	303071pi 11 j 17.22	, , 101,	
morning rise	-3045 Apr 27 j 00:20	0° Υ 51'21	40.55770710	conjunction	-3038 Apr 23 j 18:07	7° Ƴ 35'00	10002152
-	-3045 Jul 27 j 22:41	2° Υ 07'38		-		7° Υ 35'01	
retrograde	,		12001117	minimum elong	-3038 Apr 23 j 18:20		
opposition	-3045 Oct 18 j 02:11		-12°01'16	max. Earth dist.	-3038 Apr 22 j 14:11		47.71573 AU
min. Earth dist.	-3045 Oct 18 j 18:10		46.52967 AU	morning rise	-3038 May 05 j 19:43	7° Y 51'46	
direct	-3044 Jan 07 j 17:50	0° Υ ′07'17		retrograde	-3038 Aug 03 j 22:09	9° Υ ′06'38	
evening set	-3044 Apr 06 j 11:44	1° Y ′21′34		opposition	-3038 Oct 24 j 14:43	8° Y 06'05	
max. Earth dist.	-3044 Apr 16 j 06:04	1° Ƴ 34'59	48.43537 AU	min. Earth dist.	-3038 Oct 25 j 16:29		45.67869 AU
				direct	-3037 Jan 14 j 06:23	7° Ƴ 05'14	
conjunction	-3044 Apr 17 j 00:04	1° Y 36'01	-11°25'23	evening set	-3037 Apr 12 j 19:06	8° Y 18'33	
minimum elong	-3044 Apr 17 j 00:17	1° Y '36'02	11°25'23	max. Earth dist.	-3037 Apr 23 j 21:02	8° Ƴ 33'57	47.57916 AU
morning rise	-3044 Apr 27 j 13:20	1° Y 50'32					
retrograde	-3044 Jul 28 j 06:36	3° Y 06'35		conjunction	-3037 Apr 25 j 01:27	8° Y 35'37	-9°49'26
opposition	-3044 Oct 18 j 07:06	2° Y ′06'24	-11°47'57	minimum elong	-3037 Apr 25 j 01:39	8° Y 35'37	9°49'25
min. Earth dist.	-3044 Oct 18 j 23:24	2° Y 05'37	46.42182 AU	morning rise	-3037 May 07 j 08:26	8° Y ′52'44	
direct	-3043 Jan 07 j 21:36	1° Y ′06'09		retrograde	-3037 Aug 05 j 01:25	10° Y ′07'25	
evening set	-3043 Apr 07 j 11:56	2° Y ′20'17		opposition	-3037 Oct 25 j 20:13	9° Y ′06'45	-10°07'32
max. Earth dist.	-3043 Apr 17 j 11:02		48.32721 AU	min. Earth dist.	-3037 Oct 26 j 22:22		45.53862 AU
max. Lartii dist.	-5045 Apr 17 j 11.02	2 13337	40.32721 AU	direct	-3036 Jan 15 j 15:43	8° Υ 05'46	43.33602 AC
conjunction	-3043 Apr 18 j 06:48	20125107	-11°12'25	evening set	-3036 Apr 12 j 20:58	9° Υ 18'59	
minimum elong	-3043 Apr 18 j 07:00		11°12'25	max. Earth dist.	-3036 Apr 24 j 01:51		47.43884 AU
_		2°Υ50'02	11 12 23	max. Earth dist.	-3030 Apr 24 J 01.31	9 1 34 30	47.43004 AU
morning rise	-3043 Apr 29 j 02:36				2026 4 25:00.26	000000124	0024144
retrograde	-3043 Jul 29 j 12:53	4°Υ05'51	1100400	conjunction	-3036 Apr 25 j 08:36	9° Y 36'24	
opposition	-3043 Oct 19 j 12:07		-11°34'22	minimum elong	-3036 Apr 25 j 08:48	9° Υ 36'24	9°34'43
min. Earth dist.	-3043 Oct 20 j 06:46		46.31017 AU	morning rise	-3036 May 07 j 21:07	9° Υ 53'51	
direct	-3042 Jan 09 j 03:06	2° Y ′05'20		retrograde	-3036 Aug 05 j 08:08	11° Υ ′08'24	
evening set	-3042 Apr 08 j 12:35	3° Y 19′19		opposition	-3036 Oct 26 j 01:53	10° Y ′07'37	
				min. Earth dist.	-3036 Oct 27 j 05:29		45.39518 AU
conjunction	-3042 Apr 19 j 13:47		-10°59'11	direct	-3035 Jan 15 j 21:35	9° Y 06'29	
minimum elong	-3042 Apr 19 j 13:59	3° Y 34'34		evening set	-3035 Apr 13 j 23:07	10° Ƴ 19'36	
max. Earth dist.	-3042 Apr 18 j 17:20	3° Ƴ 33'22	48.21495 AU	max. Earth dist.	-3035 Apr 25 j 09:06	10° Ƴ 35'32	47.29526 AU
morning rise	-3042 Apr 30 j 15:43	3° Y 49'50					
retrograde	-3042 Jul 30 j 16:42	5° Y ′05′28		conjunction	-3035 Apr 26 j 16:10	10° Ƴ 37'21	-9°19'45
opposition	-3042 Oct 20 j 17:15	4° Υ ′05'13	-11°20'31	minimum elong	-3035 Apr 26 j 16:21	10° Ƴ 37'22	9°19'44
min. Earth dist.	-3042 Oct 21 j 12:30		46.19394 AU	morning rise	-3035 May 09 j 09:46	10° Y ′55′10	
direct	-3041 Jan 10 j 10:54	3° Υ ′04'51	.0.1707.110	retrograde	-3035 Aug 06 j 14:31	12° Υ '09'35	
evening set	-3041 Jan 10 j 10:34	4° Υ 18'41		opposition	-3035 Aug 00 j 14:31 -3035 Oct 27 j 07:35	12 γ 0933	-9°36'27
o ronning sec	50 11 11pt 07 j 15.24	. 1 10 71		min. Earth dist.	-3035 Oct 27 j 07:35		45.24863 AU
aaniumatiam	2041 Apr. 20 : 20:25	40 W 2 411 7	10045142			11° Υ 07'16 10° Υ '07'24	7J.440UJ AU
conjunction	-3041 Apr 20 j 20:35		-10°45'43	direct	-3034 Jan 17 j 03:48		
minimum elong	-3041 Apr 20 j 20:46		10°45'43	evening set	-3034 Apr 15 j 01:42	11° Y ′20′27	
max. Earth dist.	-3041 Apr 19 j 21:27		48.09780 AU	_		• •	
morning rise	-3041 May 02 j 04:46	4° Y 49'58		conjunction	-3034 Apr 27 j 23:44	11° Y ′38'33	
retrograde	-3041 Jul 31 j 23:42	6° Y ′05′24		minimum elong	-3034 Apr 27 j 23:55	11° Y ′38'33	
opposition	-3041 Oct 21 j 22:32		-11°06'26	max. Earth dist.	-3034 Apr 26 j 15:12		47.14893 AU
min. Earth dist.	-3041 Oct 22 j 19:34		46.07273 AU	morning rise	-3034 May 10 j 22:29	11° Y ′56'42	
direct	-3040 Jan 11 j 15:44	4° Y ′04'38		retrograde	-3034 Aug 08 j 00:17	13° Y 11'00	
evening set	-3040 Apr 09 j 14:25	5° Ƴ 18'19		opposition	-3034 Oct 28 j 13:26	12° Y 10'00	-9°20'28

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3034 in astronomical counting style is the year 3035 BCE in historical counting style. 12°**Υ**'08'34 45.09949 AU min. Earth dist. -3034 Oct 29 i 18:28 morning rise -3027 May 19 j 15:19 19°**Y**17′15 -3033 Jan 18 j 07:19 11°Y08'34 -3027 Aug 15 j 06:14 20°**Y**31'19 direct retrograde -3033 Apr 16 j 04:15 12°**Y**21'35 opposition -3027 Nov 04 j 10:19 19°**Y**29'31 -7°20'40 evening set max. Earth dist. -3033 Apr 27 j 21:24 12°**Υ**38'01 46.99984 AU -3027 Nov 06 j 00:18 19°**Y**27'37 43.95660 AU min. Earth dist. -3026 Jan 25 j 06:52 18°**Y**27'02 direct -3033 Apr 29 j 07:17 12° \(\gamma 40'01 \) -8° 49'00 19°**Y**40′20 conjunction evening set -3026 Apr 22 j 08:06 -3033 Apr 29 j 07:28 12°**Υ**40'02 19°**Y**58'19 45.85239 AU minimum elong 8°48'58 max. Earth dist. -3026 May 04 j 21:28 -3033 May 12 j 10:58 12°Y58'30 morning rise -3033 Aug 09 j 09:21 14°\bar{\gamma}12'43 retrograde conjunction -3026 May 06 j 18:00 20°**Y**′01′00 -6°52′48 20° **Y**01'01 6°52'47 opposition -3033 Oct 29 j 19:31 13°Υ11'36 -9°04'13 minimum elong -3026 May 06 j 18:09 20° Y21'43 min. Earth dist. -3033 Oct 31 j 02:23 13°**Y**10′05 44.94766 AU morning rise -3026 May 21 j 04:15 -3032 Jan 19 j 12:21 12°**Y**10'03 -3026 Aug 16 j 14:00 21°**Y**35'48 direct retrograde -3026 Nov 05 j 17:23 20°**Y**33'51 -7°02'26 evening set -3032 Apr 16 j 07:10 13°**Y**23'03 opposition max. Earth dist. -3032 Apr 28 j 04:55 13°**Y**39'48 46.84816 AU min. Earth dist. -3026 Nov 07 j 09:16 20°**Y**31'50 43.77571 AU direct -3025 Jan 26 j 14:44 19°**Y**31′09 conjunction -3032 Apr 29 j 15:08 13°**Y**41'49 -8°33'12 evening set -3025 Apr 23 j 13:05 20°\bar{Y}44'32 minimum elong -3032 Apr 29 j 15:19 13°**Y**41′50 8°33'12 max. Earth dist. -3025 May 06 j 06:07 21° Y 02'48 45.67079 AU morning rise -3032 May 12 j 23:31 14° \bar 00'38 retrograde -3032 Aug 09 j 14:37 15°**Y**14'46 conjunction -3025 May 08 j 02:57 21°Y05'31 -6°35'08 opposition -3032 Oct 30 j 01:30 14°Υ13'34 -8°47'39 minimum elong -3025 May 08 j 03:07 21°**Y**05'31 min. Earth dist. -3032 Oct 31 j 08:34 14°**Y**12'02 44.79294 AU morning rise -3025 May 22 j 16:47 21°Y26'31 direct -3031 Jan 19 j 20:45 13°Y11'53 retrograde -3025 Aug 17 j 20:34 22°**Y**40'39 evening set -3031 Apr 17 j 10:33 14°\bar{2}4'55 opposition -3025 Nov 07 i 00:34 21°Y38'32 -6°43'54 max. Earth dist. -3031 Apr 29 j 10:33 14°**Υ**41'50 46.69325 AU min. Earth dist. -3025 Nov 08 i 17:24 21°Υ36'28 43.59105 AU direct -3024 Jan 27 j 23:18 20°Y35'38 -3031 Apr 30 j 23:05 14°Y'44'00 -8°17'08 -3024 Apr 23 j 18:36 21°**Y**49'07 conjunction evening set -3031 Apr 30 j 23:16 14°**Y**44'01 8°17'06 max. Earth dist. -3024 May 06 j 13:26 22°Υ07'34 45.48587 AU minimum elong -3031 May 14 j 12:18 15°**Y**'03'09 morning rise -3031 Aug 10 j 21:16 16°**Y**17'15 -3024 May 08 j 12:01 22°**Y**10'23 -6°17'12 conjunction retrograde -3031 Oct 31 j 07:46 15°Υ15'57 -8°30'49 -3024 May 08 j 12:09 22° Y 10'24 6° 17'10 minimum elong opposition -3031 Nov 01 j 16:37 morning rise -3024 May 23 j 05:36 22°Y31'42 min. Earth dist. 15°**Y**14'19 44.63478 AU -3030 Jan 21 j 03:39 -3024 Aug 18 j 07:11 14°Υ14'08 23°**Y**45′53 direct retrograde -3024 Nov 07 j 07:43 -3030 Apr 18 j 14:10 15°**Y**27'11 22°\partial 43'36 -6°25'04 evening set opposition 15°**Υ**44'24 46.53439 AU -3030 Apr 30 j 18:20 -3024 Nov 09 j 01:11 22°**Υ**41'30 43.40347 AU max. Earth dist. min. Earth dist. -3023 Jan 28 j 04:19 21°**Υ**40'29 direct 15°**Y**46'36 -8°00'47 -3030 May 02 j 07:24 -3023 Apr 25 j 00:21 22°**Y**54'07 conjunction evening set -3030 May 02 j 07:35 -3023 May 07 j 21:36 23°Υ12'46 45.29803 AU minimum elong 15°**Υ**46'37 8°00'46 max. Earth dist. morning rise -3030 May 16 j 00:57 16°**Y**06'04 retrograde -3030 Aug 12 j 04:17 17°**Y**20′09 conjunction -3023 May 09 j 21:23 23°Y15'41 -5°58'58 -3030 Nov 01 j 14:10 16°**Y**18'45 -8°13'42 minimum elong -3023 May 09 j 21:32 23°**Y**15'41 5°58'56 opposition min. Earth dist. -3030 Nov 03 j 00:30 16°**Υ**17'03 44.47232 AU morning rise -3023 May 24 j 18:20 23°**Y**37'16 -3029 Jan 22 j 10:27 15°**Y**16'47 -3023 Aug 19 j 18:25 24°**Y**51'32 direct retrograde -3029 Apr 19 j 18:15 16°**Y**29'53 -3023 Nov 08 j 15:17 23°Y49'05 -6°05'56 evening set opposition max. Earth dist. -3029 May 02 j 00:34 16°**Y**47'17 46.37113 AU min. Earth dist. -3023 Nov 10 j 10:31 23°Υ46'53 43.21327 AU -3022 Jan 29 j 10:09 22°\dagger45'46 direct 23°**Y**59'34 -3029 May 03 j 15:46 16°**Y**49'37 -7°44'11 conjunction evening set -3022 Apr 26 i 06:28 -3029 May 03 j 15:57 minimum elong 16°**Y**49'38 7°44'09 max. Earth dist. -3022 May 09 i 06:40 24°Υ18'28 45.10790 AU morning rise -3029 May 17 j 13:47 17°**Y**′09′24 -3022 May 11 i 06:51 24°**Y**'21'25 -5°40'28 retrograde -3029 Aug 13 j 14:39 18°**Y**23′29 conjunction minimum elong -3029 Nov 02 i 20:44 17°**Y**21′58 -7°56′18 -3022 May 11 i 06:59 24°Y21'25 5°40'25 opposition min. Earth dist. -3029 Nov 04 i 07:48 17°**Υ**20'13 44.30529 AU -3022 May 26 j 07:03 24°**Y**43'17 morning rise -3028 Jan 23 j 14:27 16°**Y**19'51 -3022 Aug 21 j 03:22 25°**Y**57'40 direct retrograde -3028 Apr 19 j 22:24 17°**Y**32'59 -3022 Nov 09 j 22:52 24°Y55'03 -5°46'29 evening set opposition 17°**Υ**′50'35 46.20294 AU 24°Υ52'51 43.02094 AU max. Earth dist. -3028 May 02 j 07:16 min. Earth dist. -3022 Nov 11 j 17:54 23°Y51'32 direct -3021 Jan 30 j 18:50 -3028 May 04 j 00:16 -3021 Apr 27 j 12:59 25°**Y**05'31 conjunction 17°**Y**53′02 -7°27′19 evening set -3028 May 04 j 00:26 17°**Y**53'03 7°27'17 max. Earth dist. -3021 May 10 j 14:20 25°Υ24'35 44.91569 AU minimum elong -3028 May 18 j 02:28 18°Y13'09 morning rise -3028 Aug 13 j 23:22 19°Y27'13 -3021 May 12 j 16:27 25°**Y**27'39 -5°21'40 retrograde conjunction -3028 Nov 03 j 03:35 18°**Y**25'34 -7°38'37 -3021 May 12 j 16:35 25°**Y**27'40 5°21'38 opposition minimum elong 18°**Y**23'42 44.13330 AU 25°**Y**49'49 min. Earth dist. -3028 Nov 04 j 17:02 morning rise -3021 May 27 j 19:52 -3027 Jan 23 j 21:14 17°**Y**23′16 retrograde -3021 Aug 22 j 11:27 27°**Y**04′19 direct evening set -3027 Apr 21 j 03:04 18°**Y**36′29 opposition -3021 Nov 11 j 06:48 26°**Y**01'33 -5°26'44 max. Earth dist. -3027 May 03 j 15:15 18°**Y**54'20 46.02997 AU min. Earth dist. -3021 Nov 13 j 03:25 25°**Y**59'16 42.82672 AU direct -3020 Feb 01 j 03:47 24°Y57'50 -3027 May 05 j 09:07 18°**Y**56'51 -7°10'12 -3020 Apr 27 j 19:37 26°**Y**12′03 conjunction evening set -3027 May 05 j 09:17 18°**Y**56'51 7°10'10 max. Earth dist. -3020 May 11 j 00:18 26°**Υ**31'23 44.72147 AU minimum elong

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3020 in astronomical counting style is the year 3021 BCE in historical counting style. 26°**Y**'34'28 -5°02'34 -3020 May 13 j 02:19 morning rise -3014 Jun 05 i 15:39 3°**8**52'42 conjunction -3020 May 13 j 02:27 26°Y34'29 5°02'31 -3014 Aug 30 j 11:02 5°808'43 minimum elong retrograde -3020 May 28 j 08:34 26°**Y**56′54 -3014 Nov 18 j 20:30 4°804'39 -2°59'55 opposition morning rise 28°**Y**11'34 -3014 Nov 21 j 01:12 -3020 Aug 22 j 18:10 min. Earth dist. 4°801'53 41.37832 AU retrograde 27°**Y**08'39 -5°06'41 -3020 Nov 11 j 14:55 -3013 Feb 08 j 18:57 2°859'19 opposition direct 27°**Υ**06'19 42.63023 AU 4°**8**15'38 -3020 Nov 13 j 12:12 min. Earth dist. evening set -3013 May 06 j 08:15 26°**Y**04'45 direct -3019 Feb 01 j 14:06 max. Earth dist. -3013 May 19 j 18:59 4°**8**36'00 43.26636 AU 27°Υ19'12 evening set -3019 Apr 29 j 03:03 27°**Υ**38'40 44.52482 AU -3013 May 22 j 07:09 max. Earth dist. -3019 May 12 j 08:28 conjunction 4°**8**39'51 -2°40'59 minimum elong -3013 May 22 j 07:13 4°**8**39'51 2°40'57 conjunction -3019 May 14 j 12:27 27°**Y**41'54 -4°43'11 morning rise -3013 Jun 07 j 04:57 5°**8**04'03 -3019 May 14 j 12:35 27°**Υ**41'55 4°43'09 -3013 Aug 31 j 22:05 6°**8**20'22 minimum elong retrograde -3019 May 29 j 21:39 -3013 Nov 20 j 06:22 morning rise 28°**Y**04'37 opposition 5°**8**16'03 -2°37'43 retrograde -3019 Aug 24 j 05:21 29°Y19'28 min. Earth dist. -3013 Nov 22 j 12:41 5°813'12 41.15667 AU opposition -3019 Nov 12 j 23:05 28°Y16'24 -4°46'18 direct -3012 Feb 10 j 03:41 4°810'25 min. Earth dist. -3019 Nov 14 j 21:14 28°Υ14'01 42.43115 AU evening set -3012 May 06 j 18:36 5°**8**27'06 direct -3018 Feb 02 j 20:02 27°Υ12'18 max. Earth dist. -3012 May 20 j 05:53 5°**8**47'38 43.04404 AU evening set -3018 Apr 30 j 10:49 28°**Y**27'02 max. Earth dist. -3018 May 13 j 17:55 28°**Υ**46'42 44.32497 AU conjunction -3012 May 22 j 19:01 5°851'33 -2°19'38 minimum elong -3012 May 22 j 19:05 5°**8**51'34 2°19'35 conjunction -3018 May 15 j 23:00 28°**Y**′50'00 -4°23'32 morning rise -3012 Jun 07 j 18:23 6°815'59 minimum elong -3018 May 15 j 23:07 28°**Y**50'00 4°23'28 retrograde -3012 Sep 01 i 11:16 7°**と**32'37 morning rise -3018 May 31 i 10:40 29°Y12'59 opposition -3012 Nov 20 j 16:22 6°828'03 -2°15'14 -3018 Jul 06 j 19:20 0°8 min. Earth dist. -3012 Nov 22 j 22:43 6°825'10 40.93251 AU -3018 Aug 25 j 16:42 0°**8**28'03 direct -3011 Feb 10 j 12:16 5°822'07 retrograde -3018 Oct 15 j 03:32 30°RY -3011 May 08 j 05:35 6°**8**39'13 evening set opposition -3018 Nov 14 j 07:47 29°Y24'49 -4°25'38 max. Earth dist. -3011 May 21 j 16:24 6°859'49 42.81920 AU -3018 Nov 16 j 07:54 29°**Υ**22'20 42.22860 AU min. Earth dist. -3017 Feb 04 j 02:50 28°Y20'31 -3011 May 24 j 07:17 7°**と**03'53 -1°58'00 direct conjunction 29°Y35'32 -3011 May 24 j 07:21 evening set -3017 May 01 j 18:55 7°803'53 1°57'56 minimum elong -3017 May 15 j 03:34 29°**Υ**55'23 44.12147 AU -3011 Jun 09 j 07:53 7°828'31 max. Earth dist. morning rise -3011 Sep 02 j 23:54 8°845'29 retrograde -3017 May 17 j 09:35 29°Y58'45 -4°03'35 -3011 Nov 22 j 02:44 7°**8**40'40 -1°52'25 conjunction opposition -3017 May 17 j 09:42 29°**Y**′58'46 4°03'32 -3011 Nov 24 j 10:55 7°**8**37'41 40.70632 AU minimum elong min. Earth dist. -3017 May 18 j 05:26 0°8 -3010 Feb 11 j 22:53 6°**8**34'27 direct -3017 Jun 01 j 23:41 0°**8**22'00 -3010 May 09 j 16:59 7°**8**52'00 morning rise evening set -3017 Aug 27 j 04:55 -3010 May 23 j 05:13 8°812'48 42.59261 AU retrograde 1°**8**37'17 max. Earth dist. -3017 Nov 15 j 16:36 0°**8**33'53 -4°04'39 opposition min. Earth dist. -3017 Nov 17 j 17:05 0°**8**31'22 42.02216 AU conjunction -3010 May 25 j 19:55 8°816'53 -1°36'05 -3017 Dec 14 j 09:14 30°**₹**Υ minimum elong -3010 May 25 j 19:58 8°**8**16'53 1°36'02 direct -3016 Feb 05 j 12:01 29°**Y**29'21 morning rise -3010 Jun 10 j 21:25 8°**8**41'43 -3016 Mar 29 j 02:20 0°8 -3010 Sep 04 j 10:51 9°859'04 retrograde -3016 May 02 j 03:38 0°844'40 -3010 Nov 23 j 13:27 8°854'01 -1°29'19 evening set opposition max. Earth dist. -3016 May 15 j 12:01 1°804'36 43.91375 AU min. Earth dist. -3010 Nov 25 j 21:38 8°851'01 40.47859 AU -3009 Feb 13 j 12:13 7°**8**47'30 direct -3016 May 17 j 20:33 1°808'09 -3°43'21 conjunction evening set -3009 May 11 j 04:52 9°805'32 -3016 May 17 j 20:39 minimum elong 1°808'10 3°43'18 max. Earth dist. -3009 May 24 j 15:55 9°**8**26'24 42.36460 AU -3016 Jun 02 j 12:57 morning rise 1°831'39 -3009 May 27 j 08:31 9°830'38 -1°13'53 retrograde -3016 Aug 27 j 16:46 2°847'10 conjunction minimum elong -3016 Nov 16 i 01:39 1°843'33 -3°43'22 -3009 May 27 i 08:33 9°830'38 1°13'50 opposition min. Earth dist. -3016 Nov 18 i 04:21 1°840'55 41.81156 AU -3009 Jun 12 i 10:57 9°855'40 morning rise -3015 Feb 05 j 21:34 0°**8**38'46 -3009 Sep 05 j 23:48 11°**8**13'27 direct retrograde -3015 May 03 j 12:42 1°854'25 -3009 Nov 25 j 00:27 10°808'09 -1°05'54 evening set opposition 10°**8**05'06 40.24969 AU -3009 Nov 27 j 09:35 max. Earth dist. -3015 May 16 j 22:55 2°814'33 43.70183 AU min. Earth dist. direct -3008 Feb 14 j 22:43 9°801'22 -3008 May 11 j 17:18 conjunction -3015 May 19 j 07:56 2°818'09 -3°22'51 evening set 10°**8**19'56 -3015 May 19 j 08:02 2°818'10 3°22'48 max. Earth dist. -3008 May 25 j 05:02 10°**8**40'58 42.13521 AU minimum elong -3015 Jun 04 j 02:15 2°841'53 morning rise -3015 Aug 29 j 01:02 3°**8**57'39 -3008 May 27 j 21:47 10°**8**45'14 -0°51'25 retrograde conjunction -3015 Nov 17 j 11:00 2°**8**53'49 -3°21'48 -3008 May 27 j 21:48 10°**8**45'14 0°51'22 opposition minimum elong 2°**8**51'08 41.59675 AU -3008 Jun 13 j 00:38 11°**8**10'28 min. Earth dist. -3015 Nov 19 j 14:28 morning rise -3014 Feb 07 j 09:24 1°**8**48'46 retrograde -3008 Sep 06 j 11:10 12°**8**28'43 direct evening set -3014 May 04 j 22:21 3°**8**04'44 opposition -3008 Nov 25 j 11:44 11°**8**23'12 -0°42'10 max. Earth dist. -3014 May 18 j 08:03 3°**8**24'57 43.48589 AU min. Earth dist. -3008 Nov 27 j 21:57 11°**8**20'04 40.01932 AU direct -3007 Feb 15 j 09:51 10°**8**16'08 -3014 May 20 j 19:21 3°**8**28'43 -3°02'03 -3007 May 13 j 06:32 11°**8**35'17 conjunction evening set -3014 May 20 j 19:26 3°828'44 3°02'00 max. Earth dist. -3007 May 26 j 17:28 11°**8**56'24 41.90429 AU minimum elong

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3007 in astronomical counting style is the year 3008 BCE in historical counting style. -3007 May 29 j 11:20 12°**8**00'46 -0°28'40 conjunction -3001 Jun 07 i 05:04 19°**8**55'15 1°53'26 conjunction -3007 May 29 j 11:21 12°**8**00'46 0°28'36 minimum elong -3001 Jun 07 j 05:00 19°**8**55'15 minimum elong 1°53'31 -3007 Jun 14 j 14:39 12°**8**26'12 -3001 Jun 23 j 04:38 20°**8**21'32 morning rise morning rise -3007 Sep 08 j 02:26 13°**8**44'56 -3001 Sep 16 j 19:34 21°**8**43'56 retrograde retrograde -3007 Nov 26 j 23:20 12°**8**39'13 -0°18'09 -3001 Dec 05 j 05:49 20°**8**36'33 2°12'04 opposition opposition -3007 Nov 29 j 09:52 -3001 Dec 07 j 23:55 min. Earth dist. 12°**8**36'03 39.78723 AU min. Earth dist. 20°**8**32'52 38.33343 AU direct -3006 Feb 16 j 19:18 11°**8**31'52 direct -3000 Feb 24 j 23:50 19°**8**27'13 evening set -3006 May 14 j 20:20 12°**8**51'39 evening set -3000 May 22 j 21:02 20°**8**51'18 -3000 Jun 04 j 19:22 max. Earth dist. -3006 May 28 j 05:51 13°**8**12'49 41.67099 AU max. Earth dist. 21°**8**12'37 40.20710 AU conjunction -3006 May 31 j 01:18 13°**8**17'19 -0°05'42 conjunction -3000 Jun 07 j 21:21 21°**8**17'46 2°17'59 -3006 May 31 j 01:18 13°**8**17'19 -3000 Jun 07 j 21:17 21°**8**17'46 minimum elong 0°05'38 minimum elong 2°18'03 -3006 May 30 j 19:02 13°**8**16'55 -3000 Jun 23 j 19:24 21°**8**44'08 behind sun begin morning rise behind sun end -3006 May 31 j 07:34 13°**8**17'42 retrograde -3000 Sep 17 j 13:41 23°**8**07'14 morning rise -3006 Jun 16 j 04:34 13°**8**42'55 opposition -3000 Dec 05 j 20:05 21°**8**59'31 2°38'04 -3006 Aug 27 j 13:06 15°8 min. Earth dist. -3000 Dec 08 j 14:06 21°**8**55'49 38.08232 AU asc. node -3006 Aug 28 j 00:16 15°**8**00'09 direct -2999 Feb 25 j 13:51 20°849'47 retrograde -3006 Sep 09 j 18:53 15°**8**02'13 evening set -2999 May 24 j 15:41 22°814'43 -3006 Sep 22 j 21:54 15°R₩ max. Earth dist. -2999 Jun 06 j 10:17 22°835'58 39.95466 AU opposition -3006 Nov 28 j 11:28 13°**8**56'15 0°06'10 min. Earth dist. -3006 Dec 01 j 00:04 13°**8**52'58 39.55263 AU conjunction -2999 Jun 09 j 14:06 22°841'16 2°42'46 direct -3005 Feb 18 i 05:00 12°**8**48'38 minimum elong -2999 Jun 09 j 14:00 22°**8**41'15 2°42'51 evening set -3005 May 16 j 10:45 14°809'04 -2999 Jun 25 j 10:15 23°**8**07'41 morning rise max. Earth dist. -3005 May 29 j 19:51 14°**8**30'21 41.43495 AU retrograde -2999 Sep 19 i 08:11 24°**8**31'33 -2999 Dec 07 j 11:01 23°**8**23'29 3°04'19 opposition -3005 Jun 01 j 15:41 14°**8**34'54 0°17'41 -2999 Dec 10 j 06:39 23°**8**19'41 37.83023 AU conjunction min. Earth dist. -3005 Jun 01 j 15:41 14°834'54 0°17'46 -2998 Feb 27 i 03:53 22°**8**13'21 direct minimum elong -3005 Jun 17 j 18:45 15°**8**00'39 -2998 May 26 j 10:51 23°**8**39'12 morning rise evening set -3005 Jun 17 j 08:41 -2998 Jun 08 j 03:51 24°800'28 39.70145 AU 15°8 max. Earth dist. -3005 Sep 11 j 09:04 16°**8**20'31 retrograde 15°**8**14'19 0°30'47 -2998 Jun 11 j 07:12 -3005 Nov 29 j 23:54 24°**8**05'47 3°07'46 conjunction opposition -2998 Jun 11 j 07:06 24°**8**05'47 -3005 Dec 02 j 12:41 minimum elong min. Earth dist. 15°**8**11'01 39.31504 AU 3°07'50 -2998 Jun 27 j 00:59 24°**8**32'16 -3005 Dec 11 j 00:18 15°R₩ morning rise -3004 Feb 19 j 18:39 14°**8**06'24 -2998 Sep 20 j 23:36 25°**8**56'56 direct retrograde -3004 Apr 28 j 17:14 -2998 Dec 09 j 02:23 24°848'31 3°30'49 15°**8** opposition -3004 May 17 j 01:53 -2998 Dec 11 j 21:53 24°**8**44'42 37.57770 AU evening set 15°**8**27'31 min. Earth dist. 15°**8**48'46 41.19561 AU -3004 May 30 j 08:06 23°**8**37'59 max. Earth dist. direct -2997 Feb 28 j 21:13 evening set -2997 May 28 j 07:01 25°**8**04'46 conjunction -3004 Jun 02 j 06:22 15°**8**53'30 0°41'14 max. Earth dist. -2997 Jun 09 j 19:51 25°**8**25'56 39.44808 AU minimum elong -3004 Jun 02 j 06:21 15°**8**53'30 0°41'18 morning rise -3004 Jun 18 j 09:06 16°**8**19'25 conjunction -2997 Jun 13 j 00:41 25°**8**31'24 3°32'58 -3004 Sep 11 j 23:53 17°**8**39'52 -2997 Jun 13 j 00:34 25°**8**31'24 3°33'03 retrograde minimum elong -3004 Nov 30 j 12:48 16°**8**33'25 0°55'41 -2997 Jun 28 j 16:02 25°**8**57'55 opposition morning rise -3004 Dec 03 j 03:27 16°**8**29'59 39.07418 AU -2997 Sep 22 j 16:52 27°**8**23'26 min. Earth dist. retrograde -3003 Feb 20 j 08:09 15°**8**25'10 -2997 Dec 10 j 18:08 26°814'42 3°57'31 direct opposition evening set -3003 May 18 j 17:41 16°**8**46'59 min. Earth dist. -2997 Dec 13 i 14:11 26°810'49 37.32543 AU max. Earth dist. -3003 May 31 j 23:02 17°**8**08'19 40.95276 AU direct -2996 Mar 01 i 13:17 25°**8**03'46 evening set -2996 May 29 i 03:49 26°**8**31'33 -3003 Jun 03 j 21:42 conjunction 17°813'07 1°05'03 max. Earth dist. -2996 Jun 10 j 14:03 26°**8**52'42 39.19478 AU -3003 Jun 03 i 21:40 17°**8**13'07 1°05'08 minimum elong -3003 Jun 19 j 23:32 17°**8**39'10 -2996 Jun 13 i 18:49 26°**8**58'13 3°58'21 morning rise conjunction -3003 Sep 13 j 12:20 19°**8**00'14 -2996 Jun 13 i 18:41 26°**8**58'12 3°58'25 retrograde minimum elong opposition -3003 Dec 02 j 02:04 17°**8**53'30 1°20'52 -2996 Jun 29 j 07:05 27°**8**24'44 morning rise 17°**8**49'58 38.82991 AU min. Earth dist. -3003 Dec 04 j 17:48 retrograde -2996 Sep 23 j 09:33 28°**8**51'10 16°**8**44'54 direct -3002 Feb 21 j 23:10 opposition -2996 Dec 11 j 10:33 27°842'06 4°24'27 -3002 May 20 j 10:17 evening set 18°**8**07'27 min. Earth dist. -2996 Dec 14 j 07:33 27°838'08 37.07323 AU -3002 Jun 02 j 12:40 max. Earth dist. 18°**8**28'44 40.70679 AU direct -2995 Mar 03 j 04:54 26°**8**30'47 -2995 May 31 j 01:45 27°**8**59'38 evening set -3002 Jun 05 j 13:14 18°**8**33'43 1°29'07 -2995 Jun 12 j 07:58 28°**8**20'41 38.94157 AU conjunction max. Earth dist. -3002 Jun 05 j 13:11 18°**8**33'42 1°29'11 minimum elong -3002 Jun 21 j 14:14 18°**8**59'53 -2995 Jun 15 j 13:24 28°**8**26'17 4°23'55 morning rise conjunction retrograde -3002 Sep 15 j 04:08 20°**8**21'36 minimum elong -2995 Jun 15 j 13:15 28°**8**26'17 4°24'00 opposition -3002 Dec 03 j 15:42 19°**8**14'33 1°46'20 morning rise -2995 Jun 30 j 22:30 28°**8**52'48 min. Earth dist. -3002 Dec 06 j 08:05 19°**8**10'58 38.58289 AU -2995 Aug 17 j 09:26 $0^{\circ}\Pi$ direct -3001 Feb 23 j 11:19 18°**8**05'35 retrograde -2995 Sep 25 j 04:43 0°**Ⅲ**20′13 -3001 May 22 j 03:13 19°828'53 -2995 Nov 03 j 14:28 30°R₩ evening set -3001 Jun 04 j 03:26 19°**8**50'10 40.45796 AU -2995 Dec 13 j 03:17 29°810'50 4°51'34 max. Earth dist. opposition

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Earth dist. -2994 Jun 17 j 08:28 29°**8**55'44 minimum elong 4°49'43 direct -2987 Mar 15 j 06:02 8°**Ⅲ**57′28 -2994 Jun 19 j 18:51 $0^{\circ}\Pi$ evening set -2987 Jun 14 j 20:26 10°**Ⅲ**36′58 -2994 Jul 02 j 13:58 morning rise 0°**Ⅲ**22'13 max. Earth dist. -2987 Jun 25 j 03:29 10°**Ц**56'00 36.88468 AU retrograde -2994 Sep 27 j 01:16 1°**I**50'41 opposition -2994 Dec 14 j 20:50 0°**П**40'58 5°18'52 conjunction -2987 Jun 28 j 14:56 11°**Ⅱ**02'29 7°52'49 -2994 Dec 17 j 19:18 -2987 Jun 28 j 14:39 11°**Ⅲ**02'27 min. Earth dist. 0°**Д**36'53 36.56846 AU minimum elong 7°52'55 -2987 Jul 12 j 06:37 -2993 Jan 15 j 04:31 30°₽₩ morning rise 11°**Ⅲ**27'49 direct -2993 Mar 06 j 11:23 29°828'53 retrograde -2987 Oct 08 j 11:13 13°**Ⅲ**05′02 -2993 Apr 25 j 01:16 $0^{\circ}II$ opposition -2987 Dec 25 j 15:31 11°**Ⅲ**52'38 8°33'34 evening set -2993 Jun 04 j 00:10 1°II00'03 min. Earth dist. -2987 Dec 28 j 18:21 11°**II**48'06 34.77661 AU max. Earth dist. -2993 Jun 15 j 21:51 1°**Д**20'51 38.43341 AU direct -2986 Mar 17 j 01:39 10°**Ⅲ**37'24 evening set -2986 Jun 17 j 03:33 12°**Ⅲ**18'32 conjunction -2993 Jun 19 j 04:14 1°II26'37 5°15'30 max. Earth dist. -2986 Jun 27 j 04:20 12°**Д**37'16 36.62729 AU minimum elong -2993 Jun 19 j 04:03 1°**Ⅱ**26'37 5°15'36 morning rise -2993 Jul 04 j 05:29 1°**I**I53′02 conjunction -2986 Jun 30 j 14:45 12°**耳**43'44 8°19'07 retrograde -2993 Sep 28 i 22:42 3°**Ⅲ**22'35 minimum elong -2986 Jun 30 i 14:28 12°**Ⅱ**43'42 8°19'13 opposition -2993 Dec 16 j 14:50 2°**I**12'32 5°46'20 morning rise -2986 Jul 13 i 23:02 13°**Ⅱ**08'45 min. Earth dist. -2993 Dec 19 j 13:11 2°**II**08'26 36.31482 AU retrograde -2986 Oct 10 i 11:40 14°**∏**47'28 -2992 Mar 07 j 05:48 1°**I**100'03 -2986 Dec 27 j 13:56 13°**Ⅱ**34'39 9°01'32 direct opposition -2992 Jun 05 j 01:02 2°**Ⅲ**32'28 -2986 Dec 30 j 15:54 13°**Д**30'09 34.52257 AU min. Earth dist. evening set -2992 Jun 16 j 16:10 2°**Ц**52'59 38.17760 AU -2985 Mar 19 j 00:35 12°**Ⅱ**18'58 max. Earth dist. direct -2985 Jun 19 j 11:45 14°**Ⅱ**01'47 evening set -2992 Jun 20 j 00:33 2°**I**58'57 5°41'31 -2985 Jun 29 j 03:36 14°**Д**20'01 36.37202 AU max. Earth dist. conjunction -2992 Jun 20 j 00:22 2°**I**58'56 5°41'36 minimum elong -2992 Jul 04 j 21:26 3°**Ⅱ**25'16 -2985 Jul 02 j 14:57 14°**Ⅱ**26'37 8°45'21 conjunction morning rise -2985 Jul 02 j 14:39 -2992 Sep 29 j 20:17 4°**I**55'57 minimum elong 14°**I**I26'35 8°45'26 retrograde -2992 Dec 17 j 09:21 -2985 Jul 15 j 15:32 3°**I**I45'32 6°13'58 14°**Ⅱ**51'16 opposition morning rise 3°**Д**41'20 36.05999 AU -2992 Dec 20 j 09:16 -2985 Oct 12 j 14:01 16°**Ⅲ**31'35 min. Earth dist. retrograde -2991 Mar 08 j 23:13 2°**Ⅲ**32'38 -2985 Dec 29 j 13:03 15°**Ⅱ**18'22 9°29'26 direct opposition -2991 Jun 07 j 02:51 4°**I**106′22 -2984 Jan 01 j 15:25 15°**Ⅲ**13'48 34.27113 AU evening set min. Earth dist. -2991 Jun 18 j 13:19 4°**Д**26'42 37.92037 AU -2984 Mar 19 j 22:34 max. Earth dist. direct 14°**Ⅲ**02'13 evening set -2984 Jun 20 j 21:17 15°**Ⅱ**46'50 conjunction -2991 Jun 21 j 21:39 4°II32'43 6°07'38 max. Earth dist. -2984 Jun 30 j 05:57 16°**耳**04'40 36.11934 AU -2991 Jun 21 j 21:26 4°II32'42 6°07'43 minimum elong morning rise -2991 Jul 06 j 13:27 4°**Ⅱ**58'55 conjunction -2984 Jul 03 j 16:10 16°**Ⅱ**11'15 9°11'27 -2991 Oct 01 j 16:02 6°**Ⅲ**30'47 -2984 Jul 03 j 15:51 16°**Ⅱ**11'14 9°11'33 retrograde minimum elong -2991 Dec 19 j 04:40 5°**I**I20'01 6°41'44 -2984 Jul 16 j 08:09 16°**Ⅲ**35′29 opposition morning rise -2991 Dec 22 j 05:07 5°**Ⅱ**15'44 35.80381 AU -2984 Oct 13 j 14:56 18°**Ⅱ**17'28 min. Earth dist. retrograde -2990 Mar 10 j 20:06 4°**Ⅱ**06'40 -2984 Dec 30 j 12:48 17°**Ⅲ**03'52 9°57'12 direct opposition 5°**Ⅱ**41'44 -2983 Jan 02 j 15:06 16°**Д**59'17 34.02243 AU evening set -2990 Jun 09 i 05:42 min. Earth dist. max. Earth dist. -2990 Jun 20 i 09:11 6°**Д**01'46 37.66199 AU direct -2983 Mar 21 i 23:30 15°**Ⅱ**47'17 evening set -2983 Jun 23 i 08:20 17°**Ⅲ**33'48 -2990 Jun 23 i 18:59 6°**П**07'57 6°33'52 conjunction max. Earth dist. -2983 Jul 02 i 07:13 17°**耳**51'03 35.86955 AU -2990 Jun 23 i 18:46 6°II07'56 6°33'57 minimum elong -2990 Jul 08 j 05:36 6°**Ⅲ**33'59 -2983 Jul 05 i 17:57 17°**I**157'44 9°37'24 morning rise conjunction -2990 Oct 03 j 14:03 8°**II**07'05 -2983 Jul 05 i 17:37 17°**I**57'43 9°37'29 retrograde minimum elong -2990 Dec 21 j 00:26 6°II55'56 7°09'36 -2983 Jul 18 j 01:03 18°**Ⅲ**21'30 opposition morning rise -2983 Oct 15 j 18:58 20°**I**05'15 min. Earth dist. -2990 Dec 24 j 01:14 6°**Д**51'36 35.54686 AU retrograde 5°**Ⅱ**42'08 -2989 Mar 12 j 15:01 opposition -2982 Jan 01 j 13:21 18°**Д**51'17 10°24'49 direct -2989 Jun 11 j 09:28 7° II 18'37 min. Earth dist. -2982 Jan 04 j 15:07 18°**Д**46'41 33.77669 AU evening set -2982 Mar 23 j 22:39 17°**Ⅲ**34'15 max. Earth dist. -2989 Jun 22 j 06:57 7°**Ⅲ**38'22 37.40276 AU direct -2982 Jun 25 j 20:27 19°**Ⅲ**22'46 evening set -2989 Jun 25 j 17:07 7°**II**44'38 7°00'09 -2982 Jul 04 j 10:12 19°**Д**39'26 35.62226 AU conjunction max. Earth dist. -2989 Jun 25 j 16:52 7°**I**44'37 7°00'14 minimum elong -2989 Jul 09 j 21:47 8°**Ⅱ**10'29 -2982 Jul 07 j 20:30 19°**Ⅲ**46'10 10°03'10 morning rise conjunction -2989 Oct 05 j 10:54 9°**Ⅱ**44'53 minimum elong -2982 Jul 07 j 20:10 19°**Ⅱ**46′08 10°03'16 retrograde morning rise opposition -2989 Dec 22 j 20:51 8°**Ⅲ**33'19 7°37'33 -2982 Jul 19 j 17:50 20°**Ⅱ**09'23 min. Earth dist. -2989 Dec 25 j 22:58 8°**Д**28'53 35.28952 AU retrograde -2982 Oct 17 j 19:58 21°**I**55′01 direct -2988 Mar 13 j 09:26 7°**Ⅱ**19'04 opposition -2981 Jan 03 j 14:51 20°**Ⅱ**40'40 10°52'13 -2988 Jun 12 j 14:25 8°**I**57'01 -2981 Jan 06 j 17:23 20°**Д**36'00 33.53342 AU evening set min. Earth dist. -2988 Jun 23 j 05:20 9°**Ⅱ**16'27 37.14351 AU -2981 Mar 25 j 21:52 19°**Ⅲ**23'12 max. Earth dist. direct

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -2981 in astronomical counting style is the year 2982 BCE in historical counting style. -2981 Jun 28 j 10:18 21°**Ⅲ**13'48 -2975 Jul 21 j 11:58 3°9520'43 12°54'27 evening set minimum elong -2981 Jul 06 j 13:55 21°**Д**29'49 35.37736 AU -2975 Jul 29 j 15:44 max. Earth dist. 3°937'51 morning rise -2975 Oct 31 j 19:53 5°939'11 retrograde -2974 Jan 17 j 00:15 13°54'14 conjunction -2981 Jul 09 j 23:48 21°**Ⅲ**36'35 10°28'41 4°9521'51 opposition -2981 Jul 09 j 23:26 21°**Ⅲ**36'33 minimum elong 10°28'46 min. Earth dist. -2974 Jan 20 j 01:48 4°517'02 31.89393 AU -2981 Jul 21 j 10:50 morning rise 21°**Ⅲ**59′11 direct -2974 Apr 08 j 00:33 3°901'04 retrograde -2981 Oct 20 j 00:08 23°**Ⅱ**46'47 evening set -2974 Jul 16 j 09:08 5°909'00 5°517'51 33.72610 AU opposition -2980 Jan 05 j 16:54 22°**Ⅲ**32'03 11°19'22 max. Earth dist. -2974 Jul 20 j 13:14 22°**П**27'24 33.29240 AU min. Earth dist. -2980 Jan 08 j 18:36 direct -2980 Mar 26 j 22:17 21°**Ⅱ**14′09 conjunction -2974 Jul 23 j 20:51 5°**©**24'54 13°16'49 evening set -2980 Jun 30 j 01:33 23°**Ⅱ**06'55 minimum elong -2974 Jul 23 j 20:27 5°524'52 13°16'55 -2974 Jul 31 j 07:00 max. Earth dist. -2980 Jul 07 j 17:23 23°**Ц**22'07 35.13429 AU morning rise 5°9540'38 retrograde -2974 Nov 03 j 06:23 7°5544'43 conjunction -2980 Jul 11 j 04:00 23°**Ⅲ**29'01 10°53'57 opposition -2973 Jan 19 j 08:25 6°926'57 14°18'02 minimum elong -2980 Jul 11 j 03:39 23°**Ⅲ**28'59 10°54'03 min. Earth dist. -2973 Jan 22 j 08:13 6°522'13 31.67373 AU morning rise -2980 Jul 22 j 04:01 23°**I**I50'56 direct -2973 Apr 10 j 07:28 5°905'40 retrograde -2980 Oct 21 j 05:32 25°**Ⅱ**40'35 evening set -2973 Jul 19 j 13:35 7°9516'40 opposition -2979 Jan 06 j 20:04 24°**Ⅲ**25'27 11°46'15 max. Earth dist. -2973 Jul 22 j 23:39 7°523'59 33.50540 AU min. Earth dist. -2979 Jan 09 j 22:55 24°**П**20'43 33.05325 AU direct -2979 Mar 28 j 21:41 23°**II**07'05 conjunction -2973 Jul 26 j 06:18 7°**5**31'01 13°38'32 evening set -2979 Jul 02 j 18:32 25°**I**102'07 minimum elong -2973 Jul 26 j 05:54 7°930'59 13°38'37 max. Earth dist. -2979 Jul 09 i 23:21 25°**I**16'34 34.89304 AU morning rise -2973 Aug 01 j 21:32 7°9545'14 retrograde -2973 Nov 05 j 15:13 9°952'15 -2979 Jul 13 i 08:59 25°**Ⅲ**23'27 11°18'53 opposition -2972 Jan 21 j 17:29 8°934'03 14°41'02 conjunction -2979 Jul 13 j 08:36 25°**Ⅲ**23'25 11°18'58 min. Earth dist. -2972 Jan 24 j 17:18 8°529'18 31.45927 AU minimum elong -2979 Jul 23 j 21:03 25°**Ⅱ**44'37 -2972 Apr 11 j 13:47 direct 7°9612'20 morning rise -2979 Oct 23 j 11:37 27°**II**36'23 -2972 Jul 21 j 21:19 9°926'37 retrograde evening set 26°**Ⅲ**20'50 12°12'47 -2972 Jul 24 j 11:50 9°532'15 33.29094 AU -2978 Jan 08 j 24:00 max. Earth dist. opposition -2978 Jan 12 j 01:58 26°**I**16'07 32.81593 AU min. Earth dist. -2978 Mar 31 j 02:02 25°**Ⅲ**02'00 -2972 Jul 27 j 16:32 9°939'11 13°59'27 direct conjunction -2978 Jul 05 j 13:03 26°**Ⅲ**59'23 -2972 Jul 27 j 16:09 9°**©**39'09 13°59'33 evening set minimum elong -2978 Jul 12 j 04:02 27°**Ⅱ**12'50 34.65371 AU -2972 Aug 02 j 10:29 9°951'38 max. Earth dist. morning rise -2972 Nov 07 j 02:23 12°501'49 retrograde -2978 Jul 15 j 14:41 27°**Ⅱ**19'51 11°43'28 -2971 Jan 23 j 03:28 conjunction opposition 10°543'14 15°03'08 -2978 Jul 15 j 14:18 -2971 Jan 26 j 01:10 minimum elong 27°**Ⅱ**19'50 11°43'34 min. Earth dist. 10°538'36 31.25110 AU -2978 Jul 25 j 14:13 morning rise 27°**Ⅱ**40'11 direct -2971 Apr 13 j 23:08 9°9521'05 -2978 Oct 25 j 20:32 29°**Ⅱ**34'11 retrograde evening set -2971 Jul 25 j 08:57 11°939'02 -2977 Jan 11 j 04:49 28°**Ⅱ**18'11 12°38'55 max. Earth dist. -2971 Jul 26 j 23:19 11°5642'31 33.08295 AU opposition -2977 Jan 14 j 07:15 28°**Д**13'25 32.58089 AU min. Earth dist. -2977 Apr 02 j 06:01 26°**Ⅲ**58'52 conjunction -2971 Jul 30 j 03:29 11°**5**649'28 14°19'28 direct -2977 Jul 08 j 09:08 28°**Ⅲ**58'42 -2971 Jul 30 j 03:05 11°5549'26 14°19'33 evening set minimum elong -2977 Jul 14 j 11:54 29°**Ⅱ**11'15 34.41673 AU -2971 Aug 03 j 20:54 11°959'48 max. Earth dist. morning rise -2971 Nov 09 j 15:12 14°9513'32 retrograde -2977 Jul 17 j 21:07 29°II18'13 12°07'37 -2970 Jan 25 j 14:27 12°954'35 15°24'16 conjunction opposition -2977 Jul 17 j 20:44 29°**Ⅲ**18'11 -2970 Jan 28 j 11:45 12°549'57 31.04957 AU minimum elong 12°07'42 min. Earth dist. morning rise -2977 Jul 27 i 06:55 29°**Ⅲ**37'35 direct -2970 Apr 16 i 06:53 11°932'02 -2977 Aug 07 j 10:10 0ಂತಾ evening set -2970 Jul 29 i 03:39 13°954'14 retrograde -2977 Oct 28 i 03:21 1°933'55 max. Earth dist. -2970 Jul 29 i 13:44 13°555'10 32.88172 AU -2976 Jan 13 j 10:29 0°517'29 13°04'35 opposition min. Earth dist. -2976 Jan 16 j 12:35 0°512'42 32.34834 AU -2970 Aug 01 j 15:20 14°901'56 14°38'32 conjunction -2976 Jan 24 j 19:16 30°RⅡ -2970 Aug 01 j 14:57 14°901'54 14°38'38 minimum elong -2976 Apr 03 j 12:23 28°**I**57'41 -2970 Aug 05 j 02:04 14°909'33 direct morning rise -2976 Jun 09 j 02:58 0ಂತಾ -2970 Nov 12 j 04:25 retrograde 16°9527'26 evening set -2976 Jul 10 j 07:12 10000104 opposition -2969 Jan 28 j 02:19 15°9508'08 15°44'21 max. Earth dist. -2976 Jul 15 j 18:38 1°5511'26 34.18264 AU min. Earth dist. -2969 Jan 30 j 21:48 15°503'36 30.85453 AU direct -2969 Apr 18 j 18:00 13°9545'14 -2976 Jul 19 j 04:18 1°9518'31 12°31'16 max. Earth dist. 16°509'50 32.68700 AU conjunction -2969 Aug 01 j 02:33 -2976 Jul 19 j 03:54 -2969 Aug 02 j 18:16 minimum elong 1°5518'29 12°31'22 evening set 16°9513'31 morning rise -2976 Jul 27 j 23:35 1°936'49 retrograde -2976 Oct 29 j 12:19 3°935'35 conjunction -2969 Aug 04 j 03:45 16°9516'38 14°56'34 opposition -2975 Jan 14 j 16:47 2°9518'42 13°29'43 minimum elong -2969 Aug 04 j 03:23 16°9516'36 14°56'39 min. Earth dist. -2975 Jan 17 j 18:21 2°**©**13'55 32.11915 AU morning rise -2969 Aug 05 j 12:30 16°9519'40 direct -2975 Apr 05 j 17:56 0°958'24 retrograde -2969 Nov 14 j 20:43 18°9543'33 evening set -2975 Jul 13 j 07:08 3°903'30 opposition -2968 Jan 30 j 15:04 17°**©**23'54 16°03'18 max. Earth dist. -2975 Jul 18 j 03:55 3°513'42 33.95208 AU min. Earth dist. -2968 Feb 02 j 09:37 17°**©**19'25 30.66585 AU -2968 Apr 20 j 05:35 16°900'39 direct -2975 Jul 21 j 12:22 3°520'45 12°54'22 conjunction max. Earth dist. -2968 Aug 02 j 18:36 18°526'55 32.49849 AU

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 32 Attention, astronomical year style is used: The year -2968 in astronomical counting style is the year 2969 BCE in historical counting style. -2968 Aug 05 j 17:15 18°533'32 15°13'30 conjunction -2960 Aug 25 j 04:12 7°**Ω**55'47 16°40'25 conjunction -2968 Aug 05 j 16:54 -2960 Aug 25 j 04:05 7°**Ω**55'46 minimum elong 18°933'30 15°13'35 minimum elong 16°40'29 -2968 Nov 16 j 11:01 -2960 Dec 06 j 07:30 10°Ω33'09 21°901'50 retrograde retrograde -2967 Feb 01 j 04:51 -2959 Feb 21 j 00:33 19°9541'51 16°21'03 9°**Ω**10'36 17°49'53 opposition opposition -2967 Feb 03 j 22:24 -2959 Feb 23 j 02:43 9°**Ω**07'06 29.27426 AU min. Earth dist. 19°537'24 30.48310 AU min. Earth dist. 7°**Ω**44'38 direct -2967 Apr 22 j 19:05 18°9518'16 direct -2959 May 12 j 04:09 max. Earth dist. -2967 Aug 05 j 09:24 20°5045'57 32.31621 AU max. Earth dist. -2959 Aug 25 j 20:32 10°**Ω**22'38 31.12696 AU conjunction -2967 Aug 08 j 07:23 20°952'34 15°29'16 conjunction -2959 Aug 27 j 22:58 10°**Ω**27'41 16°43'59 minimum elong -2967 Aug 08 j 07:02 20°952'32 15°29'20 minimum elong -2959 Aug 27 j 22:51 10°**Ω**27'40 16°44'03 retrograde -2967 Nov 19 j 04:08 23°9522'13 retrograde -2959 Dec 09 j 02:51 13°**Ω**05'53 -2966 Feb 03 j 19:32 -2958 Feb 23 j 21:14 opposition 22°901'54 16°37'32 opposition 11°**Ω**43′08 17°53'00 -2958 Feb 25 j 20:19 min. Earth dist. -2966 Feb 06 j 11:19 21°**9**57'33 30.30650 AU min. Earth dist. 11°**Ω**39'49 29.16424 AU direct -2966 Apr 25 j 08:29 20°937'59 direct -2958 May 14 j 23:59 10° **Ω**17'00 max. Earth dist. -2966 Aug 08 j 02:33 23°507'11 32.14011 AU max. Earth dist. -2958 Aug 28 j 17:36 12°**Ω**55'55 31.02211 AU conjunction -2966 Aug 10 j 22:16 23°9513'39 15°43'47 conjunction -2958 Aug 30 j 17:50 13°Ω00'46 16°45'43 minimum elong -2966 Aug 10 j 21:57 23°9513'37 15°43'53 minimum elong -2958 Aug 30 j 17:47 13°**Ω**00'45 16°45'47 retrograde -2966 Nov 21 j 20:00 25°5944'35 -2958 Oct 25 j 11:43 15°Ω opposition -2965 Feb 06 j 11:14 24°9523'56 16°52'40 retrograde -2958 Dec 12 j 00:35 15°**Ω**39'45 min. Earth dist. -2965 Feb 09 j 02:19 24°9519'37 30.13601 AU -2957 Jan 30 j 20:08 15°RΩ direct -2965 Apr 27 j 23:01 22°959'42 opposition -2957 Feb 26 i 18:20 14°**Ω**16'49 17°54'06 max. Earth dist. -2965 Aug 10 j 19:29 25°530'16 31.97065 AU min. Earth dist. -2957 Feb 28 i 14:29 14°Ω13'42 29.06510 AU direct -2957 May 17 i 19:45 12°Ω50'34 -2965 Aug 13 j 13:50 25°536'38 15°57'00 -2957 Aug 18 j 23:41 15°Ω conjunction -2965 Aug 13 j 13:32 -2957 Aug 31 j 17:19 15° **Ω**30'32 30.92824 AU minimum elong 25°936'37 15°57'04 max. Earth dist. retrograde -2965 Nov 24 j 14:20 28°908'48 -2964 Feb 09 i 03:25 -2957 Sep 02 j 13:22 15°Ω34'58 16°45'33 26°9947'50 17°06'21 conjunction opposition -2964 Feb 11 j 16:01 -2957 Sep 02 j 13:20 min. Earth dist. 26°543'39 29.97212 AU 15°**Ω**34'58 16°45'37 minimum elong -2964 Apr 29 j 14:33 -2957 Dec 14 j 20:54 18°**Ω**14'38 25°923'15 retrograde direct -2956 Feb 29 j 15:54 16°**Ω**51'33 17°53'09 max. Earth dist. -2964 Aug 12 j 13:44 27°955'11 31.80808 AU opposition -2956 Mar 02 j 09:42 min. Earth dist. 16°**Ω**48'37 28.97639 AU -2964 Aug 15 j 06:12 28°901'25 16°08'49 -2956 May 19 j 17:31 15°**Ω**25'15 conjunction direct -2964 Aug 15 j 05:56 -2956 Sep 02 j 15:13 18°**Ω**05'56 30.84516 AU minimum elong 28°901'24 16°08'54 max. Earth dist. -2964 Oct 12 j 06:39 0 $^{\circ}\Omega$ -2964 Nov 26 j 05:49 -2956 Sep 04 j 09:03 18°**Ω**10'10 16°43'30 retrograde 0°**£**34'46 conjunction -2956 Sep 04 j 09:05 18°**Ω**10'10 16°43'33 -2963 Jan 11 j 23:23 30°R∽ minimum elong opposition -2963 Feb 10 j 20:42 29°513'27 17°18'30 retrograde -2956 Dec 16 j 19:18 20°**Ω**50′26 min. Earth dist. -2963 Feb 13 j 08:41 29°509'18 29.81525 AU opposition -2955 Mar 03 j 14:00 19°**Ω**27'13 17°50'08 direct -2963 May 02 j 05:42 27°5548'32 min. Earth dist. -2955 Mar 05 j 04:16 19°**Ω**24'32 28.89803 AU -2963 Aug 05 j 23:56 $0^{\circ}\Omega$ -2955 May 22 j 14:47 18°**Ω**00'53 direct -2963 Aug 15 j 09:02 0°**Ω**21'48 31.65325 AU max. Earth dist. -2955 Sep 05 j 15:05 20°**Ω**42'22 30.77245 AU max. Earth dist. -2963 Aug 17 j 22:56 0°Ω27'51 16°19'09 -2955 Sep 07 j 05:04 20°**Ω**46'13 16°39'31 conjunction conjunction -2963 Aug 17 j 22:40 0°Ω27'50 16°19'14 -2955 Sep 07 j 05:06 20°**Ω**46'13 16°39'35 minimum elong minimum elong -2963 Nov 28 i 23:47 -2955 Dec 19 i 16:19 23°**Ω**26′58 retrograde 3°**Ω**02'17 retrograde opposition -2962 Feb 13 i 14:38 1°Ω40'39 17°29'02 opposition -2954 Mar 06 i 12:43 22°Ω03'40 17°45'03 min. Earth dist. -2962 Feb 15 i 23:36 1°**Ω**36'41 29.66616 AU min. Earth dist. -2954 Mar 08 i 00:56 22°Ω01'07 28.82961 AU direct -2962 May 04 j 23:12 0°Ω15'26 direct -2954 May 25 i 12:42 20°**Ω**37'19 max. Earth dist. -2962 Aug 18 j 04:15 2°**Ω**49'54 31.50679 AU max. Earth dist. -2954 Sep 08 j 13:48 23°**Ω**19'19 30.71011 AU -2962 Aug 20 j 16:15 2°Ω55'48 16°27'55 -2954 Sep 10 j 01:11 23°Ω22'55 16°33'37 conjunction conjunction minimum elong -2962 Aug 20 j 16:03 2°**Ω**55'46 16°28'00 -2954 Sep 10 j 01:18 23°**Ω**22'56 16°33'40 minimum elong -2962 Dec 01 j 17:53 -2954 Dec 22 j 15:27 retrograde 5°**Ω**31'17 retrograde 26°**Ω**04'04 opposition -2961 Feb 16 j 09:17 4°Ω09'18 17°37'50 opposition -2953 Mar 09 j 11:25 24°Ω40'40 17°37'53 min. Earth dist. -2961 Feb 18 j 17:00 4°**Ω**05'26 29.52581 AU min. Earth dist. -2953 Mar 10 j 19:47 24° **Ω**38'23 28.77112 AU -2961 May 07 j 14:25 2°**Ω**43'47 direct -2953 May 28 j 11:50 23°**Ω**14'19 direct -2961 Aug 21 j 01:31 5°**Ω**19'32 31.36982 AU max. Earth dist. -2953 Sep 12 j 21:32 26°Ω00'06 16°25'48 conjunction -2961 Aug 23 j 10:00 5°**Ω**25'08 16°35'02 -2953 Sep 12 j 21:39 conjunction minimum elong 26°**Ω**00'07 16°25'52 -2961 Aug 23 j 09:49 25° **Ω**56'50 30.65785 AU minimum elong 5°**£**25′06 16°35'06 max. Earth dist. -2953 Sep 11 j 13:32 retrograde -2961 Dec 04 j 11:50 8°**Ω**01'35 retrograde -2953 Dec 25 j 11:49 28°**Ω**41'31 opposition -2960 Feb 19 j 04:36 6°**£**39′19 17°44'49 opposition -2952 Mar 11 j 10:38 27°**Ω**18′02 17°28'40 min. Earth dist. -2960 Feb 21 j 09:00 6°**Ω**35'39 29.39488 AU min. Earth dist. -2952 Mar 12 j 17:08 27°**Ω**15'54 28.72239 AU direct -2960 May 09 j 10:21 5°**Ω**13'33 direct -2952 May 30 j 09:37 25°**Ω**51'43 max. Earth dist. -2960 Aug 22 j 21:37 7°**Ω**50'21 31.24293 AU

conjunction

-2952 Sep 14 j 17:48 28° **Q**37'31 16°16'05

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Attention astronom		0 MOOR 7057 1		unting style is the year		ounting style	
minimum elong	nical year style is used: Th -2952 Sep 14 j 18:00	$28^{\circ}\Omega$ 37'32		retrograde	-2944 Jan 15 j 04:39	19° m 30'13	
max. Earth dist.	-2952 Sep 14 j 18:00 -2952 Sep 13 j 13:00		30.61584 AU	_	-2944 Apr 02 j 01:57	18° M) 06'56	15°02'47
max. Earm dist.	1 3		30.01364 AU	opposition	-2944 Apr 02 j 01:37	-	
	-2952 Oct 20 j 00:38	0° M)		min. Earth dist.		18° Mp 06'50 16° Mp 41'46	28.72717 AU
retrograde	-2952 Dec 27 j 09:26 -2951 Mar 11 j 18:42	1° m 19'05		direct	-2944 Jun 20 j 20:51	19° Mp 09'30	
	3	30°RΩ	17017100	evening set	-2944 Sep 29 j 06:46	19°11009'30	
opposition	-2951 Mar 14 j 09:48	29° Ω 55'33			2044.0 + 05:02.56	100 m -22141	12052117
min. Earth dist.	-2951 Mar 15 j 12:14		28.68356 AU	conjunction	-2944 Oct 05 j 03:56	19° Mp 23'41 19° Mp 23'44	13°52'16 13°52'17
direct	-2951 Jun 02 j 09:32	28° Ω 29'16		minimum elong	-2944 Oct 05 j 04:19	-	
	-2951 Aug 16 j 19:02	0° m		max. Earth dist.	-2944 Oct 05 j 04:50	-	30.69042 AU
	2051 G 17:14.04	10 m 14150	1 600 4107	morning rise	-2944 Oct 11 j 01:33	19° m 37'57	
conjunction	-2951 Sep 17 j 14:04	1° M) 14'58	16°04'27	retrograde	-2943 Jan 16 j 22:39	22° M 02'56	1.402.611.0
minimum elong	-2951 Sep 17 j 14:16	1° Mp 15'00	16°04'30	opposition	-2943 Apr 04 j 23:54	20° m/39'50	14°36'18
max. Earth dist.	-2951 Sep 16 j 12:19		30.58415 AU	min. Earth dist.	-2943 Apr 04 j 22:41		28.78084 AU
retrograde	-2951 Dec 30 j 06:42	3° M 56'35	17004102	direct	-2943 Jun 23 j 18:40	19° Mp 14'59	
opposition	-2950 Mar 17 j 09:13	2° Tp 33'00	17°04'03	evening set	-2943 Oct 01 j 01:26	21° m 39'34	
min. Earth dist.	-2950 Mar 18 j 09:19		28.65510 AU	:	2042 0-+ 07:21:20	210m 50100	1202(150
direct	-2950 Jun 05 j 06:51	1°Mp06'46		conjunction	-2943 Oct 07 j 21:30	21° m 56'00	13°26'50
	2050 0 20:10.02	20m 52H 4	15050156	minimum elong	-2943 Oct 07 j 21:54	21° m 56'02	13°26'52
conjunction	-2950 Sep 20 j 10:03	3° m 52'14	15°50'56	max. Earth dist.	-2943 Oct 08 j 01:02		30.75349 AU
minimum elong	-2950 Sep 20 j 10:18	3° M 52'16	15°50'59	morning rise	-2943 Oct 14 j 18:05	22° m 12'30	
max. Earth dist.	-2950 Sep 19 j 12:15		30.56338 AU	retrograde	-2942 Jan 19 j 18:51	24° m/34'35	1.400011.5
retrograde	-2949 Jan 02 j 02:28	6° Mp 33'46	1.60.40141	opposition	-2942 Apr 07 j 21:17	23° m 11'40	14°08'17
opposition	-2949 Mar 20 j 08:26	5° mp 10'10	16°48'41	min. Earth dist.	-2942 Apr 07 j 15:42		28.84546 AU
min. Earth dist.	-2949 Mar 21 j 04:26		28.63731 AU	direct	-2942 Jun 26 j 17:12	21° m/47'08	
direct	-2949 Jun 08 j 07:09	3° Mp 44'01		evening set	-2942 Oct 02 j 22:02	24° Mp 08'48	
max. Earth dist.	-2949 Sep 22 j 10:53	6°m)27'11	30.55383 AU				
				conjunction	-2942 Oct 10 j 14:38	24° m/27'11	13°00'03
conjunction	-2949 Sep 23 j 05:49	6° Mp 29'07	15°35'34	minimum elong	-2942 Oct 10 j 15:03	24° m/27'13	13°00'03
minimum elong	-2949 Sep 23 j 06:05	6° Mp 29'09	15°35'36	max. Earth dist.	-2942 Oct 10 j 22:15		30.82707 AU
retrograde	-2948 Jan 04 j 22:20	9° m 10'29		morning rise	-2942 Oct 18 j 07:39	24° m/45'38	
opposition	-2948 Mar 22 j 07:30	7° Mp 46'52	16°31'19	retrograde	-2941 Jan 22 j 11:53	27° m 05'02	
min. Earth dist.	-2948 Mar 23 j 00:30		28.63098 AU	opposition	-2941 Apr 10 j 18:20	25° m/42'18	13°38'51
direct	-2948 Jun 10 j 04:41	6° Mp 20'49		min. Earth dist.	-2941 Apr 10 j 10:35		28.92022 AU
max. Earth dist.	-2948 Sep 24 j 11:10	9° m) 04′02	30.55631 AU	direct	-2941 Jun 29 j 13:44	24° m 18'06	
	2040.0 25:01.25	00 m 05100	1.501.0100	evening set	-2941 Oct 04 j 20:18	26° Mp 36'58	
conjunction	-2948 Sep 25 j 01:25	9° m, 05'29	15°18'22		2041.0 / 12:07.16	2 (0 m 5710 (12021150
minimum elong	-2948 Sep 25 j 01:44	9° m 05'31	15°18'23	conjunction	-2941 Oct 13 j 07:16	26° m 57'06	12°31'59
retrograde	-2947 Jan 06 j 17:40	11° m/46'35	1.601.1150	minimum elong	-2941 Oct 13 j 07:41	26° m 57'08	12°32'00
opposition	-2947 Mar 25 j 06:34	10° m/22'59		max. Earth dist.	-2941 Oct 13 j 17:37	26° m) 58'07	30.91065 AU
min. Earth dist.	-2947 Mar 25 j 19:39	10011077707			2011 0 : 21 : 10 10	0.50 m 1.511.6	
direct	-		28.63654 AU	morning rise	-2941 Oct 21 j 18:40	27° m 17'16	
	-2947 Jun 13 j 03:34	8° Mp 57'06	28.63654 AU	retrograde	-2940 Jan 25 j 05:56	29° m 34'07	
	-2947 Jun 13 j 03:34	8° m 57'06		retrograde opposition	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38	29° m 34'07 28° m 11'36	13°08'07
conjunction	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27	8° m 57'06 11° m 41'11	14°59'21	retrograde opposition min. Earth dist.	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43	29° m/34'07 28° m/11'36 28° m/12'25	13°08'07 29.00457 AU
minimum elong	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27 -2947 Sep 27 j 20:47	8° m 57'06 11° m 41'11 11° m 41'13		retrograde opposition min. Earth dist. direct	-2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43 -2940 Jul 01 j 11:34	29° m/34'07 28° m/11'36 28° m/12'25 26° m/47'44	
minimum elong evening set	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27 -2947 Sep 27 j 20:47 -2947 Sep 27 j 07:03	8° m 57'06 11° m 41'11 11° m 41'13 11° m 39'50	14°59'21 14°59'23	retrograde opposition min. Earth dist.	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43	29° m/34'07 28° m/11'36 28° m/12'25	
minimum elong evening set max. Earth dist.	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27 -2947 Sep 27 j 20:47 -2947 Sep 27 j 07:03 -2947 Sep 27 j 09:08	8° my 57'06 11° my 41'11 11° my 41'13 11° my 39'50 11° my 40'02	14°59'21	retrograde opposition min. Earth dist. direct evening set	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43 -2940 Jul 01 j 11:34 -2940 Oct 05 j 19:28	29° m 34'07 28° m 11'36 28° m 12'25 26° m 47'44 29° m 03'55	29.00457 AU
minimum elong evening set max. Earth dist. morning rise	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27 -2947 Sep 27 j 20:47 -2947 Sep 27 j 07:03 -2947 Sep 27 j 09:08 -2947 Sep 28 j 10:32	8°m,57'06 11°m,41'11 11°m,41'13 11°m,39'50 11°m,40'02 11°m,42'37	14°59'21 14°59'23	retrograde opposition min. Earth dist. direct evening set conjunction	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43 -2940 Jul 01 j 11:34 -2940 Oct 05 j 19:28 -2940 Oct 14 j 23:24	29° m 34'07 28° m 11'36 28° m 12'25 26° m 47'44 29° m 03'55 29° m 25'36	29.00457 AU 12°02'47
minimum elong evening set max. Earth dist. morning rise retrograde	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27 -2947 Sep 27 j 20:47 -2947 Sep 27 j 07:03 -2947 Sep 27 j 09:08 -2947 Sep 28 j 10:32 -2946 Jan 09 j 13:58	8° my 57'06 11° my 41'11 11° my 41'13 11° my 39'50 11° my 40'02 11° my 42'37 14° my 21'57	14°59'21 14°59'23 30.57119 AU	retrograde opposition min. Earth dist. direct evening set conjunction minimum elong	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43 -2940 Jul 01 j 11:34 -2940 Oct 05 j 19:28 -2940 Oct 14 j 23:24 -2940 Oct 14 j 23:49	29° m 34'07 28° m 11'36 28° m 12'25 26° m 47'44 29° m 03'55 29° m 25'36 29° m 25'38	29.00457 AU 12°02'47 12°02'46
minimum elong evening set max. Earth dist. morning rise retrograde opposition	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27 -2947 Sep 27 j 20:47 -2947 Sep 27 j 07:03 -2947 Sep 27 j 09:08 -2947 Sep 28 j 10:32 -2946 Jan 09 j 13:58 -2946 Mar 28 j 05:24	8° my 57'06 11° my 41'11 11° my 41'13 11° my 39'50 11° my 40'02 11° my 42'37 14° my 21'57 12° my 58'25	14°59'21 14°59'23 30.57119 AU 15°50'43	retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43 -2940 Jul 01 j 11:34 -2940 Oct 05 j 19:28 -2940 Oct 14 j 23:24 -2940 Oct 14 j 23:49 -2940 Oct 15 j 12:57	29° m 34'07 28° m 11'36 28° m 12'25 26° m 47'44 29° m 03'55 29° m 25'36 29° m 25'38 29° m 26'56	29.00457 AU 12°02'47
minimum elong evening set max. Earth dist. morning rise retrograde opposition min. Earth dist.	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27 -2947 Sep 27 j 20:47 -2947 Sep 27 j 07:03 -2947 Sep 27 j 09:08 -2947 Sep 28 j 10:32 -2946 Jan 09 j 13:58 -2946 Mar 28 j 05:24 -2946 Mar 28 j 14:33	8° my 57'06 11° my 41'11 11° my 41'13 11° my 39'50 11° my 40'02 11° my 42'37 14° my 21'57 12° my 58'25 12° my 57'47	14°59'21 14°59'23 30.57119 AU	retrograde opposition min. Earth dist. direct evening set conjunction minimum elong	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43 -2940 Jul 01 j 11:34 -2940 Oct 05 j 19:28 -2940 Oct 14 j 23:24 -2940 Oct 14 j 23:49 -2940 Oct 15 j 12:57 -2940 Oct 24 j 03:44	29° m 34'07 28° m 11'36 28° m 12'25 26° m 47'44 29° m 03'55 29° m 25'36 29° m 26'56 29° m 47'19	29.00457 AU 12°02'47 12°02'46
minimum elong evening set max. Earth dist. morning rise retrograde opposition min. Earth dist. direct	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27 -2947 Sep 27 j 20:47 -2947 Sep 27 j 07:03 -2947 Sep 27 j 09:08 -2947 Sep 28 j 10:32 -2946 Jan 09 j 13:58 -2946 Mar 28 j 05:24 -2946 Mar 28 j 14:33 -2946 Jun 16 j 01:02	8° my 57'06 11° my 41'11 11° my 41'13 11° my 39'50 11° my 40'02 11° my 42'37 14° my 21'57 12° my 58'25 12° my 57'47 11° my 32'44	14°59'21 14°59'23 30.57119 AU 15°50'43	retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43 -2940 Jul 01 j 11:34 -2940 Oct 05 j 19:28 -2940 Oct 14 j 23:24 -2940 Oct 14 j 23:49 -2940 Oct 15 j 12:57 -2940 Oct 24 j 03:44 -2940 Oct 29 j 14:13	29° m 34'07 28° m 11'36 28° m 12'25 26° m 47'44 29° m 03'55 29° m 25'36 29° m 25'38 29° m 26'56 29° m 47'19 0° <u>0</u>	29.00457 AU 12°02'47 12°02'46
minimum elong evening set max. Earth dist. morning rise retrograde opposition min. Earth dist.	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27 -2947 Sep 27 j 20:47 -2947 Sep 27 j 07:03 -2947 Sep 27 j 09:08 -2947 Sep 28 j 10:32 -2946 Jan 09 j 13:58 -2946 Mar 28 j 05:24 -2946 Mar 28 j 14:33	8° my 57'06 11° my 41'11 11° my 41'13 11° my 39'50 11° my 40'02 11° my 42'37 14° my 21'57 12° my 58'25 12° my 57'47	14°59'21 14°59'23 30.57119 AU 15°50'43	retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43 -2940 Jul 01 j 11:34 -2940 Oct 05 j 19:28 -2940 Oct 14 j 23:24 -2940 Oct 14 j 23:49 -2940 Oct 24 j 03:44 -2940 Oct 29 j 14:13 -2939 Jan 26 j 23:02	29° m 34'07 28° m 11'36 28° m 12'25 26° m 47'44 29° m 03'55 29° m 25'36 29° m 25'38 29° m 26'56 29° m 47'19 0° <u>a</u> 2° <u>a</u> 01'44	29.00457 AU 12°02'47 12°02'46 31.00354 AU
minimum elong evening set max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27 -2947 Sep 27 j 20:47 -2947 Sep 27 j 07:03 -2947 Sep 27 j 09:08 -2947 Sep 28 j 10:32 -2946 Jan 09 j 13:58 -2946 Mar 28 j 05:24 -2946 Mar 28 j 14:33 -2946 Jun 16 j 01:02 -2946 Sep 27 j 07:02	8° my 57'06 11° my 41'11 11° my 41'13 11° my 40'02 11° my 40'02 11° my 42'37 14° my 21'57 12° my 58'25 12° my 57'47 11° my 32'44 14° my 08'02	14°59'21 14°59'23 30.57119 AU 15°50'43 28.65456 AU	retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43 -2940 Jul 01 j 11:34 -2940 Oct 05 j 19:28 -2940 Oct 14 j 23:24 -2940 Oct 14 j 23:49 -2940 Oct 15 j 12:57 -2940 Oct 24 j 03:44 -2940 Oct 29 j 14:13 -2939 Jan 26 j 23:02 -2939 Apr 15 j 10:40	29° m 34'07 28° m 11'36 28° m 12'25 26° m 47'44 29° m 03'55 29° m 25'36 29° m 25'38 29° m 26'56 29° m 47'19 0° <u>a</u> 2° <u>a</u> 01'44 0° <u>a</u> 39'24	29.00457 AU 12°02'47 12°02'46 31.00354 AU 12°36'11
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minimum elong evening set max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist.	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27 -2947 Sep 27 j 20:47 -2947 Sep 27 j 07:03 -2947 Sep 27 j 09:08 -2947 Sep 28 j 10:32 -2946 Jun 09 j 13:58 -2946 Mar 28 j 05:24 -2946 Mar 28 j 14:33 -2946 Jun 16 j 01:02 -2946 Sep 27 j 07:02 -2946 Sep 30 j 15:48 -2946 Sep 30 j 09:03 -2946 Oct 04 j 00:27 -2945 Jan 12 j 08:16 -2945 Mar 31 j 03:49 -2945 Mar 31 j 09:37	8° my 57'06 11° my 41'11 11° my 41'13 11° my 40'02 11° my 40'02 11° my 42'37 14° my 21'57 12° my 58'25 12° my 57'47 11° my 32'44 14° my 16'13 14° my 16'13 14° my 16'13 14° my 16'33 14° my 24'24 16° my 56'31 15° my 33'06 15° my 32'41	14°59'21 14°59'23 30.57119 AU 15°50'43 28.65456 AU 14°38'37 14°38'38 30.59874 AU	retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43 -2940 Jul 01 j 11:34 -2940 Oct 05 j 19:28 -2940 Oct 14 j 23:24 -2940 Oct 15 j 12:57 -2940 Oct 24 j 03:44 -2940 Oct 29 j 14:13 -2939 Jan 26 j 23:02 -2939 Apr 15 j 10:40 -2939 Apr 14 j 20:28 -2939 May 10 j 13:27 -2939 Aug 25 j 06:10 -2939 Oct 07 j 19:23 -2939 Oct 17 j 14:49 -2939 Oct 17 j 15:14 -2939 Oct 18 j 07:31	29° m 34'07 28° m 11'36 28° m 12'25 26° m 47'44 29° m 03'55 29° m 25'36 29° m 25'38 29° m 26'56 29° m 47'19 0° a 2° a 01'44 0° a 39'24 0° a 40'22 30° R m 29° m 15'53 0° a 1° a 29'29 1° a 52'33 1° a 52'33 1° a 54'11	29.00457 AU 12°02'47 12°02'46 31.00354 AU 12°36'11 29.09820 AU
minimum elong evening set max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27 -2947 Sep 27 j 20:47 -2947 Sep 27 j 07:03 -2947 Sep 27 j 09:08 -2947 Sep 28 j 10:32 -2946 Jun 09 j 13:58 -2946 Mar 28 j 05:24 -2946 Mar 28 j 14:33 -2946 Jun 16 j 01:02 -2946 Sep 27 j 07:02 -2946 Sep 30 j 15:26 -2946 Sep 30 j 15:48 -2946 Sep 30 j 09:03 -2946 Oct 04 j 00:27 -2945 Jun 12 j 08:16 -2945 Mar 31 j 03:37 -2945 Jun 18 j 24:00 -2945 Sep 28 j 15:34	8° my 57'06 11° my 41'11 11° my 41'13 11° my 40'02 11° my 42'37 14° my 21'57 12° my 58'25 12° my 57'47 11° my 32'44 14° my 16'11 14° my 16'13 14° my 15'32 14° my 24'24 16° my 56'31 15° my 33'06 15° my 32'41 14° my 07'39 16° my 38'50	14°59'21 14°59'23 30.57119 AU 15°50'43 28.65456 AU 14°38'37 14°38'38 30.59874 AU 15°27'38 28.68483 AU	retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43 -2940 Jul 01 j 11:34 -2940 Oct 05 j 19:28 -2940 Oct 14 j 23:24 -2940 Oct 15 j 12:57 -2940 Oct 24 j 03:44 -2940 Oct 29 j 14:13 -2939 Jan 26 j 23:02 -2939 Apr 15 j 10:40 -2939 Apr 14 j 20:28 -2939 May 10 j 13:27 -2939 Jul 04 j 07:46 -2939 Apr 25 j 06:10 -2939 Oct 07 j 19:23 -2939 Oct 17 j 14:49 -2939 Oct 17 j 15:14 -2939 Oct 17 j 15:14 -2939 Oct 17 j 15:14	29° m 34'07 28° m 11'36 28° m 12'25 26° m 47'44 29° m 03'55 29° m 25'36 29° m 25'38 29° m 26'56 29° m 47'19 0° Ω 2° Ω 01'44 0° Ω 39'24 0° Ω 40'22 30° R m 29° m 15'53 0° Ω 1° Ω 29'29 1° Ω 52'33 1° Ω 52'33 1° Ω 52'35 1° Ω 54'11 2° Ω 15'38	29.00457 AU 12°02'47 12°02'46 31.00354 AU 12°36'11 29.09820 AU 11°32'30 11°32'31
minimum elong evening set max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27 -2947 Sep 27 j 20:47 -2947 Sep 27 j 07:03 -2947 Sep 27 j 09:08 -2947 Sep 28 j 10:32 -2946 Jun 09 j 13:58 -2946 Mar 28 j 05:24 -2946 Mar 28 j 14:33 -2946 Jun 16 j 01:02 -2946 Sep 27 j 07:02 -2946 Sep 30 j 15:26 -2946 Sep 30 j 15:48 -2946 Sep 30 j 09:03 -2946 Oct 04 j 00:27 -2945 Jun 12 j 08:16 -2945 Mar 31 j 09:37 -2945 Jun 18 j 24:00 -2945 Sep 28 j 15:34	8° my 57'06 11° my 41'11 11° my 41'13 11° my 40'02 11° my 40'02 11° my 42'37 14° my 21'57 12° my 58'25 12° my 57'47 11° my 32'44 14° my 08'02 14° my 16'11 14° my 16'13 14° my 15'32 14° my 24'24 16° my 56'31 15° my 33'06 15° my 32'41 14° my 07'39 16° my 38'50	14°59'21 14°59'23 30.57119 AU 15°50'43 28.65456 AU 14°38'37 14°38'38 30.59874 AU 15°27'38 28.68483 AU	retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. direct	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43 -2940 Jul 01 j 11:34 -2940 Oct 05 j 19:28 -2940 Oct 14 j 23:24 -2940 Oct 15 j 12:57 -2940 Oct 24 j 03:44 -2940 Oct 29 j 14:13 -2939 Jan 26 j 23:02 -2939 Apr 15 j 10:40 -2939 Apr 14 j 20:28 -2939 May 10 j 13:27 -2939 Jul 04 j 07:46 -2939 Aug 25 j 06:10 -2939 Oct 07 j 19:23 -2939 Oct 17 j 14:49 -2939 Oct 17 j 15:14 -2939 Oct 18 j 07:31 -2939 Oct 27 j 10:34 -2938 Jan 29 j 14:20	29° m 34'07 28° m 11'36 28° m 12'25 26° m 47'44 29° m 03'55 29° m 25'36 29° m 25'36 29° m 26'56 29° m 47'19 0° \(\Omega\) 2° \(\Omega\) 01'44 0° \(\Omega\) 30° R m 29° m 15'53 0° \(\Omega\) 1° \(\Omega\) 29'29 1° \(\Omega\) 29' \(\Omega\) 1° \(\Omega\) 29'29 1° \(\Omega\) 29'33 1° \(\Omega\) 29'33 1° \(\Omega\) 29'34 1° \(\Omega\) 29'35 1° \(\Omega\) 29'34 29'34 29'34 29'34 29'34 29'34 29'34 29'34 29'44 29'	29.00457 AU 12°02'47 12°02'46 31.00354 AU 12°36'11 29.09820 AU 11°32'30 11°32'31 31.10560 AU
minimum elong evening set max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction min. Earth dist. direct evening set	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27 -2947 Sep 27 j 20:47 -2947 Sep 27 j 07:03 -2947 Sep 27 j 09:08 -2947 Sep 28 j 10:32 -2946 Jun 09 j 13:58 -2946 Mar 28 j 05:24 -2946 Mar 28 j 14:33 -2946 Jun 16 j 01:02 -2946 Sep 27 j 07:02 -2946 Sep 30 j 15:26 -2946 Sep 30 j 15:48 -2946 Sep 30 j 09:03 -2946 Oct 04 j 00:27 -2945 Jun 18 j 24:00 -2945 Sep 28 j 15:34 -2945 Oct 03 j 09:51 -2945 Oct 03 j 09:51	8° my 57'06 11° my 41'11 11° my 41'13 11° my 40'02 11° my 40'02 11° my 42'37 14° my 21'57 12° my 58'25 12° my 57'47 11° my 32'44 14° my 08'02 14° my 16'11 14° my 16'13 14° my 15'32 14° my 24'24 16° my 56'31 15° my 32'41 14° my 07'39 16° my 38'50 16° my 50'23 16° my 50'23 16° my 50'23	14°59'21 14°59'23 30.57119 AU 15°50'43 28.65456 AU 14°38'37 14°38'38 30.59874 AU 15°27'38 28.68483 AU	retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43 -2940 Jul 01 j 11:34 -2940 Oct 05 j 19:28 -2940 Oct 14 j 23:24 -2940 Oct 14 j 23:49 -2940 Oct 15 j 12:57 -2940 Oct 24 j 03:44 -2940 Oct 29 j 14:13 -2939 Jan 26 j 23:02 -2939 Apr 15 j 10:40 -2939 Apr 14 j 20:28 -2939 May 10 j 13:27 -2939 Jul 04 j 07:46 -2939 Apr 25 j 06:10 -2939 Oct 07 j 19:23 -2939 Oct 17 j 14:49 -2939 Oct 17 j 15:14 -2939 Oct 18 j 07:31 -2939 Oct 27 j 10:34 -2938 Jan 29 j 14:20 -2938 Apr 18 j 05:55	29° m 34'07 28° m 11'36 28° m 12'25 26° m 47'44 29° m 03'55 29° m 25'36 29° m 25'38 29° m 26'56 29° m 47'19 0° Ω 2° Ω 01'44 0° Ω 39'24 0° Ω 40'22 30° R m 29° m 15'53 0° Ω 1° Ω 29'29 1° Ω 52'33 1° Ω 52'35 1° Ω 54'11 2° Ω 15'38 4° Ω 27'42 3° Ω 05'36	29.00457 AU 12°02'47 12°02'46 31.00354 AU 12°36'11 29.09820 AU 11°32'30 11°32'31 31.10560 AU 12°03'11
minimum elong evening set max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set	-2947 Jun 13 j 03:34 -2947 Sep 27 j 20:27 -2947 Sep 27 j 20:47 -2947 Sep 27 j 07:03 -2947 Sep 27 j 09:08 -2947 Sep 28 j 10:32 -2946 Jun 09 j 13:58 -2946 Mar 28 j 05:24 -2946 Mar 28 j 14:33 -2946 Jun 16 j 01:02 -2946 Sep 27 j 07:02 -2946 Sep 30 j 15:26 -2946 Sep 30 j 15:48 -2946 Sep 30 j 09:03 -2946 Oct 04 j 00:27 -2945 Jun 12 j 08:16 -2945 Mar 31 j 09:37 -2945 Jun 18 j 24:00 -2945 Sep 28 j 15:34	8° my 57'06 11° my 41'11 11° my 41'13 11° my 40'02 11° my 40'02 11° my 42'37 14° my 21'57 12° my 58'25 12° my 57'47 11° my 32'44 14° my 08'02 14° my 16'11 14° my 16'13 14° my 15'32 14° my 24'24 16° my 56'31 15° my 32'41 14° my 07'39 16° my 38'50 16° my 50'23 16° my 50'23 16° my 50'23	14°59'21 14°59'23 30.57119 AU 15°50'43 28.65456 AU 14°38'37 14°38'38 30.59874 AU 15°27'38 28.68483 AU	retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. direct	-2940 Jan 25 j 05:56 -2940 Apr 12 j 14:38 -2940 Apr 12 j 02:43 -2940 Jul 01 j 11:34 -2940 Oct 05 j 19:28 -2940 Oct 14 j 23:24 -2940 Oct 15 j 12:57 -2940 Oct 24 j 03:44 -2940 Oct 29 j 14:13 -2939 Jan 26 j 23:02 -2939 Apr 15 j 10:40 -2939 Apr 14 j 20:28 -2939 May 10 j 13:27 -2939 Jul 04 j 07:46 -2939 Aug 25 j 06:10 -2939 Oct 07 j 19:23 -2939 Oct 17 j 14:49 -2939 Oct 17 j 15:14 -2939 Oct 18 j 07:31 -2939 Oct 27 j 10:34 -2938 Jan 29 j 14:20	29° m 34'07 28° m 11'36 28° m 12'25 26° m 47'44 29° m 03'55 29° m 25'36 29° m 25'38 29° m 26'56 29° m 47'19 0° Ω 2° Ω 01'44 0° Ω 39'24 0° Ω 40'22 30° R m 29° m 15'53 0° Ω 1° Ω 29'29 1° Ω 52'33 1° Ω 52'35 1° Ω 54'11 2° Ω 15'38 4° Ω 27'42 3° Ω 05'36	29.00457 AU 12°02'47 12°02'46 31.00354 AU 12°36'11 29.09820 AU 11°32'30 11°32'31 31.10560 AU

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 34 Attention, astronomical year style is used: The year -2938 in astronomical counting style is the year 2939 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	e year -2938 i	in astronomical co	unting style is the year	r 2939 BCE in historical c	ounting style.	
evening set	-2938 Oct 09 j 19:52	3° ₾ 53'30		min. Earth dist.	-2931 May 03 j 08:17	19° ≏ 20'46	30.17990 AU
				opposition	-2931 May 05 j 00:06	19° ≙ 18′10	7°50'21
conjunction	-2938 Oct 20 j 05:36	4° ₽ 17'48	11°01'16	direct	-2931 Jul 23 j 23:31	17° ≏ 57'41	
minimum elong	-2938 Oct 20 j 06:01	4° £ 17'50	11°01'16	evening set	-2931 Oct 22 j 05:37	19° ≙ 53'51	
max. Earth dist.	-2938 Oct 21 j 00:48	4° ₽ 19'40	31.21641 AU	-	-		
morning rise	-2938 Oct 30 j 15:49	4° ₽ 42'08		conjunction	-2931 Nov 04 j 16:22	20° ഫ 23'37	7°03'29
retrograde	-2937 Feb 01 j 04:37	6° £ 51'56		minimum elong	-2931 Nov 04 j 16:39	20° ₽ 23'39	7°03'27
min. Earth dist.	-2937 Apr 20 j 03:52	5° ₽ 31'25	29.31224 AU	max. Earth dist.	-2931 Nov 06 j 09:08	20° ≏ 27'24	32.25152 AU
opposition	-2937 Apr 21 j 00:22	5° ₾ 30'02	11°29'11	morning rise	-2931 Nov 18 j 03:46	20° م 53'27	
direct	-2937 Jul 09 i 22:52	4° ₽ 07'10		retrograde	-2930 Feb 16 j 16:23	22° ≏ 50′00	
evening set	-2937 Oct 11 j 20:40	6° £ 15'51		min. Earth dist.	-2930 May 05 j 20:02	21° ≏ 32'46	30.35581 AU
8	,			opposition	-2930 May 07 j 13:34	21° ≏ 30'04	
conjunction	-2937 Oct 22 j 19:44	6° Ω 41'15	10°29'10	direct	-2930 Jul 26 j 12:48	20° ♀ 10'03	
minimum elong	-2937 Oct 22 j 20:07	6° £ 41'17	10°29'11	evening set	-2930 Oct 24 j 07:38	22° ഫ 04'27	
max. Earth dist.	-2937 Oct 23 j 18:41		31.33627 AU	evening sec	2,50 ot 2., 07.50	22 — \$: 2 ;	
morning rise	-2937 Nov 02 j 19:02	7° ჲ 06'41	31.3302, 110	conjunction	-2930 Nov 07 j 01:29	22° ≏ 34'38	6°27'53
retrograde	-2936 Feb 03 j 17:13	9° ₽ 14'19		minimum elong	-2930 Nov 07 j 01:45	22° △ 34'39	
opposition	-2936 Apr 22 j 18:11	7° ჲ 52'38	10°54'20	max. Earth dist.	-2930 Nov 08 j 20:30		32.43374 AU
min. Earth dist.	-2936 Apr 21 j 18:35		29.43284 AU	morning rise	-2930 Nov 20 j 19:58	23° £ 04'52	32.43374710
direct	-2936 Jul 11 j 18:15	6° ₽ 30'06	2).43204 AU	retrograde	-2929 Feb 19 j 01:42	24° £ 59'51	
evening set	-2936 Oct 12 j 21:42	8° ≏ 36'28		min. Earth dist.	-2929 May 08 j 05:19		30.53875 AU
evening set	-2930 Oct 12 j 21.42	8 = 30 28		opposition	-2929 May 10 j 01:56	23° ⊆ 40'17	
agniumation	2026 Oct. 24: 09:50	9° ჲ 02'50	9°56'18	direct	-2929 Jul 29 j 02:36	23 ≅ 40 17 22° ⊆ 20'43	0 3411
conjunction minimum elong	-2936 Oct 24 j 08:50 -2936 Oct 24 j 09:12	9° 2 02'53	9°56'16		·	22 ≥ 2043 24° ⊆ 13'27	
Č	•			evening set	-2929 Oct 26 j 09:47	24 == 13 27	
max. Earth dist.	-2936 Oct 25 j 10:04		31.46528 AU		2020 M 00 : 00 52	240 0 42157	5052110
morning rise	-2936 Nov 04 j 20:29	9° 2 29'16		conjunction	-2929 Nov 09 j 09:52	24° Ω 43'57	
retrograde	-2935 Feb 05 j 07:06	11° 2 34'50	20.56200 444	minimum elong	-2929 Nov 09 j 10:06	24° Ω 43'58	
min. Earth dist.	-2935 Apr 24 j 08:06		29.56309 AU	max. Earth dist.	-2929 Nov 11 j 06:52		32.62229 AU
opposition	-2935 Apr 25 j 11:20	10° ≏ 13'21	10°18'41	morning rise	-2929 Nov 23 j 10:51	25° 2 14'31	
direct	-2935 Jul 14 j 10:35	8° ≏ 51'11		retrograde	-2928 Feb 21 j 10:30	27° ₾ 08'02	
evening set	-2935 Oct 14 j 22:57	10° ≏ 55'18		min. Earth dist.	-2928 May 09 j 15:28		30.72808 AU
				opposition	-2928 May 11 j 13:54	25° ≏ 48'48	5°55'57
conjunction	-2935 Oct 26 j 21:28	11° ≏ 22'33	9°22'44	direct	-2928 Jul 30 j 14:38	24° ≏ 29'41	
minimum elong	-2935 Oct 26 j 21:50	11° ≏ 22'36		evening set	-2928 Oct 27 j 11:47	26° ≏ 20'47	
max. Earth dist.	-2935 Oct 28 j 02:55		31.60392 AU				
morning rise	-2935 Nov 07 j 20:15	11° ≏ 49'52		conjunction	-2928 Nov 10 j 17:36	26° ≏ 51'33	
retrograde	-2934 Feb 07 j 17:42	13° ≏ 53'26		minimum elong	-2928 Nov 10 j 17:49	26° ≏ 51'34	
min. Earth dist.	-2934 Apr 26 j 21:52		29.70309 AU	max. Earth dist.	-2928 Nov 12 j 17:18		32.81662 AU
opposition	-2934 Apr 28 j 03:41		9°42'21	morning rise	-2928 Nov 25 j 00:07	27° ≏ 22'23	
direct	-2934 Jul 17 j 03:49	11° ≏ 10′26		retrograde	-2927 Feb 22 j 17:19	29° ≏ 14'27	
evening set	-2934 Oct 17 j 00:29	13° ≏ 12'25		min. Earth dist.	-2927 May 12 j 00:32	27° ≏ 58'40	30.92286 AU
				opposition	-2927 May 14 j 01:04	27° ≏ 55'34	5°17'44
conjunction	-2934 Oct 29 j 09:11	13° ≏ 40'27		direct	-2927 Aug 02 j 04:18	26° ≏ 36'53	
minimum elong	-2934 Oct 29 j 09:32	13° ≏ 40′28	8°48'32	evening set	-2927 Oct 29 j 14:03	28° 亞 26'26	
max. Earth dist.	-2934 Oct 30 j 16:37	13° ≏ 43'26	31.75227 AU				
morning rise	-2934 Nov 10 j 18:29	14° ≏ 08'31		conjunction	-2927 Nov 13 j 00:39	28° ≏ 57'23	4°40'39
retrograde	-2933 Feb 10 j 06:39	16° ≙ 10′12		minimum elong	-2927 Nov 13 j 00:50	28° ≏ 57'24	4°40'37
min. Earth dist.	-2933 Apr 29 j 09:18	14° ≙ 51'31	29.85290 AU	max. Earth dist.	-2927 Nov 15 j 01:26	29° ≙ 01'46	33.01589 AU
opposition	-2933 Apr 30 j 19:12	14° ≏ 49'16	9°05'27	morning rise	-2927 Nov 27 j 12:21	29° ≏ 28'24	
direct	-2933 Jul 19 j 18:20	13° ≏ 27'54			-2927 Dec 13 j 01:44	0° M	
evening set	-2933 Oct 19 j 02:02	15° ≏ 27'51		retrograde	-2926 Feb 25 j 00:56	1° M 19'07	
				min. Earth dist.	-2926 May 14 j 08:27	0° M 03'47	31.12275 AU
conjunction	-2933 Oct 31 j 20:20	15° ≏ 56'33	8°13'55	opposition	-2926 May 16 j 11:23	0°M00'33	4°39'35
minimum elong	-2933 Oct 31 j 20:41	15° ≙ 56'35	8°13'53		-2926 May 16 j 20:01	30° ₽ Ω	
max. Earth dist.	-2933 Nov 02 j 07:44	15° ≏ 59'53	31.91000 AU	direct	-2926 Aug 04 j 14:10	28° ≏ 42'16	
morning rise	-2933 Nov 13 j 15:04	16° ≏ 25'18			-2926 Oct 16 j 14:33	0° M	
retrograde	-2932 Feb 12 j 16:56	18° ≏ 25'11		evening set	-2926 Oct 31 j 16:03	0°M30'20	
min. Earth dist.	-2932 Apr 30 j 22:12	17° ≏ 06'56	30.01200 AU	-	·		
opposition	-2932 May 02 j 10:02	17° ≏ 04'35		conjunction	-2926 Nov 15 j 07:07	1°M01'23	4°04'59
direct	-2932 Jul 21 j 08:22	15° ≏ 43'39		minimum elong	-2926 Nov 15 j 07:17	1° M 01'24	4°04'56
evening set	-2932 Oct 20 j 03:52	17° ≏ 41'40		max. Earth dist.	-2926 Nov 17 j 10:43		33.21979 AU
S				morning rise	-2926 Nov 29 j 23:03	1°M32'33	
conjunction	-2932 Nov 02 j 06:43	18° ≏ 10'56	7°38'51	retrograde	-2925 Feb 27 j 04:20	3°M21'56	
minimum elong	-2932 Nov 02 j 07:02	18° ⊆ 10'57		min. Earth dist.	-2925 May 16 j 16:52		31.32719 AU
max. Earth dist.	-2932 Nov 03 j 20:14		32.07672 AU	opposition	-2925 May 18 j 20:58	2°M03'41	4°01'36
morning rise	-2932 Nov 15 j 10:11	18° ⊆ 40'16		direct	-2925 Aug 07 j 01:14	0°M45'48	
retrograde	-2931 Feb 14 j 05:14	20° ₽ 38'26		evening set	-2925 Nov 02 j 18:04	2°M32'24	
					10.04	_ 1100000	

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 35

•	nical year style is used: Th		•	* *			C 33
conjunction	-2925 Nov 17 j 12:38	3°M03'31		8, ,	-2919 Dec 09 j 03:52	15° ™	
minimum elong	-2925 Nov 17 j 12:47	3°M03'32	3°29'26	morning rise	-2919 Dec 13 j 13:56	15°M08'46	
max. Earth dist.	-2925 Nov 19 j 17:00	3°M08'10	33.42806 AU	desc. node	-2919 Dec 22 j 21:34	15°M26'42	
morning rise	-2925 Dec 02 j 08:26	3°M34'45		retrograde	-2918 Mar 12 j 04:38	16°M50'45	
retrograde	-2924 Feb 29 j 10:08	5°M22'53		min. Earth dist.	-2918 May 30 j 00:55	15°M38'39	32.90103 AU
min. Earth dist.	-2924 May 17 j 22:41	4° ™ 08′22	31.53640 AU	opposition	-2918 Jun 01 j 18:21	15°M34'40	-0°15'28
opposition	-2924 May 20 j 05:38	4°M04'55	3°23'49		-2918 Jun 26 j 10:46	15°RM	
direct	-2924 Aug 08 j 09:11	2° ™ 47'24		direct	-2918 Aug 21 j 01:49	14°M19'32	
evening set	-2924 Nov 03 j 19:53	4° ™ 32'38			-2918 Oct 12 j 20:15	15° ™	
	202437 10:15.24	70 W 02146	207.400	evening set	-2918 Nov 15 j 04:38	15°M58'08	
conjunction	-2924 Nov 18 j 17:34	5°M03'46	2°54'09		2010 N 20 : 00.57	1.60 m 20110	0920157
minimum elong max. Earth dist.	-2924 Nov 18 j 17:41 -2924 Nov 21 j 00:48	5°M03'46	2 34 00 33.64095 AU	conjunction minimum elong	-2918 Nov 30 j 08:57 -2918 Nov 30 j 08:55	16°M28'19 16°M28'19	
morning rise	-2924 Nov 21 j 00:48 -2924 Dec 03 j 16:24	5°M34'59	33.04093 AO	max. Earth dist.	-2918 Dec 03 j 02:10		35.02291 AU
retrograde	-2923 Mar 02 j 13:56	7°M21'56		morning rise	-2918 Dec 15 j 15:01	16°M58'38	33.02271 110
min. Earth dist.	-2923 May 20 j 05:52		31.75070 AU	retrograde	-2917 Mar 14 j 06:40	18°M39'49	
opposition	-2923 May 22 j 13:44	6° ™ 04'15		min. Earth dist.	-2917 Jun 01 j 02:19		33.14416 AU
direct	-2923 Aug 10 j 16:57	4° ™ 47'06		opposition	-2917 Jun 03 j 22:02	17° M 24'06	-0°50'23
evening set	-2923 Nov 05 j 21:33	6°M31'03		direct	-2917 Aug 23 j 04:59	16°M09'23	
				evening set	-2917 Nov 17 j 05:43	17° M 47'07	
conjunction	-2923 Nov 20 j 21:41	7° M 02'07	2°19'05				
minimum elong	-2923 Nov 20 j 21:47	7° M ₀02'07		conjunction	-2917 Dec 02 j 09:28	18°M17'00	
max. Earth dist.	-2923 Nov 23 j 06:20		33.85893 AU	minimum elong	-2917 Dec 02 j 09:26	18° M 17′00	
morning rise	-2923 Dec 05 j 23:05	7°M33'18		max. Earth dist.	-2917 Dec 05 j 04:59		35.26708 AU
retrograde	-2922 Mar 04 j 19:03	9°M19'07	21.07025.444	morning rise	-2917 Dec 17 j 14:51	18°M47'03	
min. Earth dist.	-2922 May 22 j 09:56		31.97035 AU	retrograde	-2916 Mar 15 j 05:42	20°M27'30	22 20006 ATT
opposition direct	-2922 May 24 j 20:51 -2922 Aug 13 j 01:00	8°ጤ01'43 6°ጤ44'57	2*09'08	min. Earth dist. opposition	-2916 Jun 02 j 05:22 -2916 Jun 05 j 01:13	19°M12'08	33.38986 AU
evening set	-2922 Aug 13 j 01:00 -2922 Nov 07 j 23:14	8°M27'41		direct	-2916 Aug 24 j 08:32	17°M57'50	-1 24 44
evening set	2)22 110V 07 J 23.14	0 11027 41		evening set	-2916 Nov 18 j 06:52	19°M34'45	
conjunction	-2922 Nov 23 j 01:11	8°M58'39	1°44'19	evening sec	29101101 10 10 00.52	17 11051 15	
minimum elong	-2922 Nov 23 j 01:16	8°M58'39	1°44'15	conjunction	-2916 Dec 03 j 09:32	20°M04'19	-1°35'46
max. Earth dist.	-2922 Nov 25 j 12:03	9°M03'43	34.08203 AU	minimum elong	-2916 Dec 03 j 09:29	20°M04'19	
morning rise	-2922 Dec 08 j 04:35	9° ™ 29'44		max. Earth dist.	-2916 Dec 06 j 05:20	20°M09'54	35.51340 AU
retrograde	-2921 Mar 07 j 00:00	11°ML14'30		morning rise	-2916 Dec 18 j 13:56	20° M34'02	
min. Earth dist.	-2921 May 24 j 15:00		32.19554 AU	retrograde	-2915 Mar 17 j 07:04	22°M13'48	
opposition	-2921 May 27 j 03:13	9° ™ 57'24	1°32'19	min. Earth dist.	-2915 Jun 04 j 05:49		33.63750 AU
direct	-2921 Aug 15 j 06:44	8° ጤ 41'01		opposition	-2915 Jun 07 j 03:41	20°M58'47	-1°58'30
evening set	-2921 Nov 10 j 00:43	10° ™ 22'37		direct	-2915 Aug 26 j 09:58	19°M44'52	
conjunction	-2921 Nov 25 j 04:08	100 m 52127	1°09'54	evening set	-2915 Nov 20 j 07:55	21°M21'02	
minimum elong	-2921 Nov 25 j 04:08	10°M53'27 10°M53'27	1°09'51	conjunction	-2915 Dec 05 j 09:04	21°M50'15	2007/24
max. Earth dist.	-2921 Nov 23 j 04.11 -2921 Nov 27 j 17:01		34.31049 AU	minimum elong	-2915 Dec 05 j 08:59	21°M50'15	
morning rise	-2921 Dec 10 j 08:50	11°M24'24	34.51047710	max. Earth dist.	-2915 Dec 08 j 06:15		35.76098 AU
retrograde	-2920 Mar 08 j 02:16	13°M08'09		morning rise	-2915 Dec 20 j 12:05	22°M19'38	30.,0090110
min. Earth dist.	-2920 May 25 j 18:25		32.42598 AU	retrograde	-2914 Mar 19 j 07:47	23°M58'45	
opposition	-2920 May 28 j 08:54	11°M51'23	0°55'55	min. Earth dist.	-2914 Jun 06 j 07:45	22°M48'12	33.88636 AU
direct	-2920 Aug 16 j 13:54	10° M $_{3}5'25$		opposition	-2914 Jun 09 j 05:42	22°M44'03	-2°31'40
evening set	-2920 Nov 11 j 02:06	12° ™ 15'57		direct	-2914 Aug 28 j 10:11	21°M30'32	
				evening set	-2914 Nov 22 j 08:50	23°M05'58	
conjunction	-2920 Nov 26 j 06:11	12°M46'36	0°35'52				
minimum elong	-2920 Nov 26 j 06:12	12°M46'36	0°35'48	conjunction	-2914 Dec 07 j 08:13	23°M34'49	
max. Earth dist.	-2920 Nov 28 j 20:20		34.54379 AU	minimum elong	-2914 Dec 07 j 08:07	23°M34'48	2°38'34
morning rise	-2920 Dec 11 j 11:56	13°M.17'22 15°M.		max. Earth dist.	-2914 Dec 10 j 06:13	23°IL40'29 24°IL03'49	36.00943 AU
ratragrada	-2919 Mar 06 j 07:39	15°M00'13		morning rise	-2914 Dec 22 j 09:17	25°M42'18	
retrograde	-2919 Mar 10 j 04:53 -2919 Mar 14 j 01:35	15 11600 13 15°RM		retrograde min. Earth dist.	-2913 Mar 21 j 06:26 -2913 Jun 08 j 07:36		34.13587 AU
min. Earth dist.	-2919 May 27 j 21:40		32.66143 AU	opposition	-2913 Jun 11 j 06:46	24°M27'56	
opposition	-2919 May 30 j 14:03	13°M43'47		direct	-2913 Aug 30 j 13:19	23°M14'45	
direct	-2919 Aug 18 j 19:12	12°M28'14		evening set	-2913 Nov 24 j 09:41	24°M49'31	
evening set	-2919 Nov 13 j 03:20	14° ™ 07'46		٥	,		
	-			conjunction	-2913 Dec 09 j 06:38	25°M17'58	-3°09'00
conjunction	-2919 Nov 28 j 07:56	14°M38'12	0°02'18	minimum elong	-2913 Dec 09 j 06:32	25°M17'57	3°09'04
minimum elong	-2919 Nov 28 j 07:56	14°M38'12	0°02'15	max. Earth dist.	-2913 Dec 12 j 04:53		36.25835 AU
behind sun begin	-2919 Nov 28 j 01:34	14°M37'41		morning rise	-2913 Dec 24 j 05:37	25°M46'34	
behind sun end	-2919 Nov 28 j 14:17	14°M38'42		retrograde	-2912 Mar 22 j 05:52	27°M24'28	
max. Earth dist.	-2919 Dec 01 j 00:42	14° ∏ L43'39	34.78154 AU	min. Earth dist.	-2912 Jun 09 j 07:30	26°11114'37	34.38628 AU

Planetary Phenomena of Pluto from -3400 through -2898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -2912 in astronomical counting style is the year 2913 BCE in historical counting style. -2912 Jun 12 j 07:32 26°M10'23 -3°36'07 evening set -2906 Dec 06 j 10:03 6°**х** 17'33 opposition 24°M57'33 direct -2912 Aug 31 j 14:22 -2912 Nov 25 j 10:01 26°M31'39 -2906 Dec 20 j 05:24 6°\$\square\$42'41 -6°25'37 evening set conjunction -2906 Dec 20 j 05:13 6°**х** 42'40 6°25'42 minimum elong 26°M59'41 -3°38'56 -2912 Dec 10 j 04:31 -2906 Dec 23 j 10:00 6° ₹ 48'32 38.03646 AU conjunction max. Earth dist. -2912 Dec 10 j 04:24 26°M59'41 3°39'01 -2905 Jan 03 j 02:48 7°**∡**'07'58 minimum elong morning rise -2912 Dec 13 j 04:34 -2905 Apr 03 j 05:08 8°**х** 42′54 max. Earth dist. 27°M05'26 36.50811 AU retrograde 7°**∡**°35′20 36.17932 AU -2912 Dec 25 j 00:44 -2905 Jun 21 j 13:48 morning rise 27°M27'52 min. Earth dist. -2905 Jun 24 j 19:45 7°**∡**30'55 -7°00'41 retrograde -2911 Mar 24 j 02:03 29°M05'13 opposition min. Earth dist. -2911 Jun 11 j 07:15 27°M55'39 34.63765 AU direct -2905 Sep 13 j 03:23 6°**х** 20′27 opposition -2911 Jun 14 j 07:36 27° **M** $_{5}$ 1'25 -4° 07'23 evening set -2905 Dec 08 j 09:33 7°**∡**751'20 direct -2911 Sep 02 j 16:48 26°M38'54 -2911 Nov 27 j 10:29 -2905 Dec 22 j 00:10 evening set 28°M12'25 conjunction 8°**х** 15′55 -6°51′11 minimum elong -2905 Dec 21 j 23:59 8° ₹ 15'54 6°51'16 conjunction -2911 Dec 12 j 01:50 28°M40'00 -4°08'16 max. Earth dist. -2905 Dec 25 j 06:14 8°**≯**21'50 38.29451 AU minimum elong -2911 Dec 12 j 01:43 28°M39'59 4°08'20 morning rise -2904 Jan 04 j 16:30 8°**х** 40′40 max. Earth dist. -2911 Dec 15 j 01:53 28°M45'42 36.75897 AU retrograde -2904 Apr 03 j 21:54 10°**₹**15'20 morning rise -2911 Dec 26 j 19:12 29°M07'45 min. Earth dist. -2904 Jun 22 j 10:32 9°**₹**08'03 36.43898 AU -2910 Jan 26 j 20:39 0°×7 opposition -2904 Jun 25 j 16:07 9°**∡**03'39 -7°27'10 retrograde -2910 Mar 25 j 22:37 0°**∡**744'34 direct -2904 Sep 14 j 01:23 7°**х** 53′32 -2910 May 26 j 00:29 30°RM evening set -2904 Dec 09 j 09:05 9°**х** 24′06 min. Earth dist. -2910 Jun 13 j 04:44 29°M35'22 34.89063 AU opposition -2910 Jun 16 i 06:53 29°M31'03 -4°37'59 conjunction -2904 Dec 22 j 18:24 9°**х** 48′09 -7°16′08 direct -2910 Sep 04 i 16:21 28°M18'52 minimum elong -2904 Dec 22 j 18:12 9°**х** 48′08 7°16′13 -2904 Dec 25 j 23:46 evening set -2910 Nov 29 j 10:39 29°M51'49 max. Earth dist. 9° ₹753'59 38.55193 AU -2910 Dec 03 j 20:34 0°×7 -2903 Jan 05 j 05:37 10°**∡**12'21 morning rise -2903 Apr 05 j 15:10 11°**∡** 46'47 retrograde -2910 Dec 13 j 22:44 0°**х** 18'57 -4°37'00 -2903 Jun 24 j 05:21 10°**₹**39'50 36.69777 AU conjunction min. Earth dist. -2910 Dec 13 j 22:35 -2903 Jun 27 j 12:03 10°**∡** 35′24 -7°52′58 0° x7 18'56 4°37'05 opposition minimum elong 0°**∡**′24'47 37.01136 AU -2910 Dec 17 j 00:47 -2903 Sep 15 j 22:25 9°×25'36 max. Earth dist. direct -2910 Dec 28 j 12:41 -2903 Dec 11 j 08:34 10°**х** 55'54 0°**х** 46′14 morning rise evening set retrograde -2909 Mar 27 j 17:34 2°**х** 22′37 -2909 Jun 15 j 03:38 -2903 Dec 24 j 12:31 11°**∡**19'23 -7°40'28 1°**≯**13'40 35.14534 AU conjunction min. Earth dist. -2903 Dec 24 j 12:19 -2909 Jun 18 j 05:46 1°**₹**09'22 -5°07'54 11°**х** 19'22 7°40'33 opposition minimum elong -2903 Dec 27 j 18:55 -2909 Aug 24 j 07:40 11°**尽**25′15 38.80791 AU 30°R,ML max. Earth dist. 11°**∡**⁴43'01 -2909 Sep 06 j 16:16 29°M57'32 -2902 Jan 06 j 18:15 direct morning rise -2909 Sep 19 j 18:17 -2902 Apr 07 j 08:16 0°**∡** retrograde 13°**∡**17'14 evening set -2909 Dec 01 j 10:38 1°×29'58 min. Earth dist. -2902 Jun 26 j 01:50 12°**✗**10′29 36.95489 AU opposition -2902 Jun 29 j 07:28 12°**₹**06'08 -8°18'07 conjunction -2909 Dec 15 j 19:00 1°**∡** 56'37 -5°05'06 direct -2902 Sep 17 j 18:32 10°**х** 56'38 minimum elong -2909 Dec 15 j 18:50 1°**₹**56'36 5°05'10 evening set -2902 Dec 13 j 08:00 12°**х** 26′40 max. Earth dist. -2909 Dec 18 j 21:17 2°**₹**02'25 37.26555 AU -2909 Dec 30 j 05:13 2°**∡**°23′25 -2902 Dec 26 j 06:16 12°**∡**′49'36 -8°04'11 morning rise conjunction -2908 Mar 28 j 14:42 3°**х** 59′23 -2902 Dec 26 j 06:03 12°**∡**¹49'35 8°04'15 retrograde minimum elong -2908 Jun 15 j 23:53 2°**₹**'50'50 35.40187 AU max. Earth dist. -2902 Dec 29 j 12:06 12°**≯**55′23 39.06203 AU min. Earth dist. -2908 Jun 19 i 04:00 -2901 Jan 08 i 06:10 opposition 2°**х** 46'27 -5°37'08 morning rise 13°**∡** 12'39 -2901 Apr 09 i 02:16 direct -2908 Sep 07 i 13:25 1°**х** 34'57 retrograde 14°**∡**°46'40 -2908 Dec 02 j 10:35 -2901 Jun 27 i 19:58 13°**≯**40'13 37.20986 AU evening set 3°**х** 06′56 min. Earth dist. opposition -2901 Jul 01 i 02:26 13°**₹**35'50 -8°42'36 -2908 Dec 16 i 14:52 3°×33'05 -5°32'34 direct -2901 Sep 19 j 13:16 12°**х** 26′37 conjunction -2908 Dec 16 i 14:42 3°**₹**33'04 5°32'39 evening set -2901 Dec 15 j 07:11 13°**∡** 56′25 minimum elong max. Earth dist. -2908 Dec 19 j 18:24 3°**҂**38'56 37.52133 AU -2908 Dec 30 j 21:11 3°**х** 59′24 conjunction -2901 Dec 27 j 23:23 14°**∡**18'45 -8°27'17 morning rise 5° ×7'34'59 -2901 Dec 27 j 23:11 retrograde -2907 Mar 30 j 11:44 minimum elong 14°**∡**18'44 8°27'23 min. Earth dist. -2907 Jun 17 j 21:39 4°**≯**26'44 35.66012 AU max. Earth dist. -2901 Dec 31 j 05:09 14°**✗**24'29 39.31380 AU opposition -2907 Jun 21 j 01:51 4°**₹**22'21 -6°05'41 morning rise -2900 Jan 09 j 17:25 14°**∡**′41′13 3°**∡**11'12 -2907 Sep 09 j 09:53 retrograde -2900 Apr 09 j 20:57 16° **₹** 15'03 direct -2907 Dec 04 j 10:15 4°**∡**¹42'46 min. Earth dist. -2900 Jun 28 j 15:15 15°**∡**08'47 37.46274 AU evening set -2900 Jul 01 j 21:09 15°**₹**04'27 -9°06'25 opposition -2907 Dec 18 j 10:23 5° ₹ 08'25 -5°59'24 -2900 Sep 20 j 06:51 13°**х** 55′30 conjunction direct -2907 Dec 18 j 10:13 -2900 Dec 16 j 06:12 15°**₹**'25'05 minimum elong 5°**х** 08′24 5°59′29 evening set max. Earth dist. -2907 Dec 21 j 15:01 5°**х** 14'19 37.77859 AU morning rise -2906 Jan 01 j 12:15 5°**х** 34'13 conjunction -2900 Dec 28 j 16:21 15°**х** 46′50 -8°49′47 retrograde -2906 Apr 01 j 08:09 7°**х** 09′28 minimum elong -2900 Dec 28 j 16:08 15°**∡** 46'49 8°49'52 min. Earth dist. -2906 Jun 19 j 17:49 6°**尽**01'34 35.91942 AU max. Earth dist. -2900 Dec 31 j 22:47 15°**✗**52'35 39.56363 AU

-2906 Jun 22 j 23:03

-2906 Sep 11 j 07:33

opposition

direct

5°**∡**757'09 -6°33'32

4°**∡**°46′21

-2899 Jan 10 j 03:57

-2899 Apr 11 j 13:32

morning rise

retrograde

16°**х** 08'42

17°**∡**¹42'21

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Attention, astronomical year style is used: The year -2899 in astronomical counting style is the year 2900 BCE in historical counting style.

min. Earth dist. $-2899 \text{ Jun } 30 \text{ j } 09:21 \quad 16^{\circ} \cancel{\times} 36'18 \quad 37.71371 \text{ AU}$ opposition $-2899 \text{ Jul } 03 \text{ j } 15:11 \quad 16^{\circ} \cancel{\times} 31'59 \quad -9^{\circ}29'36$

direct -2899 Sep 22 j 01:43 15° $\cancel{\times}$ 23'17 evening set -2899 Dec 18 j 05:11 16° $\cancel{\times}$ 52'41

 conjunction
 -2899 Dec 30 j 08:43
 17° ₹ 13'50
 -9°11'41

 minimum elong
 -2899 Dec 30 j 08:31
 17° ₹ 13'49
 9°11'47

 max. Earth dist.
 -2898 Jan 02 j 14:25
 17° ₹ 19'29
 39.81177 AU