Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -4400 in astronomical counting style is the year 4401 BCE in historical counting style. -4400 Feb 18 i 01:30 25°\$18'25 2°00'47 min. Earth dist. -4395 Aug 09 j 11:56 13°る21'09 4.01869 AU opposition -4400 Feb 19 j 05:18 opposition -4395 Aug 10 j 13:55 13°る12'22 -1°54'34 min. Earth dist. 25°509'32 4.37552 AU -4400 Apr 20 j 16:46 20°917'32 -4395 Oct 07 j 14:47 8°る17'21 direct direct -4400 Jul 17 j 06:23 27°る35'03 $0^{\circ}\Omega$ evening set -4394 Feb 09 j 15:28 -4400 Aug 25 j 10:51 -4394 Feb 19 j 21:59 evening set 8°**£**13′35 0°≈ -4400 Sep 05 j 07:18 max. Earth dist. 10°**£**38'38 6.34758 AU -4394 Feb 23 j 03:57 0°≈45'56 -1°22'49 conjunction -4394 Feb 23 j 03:57 -4400 Sep 07 j 00:34 conjunction 11°**Ω**01'42 1°24'12 minimum elong 0°≈45'56 1°23'00 minimum elong -4400 Sep 07 j 00:35 11°**Ω**01'42 1°24'22 max. Earth dist. -4394 Feb 25 j 01:23 1°≈12'43 6.03610 AU morning rise -4400 Sep 19 j 12:24 13°**Ω**48'57 morning rise -4394 Mar 08 j 19:06 3°≈58'09 -4400 Sep 24 j 20:47 15°€ -4394 Apr 28 j 09:05 15°≈ -4400 Dec 21 j 10:26 -4394 Jul 17 j 15:32 0° M retrograde 23°≈56'25 -4394 Sep 14 j 00:19 retrograde -4399 Jan 19 j 18:47 1°Mp18'51 min. Earth dist. 19°≈01'00 4.07104 AU -4399 Feb 18 j 06:13 30°R€ opposition -4394 Sep 15 j 04:41 18°≈51'19 -2°01'25 opposition -4399 Mar 21 j 18:06 26°**Ω**27'04 1°56'15 -4394 Oct 17 j 17:59 15°R≈ min. Earth dist. -4399 Mar 22 j 23:22 26°**Ω**17'47 4.31034 AU direct -4394 Nov 12 j 10:35 13°≈53'04 direct -4399 May 23 j 00:21 21°**Ω**28'52 -4394 Dec 08 j 07:42 15°**≈** -4399 Aug 11 j 03:08 -4393 Mar 05 j 11:15 0°\ evening set -4399 Sep 25 j 14:34 9° m 36'38 evening set -4393 Mar 18 j 15:44 2°\ 59'36 max. Earth dist. -4399 Oct 06 j 16:00 12° Mp 07'36 6.26235 AU conjunction -4393 Apr 01 j 09:12 6°¥09'09 -1°12'32 conjunction -4399 Oct 08 i 02:52 12° m 27'29 1°08'18 minimum elong -4393 Apr 01 i 09:16 6°\mathbf{09'11} 1°12'38 -4399 Oct 08 i 02:55 12° m 27'31 1°08'23 max. Earth dist. -4393 Apr 03 i 02:13 6°**)**€32'47 6.11539 AU minimum elong morning rise -4399 Oct 20 j 14:38 15° m 18'18 -4393 Apr 15 j 04:01 9° 19'09 morning rise -4398 Jan 04 j 11:30 0∘**⊽** -4393 Aug 20 j 20:29 28°\ 26'05 retrograde -4398 Feb 22 j 15:46 3°**£**32'46 -4393 Oct 18 j 08:22 23°**)** 29'53 4.16820 AU min. Earth dist. retrograde -4398 Apr 14 j 03:35 30°R M -4393 Oct 19 j 05:50 23°\ 22'34 -1°24'41 opposition -4398 Apr 24 j 20:37 28° m/39'05 1°16'19 -4393 Dec 17 j 10:10 18°¥21'09 opposition direct min. Earth dist. $0^{\circ}\Upsilon$ -4398 Apr 25 j 16:24 28° m 32'46 4 20994 AU -4392 Mar 20 j 22:07 23° m/43'43 -4392 Apr 22 j 16:08 7°**Y**′04'22 -4398 Jun 25 j 01:08 direct evening set -4398 Aug 30 j 09:17 $0 \circ \sigma$ -4398 Oct 27 j 15:45 12°**£**11'17 -4392 May 06 j 10:18 10°**Y**09'37 -0°37'18 conjunction evening set -4392 May 06 j 10:21 10°**Y**′09'39 0°37'17 minimum elong -4392 May 07 j 09:47 6.22302 AU -4398 Nov 09 j 07:12 15°**2**07'57 0°30'43 10°**Y**22′50 conjunction max. Earth dist. -4398 Nov 09 j 07:14 -4392 May 20 j 03:23 13°**Y**14′09 minimum elong 15°**2**07'58 0°30'40 morning rise -4398 Nov 08 j 13:12 -4392 Aug 23 j 00:47 max. Earth dist. 14°**£**57'26 6.15613 AU 0° 8 -4392 Sep 21 j 08:39 morning rise -4398 Nov 21 j 23:57 18°**≏**05'29 retrograde 1°**8**22'33 -4397 Jan 17 j 02:15 $0^{\circ}M$ -4392 Oct 20 j 10:47 30°**Ŗ**Υ retrograde -4397 Mar 30 j 10:28 7°M14'59 opposition -4392 Nov 19 j 18:48 26°**Y**'22'33 -0°21'55 -4397 May 30 j 10:37 2°M17'55 0°09'14 min. Earth dist. -4392 Nov 19 j 11:38 26°**Y**24'57 4.27512 AU opposition min. Earth dist. -4397 May 30 j 15:22 2°M16'22 4.10503 AU direct -4391 Jan 19 j 06:52 21°Υ19'13 -4397 Jun 17 j 22:06 -4391 Mar 26 j 19:09 27°**Y**26'37 asc. node desc. node -4397 Jul 18 j 17:27 27°**♀**35'31 -4391 Apr 10 j 08:32 0° 8 -4397 Jul 29 j 07:34 27°**♀**24'31 -4391 May 27 j 02:21 9°**8**37'37 direct evening set -4397 Sep 07 j 20:41 0°M -4391 Jun 09 i 15:24 -4397 Nov 24 j 22:16 15°M conjunction 12°**8**36'41 0°08'46 -4397 Nov 30 i 07:09 16°ML15'40 minimum elong -4391 Jun 09 i 15:24 12°**8**36'41 0°08'54 evening set behind sun begin -4391 Jun 09 i 08:22 12°**8**32'49 conjunction -4397 Dec 13 i 05:02 19°M19'10 -0°18'30 behind sun end -4391 Jun 09 j 22:25 12°**8**40'32 -4397 Dec 13 i 05:00 19°ML19'09 0°18'39 max. Earth dist. -4391 Jun 09 j 13:42 12°**8**35'45 6.32143 AU minimum elong -4397 Dec 13 j 11:15 19°M22'51 6.06258 AU -4391 Jun 20 j 11:19 15°8 max. Earth dist. -4397 Dec 26 j 05:38 22°M24'15 -4391 Jun 23 j 01:51 15°**8**34'19 morning rise morning rise -4396 Jan 28 j 16:56 0°×7 $0^{\circ}\Pi$ -4391 Sep 08 j 13:57 -4391 Oct 22 j 13:41 -4396 May 05 j 09:10 12°**х** 22′03 retrograde 2°**I**57'44 retrograde opposition -4396 Jul 04 j 23:52 7°**∡**1'04 -1°04'01 -4391 Dec 05 j 21:17 30°R₩ 7°**∡**¹25'34 4.03201 AU min. Earth dist. -4396 Jul 04 j 10:16 opposition -4391 Dec 21 j 07:47 28°801'35 0°44'47 2°**∡**¹27'57 -4396 Sep 01 j 14:28 min. Earth dist. -4391 Dec 21 j 16:02 27°**8**58'52 4.35749 AU direct -4395 Jan 03 j 19:23 21°**х** 38′59 direct -4390 Feb 21 j 00:35 22°**8**57'48 evening set -4390 May 04 j 23:36 $0^{\circ}\Pi$ -4395 Jan 17 j 00:36 24°**₹**47'43 -1°02'11 -4390 Jun 28 j 22:19 10°**Ⅲ**58′27 conjunction evening set -4390 Jul 11 j 03:27 minimum elong -4395 Jan 17 j 00:32 24°**₹**47'41 1°02'23 max. Earth dist. 13°**Ⅲ**38'43 6.38121 AU max. Earth dist. -4395 Jan 18 j 06:27 25°**₹**'05'30 6.01610 AU morning rise -4395 Jan 30 j 09:16 27°**х** 58'16 conjunction -4390 Jul 12 j 02:35 13°**I**51'25 0°50'57 -4395 Feb 08 j 00:36 0°궁 minimum elong -4390 Jul 12 j 02:32 13°**Ⅲ**51′23 0°51'09 retrograde -4395 Jun 11 j 12:43 18°**る**16'30 morning rise -4390 Jul 25 j 03:22 16°**Ⅱ**42'41

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Attention, astronomic		-	ii astronomicai cou				
	-4390 Oct 03 j 06:10	0.20 0.20		retrograde	-4384 May 10 j 16:19	17° ∡ ³33′12	
retrograde	-4390 Nov 22 j 09:59	3° © 44'48		opposition	-4384 Jul 10 j 04:58	12° ∡ 31'37	
	-4389 Jan 12 j 17:22	30°Ŗ Ⅱ		min. Earth dist.	-4384 Jul 09 j 12:43	12° ≯ 37′01	4.02251 AU
opposition	-4389 Jan 21 j 14:36	28° Ⅲ 51'46	1°37'05	direct	-4384 Sep 06 j 16:48	7° ∡ ³38'18	
min. Earth dist.	-4389 Jan 22 j 12:22	28° Ⅱ 44'45	4.39188 AU	evening set	-4383 Jan 08 j 23:56	26° ₹ 52′20	
direct	-4389 Mar 25 j 02:23	23° Ⅱ 49′02					
	-4389 Jun 01 j 07:23	0ಂಣ		conjunction	-4383 Jan 22 j 06:24	0° る 01'43	-1°06'49
evening set	-4389 Jul 30 j 13:30	11°5642'32		minimum elong	-4383 Jan 22 j 06:20	0° ට 01'40	
max. Earth dist.	-4389 Aug 10 j 17:46	14°910'01	6.38625 AU	minimum ciong	-4383 Jan 22 j 03:32	0°ਰ 0°ਰ	1 0/02
max. Earm dist.	-4369 Aug 10 j 17.40	14 3 1001	0.38023 AU	E d Ed	-	0°る22'31	6.01276 AU
	1200 1 12:00 25		1010110	max. Earth dist.	-4383 Jan 23 j 17:20		6.01276 AU
conjunction	-4389 Aug 12 j 08:35	14° © 31'25	1°18'12	morning rise	-4383 Feb 04 j 16:03	3° る 12'49	
minimum elong	-4389 Aug 12 j 08:32	14° © 31'24	1°18'24	retrograde	-4383 Jun 16 j 19:36	23° ප 31'01	
morning rise	-4389 Aug 25 j 00:48	17° © 18'56		opposition	-4383 Aug 15 j 17:52	18° る 26'32	-1°58'25
	-4389 Oct 29 j 13:21	$0^{\circ}\Omega$		min. Earth dist.	-4383 Aug 14 j 14:41	18° る 35'44	4.02200 AU
retrograde	-4389 Dec 23 j 17:53	4° Ω 25'54		direct	-4383 Oct 12 j 18:04	13° る 31'05	
•	-4388 Feb 19 j 00:38	30°Rூ			-4382 Feb 02 j 20:41	0° ≈	
opposition	-4388 Feb 22 j 09:14	29°534'19	2°02'13	evening set	-4382 Feb 14 j 22:35	2° ≈ 47'57	
min. Earth dist.	-4388 Feb 23 j 15:00	29°524'49	4.36873 AU	evening set	1302100 111 22:33	2 / 3/1/3/	
	,	24° © 33'39	4.30073 AU		4202 E-L 20 : 11.46	5° ≈ 58'46	1922112
direct	-4388 Apr 25 j 01:02			conjunction	-4382 Feb 28 j 11:46		
	-4388 Jun 27 j 06:28	0 \circ Ω		minimum elong	-4382 Feb 28 j 11:46	5° ≈ 58'46	
evening set	-4388 Aug 29 j 15:01	12° Ω 31'16		max. Earth dist.	-4382 Mar 02 j 09:16	6° ≈ 25'29	6.04513 AU
max. Earth dist.	-4388 Sep 09 j 11:15	14° Ω 56'35	6.33575 AU	morning rise	-4382 Mar 14 j 03:48	9° ≈ 10'51	
	-4388 Sep 09 j 17:22	15° Ω			-4382 Apr 08 j 18:37	15° ≈	
				retrograde	-4382 Jul 22 j 13:38	29° ≈ 02'35	
conjunction	-4388 Sep 11 j 04:27	15° Ω 19'40	1°23'28	min. Earth dist.	-4382 Sep 18 j 22:34		4.08451 AU
minimum elong	-4388 Sep 11 j 04:28	15° Ω 19'40		opposition	-4382 Sep 20 j 03:19	23°≈57'27	
_	1 3		1 23 37				-1 3631
morning rise	-4388 Sep 23 j 15:52	18° Ω 07'15		direct	-4382 Nov 17 j 11:16	18°≈58'40	
	-4388 Nov 21 j 17:01	0° m			-4381 Feb 15 j 06:30	0° ∀	
retrograde	-4387 Jan 24 j 05:40	5° Mp 43′08		evening set	-4381 Mar 23 j 20:06	8° ₩ 01'30	
opposition	-4387 Mar 26 j 06:29	0° m ∕51'12	1°52'51				
min. Earth dist.	-4387 Mar 27 j 10:55	0° Mp42′10	4.29423 AU	conjunction	-4381 Apr 06 j 14:02	11° ∺ 10′30	-1°08'45
	-4387 Apr 02 j 00:29	30°R Ω		minimum elong	-4381 Apr 06 j 14:06	11° ∺ 10′33	1°08'49
direct	-4387 May 27 j 08:46	25° Ω 53′21		max. Earth dist.	-4381 Apr 08 j 05:59	11°) 33′26	6.13201 AU
	-4387 Jul 20 j 00:44	0° m/		morning rise	-4381 Apr 20 j 08:45	14°) 19'43	
avanina aat	3			morning risc	-4381 Jul 10 j 08:39	0° Υ	
evening set	-4387 Sep 29 j 21:48	14° Mp 05'03	6 0 400 T 4 YY		•		
max. Earth dist.	-4387 Oct 11 j 00:03	16° Mp 37′09	6.24327 AU	retrograde	-4381 Aug 25 j 13:43	3° Y 17′21	
					-4381 Oct 10 j 16:13	30° ₹ ₩	
conjunction	-4387 Oct 12 j 10:16	16°№56'46	1°04'18	opposition	-4381 Oct 23 j 22:10	28°) 14′16	-1°16'50
minimum elong	-4387 Oct 12 j 10:19	16° Mp 56′48	1°04'22	min. Earth dist.	-4381 Oct 23 j 03:08	28° ∺ 20'44	4.18588 AU
morning rise	-4387 Oct 24 j 22:37	19° Mp 48'36		direct	-4381 Dec 22 j 07:53	23°) 12′30	
-	-4387 Dec 11 j 21:43	0∘ ರ			-4380 Feb 29 j 14:13	$0^{\circ}\mathbf{\Upsilon}$	
retrograde	-4386 Feb 27 j 13:14	8° ≏ 12'14		evening set	-4380 Apr 27 j 14:50	11° Υ 51'11	
opposition	-4386 Apr 29 j 16:00	3° ⊆ 18'09	1°08'25	evening set	1500 rpr 27 j 11.50	11 (3111	
					4200 M 11:00 24	1.40005512.1	0021107
min. Earth dist.	-4386 Apr 30 j 10:59	3° £ 12'04	4.18900 AU	conjunction	-4380 May 11 j 08:34	14° Υ 55'31	
	-4386 May 28 j 00:51	30°₽,₩		minimum elong	-4380 May 11 j 08:36	14° Y 55'33	0°31'04
direct	-4386 Jun 29 j 16:29	28° Mp 23'03		max. Earth dist.	-4380 May 12 j 04:30	15° Y 06'41	6.24035 AU
	-4386 Jul 31 j 23:42	0∘ ⊽		morning rise	-4380 May 25 j 01:01	17° Ƴ 59'03	
evening set	-4386 Nov 01 j 05:01	16° ≏ 56′01			-4380 Jul 23 j 13:58	9° 8	
				retrograde	-4380 Sep 25 j 18:01	5° 8 59'17	
conjunction	-4386 Nov 13 j 21:26	19° ≙ 53'57	0°24'17	opposition	-4380 Nov 24 i 06:04	0° 8 59'50	-0°12'18
minimum elong	-4386 Nov 13 j 21:27	19° ≏ 53'58	0°24'14	min. Earth dist.	-4380 Nov 24 j 00:36		4.29065 AU
max. Earth dist.				iiiii. Lartii dist.	-	30°RY	4.27003 AO
	-4386 Nov 13 j 06:34	19° £ 45'15	6.13538 AU	T' .	-4380 Dec 01 j 18:04		
morning rise	-4386 Nov 26 j 15:16	22° ≏ 52'52		direct	-4379 Jan 23 j 22:11	25° Y 56′22	
	-4386 Dec 28 j 07:22	0° M		asc. node	-4379 Feb 03 j 09:14	26° Y 06'44	
retrograde	-4385 Apr 04 j 13:20	12°M12'11			-4379 Mar 18 j 03:55	9° 8	
desc. node	-4385 May 29 j 01:00	8° M 04'49		evening set	-4379 May 31 j 18:43	14° 8 11'11	
opposition	-4385 Jun 04 j 12:21	7°M14'35	-0°01'13		-4379 Jun 04 j 11:50	15° 8	
min. Earth dist.	-4385 Jun 04 j 13:48	7° M 14'07	4.08639 AU		·		
direct	-4385 Aug 03 j 02:59	2°M21'24		conjunction	-4379 Jun 14 j 06:41	17° 8 09'17	0°15'12
	-4385 Nov 07 j 18:31	15°M		minimum elong	-4379 Jun 14 j 06:40	17° 8 09'16	0°15'20
ovening				-	-		0 13 20
evening set	-4385 Dec 05 j 04:51	21° M 17'49		behind sun begin	-4379 Jun 14 j 04:34	17° 8 08'07	
				behind sun end	-4379 Jun 14 j 08:46	17° 8 10'26	
conjunction	-4385 Dec 18 j 03:44	24°M22'26		max. Earth dist.	-4379 Jun 14 j 01:38	17° 8 06'31	6.33410 AU
minimum elong	-4385 Dec 18 j 03:42	24° M $22'25$	0°25'33	morning rise	-4379 Jun 27 j 15:50	20° 8 05'53	
max. Earth dist.	-4385 Dec 18 j 13:32	24°M28'15	6.04770 AU		-4379 Aug 15 j 05:19	$\Pi^{\circ}0$	
morning rise	-4385 Dec 31 j 05:37	27°M28'43		retrograde	-4379 Oct 26 j 22:00	7° Ⅱ 24'30	
C	-4384 Jan 10 j 23:57	0° ∡ 7		opposition	-4379 Dec 25 j 16:50	2° Ⅱ 28'56	0°53'19
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Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 3
Attention, astronomical year style is used: The year -4379 in astronomical counting style is the year 4380 BCE in historical counting style.

min. Earth dist. -4379 Dec 26 j 03:46 2° \$\Pi\$25'21 4.36647 AU -4373 Oct 19 j 01:42 15° \$\Pi\$\$

1 E d 11 d	4270 D 26:02 46	20 TT 2 512 1	4.0004T ATT		1272 0 1 10:01 12	1.50M	
min. Earth dist.	-4379 Dec 26 j 03:46		4.36647 AU		-4373 Oct 19 j 01:42	15°M	
	-4378 Jan 14 j 12:03	30°R 8		evening set	-4373 Dec 10 j 03:27	26°M22'48	
direct	-4378 Feb 25 j 13:39	27° 8 25'16					
	-4378 Apr 08 j 22:18	0°II		conjunction	-4373 Dec 23 j 03:29	29°M28'10	
evening set	-4378 Jul 03 j 09:44	15° Ⅲ 24'02		minimum elong	-4373 Dec 23 j 03:26	29°M28'09	0°32'19
max. Earth dist.	-4378 Jul 15 j 09:40	18° Ⅱ 01'30	6.38560 AU	max. Earth dist.	-4373 Dec 23 j 18:40	29°M37'12	6.04089 AU
		_			-4373 Dec 25 j 08:57	0° ∡ ¹	
conjunction	-4378 Jul 16 j 12:37	18° Ⅱ 16'17		morning rise	-4372 Jan 05 j 06:21	2° ∡ "35′13	
minimum elong	-4378 Jul 16 j 12:34	18° Ⅱ 16'15	0°56'04	retrograde	-4372 May 15 j 22:51	22° ∡ ¹42'57	
morning rise	-4378 Jul 29 j 12:10	21° Ⅱ 06′50		opposition	-4372 Jul 15 j 09:06	17° ∡ ′40′52	-1°21'42
	-4378 Sep 10 j 18:52	0 \circ \odot		min. Earth dist.	-4372 Jul 14 j 14:54	17° ∡ ¹46′56	4.02099 AU
retrograde	-4378 Nov 26 j 17:59	8°908'12		direct	-4372 Sep 11 j 18:41	12° ∡ ⁴47'24	
opposition	-4377 Jan 26 j 00:02	3° © 15'29	1°42'26		-4371 Jan 05 j 11:57	0°ಕ	
min. Earth dist.	-4377 Jan 26 j 23:27	3° © 07'56	4.39179 AU	evening set	-4371 Jan 14 j 02:56	2° る 01'39	
	-4377 Feb 22 j 13:52	30°RⅡ					
direct	-4377 Mar 29 j 13:06	28° Ⅱ 12'57		conjunction	-4371 Jan 27 j 10:08	5° る 11'12	
	-4377 May 03 j 16:57	0 \circ \odot		minimum elong	-4371 Jan 27 j 10:05	5° る 11'10	1°11'05
evening set	-4377 Aug 03 j 22:12	16°9506'42		max. Earth dist.	-4371 Jan 28 j 22:21	5° る 32'44	6.01620 AU
max. Earth dist.	-4377 Aug 15 j 01:25	18° © 33'50	6.38162 AU	morning rise	-4371 Feb 09 j 20:52	8° る 22'32	
				retrograde	-4371 Jun 21 j 19:24	28° る 38'05	
conjunction	-4377 Aug 16 j 16:21	18° © 55'21	1°20'21	opposition	-4371 Aug 20 j 18:05	23° る 33'18	-2°01'12
minimum elong	-4377 Aug 16 j 16:19	18° © 55'20	1°20'32	min. Earth dist.	-4371 Aug 19 j 13:21	23° る 43'03	4.03025 AU
morning rise	-4377 Aug 29 j 07:30	21° 5 42'38		direct	-4371 Oct 17 j 18:02	18° る 37'23	
	-4377 Oct 08 j 01:56	$0^{\circ}\Omega$			-4370 Jan 16 j 00:56	0° ≈	
retrograde	-4377 Dec 28 j 04:49	8° £ 52'39		evening set	-4370 Feb 20 j 01:59	7° ≈ 52'02	
opposition	-4376 Feb 26 j 21:48	4° Ω 01'13	2°03'04				
min. Earth dist.	-4376 Feb 28 j 03:52	3° £ 51′39	4.35998 AU	conjunction	-4370 Mar 05 j 16:02	11° ≈ 02'38	-1°22'58
	-4376 Apr 03 j 18:06	30° ℝ ∽		minimum elong	-4370 Mar 05 j 16:03	11° ≈ 02'38	1°23'08
direct	-4376 Apr 29 j 12:09	29° © 00'59		max. Earth dist.	-4370 Mar 07 j 14:08	11° ≈ 29'37	6.05727 AU
	-4376 May 25 j 07:22	$0^{\circ}\Omega$		morning rise	-4370 Mar 19 j 08:27	14° ≈ 14'19	
	-4376 Aug 24 j 21:37	15° Ω			-4370 Mar 22 j 15:22	15° ≈	
evening set	-4376 Sep 02 j 23:41	17° Ω 00'33			-4370 Jun 06 j 04:39	0°)	
max. Earth dist.	-4376 Sep 13 j 18:20	19° Ω 25'30	6.32347 AU	retrograde	-4370 Jul 27 j 09:34	3° ¥ 58'42	
					-4370 Sep 16 j 18:00	30° R ≈	
conjunction	-4376 Sep 15 j 12:33	19° Ω 49'15	1°22'13	opposition	-4370 Sep 24 j 21:38	28° ≈ 53'42	-1°54'52
minimum elong	-4376 Sep 15 j 12:34	19° Ω 49'16	1°22'22	min. Earth dist.	-4370 Sep 23 j 18:47	29° ≈ 02'52	4.09908 AU
morning rise	-4376 Sep 27 j 23:57	22° Ω 37'18		direct	-4370 Nov 22 j 09:39	23° ≈ 54'26	
	-4376 Nov 01 j 09:34	0° m)			-4369 Jan 25 j 09:50	0° ∀	
retrograde	-4375 Jan 29 j 00:07	10° m 19'33		evening set	-4369 Mar 28 j 20:11	12° ¥ 53'31	
opposition	-4375 Mar 31 j 00:26	5° m 27'28	1°48'37				
min. Earth dist.							
	-4375 Apr 01 j 04:22	5° m) 18'35	4.27918 AU	conjunction	-4369 Apr 11 j 14:22	16°) €01'57	-1°04'37
direct	-4375 Apr 01 j 04:22 -4375 May 31 j 23:45	5° Mp 18'35 0° Mp 30'01	4.27918 AU	conjunction minimum elong	-4369 Apr 11 j 14:22 -4369 Apr 11 j 14:26	16° 米 01'57 16° 米 01'59	-1°04'37 1°04'41
direct evening set			4.27918 AU				
	-4375 May 31 j 23:45	0° m/30'01	4.27918 AU	minimum elong	-4369 Apr 11 j 14:26	16° 米 01′59	1°04'41
	-4375 May 31 j 23:45	0° m/30'01	4.27918 AU 0°59'44	minimum elong max. Earth dist.	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02	16° 米 01'59 16° 米 23'28	1°04'41
evening set	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09	0° m/30'01 18° m/45'00		minimum elong max. Earth dist.	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08	16°¥01'59 16°¥23'28 19°¥10'28	1°04'41
evening set	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05	0° m 30'01 18° m 45'00 21° m 37'33	0°59'44	minimum elong max. Earth dist. morning rise	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35	16° X 01'59 16° X 23'28 19° X 10'28 0° Υ	1°04'41 6.14772 AU
evening set conjunction minimum elong max. Earth dist.	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08	0° m/30'01 18° m/45'00 21° m/37'33 21° m/37'35	0°59'44 0°59'46	minimum elong max. Earth dist. morning rise	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21	16° H 01'59 16° H 23'28 19° H 10'28 0° Υ 7° Υ 59'33	1°04'41 6.14772 AU
evening set conjunction minimum elong	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59	0° m/30'01 18° m/45'00 21° m/37'33 21° m/37'35 21° m/19'40	0°59'44 0°59'46	minimum elong max. Earth dist. morning rise retrograde opposition	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41	16° ₭01'59 16° ₭23'28 19° ₭10'28 0° Ŷ 7° Ŷ59'33 2° Ŷ56'54	1°04'41 6.14772 AU -1°08'47
evening set conjunction minimum elong max. Earth dist.	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52	0° m/30'01 18° m/45'00 21° m/37'33 21° m/37'35 21° m/19'40 24° m/30'18	0°59'44 0°59'46	minimum elong max. Earth dist. morning rise retrograde opposition	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47	16° X 01'59 16° X 23'28 19° X 10'28 0° Y 7° Y 59'33 2° Y 56'54 3° Y 02'59	1°04'41 6.14772 AU -1°08'47
evening set conjunction minimum elong max. Earth dist. morning rise	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52 -4375 Nov 23 j 02:11	0° m 30'01 18° m 45'00 21° m 37'33 21° m 37'35 21° m 19'40 24° m 30'18 0° Ω	0°59'44 0°59'46	minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist.	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47 -4369 Nov 20 j 18:04	16° \(\pma\)01'59 16° \(\pma\)23'28 19° \(\pma\)10'28 0° \(\pma\) 7° \(\pma\)59'33 2° \(\pma\)56'54 3° \(\pma\)02'59 30° \(\pma\)	1°04'41 6.14772 AU -1°08'47
evening set conjunction minimum elong max. Earth dist. morning rise retrograde	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52 -4375 Nov 23 j 02:11 -4374 Mar 04 j 12:37	0° m 30'01 18° m 45'00 21° m 37'33 21° m 37'35 21° m 19'40 24° m 30'18 0° Ω 13° Ω 02'04	0°59'44 0°59'46 6.22703 AU	minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist.	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47 -4369 Nov 20 j 18:04 -4369 Dec 26 j 23:40	16° \(\frac{1}{6}\) \(\frac{1}{6}\) \(\frac{1}{2}\) \(16^{\circ}\) \(\frac{1}{2}\) \(10^{\circ}\) \(\frac{1}{2}\) \(10^{\circ}\) \(\frac{1}{2}\) \(10^{\circ}\) \(\frac{1}{2}\) \(10^{\circ}\) \(10^{\cir	1°04'41 6.14772 AU -1°08'47
evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52 -4375 Nov 23 j 02:11 -4374 Mar 04 j 12:37 -4374 May 04 j 15:31	0° m 30'01 18° m 45'00 21° m 37'33 21° m 37'35 21° m 19'40 24° m 30'18 0° Ω 13° Ω 02'04 8° Ω 07'38	0°59'44 0°59'46 6.22703 AU 0°59'42	minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47 -4369 Nov 20 j 18:04 -4369 Dec 26 j 23:40 -4368 Feb 01 j 16:44	16° \(\) \(1°04'41 6.14772 AU -1°08'47
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evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52 -4375 Nov 23 j 02:11 -4374 Mar 04 j 12:37 -4374 May 05 j 07:49 -4374 Jul 04 j 10:20	0° m 30'01 18° m 45'00 21° m 37'33 21° m 37'35 21° m 19'40 24° m 30'18 0° Ω 13° Ω 02'04 8° Ω 07'38 8° Ω 02'25 3° Ω 13'00	0°59'44 0°59'46 6.22703 AU 0°59'42	minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47 -4369 Nov 20 j 18:04 -4369 Dec 26 j 23:40 -4368 Feb 01 j 16:44 -4368 May 02 j 09:47	16° \(\pmax.01'59\) 16° \(\pmax.23'28\) 19° \(\pmax.10'28\) 0° \(\pmax.759'33\) 2° \(\pmax.56'54\) 3° \(\pmax.902'59\) 30° \(\pmax.\pmax.754'47\) 0° \(\pmax.159'58\)	1°04'41 6.14772 AU -1°08'47 4.20120 AU
evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52 -4375 Nov 23 j 02:11 -4374 Mar 04 j 12:37 -4374 May 05 j 07:49 -4374 Jul 04 j 10:20	0° m 30'01 18° m 45'00 21° m 37'33 21° m 37'35 21° m 19'40 24° m 30'18 0° Ω 13° Ω 02'04 8° Ω 07'38 8° Ω 02'25 3° Ω 13'00	0°59'44 0°59'46 6.22703 AU 0°59'42	minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47 -4369 Nov 20 j 18:04 -4369 Feb 01 j 16:44 -4368 May 02 j 09:47	16° \(\) \(1°04'41 6.14772 AU -1°08'47 4.20120 AU -0°24'55
evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52 -4375 Nov 23 j 02:11 -4374 Mar 04 j 12:37 -4374 May 04 j 15:31 -4374 May 05 j 07:49 -4374 Jul 04 j 10:20 -4374 Nov 05 j 21:51	0° m 30'01 18° m 45'00 21° m 37'33 21° m 37'35 21° m 19'40 24° m 30'18 0° Ω 13° Ω 02'04 8° Ω 07'38 8° Ω 02'25 3° Ω 13'00 21° Ω 49'32	0°59'44 0°59'46 6.22703 AU 0°59'42 4.17294 AU	minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47 -4369 Nov 20 j 18:04 -4369 Dec 26 j 23:40 -4368 Feb 01 j 16:44 -4368 May 02 j 09:47 -4368 May 16 j 02:58 -4368 May 16 j 03:00	16° \(\pmax.01'59\) 16° \(\pmax.23'28\) 19° \(\pmax.10'28\) 0° \(\pmax.70'\) 7° \(\pmax.59'33\) 2° \(\pmax.56'54\) 30° \(\pmax.\) 27° \(\pmax.54'47\) 0° \(\pmax.10'\) 16° \(\pmax.29'58\) 19° \(\pmax.33'31\) 19° \(\pmax.33'32\)	1°04'41 6.14772 AU -1°08'47 4.20120 AU -0°24'55 0°24'51
evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52 -4375 Nov 23 j 02:11 -4374 Mar 04 j 12:37 -4374 May 04 j 15:31 -4374 May 05 j 07:49 -4374 Jul 04 j 10:20 -4374 Nov 05 j 21:51	0° m 30'01 18° m 45'00 21° m 37'33 21° m 37'35 21° m 19'40 24° m 30'18 0° Ω 13° Ω 02'04 8° Ω 07'38 8° Ω 02'25 3° Ω 13'00 21° Ω 49'32 24° Ω 48'25	0°59'44 0°59'46 6.22703 AU 0°59'42 4.17294 AU	minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47 -4369 Nov 20 j 18:04 -4369 Dec 26 j 23:40 -4368 Feb 01 j 16:44 -4368 May 02 j 09:47 -4368 May 16 j 02:58 -4368 May 16 j 03:00 -4368 May 16 j 18:29	16° \times 01'59 16° \times 23'28 19° \times 10'28 0° \times 7° \times 59'33 2° \times 56'54 3° \times 02'59 30° \times \times 27° \times 54'47 0° \times 16° \times 29'58 19° \times 33'31 19° \times 33'32 19° \times 42'11	1°04'41 6.14772 AU -1°08'47 4.20120 AU -0°24'55 0°24'51
evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52 -4375 Nov 23 j 02:11 -4374 Mar 04 j 12:37 -4374 May 05 j 07:49 -4374 Jul 04 j 10:20 -4374 Nov 05 j 21:51 -4374 Nov 18 j 14:54 -4374 Nov 18 j 14:56	0° m 30'01 18° m 45'00 21° m 37'33 21° m 37'35 21° m 19'40 24° m 30'18 0° Ω 13° Ω 02'04 8° Ω 07'38 8° Ω 02'25 3° Ω 13'00 21° Ω 49'32 24° Ω 48'25 24° Ω 48'25	0°59'44 0°59'46 6.22703 AU 0°59'42 4.17294 AU 0°17'30 0°17'25	minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47 -4369 Nov 20 j 18:04 -4369 Dec 26 j 23:40 -4368 Feb 01 j 16:44 -4368 May 02 j 09:47 -4368 May 16 j 02:58 -4368 May 16 j 03:00 -4368 May 16 j 18:29 -4368 May 29 j 18:43	16° \times 01'59 16° \times 23'28 19° \times 10'28 0° \times 7° \times 59'33 2° \times 56'54 3° \times 02'59 30° \times \times 27' \times 54'47 0° \times 16° \times 29'58 19° \times 33'31 19° \times 33'32 19° \times 42'11 22° \times 36'09	1°04'41 6.14772 AU -1°08'47 4.20120 AU -0°24'55 0°24'51
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evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52 -4375 Nov 23 j 02:11 -4374 Mar 04 j 12:37 -4374 May 05 j 07:49 -4374 Jul 04 j 10:20 -4374 Nov 05 j 21:51 -4374 Nov 18 j 14:54 -4374 Nov 18 j 14:56 -4374 Nov 18 j 02:58 -4374 Dec 01 j 09:51	0° m 30'01 18° m 45'00 21° m 37'33 21° m 37'35 21° m 19'40 24° m 30'18 0° Ω 13° Ω 02'04 8° Ω 07'38 8° Ω 02'25 3° Ω 13'00 21° Ω 48'25 24° Ω 48'25 24° Ω 48'25 24° Ω 48'25	0°59'44 0°59'46 6.22703 AU 0°59'42 4.17294 AU 0°17'30 0°17'25	minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47 -4369 Nov 20 j 18:04 -4369 Dec 26 j 23:40 -4368 Feb 01 j 16:44 -4368 May 02 j 09:47 -4368 May 16 j 02:58 -4368 May 16 j 03:00 -4368 May 29 j 18:43 -4368 Jul 03 j 12:27 -4368 Sep 30 j 03:36	16° \times 01'59 16° \times 23'28 19° \times 10'28 0° \times 7° \times 59'33 2° \times 56'54 3° \times 02'59 30° \times \times 27° \times 54'47 0° \times 16° \times 29'58 19° \times 33'31 19° \times 33'32 19° \times 42'11 22° \times 36'09 0° \times 10° \times 29'54	1°04'41 6.14772 AU -1°08'47 4.20120 AU -0°24'55 0°24'51 6.25418 AU
evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52 -4375 Nov 23 j 02:11 -4374 Mar 04 j 12:37 -4374 May 05 j 07:49 -4374 Jul 04 j 10:20 -4374 Nov 18 j 14:54 -4374 Nov 18 j 14:56 -4374 Nov 18 j 02:58 -4374 Dec 01 j 09:51 -4374 Dec 10 j 20:52	0° m 30'01 18° m 45'00 21° m 37'33 21° m 37'35 21° m 19'40 24° m 30'18 0° Ω 13° Ω 02'04 8° Ω 07'38 8° Ω 02'25 3° Ω 13'00 21° Ω 49'32 24° Ω 48'25 24° Ω 48'25 24° Ω 48'25 0° M	0°59'44 0°59'46 6.22703 AU 0°59'42 4.17294 AU 0°17'30 0°17'25	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	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47 -4369 Nov 20 j 18:04 -4369 Dec 26 j 23:40 -4368 Feb 01 j 16:44 -4368 May 02 j 09:47 -4368 May 16 j 02:58 -4368 May 16 j 03:00 -4368 May 16 j 18:29 -4368 May 29 j 18:43 -4368 Jul 03 j 12:27 -4368 Sep 30 j 03:36 -4368 Nov 28 j 15:05	16° \(\) \(1°04'41 6.14772 AU -1°08'47 4.20120 AU -0°24'55 0°24'51 6.25418 AU
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	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52 -4375 Nov 23 j 02:11 -4374 Mar 04 j 12:37 -4374 May 04 j 15:31 -4374 May 05 j 07:49 -4374 Jul 04 j 10:20 -4374 Nov 18 j 14:54 -4374 Nov 18 j 14:56 -4374 Nov 18 j 02:58 -4374 Dec 01 j 09:51 -4374 Dec 10 j 20:52 -4373 Mar 02 j 03:44	0° m 30'01 18° m 45'00 21° m 37'33 21° m 37'35 21° m 19'40 24° m 30'18 0° Ω 13° Ω 02'04 8° Ω 07'38 8° Ω 02'25 3° Ω 13'00 21° Ω 49'32 24° Ω 48'25 24° Ω 48'25 24° Ω 41'24 27° Ω 48'25 0° m 15° m	0°59'44 0°59'46 6.22703 AU 0°59'42 4.17294 AU 0°17'30 0°17'25	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 min. Earth dist.	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47 -4369 Nov 20 j 18:04 -4369 Dec 26 j 23:40 -4368 Feb 01 j 16:44 -4368 May 02 j 09:47 -4368 May 16 j 02:58 -4368 May 16 j 03:00 -4368 May 16 j 03:00 -4368 May 29 j 18:43 -4368 Jul 03 j 12:27 -4368 Sep 30 j 03:36 -4368 Nov 28 j 15:05 -4368 Nov 28 j 12:56	16° \(\) \(1°04'41 6.14772 AU -1°08'47 4.20120 AU -0°24'55 0°24'51 6.25418 AU
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	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:08 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52 -4375 Nov 23 j 02:11 -4374 Mar 04 j 12:37 -4374 May 04 j 15:31 -4374 May 05 j 07:49 -4374 Jul 04 j 10:20 -4374 Nov 18 j 14:54 -4374 Nov 18 j 14:54 -4374 Nov 18 j 02:58 -4374 Dec 01 j 09:51 -4374 Dec 10 j 20:52 -4373 Mar 02 j 03:44 -4373 Apr 07 j 19:05	0° m 30'01 18° m 45'00 21° m 37'33 21° m 37'35 21° m 19'40 24° m 30'18 0° Ω 13° Ω02'04 8° Ω07'38 8° Ω02'25 3° Ω 13'00 21° Ω 49'32 24° Ω 48'25 24° Ω 48'25 24° Ω 48'25 0° m 15° m 17° m 14'44	0°59'44 0°59'46 6.22703 AU 0°59'42 4.17294 AU 0°17'30 0°17'25	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 min. Earth dist. asc. node	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47 -4369 Nov 20 j 18:04 -4369 Dec 26 j 23:40 -4368 Feb 01 j 16:44 -4368 May 02 j 09:47 -4368 May 16 j 02:58 -4368 May 16 j 03:00 -4368 May 16 j 18:29 -4368 May 29 j 18:43 -4368 Jul 03 j 12:27 -4368 Sep 30 j 03:36 -4368 Nov 28 j 15:05 -4368 Nov 28 j 12:56 -4368 Dec 15 j 06:44	16° \(\) \(1°04'41 6.14772 AU -1°08'47 4.20120 AU -0°24'55 0°24'51 6.25418 AU
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	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52 -4375 Nov 23 j 02:11 -4374 Mar 04 j 12:37 -4374 May 05 j 07:49 -4374 Jul 04 j 10:20 -4374 Nov 18 j 14:54 -4374 Nov 18 j 14:54 -4374 Nov 18 j 02:58 -4374 Dec 01 j 09:51 -4374 Dec 10 j 20:52 -4373 Mar 02 j 03:44 -4373 Apr 07 j 19:05 -4373 Apr 09 j 17:36	0° m 30'01 18° m 45'00 21° m 37'33 21° m 37'35 21° m 19'40 24° m 30'18 0° Ω 13° Ω 02'04 8° Ω 02'25 3° Ω 13'00 21° Ω 48'25 24° Ω 48'25 24° Ω 48'25 24° Ω 48'25 0° m 15° m 17° m 14'44 17° m 15'06	0°59'44 0°59'46 6.22703 AU 0°59'42 4.17294 AU 0°17'30 0°17'25 6.12112 AU	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 min. Earth dist. asc. node	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47 -4369 Nov 20 j 18:04 -4369 Dec 26 j 23:40 -4368 Feb 01 j 16:44 -4368 May 02 j 09:47 -4368 May 16 j 02:58 -4368 May 16 j 03:00 -4368 May 16 j 18:29 -4368 May 29 j 18:43 -4368 Jul 03 j 12:27 -4368 Sep 30 j 03:36 -4368 Nov 28 j 15:05 -4368 Dec 15 j 06:44 -4367 Jan 28 j 12:14	16° X01'59 16° X23'28 19° X10'28 0° Y 7° Y59'33 2° Y56'54 3° Y02'59 30° RX 27° X54'47 0° Y 16° Y29'58 19° Y33'31 19° Y33'32 19° Y42'11 22° Y36'09 0° 8 10° 829'54 5° 831'01 5° 831'44 3° 822'01 0° 827'24	1°04'41 6.14772 AU -1°08'47 4.20120 AU -0°24'55 0°24'51 6.25418 AU
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 desc. node retrograde	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52 -4375 Nov 23 j 02:11 -4374 Mar 04 j 12:37 -4374 May 04 j 15:31 -4374 May 05 j 07:49 -4374 Jul 04 j 10:20 -4374 Nov 18 j 14:54 -4374 Nov 18 j 14:54 -4374 Nov 18 j 02:58 -4374 Dec 01 j 09:51 -4374 Dec 10 j 20:52 -4373 Mar 02 j 03:44 -4373 Apr 07 j 19:05 -4373 May 18 j 12:46	0° m 30'01 18° m 45'00 21° m 37'33 21° m 37'35 21° m 19'40 24° m 30'18 0° Ω 13° Ω 02'04 8° Ω 02'25 3° Ω 13'00 21° Ω 48'25 24° Ω 48'25 24° Ω 48'25 24° Ω 48'25 0° m 15° m 17° m 14'44 17° m 15'06 15° R m	0°59'44 0°59'46 6.22703 AU 0°59'42 4.17294 AU 0°17'30 0°17'25 6.12112 AU	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 min. Earth dist. asc. node direct	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47 -4369 Nov 20 j 18:04 -4369 Dec 26 j 23:40 -4368 Feb 01 j 16:44 -4368 May 16 j 02:58 -4368 May 16 j 03:00 -4368 May 16 j 03:00 -4368 May 29 j 18:43 -4368 Jul 03 j 12:27 -4368 Sep 30 j 03:36 -4368 Nov 28 j 15:05 -4368 Nov 28 j 12:56 -4368 Dec 15 j 06:44 -4367 Jan 28 j 12:14 -4367 May 19 j 07:55	16° \(\) \(1°04'41 6.14772 AU -1°08'47 4.20120 AU -0°24'55 0°24'51 6.25418 AU
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 desc. node retrograde opposition	-4375 May 31 j 23:45 -4375 Oct 04 j 09:09 -4375 Oct 16 j 22:05 -4375 Oct 16 j 22:08 -4375 Oct 15 j 14:59 -4375 Oct 29 j 10:52 -4375 Nov 23 j 02:11 -4374 Mar 04 j 12:37 -4374 May 04 j 15:31 -4374 May 05 j 07:49 -4374 Jul 04 j 10:20 -4374 Nov 05 j 21:51 -4374 Nov 18 j 14:54 -4374 Nov 18 j 14:56 -4374 Nov 18 j 02:58 -4374 Dec 01 j 09:51 -4374 Dec 10 j 20:52 -4373 Mar 02 j 03:44 -4373 Apr 07 j 19:05 -4373 Apr 09 j 17:36 -4373 May 18 j 12:46 -4373 Jun 09 j 15:56	0° m 30'01 18° m 45'00 21° m 37'33 21° m 37'35 21° m 19'40 24° m 30'18 0° Ω 13° Ω 02'04 8° Ω 02'25 3° Ω 13'00 21° Ω 48'25 24° Ω 48'25 24° Ω 48'25 24° Ω 48'25 0° m 15° m 17° m 14'44 17° m 15'06 15° m 12° m 16'54	0°59'44 0°59'46 6.22703 AU 0°59'42 4.17294 AU 0°17'30 0°17'25 6.12112 AU	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 min. Earth dist. asc. node direct	-4369 Apr 11 j 14:26 -4369 Apr 13 j 04:02 -4369 Apr 25 j 09:08 -4369 Jun 15 j 17:35 -4369 Aug 30 j 01:21 -4369 Oct 28 j 10:41 -4369 Oct 27 j 16:47 -4369 Nov 20 j 18:04 -4369 Dec 26 j 23:40 -4368 Feb 01 j 16:44 -4368 May 16 j 02:58 -4368 May 16 j 03:00 -4368 May 16 j 03:00 -4368 May 29 j 18:43 -4368 Jul 03 j 12:27 -4368 Sep 30 j 03:36 -4368 Nov 28 j 15:05 -4368 Nov 28 j 12:56 -4368 Dec 15 j 06:44 -4367 Jan 28 j 12:14 -4367 May 19 j 07:55	16° \(\) \(1°04'41 6.14772 AU -1°08'47 4.20120 AU -0°24'55 0°24'51 6.25418 AU -0°02'53 4.30183 AU

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 4 Attention, astronomical year style is used: The year -4367 in astronomical counting style is the year 4368 BCE in historical counting style.

Attention, astronom	nical year style is used: Th	ne year -4367 i	in astronomical co	unting style is the year	r 4368 BCE in historical c	ounting style.	
minimum elong	-4367 Jun 18 j 19:45	21° 8 37'26	0°21'32		-4361 Jul 02 j 18:23	15°RM	
max. Earth dist.	-4367 Jun 18 j 11:32	21° 8 32'54	6.34179 AU	direct	-4361 Aug 13 j 01:34	12°M22'44	
morning rise	-4367 Jul 02 j 03:41	24° 8 33'13			-4361 Sep 22 j 13:24	15°M	
	-4367 Jul 27 j 17:18	Π °0			-4361 Dec 09 j 03:28	0° ⊀	
retrograde	-4367 Oct 31 j 04:11	11° Ⅱ 48'47		evening set	-4361 Dec 15 j 01:16	1° ≯ 23'33	
opposition	-4367 Dec 30 j 00:45	6° Ⅱ 53'39					
min. Earth dist.	-4367 Dec 30 j 13:03	6° Ⅱ 49'37	4.37052 AU	conjunction	-4361 Dec 28 j 02:05	4° ₹ 29'31	
direct	-4366 Mar 01 j 23:15	1° Ⅱ 50'03		minimum elong	-4361 Dec 28 j 02:02	4° ₹ 29'30	
evening set	-4366 Jul 07 j 20:25	19° Ⅱ 48'29		max. Earth dist.	-4361 Dec 28 j 19:10		6.03579 AU
. ,.	4266 1 1 20:22.01	220 T 40110	1000122	morning rise	-4360 Jan 10 j 06:11	7° 🗷 37'17	
conjunction minimum elong	-4366 Jul 20 j 22:01 -4366 Jul 20 j 21:58	22° П 40'10 22° П 40'08	1°00'23 1°00'35	retrograde opposition	-4360 May 21 j 01:18 -4360 Jul 20 j 10:51	27° х 47′37 22° х 45′05	1920/21
max. Earth dist.	-4366 Jul 19 j 17:06	22° I I40'08		min. Earth dist.	-4360 Jul 19 j 14:06		4.01992 AU
morning rise	-4366 Aug 02 j 20:18	25° I I30'13	0.36307 AO	direct	-4360 Sep 16 j 17:25	17° 🖈 51'23	4.01772 AC
morning rise	-4366 Aug 23 j 20:51	0°95		direct	-4360 Dec 19 j 03:20	0°る	
retrograde	-4366 Dec 01 j 03:23	12° © 32'07		evening set	-4359 Jan 19 j 04:42	7° る 06'13	
opposition	-4365 Jan 30 j 10:02	7° 5 39'44	1°47'11	8			
min. Earth dist.	-4365 Jan 31 j 11:07	7° © 31'40	4.38817 AU	conjunction	-4359 Feb 01 j 13:00	10° る 16'05	-1°14'21
direct	-4365 Apr 03 j 00:18	2°537'30		minimum elong	-4359 Feb 01 j 12:57	10° ට 16'04	1°14'33
evening set	-4365 Aug 08 j 07:07	20° © 32'12		max. Earth dist.	-4359 Feb 03 j 04:00	10° る 39'15	6.01916 AU
max. Earth dist.	-4365 Aug 19 j 07:33	22° © 58'10	6.37440 AU	morning rise	-4359 Feb 15 j 00:29	13° る 27'37	
					-4359 May 08 j 13:49	0° ≈	
conjunction	-4365 Aug 21 j 00:17	23° 5 20'44	1°22'01	retrograde	-4359 Jun 26 j 20:29	3° ≈ 40′50	
minimum elong	-4365 Aug 21 j 00:15	23° © 20'43	1°22'12		-4359 Aug 15 j 05:53	30°Ŗる	
morning rise	-4365 Sep 02 j 14:45	26° © 08'00		opposition	-4359 Aug 25 j 16:43	28° る 35'53	
	-4365 Sep 20 j 10:54	0 \circ Ω		min. Earth dist.	-4359 Aug 24 j 12:40		4.03697 AU
retrograde	-4364 Jan 01 j 17:50	13° Ω 21'48		direct	-4359 Oct 22 j 17:49	23° る 39'34	
opposition	-4364 Mar 02 j 11:47	8° Ω 30'21			-4359 Dec 26 j 08:04	0° ≈	
min. Earth dist.	-4364 Mar 03 j 17:31	8° Ω 20'53	4.34985 AU	evening set	-4358 Feb 25 j 04:31	12°≈52'54	
direct	-4364 May 04 j 00:14	3° Ω 30′28			-4358 Mar 06 j 06:44	15° ≈	
	-4364 Aug 08 j 01:28	15° Ω			4250 M 10 : 10-20	1.690 00212.4	1922100
evening set max. Earth dist.	-4364 Sep 07 j 09:06 -4364 Sep 18 j 06:14	21°Ω32'02	6.31137 AU	conjunction minimum elong	-4358 Mar 10 j 19:20 -4358 Mar 10 j 19:21	16°≈03'24 16°≈03'25	
max. Earm dist.	-4304 Sep 18 J 00.14	23 6(3643	0.31137 AU	max. Earth dist.	-4358 Mar 12 j 17:06	16°≈30'06	
conjunction	-4364 Sep 19 j 21:48	24° Ω 21'05	1°20'27	morning rise	-4358 Mar 24 j 12:25	10 ≈30 00 19°≈14'54	0.00704 AU
minimum elong	-4364 Sep 19 j 21:50	24° Ω 21'06		morning rise	-4358 May 13 j 04:59	0° ∀	
morning rise	-4364 Oct 02 j 08:57	27° Ω 09'34	1 2031	retrograde	-4358 Aug 01 j 03:39	8° ¥ 52'55	
	-4364 Oct 15 j 04:09	0° m		opposition	-4358 Sep 29 j 15:11	3°) (48′09	-1°50'28
retrograde	-4363 Feb 02 j 18:06	14° m 57'47		min. Earth dist.	-4358 Sep 28 j 12:31		4.11088 AU
opposition	-4363 Apr 04 j 19:15	10° m/05'28	1°43'36		-4358 Oct 31 j 12:27	30°R≈	
min. Earth dist.	-4363 Apr 05 j 21:53	9° m 57'01	4.26582 AU	direct	-4358 Nov 27 j 05:00	28° ≈ 48'28	
direct	-4363 Jun 05 j 15:14	5° m 08'30			-4358 Dec 24 j 04:31	0°) €	
evening set	-4363 Oct 08 j 21:16	23° m 25'49		evening set	-4357 Apr 02 j 20:20	17° ¥ 45′04	
max. Earth dist.	-4363 Oct 20 j 04:44	26°Mp01'57	6.21354 AU				
				conjunction	-4357 Apr 16 j 14:41	20° ¥ 53′02	
conjunction	-4363 Oct 21 j 10:23	26° Mp 19'04	0°54'45	minimum elong	-4357 Apr 16 j 14:45	20° ¥ 53′04	
minimum elong	-4363 Oct 21 j 10:27	26° Mp 19'06	0°54'47	max. Earth dist.	-4357 Apr 18 j 00:36	21° ∺ 12′22	6.16063 AU
morning rise	-4363 Nov 02 j 23:57	29° m 12'41		morning rise	-4357 Apr 30 j 09:27	24°) €00'58	
	-4363 Nov 06 j 10:39	0° 亞			-4357 May 27 j 14:38	0°Υ 12°W42147	
retrograde	-4362 Mar 09 j 12:05	17° £ 51'27	0050122	retrograde	-4357 Sep 03 j 15:27	12° Y 42'47	1000117
opposition min. Earth dist.	-4362 May 09 j 15:04 -4362 May 10 j 04:44	12° £ 56′29 12° £ 52′06	0°50'33 4.16001 AU	opposition min. Earth dist.	-4357 Nov 01 j 23:43 -4357 Nov 01 j 08:42	7° Υ 40'36 7° Υ 45'42	
direct	-4362 Jul 09 j 05:49	8° £ 02'08	4.10001 AU	direct	-4357 Nov 01 j 08.42 -4357 Dec 31 j 17:44	2° Υ 38'11	4.21374 AU
evening set	-4362 Nov 10 j 14:08	26° £ 41'02		evening set	-4356 May 07 j 05:33	21° Υ 10'52	
evening set	-4302 NOV 10 J 14.08	20 ==41 02		evening set	-4330 May 07 J 03.33	21 11032	
conjunction	-4362 Nov 23 j 08:10	29° ≏ 40'47	0°10'37	conjunction	-4356 May 20 j 22:22	24° Ƴ 13'47	-0°18'30
minimum elong	-4362 Nov 23 j 08:11	29° Ω 40'48	0°10'31	minimum elong	-4356 May 20 j 22:24	24°Υ13'48	0°18'25
behind sun begin	-4362 Nov 23 j 01:51	29° ♀ 37'05	-	max. Earth dist.	-4356 May 21 j 11:35	24° Υ 21'09	6.26556 AU
behind sun end	-4362 Nov 23 j 14:30	29° ≏ 44'30		morning rise	-4356 Jun 03 j 13:15	27° Y 15'37	-
max. Earth dist.	-4362 Nov 23 j 01:06	29° ჲ 36'39	6.11001 AU	-	-4356 Jun 16 j 01:27	0°8	
	-4362 Nov 24 j 16:47	0° M			-4356 Sep 28 j 08:35	15° 8	
morning rise	-4362 Dec 06 j 03:58	2° M 41'42		retrograde	-4356 Oct 04 j 12:34	15° 8 03'45	
	-4361 Feb 01 j 18:41	15° ™			-4356 Oct 10 j 16:03	15° ₹ 8	
desc. node	-4361 Feb 15 j 21:04	17°M22'26		asc. node	-4356 Oct 25 j 08:54	14° 8 21'03	
retrograde	-4361 Apr 14 j 21:37	22°M14'24		opposition	-4356 Dec 03 j 01:14	10° 8 05'26	0°06'41
opposition	-4361 Jun 14 j 18:18	17°M15'42		min. Earth dist.	-4356 Dec 03 j 00:16	10° 8 05'46	4.31121 AU
min. Earth dist.	-4361 Jun 14 j 14:44	1/~IIL16'51	4.06692 AU	direct	-4355 Feb 02 j 00:40	5° 8 01'47	

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 5 Attention, astronomical year style is used: The year -4355 in astronomical counting style is the year 4356 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	e year -4355 i	n astronomical cou	inting style is the year	4356 BCE in historical c	ounting style.	<i>6</i>
	-4355 May 01 j 12:01	15° 8		morning rise	-4350 Dec 10 j 20:28	7°M30'28	
evening set	-4355 Jun 10 j 00:14	23° 8 12'53		desc. node	-4350 Dec 27 j 20:43	11°M26'00	
					-4349 Jan 13 j 01:45	15° M	
conjunction	-4355 Jun 23 j 09:56	26° 8 09'29	0°27'35	retrograde	-4349 Apr 19 j 20:54	27° M 08'11	
minimum elong	-4355 Jun 23 j 09:54	26° 8 09'28	0°27'46	opposition	-4349 Jun 19 j 17:35	22°M08'53	-0°32'33
max. Earth dist.	-4355 Jun 22 j 21:41	26° 8 02'45	6.34849 AU	min. Earth dist.	-4349 Jun 19 j 11:08	22°M11'00	4.06020 AU
morning rise	-4355 Jul 06 j 16:42	29° 8 04'31		direct	-4349 Aug 17 j 20:40	17°M15'53	
	-4355 Jul 10 j 22:33	$\Pi^{\circ}0$			-4349 Nov 22 j 11:04	0° ∡ 7	
retrograde	-4355 Nov 04 j 14:20	16° Ⅱ 17'30		evening set	-4349 Dec 19 j 20:41	6° ∡ 18'18	
opposition	-4354 Jan 03 j 10:49	11° Ⅲ 22'52					
min. Earth dist.	-4354 Jan 04 j 01:43		4.37430 AU	conjunction	-4348 Jan 01 j 22:35	9° х 24′53	
direct	-4354 Mar 06 j 12:42	6° Ⅱ 19'26		minimum elong	-4348 Jan 01 j 22:31	9° ∡ ¹24'51 −	
evening set	-4354 Jul 12 j 08:13	24° Ⅱ 17'18		max. Earth dist.	-4348 Jan 02 j 19:25		6.03153 AU
max. Earth dist.	-4354 Jul 24 j 02:18	26° ∏ 51'47	6.38625 AU	morning rise	-4348 Jan 15 j 03:33	12° ∡ °33'14	
					-4348 Apr 13 j 12:09	0°る	
conjunction	-4354 Jul 25 j 08:39	27° I 108'27		retrograde	-4348 May 26 j 02:44	2°る45'52	
minimum elong	-4354 Jul 25 j 08:36	27° I 108'25	1°04'52	•.•	-4348 Jul 07 j 16:15	30°₹ ⋌ ¹	100/101
morning rise	-4354 Aug 07 j 05:37	29° Ⅱ 57'58		opposition	-4348 Jul 25 j 09:49	27° х 42'53	
	-4354 Aug 07 j 09:21	0°9		min. Earth dist.	-4348 Jul 24 j 12:53		4.01867 AU
retrograde	-4354 Dec 05 j 12:46	17°900'21	1051126	direct	-4348 Sep 21 j 15:26	22°ダ48'53 0°る	
opposition	-4353 Feb 03 j 21:39 -4353 Feb 04 j 22:37	12°508'11	1°51'26	avanina aat	-4348 Nov 29 j 14:20	0 3 12° る 04'37	
min. Earth dist.	-4353 Feb 04 j 22:37 -4353 Apr 07 j 11:20	12° © 00'09 7° © 06'16	4.38599 AU	evening set	-4347 Jan 24 j 04:13	12-00437	
direct evening set	-4353 Apr 07 j 11.20 -4353 Aug 12 j 17:00	7 906 16 25°901'14		conjunction	-4347 Feb 06 j 13:26	15° る 14'48	1017112
max. Earth dist.	-4353 Aug 12 j 17:00 -4353 Aug 23 j 17:14		6.36973 AU	minimum elong	-4347 Feb 06 j 13:23	15°る14'46	
max. Earth dist.	-4333 Aug 23 j 17.14	21 32/21	0.30773 AO	max. Earth dist.	-4347 Feb 08 j 05:26		6.02086 AU
conjunction	-4353 Aug 25 j 09:13	27°549'33	1°23'16	morning rise	-4347 Feb 20 j 01:55	18° පි 26'37	0.02080 AU
minimum elong	-4353 Aug 25 j 09:12	27°549'32		morning risc	-4347 Apr 14 j 00:15	0° ≈	
minimum clong	-4353 Sep 04 j 04:27	0°Ω	1 2321	retrograde	-4347 Jul 01 j 17:48	8° ≈ 37'49	
morning rise	-4353 Sep 04 j 04:27	0° Ω 36'40		min. Earth dist.	-4347 Aug 29 j 07:51		4.04178 AU
morning rise	-4353 Nov 23 j 06:21	15° Ω		opposition	-4347 Aug 30 j 12:42	3°≈32'48	
retrograde	-4352 Jan 06 j 07:49	17° Ω 53'23		оррозион	-4347 Sep 28 j 18:05	30°Rる	2 0.00
	-4352 Feb 20 j 03:35	15°RΩ		direct	-4347 Oct 27 j 13:20	28° る 36'02	
opposition	-4352 Mar 07 j 02:37	13° Ω 01'56	2°02'33		-4347 Nov 25 j 12:33	0° ≈	
min. Earth dist.	-4352 Mar 08 j 08:38		4.34302 AU		-4346 Feb 17 j 23:18	15° ≈	
direct	-4352 May 08 j 14:41	8° Ω 02'28		evening set	-4346 Mar 02 j 05:37	17° ≈ 49'00	
	-4352 Jul 19 j 15:54	15° Ω		C	,		
evening set	-4352 Sep 11 j 18:25	26° Ω 04'38		conjunction	-4346 Mar 15 j 21:08	20° ≈ 59'30	-1°20'43
max. Earth dist.	-4352 Sep 22 j 15:26	28° £ 31'40	6.30287 AU	minimum elong	-4346 Mar 15 j 21:10	20° ≈ 59'31	1°20'51
				max. Earth dist.	-4346 Mar 17 j 16:54	21° ≈ 25′00	6.07450 AU
conjunction	-4352 Sep 24 j 06:47	28° Ω 53'54	1°18'13	morning rise	-4346 Mar 29 j 14:49	24° ≈ 10′54	
minimum elong	-4352 Sep 24 j 06:49	28° Ω 53'55	1°18'19		-4346 Apr 24 j 11:04	0°)	
	-4352 Sep 29 j 03:45	0° m		retrograde	-4346 Aug 05 j 21:20	13° ¥ 43′28	
morning rise	-4352 Oct 06 j 18:00	1° Mp 42'45		min. Earth dist.	-4346 Oct 03 j 06:28	8°){ 47'24	4.12013 AU
retrograde	-4351 Feb 07 j 10:52	19° m 35'48		opposition	-4346 Oct 04 j 07:19	8° ¥ 38'55	-1°45'23
opposition	-4351 Apr 09 j 13:49	14° m 43'08	1°37'58	direct	-4346 Dec 02 j 00:42	3°) 38'46	
min. Earth dist.	-4351 Apr 10 j 14:22	14° m 35'19	4.25609 AU	evening set	-4345 Apr 07 j 19:35	22°) 33′48	
direct	-4351 Jun 10 j 06:22	9° Mp 46'31					
evening set	-4351 Oct 13 j 08:06	28° Mp 04'52		conjunction	-4345 Apr 21 j 14:18	25°) 41′28	
	-4351 Oct 21 j 16:09	0∘ ⊽		minimum elong	-4345 Apr 21 j 14:22	25°) (41'30	0°55'09
	1051 6 5555	00	00.4015.0	max. Earth dist.	-4345 Apr 22 j 23:15	26°) €00'11	6.17125 AU
conjunction	-4351 Oct 25 j 21:43	0° £ 58'42	0°49'29	morning rise	-4345 May 05 j 08:51	28°) (48'53	
minimum elong	-4351 Oct 25 j 21:46	0° ჲ 58'44	0°49'30		-4345 May 10 j 15:29	0°Υ 17°Ω2 405	
max. Earth dist.	-4351 Oct 24 j 19:59	0° £ 43'50	6.20354 AU	retrograde	-4345 Sep 08 j 04:07	17° Y ′24′05	
morning rise	-4351 Nov 07 j 11:41	3° ₾ 52'59		opposition	-4345 Nov 06 j 12:18	12° Y 22'25	
retrograde	-4350 Mar 14 j 09:58	22° £ 37'29	0044440	min. Earth dist.	-4345 Nov 05 j 22:15	12° Y 27'10	4.22472 AU
opposition	-4350 May 14 j 12:52	17° £ 42'03	0°41'10	direct	-4344 Jan 05 j 08:45	7° Υ 19'47	
min. Earth dist.	-4350 May 15 j 01:09	17° £ 38'06	4.15029 AU	evening set	-4344 May 12 j 01:03	25° Y 50′20	
direct	-4350 Jul 14 j 00:45	12° Ω 47'57			4244 N4 25:17.02	2000052123	0011150
ovonint	-4350 Nov 08 j 21:16	0°M		conjunction	-4344 May 25 j 17:03	28°Y52'31	
evening set	-4350 Nov 15 j 04:52	1°ML28'18		minimum elong	-4344 May 25 j 17:04	28° Y 52'32 28° Y 49'25	0°11'55
conjunction	4350 Nov. 27: 22:21	10m 20112	0°03'48	behind sun begin behind sun end	-4344 May 25 j 11:27 -4344 May 25 j 22:41	28° Y ′49′25 28° Y ′55′38	
conjunction minimum elong	-4350 Nov 27 j 23:31 -4350 Nov 27 j 23:31	4°M28'43 4°M28'43	0°03'48 0°03'42	max. Earth dist.	-4344 May 25 j 22:41 -4344 May 26 j 01:54	28° Y 55'38	6.27614 AU
behind sun begin	-4350 Nov 27 j 25:31 -4350 Nov 27 j 15:32	4°1162843 4°1162843	0 0544	max. Datui üist.	-4344 May 20 j 01:34	0° 8	0.27014 AU
behind sun begin	-4350 Nov 28 j 07:30	4 11624 02 4°M33'24		morning rise	-4344 Jun 08 j 07:14	1° 8 53'34	
		4°M25'30	6.10138 AU	morning 1150	-4344 Aug 14 j 07:11	15° 8	
max. Earth dist.	-4350 Nov 27 j 18:00	4"1115/5/30					

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 6 Attention, astronomical year style is used: The year -4344 in astronomical counting style is the year 4345 BCE in historical counting style.

Attention, astronom	nical year style is used: Th	ie year -4344 i	n astronomical co	unting style is the year	4345 BCE in historical c	ounting style.	
asc. node	-4344 Sep 04 j 10:21	17° 8 43'54		evening set	-4338 Nov 19 j 21:49	6°M21'14	
retrograde	-4344 Oct 08 j 22:40	19° 8 36'22					
	-4344 Dec 04 j 19:00	15° ₹ 8		conjunction	-4338 Dec 02 j 17:30	9° ™ 22'40	-0°03'19
opposition	-4344 Dec 07 j 11:35	14° 8 38'32	0°16'10	minimum elong	-4338 Dec 02 j 17:30	9° ™ 22'40	0°03'25
min. Earth dist.	-4344 Dec 07 j 13:12	14° 8 38'00	4.32057 AU	behind sun begin	-4338 Dec 02 j 09:29	9° ™ 17'57	
direct	-4343 Feb 06 j 15:41	9° 8 34'48		behind sun end	-4338 Dec 03 j 01:31	9° ™ 27′23	
	-4343 Apr 10 j 08:23	15° 8		max. Earth dist.	-4338 Dec 02 j 16:10	9° ™ 21'55	6.08779 AU
evening set	-4343 Jun 14 j 15:02	27° 8 43'57		morning rise	-4338 Dec 15 j 15:26	12°M25'30	
	-4343 Jun 24 j 23:22	Π $^{\circ}0$			-4338 Dec 26 j 17:01	15° ™	
					-4337 Mar 18 j 06:52	0° ∡ ¹	
conjunction	-4343 Jun 27 j 23:41	0° Ⅱ 39'46	0°33'36	retrograde	-4337 Apr 25 j 02:42	2° ∡ 10'17	
minimum elong	-4343 Jun 27 j 23:38	0° Ⅱ 39'45	0°33'47		-4337 Jun 01 j 22:16	30°₽ M	
max. Earth dist.	-4343 Jun 27 j 10:17	0° Ⅲ 32'24	6.35589 AU	opposition	-4337 Jun 24 j 20:09	27°M10'30	-0°42'45
morning rise	-4343 Jul 11 j 04:57	3° Ⅲ 33'54		min. Earth dist.	-4337 Jun 24 j 12:27	27°M13'02	4.04918 AU
retrograde	-4343 Nov 08 j 21:08	20° Ⅱ 43'56		direct	-4337 Aug 22 j 19:55	22°M17'30	
opposition	-4342 Jan 07 j 20:12	15° Ⅱ 49'41	1°16'45		-4337 Nov 02 j 22:37	0° ∡	
min. Earth dist.	-4342 Jan 08 j 11:42	15° Ⅱ 44'38	4.37931 AU	evening set	-4337 Dec 24 j 20:29	11° ₹ 23'19	
direct	-4342 Mar 10 j 23:27	10° Ⅱ 46′23					
evening set	-4342 Jul 16 j 19:03	28° Ⅱ 43'02		conjunction	-4336 Jan 06 j 23:23	14° ∡ °30'41	-0°50'34
	-4342 Jul 22 j 15:49	0 \circ \mathfrak{S}		minimum elong	-4336 Jan 06 j 23:19	14° ∡ °30′39	0°50'45
max. Earth dist.	-4342 Jul 28 j 09:12	1° © 15'29	6.38813 AU	max. Earth dist.	-4336 Jan 07 j 22:53	14° ∡ ⁴44'42	6.02404 AU
				morning rise	-4336 Jan 20 j 05:37	17° ∡ ³39'52	
conjunction	-4342 Jul 29 j 18:01	1° © 33'32	1°08'33		-4336 Mar 16 j 23:39	8°0	
minimum elong	-4342 Jul 29 j 17:58	1° © 33'30	1°08'45	retrograde	-4336 May 31 j 07:00	7° る 55'34	
morning rise	-4342 Aug 11 j 13:52	४°छ22'27		opposition	-4336 Jul 30 j 12:34	2° る 52'15	-1°43'02
retrograde	-4342 Dec 09 j 22:59	21° 5 24'57		min. Earth dist.	-4336 Jul 29 j 13:16	3° ප 00'05	4.01594 AU
opposition	-4341 Feb 08 j 08:27	16° © 32'58	1°55'00		-4336 Aug 22 j 10:05	30°R. ✓	
min. Earth dist.	-4341 Feb 09 j 11:25	16° 5 24'20	4.38445 AU	direct	-4336 Sep 26 j 14:58	27° ₹ 58'02	
direct	-4341 Apr 12 j 00:15	11° 5 31'20			-4336 Oct 31 j 16:11	ರ°0	
evening set	-4341 Aug 17 j 01:03	29° 5 26'12		evening set	-4335 Jan 29 j 09:01	17° る 15'21	
-	-4341 Aug 19 j 14:19	$0^{\circ}\Omega$		-	-		
max. Earth dist.	-4341 Aug 27 j 23:58	1° Ω 51'50	6.36450 AU	conjunction	-4335 Feb 11 j 19:13	20° る 25'52	-1°19'36
				minimum elong	-4335 Feb 11 j 19:11	20° පි 25'51	1°19'48
conjunction	-4341 Aug 29 j 16:30	2° Ω 14'22	1°24'01	max. Earth dist.	-4335 Feb 13 j 12:28	20° る 50'19	6.02306 AU
minimum elong	-4341 Aug 29 j 16:30	2° Ω 14'21	1°24'12	morning rise	-4335 Feb 25 j 08:37	23° る 37'59	
morning rise	-4341 Sep 11 j 05:26	5° Ω 01'24		•	-4335 Mar 25 j 05:59	0° ≈	
-	-4341 Oct 29 j 19:11	15° Ω		retrograde	-4335 Jul 06 j 19:52	13° ≈ 46′28	
retrograde	-4340 Jan 10 j 18:55	22° Ω 21'31		min. Earth dist.	-4335 Sep 03 j 07:52	8°≈51'12	4.04891 AU
opposition	-4340 Mar 11 j 16:21		2°01'15	opposition	-4335 Sep 04 j 12:42	8° ≈ 41'21	-2°04'12
min. Earth dist.	-4340 Mar 12 j 21:27		4.33436 AU	direct	-4335 Nov 01 j 15:20	3° ≈ 44'09	
	-4340 Apr 01 j 07:14	15°R Ω			-4334 Jan 30 j 19:33	15° ≈	
direct	-4340 May 13 j 01:48	12° Ω 30'53		evening set	-4334 Mar 07 j 10:48	22° ≈ 55'39	
	-4340 Jun 23 j 13:04	15° Ω		C	J		
	-4340 Sep 13 j 13:14	0° m)		conjunction	-4334 Mar 21 j 03:11	26°≈05'59	-1°18'41
evening set	-4340 Sep 16 j 02:45	0° Mp 34'29		minimum elong	-4334 Mar 21 j 03:13	26°≈06'00	1°18'48
max. Earth dist.	-4340 Sep 27 j 01:18	3° m/02'48	6.29142 AU	max. Earth dist.	-4334 Mar 23 j 00:27	26° ≈ 32'16	6.08634 AU
		•		morning rise	-4334 Apr 03 j 21:10	29°≈17'00	
conjunction	-4340 Sep 28 j 14:58	3° m 24'09	1°15'33	•	-4334 Apr 07 j 00:04	0° ∀	
minimum elong	-4340 Sep 28 j 15:00	3° m 24'10	1°15'38	retrograde	-4334 Aug 10 j 16:53	18°) 41'48	
morning rise	-4340 Oct 11 j 02:11	6° Mp 13′30		min. Earth dist.	-4334 Oct 08 j 01:40	13°) 45′54	4.13559 AU
retrograde	-4339 Feb 12 j 05:19	24° m 12'42		opposition	-4334 Oct 09 j 02:08	13°) € 37'33	
opposition	-4339 Apr 14 j 08:02	19° m 19'48	1°31'46	direct	-4334 Dec 06 j 22:10	8° 升 37′03	
min. Earth dist.	-4339 Apr 15 j 08:28	19° m 12'01	4.24229 AU	evening set	-4333 Apr 12 j 20:54	27°) €27'55	
direct	-4339 Jun 14 j 22:29	14° m) 23'34			-4333 Apr 24 j 02:03	0° Y	
	-4339 Oct 05 j 18:00	0∘ ⊽					
evening set	-4339 Oct 17 j 19:31	2° ₽ 44'44		conjunction	-4333 Apr 26 j 15:22	0° Ƴ 34'44	-0°49'47
max. Earth dist.	-4339 Oct 29 j 08:45	5° ₽ 25'02	6.18864 AU	minimum elong	-4333 Apr 26 j 15:26	0° Y ′34'46	0°49'47
	•			max. Earth dist.	-4333 Apr 27 j 20:50	0° Υ 51'25	6.18920 AU
conjunction	-4339 Oct 30 j 09:35	5° ₽ 39'25	0°43'53	morning rise	-4333 May 10 j 09:43	3° Ƴ 41'14	
minimum elong	-4339 Oct 30 j 09:38	5° ჲ 39'27	0°43'52	retrograde	-4333 Sep 12 j 15:36	22° Y °07'03	
morning rise	-4339 Nov 12 j 00:28	8° ₾ 34'43		opposition	-4333 Nov 11 j 01:13	17° Υ ′05'48	-0°42'19
retrograde	-4338 Mar 19 j 08:34	27° ≏ 26'58		min. Earth dist.	-4333 Nov 10 j 13:05	17° Y ′09'54	
opposition	-4338 May 19 j 11:48	22° ♀ 31'04	0°31'24	direct	-4332 Jan 10 j 03:07	12° Υ '02'52	
min. Earth dist.	-4338 May 19 j 21:05	22° ♀ 28'04	4.13532 AU		-4332 May 14 j 15:53	0°8	
direct	-4338 Jul 18 j 18:15	17° ≏ 37'13		evening set	-4332 May 16 j 19:28	0° 8 28'21	
	-4338 Oct 22 j 23:38	0° M ,		Č	, ,	-	
desc. node	-4338 Nov 06 j 19:05	3° M ₁8'37		conjunction	-4332 May 30 j 10:45	3° 8 29'26	-0°05'32
	,			-	- "		

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 7 Attention, astronomical year style is used: The year -4332 in astronomical counting style is the year 4333 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	ne year -4332 i	n astronomical co	unting style is the year	4333 BCE in historical c	ounting style.	C
minimum elong	-4332 May 30 j 10:45	3° 8 29'26	0°05'26		-4326 May 02 j 17:16	30° ₹ Ω	
behind sun begin	-4332 May 30 j 02:47	3° 8 25'02		opposition	-4326 May 24 j 11:24	27° ≏ 20'44	0°21'27
behind sun end	-4332 May 30 j 18:43	3° 8 33'50		min. Earth dist.	-4326 May 24 j 19:19	27° ≏ 18'11	4.11493 AU
max. Earth dist.	-4332 May 30 j 17:49	3° 8 33'20	6.29431 AU	direct	-4326 Jul 23 j 13:32	22° ≏ 27'06	
morning rise	-4332 Jun 12 j 23:37	6° 8 29'13		desc. node	-4326 Sep 17 j 00:49	27° ≏ 06'52	
asc. node	-4332 Jul 16 j 03:03	13° 8 30'41			-4326 Oct 03 j 17:54	0° M	
	-4332 Jul 23 j 17:34	15° 8		evening set	-4326 Nov 24 j 16:23	11°M16'50	
retrograde	-4332 Oct 13 j 04:42	24° 8 04'14					
opposition	-4332 Dec 11 j 19:51	19° 8 06'55	0°25'16	conjunction	-4326 Dec 07 j 13:07	14°M19'32	-0°10'17
min. Earth dist.	-4332 Dec 11 j 23:07	19° 8 05'51	4.33668 AU	minimum elong	-4326 Dec 07 j 13:06	14°M19'31	0°10'24
	-4331 Jan 17 j 10:31	15° ₹ 8		behind sun begin	-4326 Dec 07 j 06:42	14° ™ 15'44	
direct	-4331 Feb 11 j 04:01	14° 8 03'09		behind sun end	-4326 Dec 07 j 19:31	14°M23'18	
	-4331 Mar 08 j 05:40	15° 8		max. Earth dist.	-4326 Dec 07 j 15:06	14° M 20'41	6.06970 AU
	-4331 Jun 09 j 05:30	Π °0			-4326 Dec 10 j 09:22	15° M	
evening set	-4331 Jun 19 j 02:31	2° Ⅱ 08'00		morning rise	-4326 Dec 20 j 12:23	17°M23'43	
		_			-4325 Feb 17 j 04:49	0° ∡ 7	
conjunction	-4331 Jul 02 j 09:39	5° Ⅱ 02'42		retrograde	-4325 Apr 30 j 08:14	7° ∡ 16'55	
minimum elong	-4331 Jul 02 j 09:36	5° Ⅱ 02'41	0°39'23	opposition	-4325 Jun 30 j 00:22	2° ∡ 16'35	
max. Earth dist.	-4331 Jul 01 j 15:32	4° Ⅱ 52'46	6.36845 AU	min. Earth dist.	-4325 Jun 29 j 13:05		4.03549 AU
morning rise	-4331 Jul 15 j 13:41	7° Ⅱ 55'47			-4325 Jul 17 j 23:41	30°RM	
retrograde	-4331 Nov 13 j 02:03	25° Ⅱ 01'41		direct	-4325 Aug 27 j 18:35	27°M23'36	
opposition	-4330 Jan 12 j 02:30	20° Ⅱ 07'46	1°23'26		-4325 Oct 06 j 22:20	0° ∡ ¹	
min. Earth dist.	-4330 Jan 12 j 20:56	20° Ⅱ 01'47	4.38755 AU	evening set	-4325 Dec 29 j 23:04	16° ₹ 33'44	
direct	-4330 Mar 15 j 09:59	15° Ⅱ 04'32					
	-4330 Jul 07 j 04:55	0		conjunction	-4324 Jan 12 j 03:04	19° ∡ ′41′58	-0°56'08
evening set	-4330 Jul 21 j 01:12	2° © 58'54		minimum elong	-4324 Jan 12 j 03:00	19° ∡ ′41′55	0°56'20
				max. Earth dist.	-4324 Jan 13 j 06:15	19° ∡ ′58′11	6.01576 AU
conjunction	-4330 Aug 02 j 23:05	5° 5 48'46	1°11'53	morning rise	-4324 Jan 25 j 10:28	22° ∡ 52′00	
minimum elong	-4330 Aug 02 j 23:02	5° 5 48'44	1°12'05		-4324 Feb 25 j 14:11	0°₹	
max. Earth dist.	-4330 Aug 01 j 13:00	5° © 30'01	6.39116 AU	retrograde	-4324 Jun 05 j 14:09	13° る 10'37	
morning rise	-4330 Aug 15 j 17:34	8° 9 37'03		opposition	-4324 Aug 04 j 17:36	8° る 06'49	-1°48'48
retrograde	-4330 Dec 14 j 02:38	25° © 39'41		min. Earth dist.	-4324 Aug 03 j 16:33	8° る 15'16	4.01408 AU
opposition	-4329 Feb 12 j 15:17	20°947'50	1°57'47	direct	-4324 Oct 01 j 19:25	3° る 12'14	
min. Earth dist.	-4329 Feb 13 j 18:53	20° © 39'01	4.38221 AU	evening set	-4323 Feb 03 j 15:59	22° る 30'23	
direct	-4329 Apr 16 j 06:47	15° 5 46'26					
	-4329 Aug 04 j 05:08	$0^{\circ}\Omega$		conjunction	-4323 Feb 17 j 03:19	25° る 41'10	-1°21'22
evening set	-4329 Aug 21 j 05:17	3° Ω 41'38		minimum elong	-4323 Feb 17 j 03:17	25° る 41'09	1°21'34
max. Earth dist.	-4329 Sep 01 j 01:33	6° Ω 06′09	6.35693 AU	max. Earth dist.	-4323 Feb 19 j 00:25	26° る 07'49	6.02753 AU
				morning rise	-4323 Mar 02 j 17:28	28° る 53'22	
conjunction	-4329 Sep 02 j 19:54	6° Ω 29'45	1°24'17		-4323 Mar 07 j 11:36	0° ≈	
minimum elong	-4329 Sep 02 j 19:54	6° Ω 29'45	1°24'27		-4323 May 21 j 19:29	15° ≈	
morning rise	-4329 Sep 15 j 08:22	9° Ω 16′53		retrograde	-4323 Jul 11 j 22:51	18° ≈ 57'31	
	-4329 Oct 11 j 21:31	15° Ω			-4323 Sep 01 j 05:41	15°R ≈	
retrograde	-4328 Jan 15 j 05:44	26° Ω 41′25		min. Earth dist.	-4323 Sep 08 j 08:37	14° ≈ 02′16	4.05907 AU
opposition	-4328 Mar 16 j 03:03	21° Ω 49'48	1°59'20	opposition	-4323 Sep 09 j 13:49	13° ≈ 52′18	-2°03'16
min. Earth dist.	-4328 Mar 17 j 09:41	21° Ω 40′04	4.32178 AU	direct	-4323 Nov 06 j 17:37	8° ≈ 54'38	
direct	-4328 May 17 j 11:54	16° Q 51′00			-4322 Jan 09 j 05:28	15° ≈	
	-4328 Aug 28 j 19:44	0° m)		evening set	-4322 Mar 12 j 17:09	28° ≈ 03′23	
evening set	-4328 Sep 20 j 08:12	4° ™ 57'30			-4322 Mar 21 j 03:15	0°)	
max. Earth dist.	-4328 Oct 01 j 06:48	7° Mp 26'24	6.27480 AU				
	•			conjunction	-4322 Mar 26 j 09:55	1° ¥ 13′16	-1°16'01
conjunction	-4328 Oct 02 j 20:33	7° ™ 47'52	1°12'31	minimum elong	-4322 Mar 26 j 09:58	1°) 13′18	
minimum elong	-4328 Oct 02 j 20:35	7° m 47'53	1°12'36	max. Earth dist.	-4322 Mar 28 j 05:12	1° ¥ 38'18	6.10076 AU
morning rise	-4328 Oct 15 j 08:03	10° mp 38'01		morning rise	-4322 Apr 09 j 04:23	4°) €23'46	
retrograde	-4327 Feb 16 j 21:02	28° m 45'22		retrograde	-4322 Aug 15 j 10:46	23° ¥ 39'48	
opposition	-4327 Apr 19 j 00:45	23° m 52'08	1°25'09	opposition	-4322 Oct 13 j 20:53	18° ¥ 35'48	-1°32'46
min. Earth dist.	-4327 Apr 19 j 23:09	23° m/45'00	4.22272 AU	min. Earth dist.	-4322 Oct 12 j 21:25		4.15237 AU
direct	-4327 Jun 19 j 09:42	18° m) 56'15		direct	-4322 Dec 11 j 20:40	13°) 34′52	
	-4327 Sep 18 j 23:39	0∘ <u>⊽</u>			-4321 Apr 07 j 08:02	0° Υ	
evening set	-4327 Oct 22 j 06:07	7° ≏ 22'21		evening set	-4321 Apr 17 j 22:04	2° Υ 21'21	
S	<i>j</i> • ·	-		Č	1 . 3	_	
conjunction	-4327 Nov 03 j 20:52	10° ≏ 18'12	0°38'05	conjunction	-4321 May 01 j 16:31	5° Y ′27'23	-0°44'04
minimum elong	-4327 Nov 03 j 20:55	10° ♀ 18'14	0°38'02	minimum elong	-4321 May 01 j 16:34	5° Υ 27'25	
Č				0			
max. Earth dist.		10° ♀ 05'25	6.16789 AU	max. Earth dist.	-4321 May 02 i 20:03	5° Ƴ 42'55	6.20701 AU
	-4327 Nov 02 j 22:55	10° ♀ 05'25 13° ♀ 14'47	6.16789 AU		-4321 May 02 j 20:03 -4321 May 15 j 10:14	5° Υ 42'55 8° Υ 32'52	6.20701 AU
max. Earth dist. morning rise	-4327 Nov 02 j 22:55 -4327 Nov 16 j 12:36	13° ≏ 14'47	6.16789 AU	morning rise	-4321 May 15 j 10:14		6.20701 AU
	-4327 Nov 02 j 22:55		6.16789 AU			8° Y 32'52	

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -4321 in astronomical counting style is the year 4322 BCE in historical counting style. 21°**Υ**52'29 4.26036 AU min. Earth dist. -4321 Nov 15 i 04:45 direct -4315 Jun 24 j 04:30 23° m 42'49 -4320 Jan 14 j 21:16 16°**Y**46′07 -4315 Aug 29 j 13:45 0∘**⊽** direct -4320 Apr 27 j 17:28 0°8 -4315 Oct 26 j 21:24 12°**♀**12'38 evening set -4320 May 21 j 14:15 5°807'28 evening set -4320 May 25 j 09:52 asc. node 5°**8**57'53 conjunction -4315 Nov 08 j 12:57 15°**≏**09'29 0°31'46 -4315 Nov 08 j 12:59 0°31'43 minimum elong 15°**≏**09'31 -4320 Jun 04 j 04:30 -4315 Nov 07 j 18:19 conjunction 8°**8**07'33 0°01'11 max. Earth dist. 14°**£**58'36 6.15191 AU -4320 Jun 04 j 04:29 minimum elong 8°**8**07'32 0°01'18 morning rise -4315 Nov 21 j 05:37 18°**≏**07'10 -4320 Jun 03 j 20:12 0° M behind sun begin 8°**8**02'59 -4314 Jan 16 j 02:31 behind sun end -4320 Jun 04 j 12:45 8°**8**12'05 retrograde -4314 Mar 29 j 14:22 7°M17'30 max. Earth dist. -4320 Jun 04 j 06:55 8°**8**08'50 6.30899 AU opposition -4314 May 29 j 14:33 2° M $_2$ 0'37 0°10'58 -4320 Jun 17 j 16:22 -4314 May 29 j 18:50 morning rise 11°**8**06'17 min. Earth dist. 2°M19'13 4.10130 AU -4314 Jun 17 j 11:39 -4320 Jul 05 j 16:56 15°8 30°**₹**Ω retrograde -4320 Oct 17 j 12:57 28°835'20 desc. node -4314 Jul 27 j 05:31 27°**2**27'24 opposition -4320 Dec 16 j 05:48 23°**8**38'33 0°34'25 direct -4314 Jul 28 j 10:37 27°**£**27'16 min. Earth dist. -4320 Dec 16 j 11:30 23°**8**36'40 4.34818 AU -4314 Sep 06 j 16:17 0°M direct -4319 Feb 15 j 18:13 18°**8**34'46 -4314 Nov 23 j 21:30 15°M -4319 May 23 j 02:56 $\mathbb{I}^{\circ 0}$ evening set -4314 Nov 29 j 13:52 16°ML20'04 evening set -4319 Jun 23 j 15:44 6°**Ⅲ**37'09 conjunction -4314 Dec 12 j 11:30 19°ML23'37 -0°17'20 conjunction -4319 Jul 06 j 21:40 9°**Ⅲ**31′01 0°44'45 minimum elong -4314 Dec 12 j 11:28 19°M23'36 0°17'30 minimum elong -4319 Jul 06 j 21:36 9°**Ⅲ**30′59 0°44'56 max. Earth dist. -4314 Dec 12 i 17:19 19°**™**27'04 6.05974 AU max. Earth dist. -4319 Jul 06 i 01:42 9°**Ⅱ**20′04 6.37592 AU morning rise -4314 Dec 25 i 11:55 22°M28'44 morning rise -4319 Jul 20 i 00:08 12°**Ⅲ**23'12 -4313 Jan 27 j 14:16 0° **₹** retrograde -4319 Nov 17 j 09:04 29°**Ⅲ**26'55 retrograde -4313 May 05 j 14:33 12°**∡** 26'58 -4318 Jan 16 j 11:45 24°II33'28 1°29'57 -4313 Jul 05 j 05:31 7° ₹ 26'01 -1°02'24 opposition opposition -4318 Jan 17 j 07:43 24°**П**27'00 4.39072 AU min. Earth dist. -4313 Jul 04 j 15:43 7°**∡**′30'35 4.03031 AU min. Earth dist. -4318 Mar 19 j 21:17 -4313 Sep 01 j 21:23 2°×732'53 direct 19°**Ⅲ**30′28 direct -4312 Jan 04 j 01:45 21°×744'08 -4318 Jun 19 j 23:30 0.00 evening set -4318 Jul 25 j 10:56 7°9524'18 evening set -4312 Jan 17 j 06:51 24°**₹**52'48 -1°01'17 max. Earth dist. -4318 Aug 05 j 18:00 9°**©**53'03 6.38955 AU conjunction -4312 Jan 17 j 06:47 minimum elong 24° \$\sqrt{52'46} 1\circ{01'28} -4318 Aug 07 j 07:28 conjunction 10°**©**13'41 1°14'58 max. Earth dist. -4312 Jan 18 j 14:37 25°**尽**11'44 6.01577 AU -4318 Aug 07 j 07:25 -4312 Jan 30 j 15:09 28°**х** 03′13 minimum elong 10°9513'40 1°15'10 morning rise -4318 Aug 20 j 01:02 13°901'37 -4312 Feb 07 j 21:57 morning rise 0°₹ -4318 Dec 10 j 14:25 -4312 Jun 10 j 19:08 18°**る**20'58 0 $^{\circ}\Omega$ retrograde -4318 Dec 18 j 13:47 -4312 Aug 09 j 20:09 retrograde 0°**Ω**06′04 opposition 13°る16'50 -1°53'35 -4318 Dec 26 j 13:15 30°Rூ min. Earth dist. -4312 Aug 08 j 18:00 13°る25'39 4.01957 AU opposition -4317 Feb 17 j 03:05 25°5514'24 2°00'06 direct -4312 Oct 06 j 21:18 8°る21'51 min. Earth dist. -4317 Feb 18 j 08:22 25°505'02 4.37611 AU -4311 Feb 08 j 20:38 27°る38'25 evening set direct -4317 Apr 20 j 19:20 20°9513'18 -4311 Feb 18 j 21:24 0°≈ -4317 Jul 17 j 17:03 $0^{\circ}\Omega$ -4317 Aug 25 j 13:45 8°**Ω**09'51 -4311 Feb 22 j 08:37 0°≈49'02 -1°22'29 evening set conjunction -4317 Sep 05 j 10:10 10°**Ω**34'48 -4311 Feb 22 j 08:36 0°≈49'02 1°22'39 max. Earth dist. 6.34676 AU minimum elong -4311 Feb 24 j 05:13 1°≈15'19 6.03754 AU max. Earth dist. 4°≈01'04 conjunction -4317 Sep 07 i 03:55 10°Ω58'08 1°24'06 morning rise -4311 Mar 07 i 23:39 -4317 Sep 07 i 03:55 minimum elong 10°**Ω**58′08 1°24'15 -4311 Apr 27 j 08:04 15°**≈** morning rise -4317 Sep 19 i 15:49 13°**Ω**45'29 retrograde -4311 Jul 16 i 19:09 23°≈58'48 -4317 Sep 25 i 06:29 15°Ω min. Earth dist. -4311 Sep 13 i 05:20 19°≈03'34 4.07253 AU -4317 Dec 22 j 05:15 0° m -4311 Sep 14 j 10:38 18°≈53'33 -2°01'25 opposition -4316 Jan 19 j 19:58 1° m) 15'22 -4311 Oct 17 j 10:58 15°R≈ retrograde -4316 Feb 17 j 15:44 30°RΩ direct -4311 Nov 11 j 16:19 13°≈55'21 -4316 Mar 20 j 19:21 26°Ω23'40 1°56'38 -4311 Dec 07 j 02:58 15°**≈** opposition 4.30828 AU min. Earth dist. -4316 Mar 22 j 00:43 26°**Ω**14'21 -4310 Mar 04 j 13:01 0°) direct -4316 May 22 j 00:40 21°**Ω**25'20 evening set -4310 Mar 17 j 19:07 3°**₩**00'31 -4316 Aug 10 j 12:12 0° m evening set -4316 Sep 24 j 18:52 9° m 34'44 conjunction -4310 Mar 31 j 12:29 6°\(\mathbf{6}\)09'55 -1°12'54 -4316 Oct 05 j 18:40 12°Mp04'53 -4310 Mar 31 j 12:33 6°¥09'57 1°13'00 max. Earth dist. 6.25920 AU minimum elong -4310 Apr 02 j 06:42 max. Earth dist. 6°**¥**34'15 6.11652 AU -4316 Oct 07 j 07:11 12° m/25'45 1°08'53 -4310 Apr 14 j 06:59 conjunction morning rise 9°**₩**19'44 -4316 Oct 07 j 07:14 minimum elong 12° Mp 25'46 1°08'57 retrograde -4310 Aug 20 j 02:40 28°**\(**27'01 morning rise -4316 Oct 19 j 19:06 15° Mp 16'43 -4310 Oct 18 j 11:40 23°**)** €23'24 -1°25'42 opposition -4315 Jan 03 j 18:25 0∘**⊽** min. Earth dist. -4310 Oct 17 j 14:43 23°**₭**30'32 4.16857 AU retrograde -4315 Feb 21 j 20:39 3°**£**31'53 direct -4310 Dec 16 j 16:21 18°**¥**22'04 -4315 Apr 13 j 03:18 30°R, Mp -4309 Mar 21 j 00:48 $0^{\circ}\Upsilon$ 28° m/38'20 1°17'37 -4309 Apr 22 j 19:08 7°**Y**04'35 opposition -4315 Apr 23 j 22:56 evening set

-4315 Apr 24 j 20:18

28° Mp 31'30 4.20599 AU

min. Earth dist.

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -4309 in astronomical counting style is the year 4310 BCE in historical counting style. -4309 May 06 i 13:17 10°**Y**09'51 -0°38'15 -4304 Jul 18 i 07:46 0° m conjunction -4309 May 06 j 13:20 10°**Y**09'53 0°38'14 -4304 Sep 29 j 06:19 minimum elong 14° m 13'57 evening set 10°**Y**23′07 -4309 May 07 j 12:53 -4304 Oct 10 j 09:42 16° Mp 46'36 max. Earth dist. 6.22236 AU max. Earth dist. 6.24518 AU -4309 May 20 j 06:35 13°Y14'29 morning rise -4309 Aug 23 j 00:09 -4304 Oct 11 j 18:59 1°04'47 0°8 conjunction 17° Mp 05'40 -4309 Sep 21 j 13:14 -4304 Oct 11 j 19:02 17° Mp 05'42 retrograde 1°**8**23'56 minimum elong 1°04'49 -4309 Oct 20 j 22:24 -4304 Oct 24 j 07:11 30°**₹**Υ morning rise 19° m 57'23 opposition -4309 Nov 20 j 00:30 26°**Y**23'48 -0°23'31 -4304 Dec 10 j 12:21 0∘**⊽** min. Earth dist. -4309 Nov 19 j 16:36 26°**Y**26′27 4.27361 AU retrograde -4303 Feb 26 j 18:47 8°**₽**19'38 21° Y20'30direct -4308 Jan 19 j 11:03 opposition -4303 Apr 28 j 21:51 3°**£**25'41 1°09'29 29° Y 09' 45 asc. node -4308 Apr 04 j 19:17 min. Earth dist. -4303 Apr 29 j 16:31 3°**₽**19'43 4.19220 AU -4308 Apr 09 j 09:30 0°8 -4303 May 28 j 15:40 30°R, M) evening set -4308 May 26 j 06:09 9°**8**39'11 direct -4303 Jun 28 j 22:11 28° m 30'37 -4303 Jul 29 j 23:19 0∘**⊽** conjunction -4308 Jun 08 j 19:29 12°**8**38'27 0°07'37 evening set -4303 Oct 31 j 12:59 17°**£**02'57 minimum elong -4308 Jun 08 j 19:29 12°**8**38'27 0°07'45 behind sun begin -4308 Jun 08 j 12:05 12°**8**34'23 conjunction -4303 Nov 13 j 05:04 20°**♀**00'37 0°25'13 behind sun end -4308 Jun 09 j 02:53 12°842'31 minimum elong -4303 Nov 13 j 05:06 20°**♀**00'38 0°25'10 max. Earth dist. -4308 Jun 08 j 18:23 12°**8**37'52 6.31930 AU max. Earth dist. -4303 Nov 12 j 13:11 19°**£**51'19 6.13947 AU -4308 Jun 19 j 12:03 15°8 morning rise -4303 Nov 25 j 22:44 22°**2**59'16 morning rise -4308 Jun 22 j 06:12 15°**8**36'18 -4303 Dec 27 j 03:31 -4308 Sep 07 i 10:06 Π °0 retrograde -4302 Apr 03 i 17:28 12°M16'21 retrograde -4308 Oct 21 i 20:59 3°II01'03 opposition -4302 Jun 03 j 17:00 7°**IL**18'52 0°00'25 -4308 Dec 05 i 14:35 30°R₩ min. Earth dist. -4302 Jun 03 j 18:45 7°ML18'18 4.09101 AU -4308 Dec 20 j 14:00 28°804'51 0°43'10 desc. node -4302 Jun 05 j 22:53 7°**ጤ**01'22 opposition -4308 Dec 20 j 22:28 28°**8**02'04 4.35491 AU direct -4302 Aug 02 j 09:31 2°M25'39 min. Earth dist. -4307 Feb 20 j 06:18 23°801'07 -4302 Nov 06 j 18:30 direct 15°M. -4307 May 03 j 20:01 $0^{\circ}II$ -4302 Dec 04 j 10:36 21°M20'38 evening set evening set -4307 Jun 28 j 03:30 11°**Ⅱ**02'33 -4307 Jul 10 j 08:19 13°**Ⅲ**42'44 -4302 Dec 17 j 09:18 max. Earth dist. 6.37839 AU conjunction 24°M24'55 -0°24'15 -4302 Dec 17 j 09:16 24°M24'54 0°24'24 minimum elong -4302 Dec 17 j 19:52 -4307 Jul 11 j 08:09 13°**I**55'49 conjunction 0°49'57 max. Earth dist. 24°M31'12 6.05256 AU -4307 Jul 11 j 08:05 13°**Ⅲ**55'47 0°50'08 -4302 Dec 30 j 10:42 27°M30'48 minimum elong morning rise -4307 Jul 24 j 09:28 16°**Ⅱ**47'23 -4301 Jan 10 j 01:41 morning rise 0°×7 -4307 Oct 01 j 21:18 -4301 May 10 j 19:45 0°9 retrograde 17°**х** 32′51 -4301 Jul 10 j 08:30 retrograde -4307 Nov 21 j 17:22 3°950'41 opposition 12°**∡** 31'27 -1°11'31 -4306 Jan 12 j 18:36 30°Ŗ**Ⅱ** min. Earth dist. -4301 Jul 09 j 16:55 12°**✗**36'37 4.02717 AU -4306 Jan 20 j 21:09 28°II57'34 1°35'53 direct -4301 Sep 06 j 21:39 7°**х**³38'14 opposition min. Earth dist. -4306 Jan 21 j 18:41 28°**Ⅲ**50′36 4.38921 AU -4300 Jan 09 j 03:14 26°**х** 50′25 evening set direct -4306 Mar 24 j 07:55 23°**I**54'45 -4306 May 30 j 22:16 0ಂತಾ conjunction -4300 Jan 22 j 09:08 29°**₹**59'25 -1°05'54 -4306 Jul 29 j 20:25 11°5549'23 -4300 Jan 22 j 09:04 29°**₹**59'23 1°06'06 evening set minimum elong -4306 Aug 10 j 02:38 -4300 Jan 22 j 10:07 0°정 max. Earth dist. 14°9517'56 6.38415 AU 6.01659 AU max. Earth dist. -4300 Jan 23 j 17:55 0°**ප**18'56 -4306 Aug 11 j 16:00 14°538'33 1°17'36 -4300 Feb 04 j 18:35 3°**ප**10'13 conjunction morning rise minimum elong -4306 Aug 11 j 15:58 14°9538'32 1°17'47 retrograde -4300 Jun 15 i 19:44 23°る27'02 morning rise -4306 Aug 24 j 08:26 17°526'16 opposition -4300 Aug 14 j 20:29 18°る22'34 -1°57'29 -4306 Oct 28 i 00:43 $0^{\circ}\Omega$ min. Earth dist. -4300 Aug 13 i 16:50 18°る31'56 4.02452 AU retrograde -4306 Dec 23 i 00:56 4°**Ω**33'43 direct -4300 Oct 11 j 20:42 13°る27'12 -4305 Feb 19 i 08:03 30°R95 -4299 Feb 02 j 06:45 0°**≈** -4305 Feb 21 j 15:52 29°542'13 2°01'43 -4299 Feb 13 j 23:41 2°≈42'50 opposition evening set min. Earth dist. -4305 Feb 22 j 21:14 29°532'51 4.36742 AU direct -4305 Apr 25 j 06:58 24°9541'32 -4299 Feb 27 j 12:40 5°≈53'28 -1°22'59 conjunction -4305 Jun 26 j 16:49 $0^{\circ}\Omega$ minimum elong -4299 Feb 27 j 12:40 5°≈53'28 1°23'08 -4305 Aug 29 j 23:23 12°**Ω**40′02 max. Earth dist. -4299 Mar 01 j 10:27 6°≈20'23 6.04613 AU evening set -4305 Sep 09 j 09:58 $15^{\circ}\Omega$ -4299 Mar 13 j 04:14 9°≈05'21 morning rise max. Earth dist. -4305 Sep 09 j 18:23 15°**Ω**04'43 6.33538 AU -4299 Apr 08 j 05:03 15°≈ -4299 Jul 21 j 16:50 retrograde 28°≈57'31 -4305 Sep 11 j 12:52 15°**Ω**28'32 1°23'23 -4299 Sep 18 j 02:34 conjunction min. Earth dist. 24°**≈**01'49 4.08375 AU -4305 Sep 11 j 12:53 minimum elong 15°**Ω**28'32 1°23'32 opposition -4299 Sep 19 j 06:15 23°≈52'22 -1°58'47 morning rise -4305 Sep 24 j 00:37 18°**Ω**16'14 direct -4299 Nov 16 j 14:53 18°≈53'43 -4305 Nov 21 j 04:05 0° m -4298 Feb 14 j 17:35 0°**)**€ retrograde -4304 Jan 24 j 14:00 5° m 51'48 evening set -4298 Mar 22 j 20:37 7°**¥**56′22 opposition -4304 Mar 25 j 13:11 0° m 59'57 1°53'09 min. Earth dist. -4304 Mar 26 j 17:59 0° m 50'47 4.29495 AU conjunction -4298 Apr 05 j 14:22 11°\(\)\(\)05'24 -1°09'19

-4298 Apr 05 j 14:26

-4298 Apr 07 j 06:29

minimum elong

max. Earth dist.

11°**)** 05'27 1°09'22

11°**米**28′26 6.12942 AU

-4304 Apr 02 j 10:55

-4304 May 26 j 16:08

direct

30°R€

26°**Ω**02'00

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 10 Attention, astronomical year style is used: The year -4298 in astronomical counting style is the year 4299 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	ie year -4298 i	n astronomical co	unting style is the year	r 4299 BCE in historical c	counting style.	
morning rise	-4298 Apr 19 j 09:08	14°) (14′44		conjunction	-4293 Sep 15 j 22:09	20° Ω 00'35	1°22'12
	-4298 Jul 09 j 21:19	0° Y		minimum elong	-4293 Sep 15 j 22:11	20° Ω 00'35	1°22'21
retrograde	-4298 Aug 24 j 16:31	3° Y 14′21		morning rise	-4293 Sep 28 j 09:28	22° Ω 48′29	
	-4298 Oct 09 j 10:38	30° ₹			-4293 Oct 31 j 21:46	0° ™	
min. Earth dist.	-4298 Oct 22 j 05:56		4.18185 AU	retrograde	-4292 Jan 29 j 06:35	10°Mp28'37	
opposition	-4298 Oct 23 j 01:57	28° ∺ 11′09	-1°18'07	opposition	-4292 Mar 30 j 07:13	5°₩36'34	1°48'58
direct	-4298 Dec 21 j 09:40	23° ∺ 09′27		min. Earth dist.	-4292 Mar 31 j 10:49	5° ™ 27'48	4.28514 AU
	-4297 Feb 28 j 22:20	0° Y		direct	-4292 May 31 j 07:30	0° ™ 39'04	
evening set	-4297 Apr 27 j 16:35	11° Y ′49'12		evening set	-4292 Oct 03 j 17:21	18° m 52'07	
				max. Earth dist.	-4292 Oct 14 j 21:50	21° m 25'48	6.23479 AU
conjunction	-4297 May 11 j 10:25	14° Y ′53'49					
minimum elong	-4297 May 11 j 10:28	14° Y ′53′50		conjunction	-4292 Oct 16 j 06:02	21° m /44'17	
max. Earth dist.	-4297 May 12 j 06:03	15° Y ′04'50	6.23511 AU	minimum elong	-4292 Oct 16 j 06:05	21° m 44'19	1°00'20
morning rise	-4297 May 25 j 03:09	17° Y ′57'40		morning rise	-4292 Oct 28 j 18:49	24° Mp 36'40	
	-4297 Jul 23 j 17:10	0°8			-4292 Nov 21 j 23:23	0∘ ⊽	
retrograde	-4297 Sep 26 j 01:11	6° 8 00'37		retrograde	-4291 Mar 03 j 15:59	13° ≏ 04'41	
opposition	-4297 Nov 24 j 11:32	1° 8 01'02		opposition	-4291 May 03 j 19:30	8° ≏ 10'15	1°00'58
min. Earth dist.	-4297 Nov 24 j 06:44		4.28458 AU	min. Earth dist.	-4291 May 04 j 11:58	8° ჲ 04'58	4.18170 AU
	-4297 Dec 02 j 02:52	30° ŖƳ		direct	-4291 Jul 03 j 16:22	3° £ 15′26	
direct	-4296 Jan 24 j 03:08	25° Y ′57'34		evening set	-4291 Nov 05 j 03:07	21° ≏ 49'14	
asc. node	-4296 Feb 13 j 11:40	26° Y 36′23					
	-4296 Mar 17 j 03:00	9° 8		conjunction	-4291 Nov 17 j 20:03	24° ≏ 47'38	0°18'37
evening set	-4296 May 30 j 22:47	14° 8 14'10		minimum elong	-4291 Nov 17 j 20:05	24° ≏ 47'39	0°18'32
	-4296 Jun 03 j 10:20	15° 8		max. Earth dist.	-4291 Nov 17 j 08:30	24° ≏ 40'52	6.12999 AU
				morning rise	-4291 Nov 30 j 14:29	27° ≏ 47'04	
conjunction	-4296 Jun 13 j 11:12	17° 8 12'43	0°14'03		-4291 Dec 10 j 04:20	0° M	
minimum elong	-4296 Jun 13 j 11:11	17° 8 12'42	0°14'11		-4290 Mar 01 j 22:55	15°M	
behind sun begin	-4296 Jun 13 j 07:24	17° 8 10'38		retrograde	-4290 Apr 08 j 18:23	17°M09'34	
behind sun end	-4296 Jun 13 j 14:58	17° 8 14'46		desc. node	-4290 Apr 16 j 20:39	17°M03'23	
max. Earth dist.	-4296 Jun 13 j 07:06	17° 8 10'27	6.32766 AU		-4290 May 16 j 17:25	15°RM	
morning rise	-4296 Jun 26 j 20:45	20° 8 09'45		opposition	-4290 Jun 08 j 17:03	12°M11'35	-0°09'56
	-4296 Aug 13 j 24:00	Π $^{\circ}0$		min. Earth dist.	-4290 Jun 08 j 16:58	12°M11'36	4.08330 AU
retrograde	-4296 Oct 26 j 05:04	7° Ⅱ 30′54		direct	-4290 Aug 07 j 06:02	7°M18'29	
opposition	-4296 Dec 24 j 23:46	2° Ⅲ 35′10	0°51'48		-4290 Oct 18 j 18:07	15°M	
min. Earth dist.	-4296 Dec 25 j 09:26	2° Ⅲ 31′59	4.36034 AU	evening set	-4290 Dec 09 j 05:25	26°M14'55	
	-4295 Jan 14 j 16:47	30° ₹ 8					
direct	-4295 Feb 24 j 17:59	27° 8 31'29		conjunction	-4290 Dec 22 j 04:52	29°M19'47	-0°30'50
	-4295 Apr 07 j 05:05	Π $^{\circ}0$		minimum elong	-4290 Dec 22 j 04:49	29°M19'46	0°30'59
evening set	-4295 Jul 02 j 16:30	15° Ⅲ 32′09		max. Earth dist.	-4290 Dec 22 j 16:57	29°M26'58	6.04711 AU
					-4290 Dec 25 j 00:29	0°⊀	
conjunction	-4295 Jul 15 j 19:48	18° Ⅱ 24'46	0°54'57	morning rise	-4289 Jan 04 j 07:27	2° ₹ 26'24	
minimum elong	-4295 Jul 15 j 19:45	18° Ⅲ 24'44	0°55'09	retrograde	-4289 May 15 j 20:22	22° х 31′36	
max. Earth dist.	-4295 Jul 14 j 18:03	18° Ⅱ 10′37	6.38055 AU	opposition	-4289 Jul 15 j 08:28	17° ∡ ¹29'41	-1°19'52
morning rise	-4295 Jul 28 j 19:46	21° Ⅱ 15'43		min. Earth dist.	-4289 Jul 14 j 14:33	17° ∡ ³35'39	4.02466 AU
	-4295 Sep 09 j 06:21	0 \circ 60		direct	-4289 Sep 11 j 18:33	12° ∡ ³36′14	
retrograde	-4295 Nov 26 j 03:40	8° 5 518'36			-4288 Jan 06 j 08:15	0° ප	
opposition	-4294 Jan 25 j 08:08	3° 5 25'51	1°41'24	evening set	-4288 Jan 14 j 02:17	1° る 49'25	
min. Earth dist.	-4294 Jan 26 j 07:17	3° © 18'23	4.38827 AU				
	-4294 Feb 23 j 17:00	30°RⅡ		conjunction	-4288 Jan 27 j 09:18	4° る 58'49	-1°09'56
direct	-4294 Mar 28 j 20:40	28° Ⅲ 23′20		minimum elong	-4288 Jan 27 j 09:14	4° る 58'47	1°10'08
	-4294 May 01 j 04:36	0 \circ		max. Earth dist.	-4288 Jan 28 j 20:58	5° る 20'02	6.01718 AU
evening set	-4294 Aug 03 j 07:00	16° © 18'10		morning rise	-4288 Feb 09 j 19:30	8° る 09'56	
max. Earth dist.	-4294 Aug 14 j 10:20	18° © 45'25	6.38013 AU	retrograde	-4288 Jun 20 j 19:59	28° る 25'51	
				opposition	-4288 Aug 19 j 18:01	23° る 21'12	-2°00'26
conjunction	-4294 Aug 16 j 01:27	19° 5 07'02	1°19'51	min. Earth dist.	-4288 Aug 18 j 15:02	23° る 30'21	4.02828 AU
minimum elong	-4294 Aug 16 j 01:25	19° 5 07'01	1°20'01	direct	-4288 Oct 16 j 18:43	18° る 25'26	
morning rise	-4294 Aug 28 j 17:03	21° © 54'32			-4287 Jan 15 j 22:04	0° ≈	
	-4294 Oct 06 j 10:28	0 ° Ω		evening set	-4287 Feb 19 j 00:58	7° ≈ 40'53	
retrograde	-4294 Dec 27 j 13:45	9° Ω 04'28					
opposition	-4293 Feb 26 j 05:59	4° Ω 12'59	2°02'39	conjunction	-4287 Mar 04 j 14:46	10° ≈ 51'36	
min. Earth dist.	-4293 Feb 27 j 11:06	4° Ω 03'41	4.36089 AU	minimum elong	-4287 Mar 04 j 14:46	10° ≈ 51'36	1°23'02
	-4293 Apr 06 j 20:05	30° ₹ 5		max. Earth dist.	-4287 Mar 06 j 12:02	11° ≈ 18′08	6.05264 AU
direct	-4293 Apr 29 j 19:50	29° © 12'38		morning rise	-4287 Mar 18 j 07:08	14° ≈ 03′29	
	-4293 May 22 j 22:03	0 $^{\circ}\Omega$			-4287 Mar 22 j 08:38	15° ≈	
	-4293 Aug 24 j 09:59	15° Ω			-4287 Jun 06 j 05:17	0°) €	
evening set	-4293 Sep 03 j 09:01	17° Ω 11'57		retrograde	-4287 Jul 26 j 10:59	3° ¥ 50'45	
max. Earth dist.	-4293 Sep 14 j 06:13	19° Ω 38′08	6.32700 AU		-4287 Sep 14 j 20:23	30°R ≈	

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -4287 in astronomical counting style is the year 4288 BCE in historical counting style. conjunction -4287 Sep 23 j 23:39 28°≈45'48 -1°55'23 -4281 Sep 20 j 06:10 24°**Ω**30′05 1°20'34 opposition 24°**Ω**30′06 -4287 Sep 22 j 19:55 -4281 Sep 20 j 06:12 1°20'41 min. Earth dist. 28°≈55'16 4.09251 AU minimum elong direct -4287 Nov 21 j 09:28 23°≈46'43 -4281 Oct 02 j 17:27 27°**Ω**18'22 morning rise 0°**)**€ -4281 Oct 14 j 20:55 -4286 Jan 25 j 02:49 0° m -4286 Mar 27 j 20:49 -4280 Feb 02 j 22:32 12°**)**48'00 evening set retrograde 15° m 03'51 opposition -4280 Apr 04 j 00:23 10° Mp 11'31 1°44'10 min. Earth dist. conjunction -4286 Apr 10 j 14:57 15°**¥**56'47 -1°05'17 -4280 Apr 05 j 02:42 10° **m** 03'09 4.27262 AU minimum elong -4286 Apr 10 j 15:01 15°**X** 56'49 1°05'20 direct -4280 Jun 04 j 21:05 5° m 14'22 max. Earth dist. -4286 Apr 12 j 03:59 16°**₩** 18'00 6.13984 AU evening set -4280 Oct 08 j 03:46 23° m 29'47 morning rise -4286 Apr 24 j 09:52 19°**)**€05'43 max. Earth dist. -4280 Oct 19 j 11:55 26° Mp 06'006.22068 AU -4286 Jun 15 j 01:32 $0^{\circ}\Upsilon$ 7°**Υ**58'51 -4280 Oct 20 j 16:55 retrograde -4286 Aug 29 j 07:42 conjunction 26° Mp 22'420°55'28 -4286 Oct 27 j 15:42 opposition 2°Υ56'05 -1°10'07 minimum elong -4280 Oct 20 j 16:58 26° Mp 22'440°55'30 min. Earth dist. -4286 Oct 26 j 22:13 3°**Y**02'02 4.19276 AU morning rise -4280 Nov 02 j 06:06 29° m 15'55 -4286 Nov 19 j 19:43 30°R₩ -4280 Nov 05 j 11:19 0∘**⊽** direct -4286 Dec 26 j 04:05 27°¥54'05 retrograde -4279 Mar 08 j 14:35 17° 251'19 -4285 Jan 31 j 21:24 $0^{\circ}\Upsilon$ opposition -4279 May 08 j 17:38 12°**≏**56'29 0°52'01 evening set -4285 May 02 j 13:17 16°**Y**31'49 min. Earth dist. -4279 May 09 j 08:56 12°**£**51'35 4.16682 AU direct -4279 Jul 08 j 10:58 8°**2**02'00 conjunction -4285 May 16 j 06:52 19°**Y**35'52 -0°25'55 evening set -4279 Nov 09 j 18:29 26°**♀**39'05 minimum elong -4285 May 16 j 06:54 19°**Υ**35'54 0°25'51 max. Earth dist. -4285 May 17 j 00:41 19°**Y**45′51 6.24594 AU conjunction -4279 Nov 22 j 12:05 29°**₽**38'26 0°11'49 morning rise -4285 May 29 j 22:51 22° Y 38'59 -4279 Nov 22 j 12:06 29°**£**38'26 0°11'43 minimum elong -4285 Jul 03 i 09:19 0°8 behind sun begin -4279 Nov 22 i 06:21 29°**♀**35'04 retrograde -4285 Sep 30 j 10:47 10°**8**36'08 behind sun end -4279 Nov 22 j 17:51 29°**₽**41'48 -4285 Nov 28 j 22:17 5°837'06 -0°04'24 max. Earth dist. -4279 Nov 22 j 02:03 29°**₽**32'33 opposition 6 11562 AU -4285 Nov 28 j 18:20 5°**8**38'25 4.29454 AU -4279 Nov 24 j 00:45 min. Earth dist. o°m. -4285 Dec 24 j 08:29 2°**8**28'55 -4279 Dec 05 j 07:43 asc node 2°M,38'59 morning rise -4278 Feb 01 j 06:33 direct -4284 Jan 28 j 16:21 0°**8**33'34 15°M. -4278 Feb 25 j 01:07 -4284 May 17 j 23:17 15°8 desc. node 18°M45'26 -4284 Jun 04 j 15:20 18°**8**48'19 -4278 Apr 13 j 20:51 22°ML08'58 evening set retrograde -4278 Jun 13 j 18:58 17°M10'24 -0°20'26 opposition 17°ML11'26 4.07073 AU -4284 Jun 18 j 02:31 21°**8**46'03 0°20'24 min. Earth dist. -4278 Jun 13 j 15:46 conjunction -4284 Jun 18 j 02:29 21°**8**46'02 0°20'32 -4278 Jul 01 j 01:23 minimum elong 15°RM -4284 Jun 17 j 18:40 21°**8**41'43 6.33604 AU -4278 Aug 12 j 03:06 max. Earth dist. direct 12°M17'20 -4284 Jul 01 j 10:55 24°**8**42'14 morning rise -4278 Sep 22 j 09:30 15°M -4284 Jul 26 j 06:18 $0^{\circ}\Pi$ -4278 Dec 08 j 16:10 0°**⊼** retrograde -4284 Oct 30 j 14:53 11°**Ⅲ**59'47 evening set -4278 Dec 14 j 03:18 1°×17'16 -4284 Dec 29 j 09:35 7°**II**04'32 1°00'05 opposition min. Earth dist. -4284 Dec 29 j 21:50 7°**耳**00'31 4.36659 AU conjunction -4278 Dec 27 j 03:56 4° ₹23'02 -0°37'21 direct -4283 Mar 01 j 07:47 $2^{\circ}\Pi 00'55$ -4278 Dec 27 j 03:53 4° ₹23'01 0°37'31 minimum elong -4283 Jul 07 j 04:35 20° II 00'15 -4278 Dec 27 j 20:37 4°**∡**³32'59 evening set max. Earth dist. 6.03749 AU -4283 Jul 19 j 03:17 22°**Ⅲ**37′09 -4277 Jan 09 j 07:29 7°**∡**³30'31 max. Earth dist. 6.38387 AU morning rise -4277 May 21 j 02:51 27°**х** 40′18 retrograde -4283 Jul 20 j 06:40 22°II52'12 0°59'37 -4277 Jul 20 j 11:49 22°**∡**¹37'54 -1°27'55 conjunction opposition minimum elong -4283 Jul 20 i 06:37 22°II52'10 0°59'49 min. Earth dist. -4277 Jul 19 j 17:02 22° ₹ 44'10 4.01915 AU morning rise -4283 Aug 02 j 05:16 25°**Ⅱ**42'28 direct -4277 Sep 16 j 19:53 17°**∡**¹44'14 -4283 Aug 22 j 06:21 0ಂತಾ -4277 Dec 19 j 17:28 0°궁 retrograde -4283 Nov 30 j 11:46 12°5544'40 evening set -4276 Jan 19 j 05:58 6°る59'35 -4282 Jan 29 j 18:40 7°952'08 1°46'18 opposition min. Earth dist. -4282 Jan 30 j 18:08 7°9544'34 4.38854 AU conjunction -4276 Feb 01 i 13:57 10°る09'28 -1°13'35 -4282 Apr 02 j 07:11 2°949'50 -4276 Feb 01 j 13:54 10°**ට**09'27 1°13'46 direct minimum elong 20°5944'19 -4276 Feb 03 j 03:36 10°る31'51 6.01612 AU evening set -4282 Aug 07 j 16:07 max. Earth dist. max. Earth dist. -4282 Aug 18 j 18:17 23°5511'07 6.37699 AU morning rise -4276 Feb 15 j 01:20 13°る21'05 -4276 May 08 j 06:18 0°2 conjunction -4282 Aug 20 j 09:31 23°**©**32'51 1°21'37 retrograde -4276 Jun 25 j 22:35 3°≈36'04 -4282 Aug 20 j 09:29 23°932'50 1°21'48 -4276 Aug 13 j 18:22 30°Ŗる minimum elong -4282 Sep 02 j 00:08 26°9520'05 -4276 Aug 24 j 19:24 28°る31'15 -2°02'35 morning rise opposition $0^{\circ}\Omega$ -4276 Aug 23 j 14:42 28°**る**41'00 -4282 Sep 18 j 21:53 min. Earth dist. 4.03221 AU -4281 Jan 01 j 02:08 -4276 Oct 21 j 18:58 23°る35'06 retrograde 13°**Ω**32'25 direct opposition -4281 Mar 02 j 19:08 8°**Ω**40'59 2°02'53 -4276 Dec 25 j 19:16 0°≈ min. Earth dist. -4281 Mar 04 j 01:14 8°**Ω**31'24 4.35430 AU evening set -4275 Feb 24 j 06:44 12°≈50'05 direct -4281 May 04 j 08:57 3°**Ω**41′00 -4275 Mar 05 j 13:25 15°≈ -4281 Aug 07 j 14:39 15°€ evening set -4281 Sep 07 j 17:29 21°**Ω**41'15 conjunction -4275 Mar 09 j 21:20 16°≈00'47 -1°22'08 max. Earth dist. -4281 Sep 18 j 13:28 24°**Ω**07'10 6.31720 AU minimum elong -4275 Mar 09 j 21:21 16°**≈**00'48 1°22'17

max. Earth dist.

-4275 Mar 11 j 18:24

16°**≈**27′09

6.06131 AU

-	nical year style is used: Th			. //		, 1	ge 12
morning rise	-4275 Mar 23 j 14:20	19° ≈ 12'32	in astronomicai co	min. Earth dist.	-4269 Mar 08 j 10:23		4.34578 AU
morning rise		0° ∺		direct	-4269 May 08 j 15:51	7° Ω 58'39	4.34376 AU
	-4275 May 12 j 09:35	8°) ₹ 53'36		direct	-4269 Jul 20 j 03:45		
retrograde	-4275 Jul 31 j 09:26		1051102	. ,	-	15° Ω 26° Ω 00'43	
opposition	-4275 Sep 28 j 20:40	3°) (48'47		evening set	-4269 Sep 11 j 21:59		C 20411 ATT
min. Earth dist.	-4275 Sep 27 j 18:00		4.10512 AU	max. Earth dist.	-4269 Sep 22 j 18:21	28° 3(2/18	6.30411 AU
1.	-4275 Oct 30 j 20:45	30°R≈			42.60 G 24:10.20	200 0 40150	1010121
direct	-4275 Nov 26 j 10:18	28°≈49'16		conjunction	-4269 Sep 24 j 10:29	28° Ω 49'59	1°18'31
. ,	-4275 Dec 23 j 04:34	0°){		minimum elong	-4269 Sep 24 j 10:31	28° Ω 50'00	1°18'36
evening set	-4274 Apr 02 j 00:06	17°) (47′18			-4269 Sep 29 j 14:22	0° m)	
	4074 4 15:10.26	200 1 55121	1000142	morning rise	-4269 Oct 06 j 21:41	1° Mp 38'47	
conjunction	-4274 Apr 15 j 18:36	20°) ₹55'31		retrograde	-4268 Feb 07 j 13:35	19° Mp 31'08	1020155
minimum elong	-4274 Apr 15 j 18:40	20°) ₹55'33		opposition	-4268 Apr 08 j 14:54	14° Mp 38'37	1°38'55
max. Earth dist.	-4274 Apr 17 j 07:37	21°) €16'38	6.15582 AU	min. Earth dist.	-4268 Apr 09 j 17:43	14° Mp 30'05	4.25551 AU
morning rise	-4274 Apr 29 j 13:18	24°) €03'41		direct	-4268 Jun 09 j 09:14	9° m/41'50	
	-4274 May 26 j 12:40	0°Υ 12° 20 15111		evening set	-4268 Oct 12 j 12:08	28° Mp 01'26	
retrograde	-4274 Sep 02 j 22:12	12° Υ 47'41	1001124	79 J. 17 J.	-4268 Oct 21 j 01:56	0∘ ⊽	C 2010 C 177
opposition	-4274 Nov 01 j 06:54	7° Y 45′22		max. Earth dist.	-4268 Oct 23 j 20:52	0° ჲ 38'42	6.20106 AU
min. Earth dist.	-4274 Oct 31 j 13:58	7° Y 51′07	4.21062 AU				
direct	-4274 Dec 30 j 22:35	2° Y 43'06		conjunction	-4268 Oct 25 j 01:42	0° ≏ 55'23	0°50'25
evening set	-4273 May 07 j 10:46	21° Y 16'00		minimum elong	-4268 Oct 25 j 01:46	0° ≏ 55'25	0°50'26
		••		morning rise	-4268 Nov 06 j 15:47	3° ≏ 49'47	
conjunction	-4273 May 21 j 03:31	24° Y °18′58		retrograde	-4267 Mar 13 j 11:32	22° ≏ 34'48	
minimum elong	-4273 May 21 j 03:33	24° Y 18′59		opposition	-4267 May 13 j 14:31	17° ≏ 39'32	0°42'53
max. Earth dist.	-4273 May 21 j 17:06	24° Y ′26'33	6.26439 AU	min. Earth dist.	-4267 May 14 j 03:03	17° ≏ 35'31	4.14610 AU
morning rise	-4273 Jun 03 j 18:45	27° Y ′20′57		direct	-4267 Jul 13 j 01:52	12° ≏ 45'20	
	-4273 Jun 15 j 21:00	0°8			-4267 Nov 08 j 02:47	0°M₊	
	-4273 Sep 24 j 23:02	15° 8		evening set	-4267 Nov 14 j 10:00	1°M28'11	
retrograde	-4273 Oct 04 j 20:12	15° 8 09'39					
	-4273 Oct 14 j 15:46	15° ₹ 8		conjunction	-4267 Nov 27 j 04:43	4° M 28'51	0°05'01
asc. node	-4273 Nov 03 j 21:57	13° 8 42'15		minimum elong	-4267 Nov 27 j 04:42	4°M28'50	0°04'55
opposition	-4273 Dec 03 j 08:41	10° 8 11'06	0°05'04	behind sun begin	-4267 Nov 26 j 20:51	4°M24'14	
min. Earth dist.	-4273 Dec 03 j 07:27	10° 8 11'31	4.31196 AU	behind sun end	-4267 Nov 27 j 12:33	4°M33'27	
direct	-4272 Feb 02 j 08:29	5° 8 07'25		max. Earth dist.	-4267 Nov 26 j 22:57	4° M 25′28	6.09586 AU
	-4272 Apr 30 j 07:02	15° 8		morning rise	-4267 Dec 10 j 01:22	7°M30'45	
evening set	-4272 Jun 09 j 05:21	23° 8 17'26		desc. node	-4266 Jan 05 j 19:29	13°M37'05	
					-4266 Jan 12 j 04:52	15° M	
conjunction	-4272 Jun 22 j 15:27	26° 8 14'02	0°26'28	retrograde	-4266 Apr 19 j 03:32	27° M ₊10′20	
minimum elong	-4272 Jun 22 j 15:25	26° 8 14'01	0°26'38	opposition	-4266 Jun 18 j 21:52	22°M11'16	
max. Earth dist.	-4272 Jun 22 j 05:51	26° 8 08'46	6.35106 AU	min. Earth dist.	-4266 Jun 18 j 17:01		4.05373 AU
morning rise	-4272 Jul 05 j 22:18	29° 8 09'01		direct	-4266 Aug 17 j 01:47	17° M ₊18'17	
	-4272 Jul 09 j 19:57	Π °0			-4266 Nov 21 j 09:32	0° ∡ ¹	
retrograde	-4272 Nov 03 j 18:47	16° Ⅱ 21′05		evening set	-4266 Dec 19 j 03:19	6° ∡ ¹23'30	
opposition	-4271 Jan 02 j 16:45	11° Ⅱ 26′15	1°07'43				
min. Earth dist.	-4271 Jan 03 j 06:07	11° Ⅱ 21'52	4.37821 AU	conjunction	-4265 Jan 01 j 05:02	9° ∡ ³30′21	
direct	-4271 Mar 05 j 17:16	6° Ⅱ 22'44		minimum elong	-4265 Jan 01 j 04:58	9° ∡ ³30′19	0°43'47
evening set	-4271 Jul 11 j 12:49	24° Ⅱ 18'53		max. Earth dist.	-4265 Jan 02 j 01:03	9° ∡ ¹42'17	6.02477 AU
max. Earth dist.	-4271 Jul 23 j 06:25	26° Ⅱ 52'57	6.39096 AU	morning rise	-4265 Jan 14 j 10:00	12° ∡ ³38'58	
					-4265 Apr 12 j 17:51	0°ಕ	
conjunction	-4271 Jul 24 j 13:22	27° Ⅱ 09'56	1°03'44	retrograde	-4265 May 26 j 09:35	2° る 54'05	
minimum elong	-4271 Jul 24 j 13:19	27° Ⅱ 09'54	1°03'55		-4265 Jul 09 j 03:34	30°₹ ⋌ 7	
morning rise	-4271 Aug 06 j 10:44	29° Ⅱ 59′22		opposition	-4265 Jul 25 j 17:04	27° ∡ 751'13	
	-4271 Aug 06 j 11:54	0 \circ		min. Earth dist.	-4265 Jul 24 j 19:01	27° ∡ ¹58'36	4.01241 AU
retrograde	-4271 Dec 04 j 17:43	17° © 00'03		direct	-4265 Sep 21 j 21:00	22° ₹ 57'22	
opposition	-4270 Feb 03 j 01:28	12° © 07'48	1°50'21		-4265 Nov 29 j 01:59	0°ಕ	
min. Earth dist.	-4270 Feb 04 j 03:43	11° © 59'21	4.39065 AU	evening set	-4264 Jan 24 j 12:22	12° る 15'14	
direct	-4270 Apr 06 j 16:50	7° © 05'41					
evening set	-4270 Aug 11 j 20:43	24° © 59'20		conjunction	-4264 Feb 06 j 21:25	15° る 25'36	-1°16'39
max. Earth dist.	-4270 Aug 22 j 20:15	27° © 24'52	6.37367 AU	minimum elong	-4264 Feb 06 j 21:22	15° පි 25'34	
				max. Earth dist.	-4264 Feb 08 j 13:46	15° ⋜ 49'34	6.01567 AU
conjunction	-4270 Aug 24 j 13:18	27° © 47'36	1°22'51	morning rise	-4264 Feb 20 j 09:45	18° る 37'37	
minimum elong	-4270 Aug 24 j 13:16	27° © 47'35	1°23'02		-4264 Apr 12 j 07:18	0° ≈	
	-4270 Sep 03 j 12:20	0 $^{\circ}$ Ω		retrograde	-4264 Jul 01 j 03:38	8° ≈ 50'52	
morning rise	-4270 Sep 06 j 03:07	0° Ω 34'39		opposition	-4264 Aug 29 j 22:24	3° ≈ 45'48	-2°03'43
	-4270 Nov 22 j 20:23	15° Ω		min. Earth dist.	-4264 Aug 28 j 17:13	3° ≈ 55'44	4.03801 AU
retrograde	-4269 Jan 05 j 08:54	17° Ω 49'49			-4264 Sep 30 j 13:38	30°Ŗる	
	-4269 Feb 18 j 17:06	15°R Ω		direct	-4264 Oct 26 j 23:48	28° る 49'09	
opposition	-4269 Mar 07 j 04:19	12° Ω 58′20	2°02'24		-4264 Nov 22 j 11:26	0° ≈	

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 13 Attention, astronomical year style is used: The year -4263 in astronomical counting style is the year 4264 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	ie year -4263 i	in astronomical co	ounting style is the year	4264 BCE in historical c	ounting style.	
	-4263 Feb 16 j 08:06	15° ≈		minimum elong	-4258 Aug 28 j 21:20	2° Ω 14'51	1°23'53
evening set	-4263 Mar 01 j 14:18	18° ≈ 02'44		morning rise	-4258 Sep 10 j 10:35	5° Ω 01'57	
					-4258 Oct 28 j 23:40	15° Ω	
conjunction	-4263 Mar 15 j 05:47	21° ≈ 13'17		retrograde	-4257 Jan 09 j 23:45	22° Ω 21′20	
minimum elong	-4263 Mar 15 j 05:49	21° ≈ 13'18		opposition	-4257 Mar 11 j 19:25	17° Ω 29'50	
max. Earth dist.	-4263 Mar 17 j 04:45	21° ≈ 40′39	6.07258 AU	min. Earth dist.	-4257 Mar 13 j 02:38	17° Ω 19'54	4.33431 AU
morning rise	-4263 Mar 28 j 23:13	24°≈24'41			-4257 Apr 01 j 09:18	15°R€	
. 1	-4263 Apr 22 j 17:51	0°) {		direct	-4257 May 13 j 06:38	12° Ω 30'31	
retrograde	-4263 Aug 05 j 07:33	13° ¥ 58′01	1045140		-4257 Jun 23 j 17:44	15° Ω	
opposition	-4263 Oct 03 j 17:57	8°) € 53'22	4.12025 AU	evening set	-4257 Sep 13 j 17:35 -4257 Sep 16 j 07:57	0° M)	
min. Earth dist. direct	-4263 Oct 02 j 15:39 -4263 Dec 01 j 10:06	3° X 53'24	4.12025 AU	max. Earth dist.	-4257 Sep 16 j 07:57 -4257 Sep 27 j 04:46	0° Тр 34'59 3° Тр 02'20	6.28964 AU
evening set	-4262 Apr 07 j 03:50	22°)(47'22		max. Earth dist.	-4237 Sep 27 J 04.40	3 111/02/20	0.28904 AU
evening set	-4202 Apr 07 J 05.50	22 /(4/22		conjunction	-4257 Sep 28 j 20:25	3° m 24'48	1°15'53
conjunction	-4262 Apr 20 j 22:15	25° ¥ 54'51	-0°55'41	minimum elong	-4257 Sep 28 j 20:27	3° m) 24'49	1°15'59
minimum elong	-4262 Apr 20 j 22:19	25° X 54'53		morning rise	-4257 Oct 11 j 07:45	6° M) 14'15	1 1337
max. Earth dist.	-4262 Apr 22 j 07:27	26°) 13'43		retrograde	-4256 Feb 12 j 08:29	24° m) 13'45	
morning rise	-4262 May 04 j 16:55	29°) 02'11		opposition	-4256 Apr 13 j 11:20	19° m) 20'55	1°32'44
	-4262 May 08 j 23:50	0°Υ		min. Earth dist.	-4256 Apr 14 j 11:46	19° m 13'09	4.23912 AU
retrograde	-4262 Sep 07 j 12:39	17° Ƴ 36'59		direct	-4256 Jun 14 j 00:46	14° m) 24'33	
opposition	-4262 Nov 05 j 22:16	12° Y 35'05	-0°52'34		-4256 Oct 04 j 19:23	0∘ ⊽	
min. Earth dist.	-4262 Nov 05 j 07:34	12° Y ′40'04	4.22811 AU	evening set	-4256 Oct 17 j 02:04	2° ₽ 47'46	
direct	-4261 Jan 04 j 19:00	7° Y ′32'29					
evening set	-4261 May 12 j 08:01	26° Y ′00'59		conjunction	-4256 Oct 29 j 16:12	5° ≏ 42'39	0°44'46
				minimum elong	-4256 Oct 29 j 16:15	5° ≏ 42'41	0°44'45
conjunction	-4261 May 26 j 00:13	29° Y °03'00	-0°12'56	max. Earth dist.	-4256 Oct 28 j 14:49	5° ≏ 27'55	6.18438 AU
minimum elong	-4261 May 26 j 00:14	29° Y 03'01	0°12'51	morning rise	-4256 Nov 11 j 07:00	8° 亞 38'06	
behind sun begin	-4261 May 25 j 19:16	29° Y ′00′16		retrograde	-4255 Mar 18 j 15:59	27° ≏ 31'32	
behind sun end	-4261 May 26 j 05:12	29° Y ′05'45		opposition	-4255 May 18 j 16:53	22° ≏ 35'48	0°32'57
max. Earth dist.	-4261 May 26 j 11:35	29° Y ′09'19	6.28076 AU	min. Earth dist.	-4255 May 19 j 03:45	22° △ 32'18	4.13046 AU
	-4261 May 30 j 06:44	0° 8		direct	-4255 Jul 18 j 00:29	17° ≏ 41'53	
morning rise	-4261 Jun 08 j 14:17	2° 8 03'51			-4255 Oct 21 j 19:35	0°M	
	-4261 Aug 13 j 14:06	15° 8		desc. node	-4255 Nov 14 j 17:45	5°M24'58	
asc. node	-4261 Sep 13 j 07:10	18° 8 40'41		evening set	-4255 Nov 19 j 05:51	6° M 28'17	
retrograde	-4261 Oct 09 j 05:31	19° と 45'20 15°R と			4255 Day 02 : 01,20	9° ™ 29'55	0903114
opposition	-4261 Dec 06 j 05:41 -4261 Dec 07 j 19:42	13 KO 14° 8 47'22	0°14'37	conjunction minimum elong	-4255 Dec 02 j 01:28 -4255 Dec 02 j 01:27	9°M29'54	
min. Earth dist.	-4261 Dec 07 j 20:21	14° 8 47'22		behind sun begin	-4255 Dec 01 j 17:22	9°M25'09	0 02 20
direct	-4260 Feb 06 j 23:15	9° 8 43'40		behind sun end	-4255 Dec 02 j 09:31	9°M34'40	
direct	-4260 Apr 08 j 18:16	15° 8		max. Earth dist.	-4255 Dec 01 j 23:14		6.08293 AU
evening set	-4260 Jun 13 j 20:49	27° 8 50'30		morning rise	-4255 Dec 14 j 23:21	12°M32'55	0.002/3710
	-4260 Jun 23 j 17:26	0°П			-4255 Dec 25 j 11:39	15° M	
					-4254 Mar 16 j 07:45	0° ∡ ¹	
conjunction	-4260 Jun 27 j 05:28	0° Ⅱ 46′08	0°32'31	retrograde	-4254 Apr 24 j 09:14	2° ∡ 18'57	
minimum elong	-4260 Jun 27 j 05:25	0° Ⅱ 46′07	0°32'42		-4254 Jun 02 j 13:48	30°RM	
max. Earth dist.	-4260 Jun 26 j 14:52	0°Щ38′08	6.36130 AU	opposition	-4254 Jun 24 j 03:16	27° M 19'18	-0°41'12
morning rise	-4260 Jul 10 j 11:07	3° Ⅱ 40′10		min. Earth dist.	-4254 Jun 23 j 18:36	27° ML $22'08$	4.04515 AU
retrograde	-4260 Nov 08 j 03:31	20° Ⅱ 48'41		direct	-4254 Aug 22 j 02:03	22° M $_{26'22}$	
opposition	-4259 Jan 07 j 02:20	15° Ⅱ 54'17	1°15'14		-4254 Nov 01 j 11:09	0° ∡ ¹	
min. Earth dist.	-4259 Jan 07 j 18:42	15° Ⅱ 48'56	4.38436 AU	evening set	-4254 Dec 24 j 05:20	11° ∡ ³33'37	
direct	-4259 Mar 10 j 06:55	10° Ⅱ 50′50					
evening set	-4259 Jul 15 j 23:39	28° ∏ 45'44		conjunction	-4253 Jan 06 j 08:02	14° ∡ °41′02	
	-4259 Jul 21 j 15:41	0		minimum elong	-4253 Jan 06 j 07:58	14° ∡ °41′00	
				max. Earth dist.	-4253 Jan 07 j 07:50	14° ₹ 55'15	6.02121 AU
conjunction	-4259 Jul 28 j 23:06	1°536'13		morning rise	-4253 Jan 19 j 14:01	17° ∡ 750′15	
minimum elong	-4259 Jul 28 j 23:03	1°536'11			-4253 Mar 16 j 08:48	0°る	
max. Earth dist.	-4259 Jul 27 j 15:00	1°518'35	6.39240 AU	retrograde	-4253 May 31 j 15:29	8° ろ 06'39	10/11/57
morning rise	-4259 Aug 10 j 19:05	4°\$25'04 21°\$26'14		opposition	-4253 Jul 30 j 21:24	3°る03'18	-1°41′56 4.01442 AU
retrograde opposition	-4259 Dec 09 j 01:46 -4258 Feb 07 j 12:25	16°534'10	1°54'04	min. Earth dist.	-4253 Jul 29 j 21:56 -4253 Aug 24 j 12:54	30°R. ₹	4.01442 AU
min. Earth dist.	-4258 Feb 07 j 12:25 -4258 Feb 08 j 15:07	16°934'10	4.38759 AU	direct	-4253 Aug 24 j 12:54 -4253 Sep 27 j 01:06	30° ₹ ×′ 28° ₹ '09'06	
direct	-4258 Apr 11 j 03:35	10 3 23 37	1.50/57 AU	uncet	-4253 Sep 27 J 01:00 -4253 Oct 30 j 08:48	28 メ ・09 00	
evening set	-4258 Apr 11 j 05:35	29°\$26'41		evening set	-4252 Jan 29 j 17:25	0 8 17° 8 26'18	
5. cg 50t	-4258 Aug 18 j 18:10	0°Ω		training set	.202 tun 27 j 17.23	1, 02010	
max. Earth dist.	-4258 Aug 27 j 02:57	1° Ω 51'18	6.36616 AU	conjunction	-4252 Feb 12 j 03:30	20° ට 36'45	-1°19'06
	5 . 3 . 3 .			minimum elong	-4252 Feb 12 j 03:28	20° පි 36'44	
conjunction	-4258 Aug 28 j 21:20	2° Ω 14'51	1°23'42	max. Earth dist.	-4252 Feb 13 j 23:06		6.02287 AU
-	5 3				, and the second		

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -4252 in astronomical counting style is the year 4253 BCE in historical counting style. -4252 Feb 25 j 16:36 23°る48'44 direct -4246 Apr 15 j 16:11 15°959'45 morning rise -4252 Mar 23 j 18:18 -4246 Aug 02 j 12:20 0°≈≈ $0^{\circ}\Omega$ -4252 Jul 06 j 04:55 13°≈57'03 -4246 Aug 20 j 15:16 3°**£**55'55 retrograde evening set -4252 Sep 03 j 21:56 8°≈51'53 -2°03'51 max. Earth dist. -4246 Aug 31 j 12:49 6°**Ω**21′07 6.35581 AU opposition min. Earth dist. -4252 Sep 02 j 16:34 9°**≈**01'53 4.04973 AU -4246 Sep 02 j 06:20 direct -4252 Nov 01 j 00:16 3°≈54'47 conjunction 6°**Ω**44'14 1°24'02 -4251 Jan 29 j 08:30 15°≈ minimum elong -4246 Sep 02 j 06:20 6°**Ω**44'14 1°24'11 evening set -4251 Mar 06 j 18:09 23°≈05'08 morning rise -4246 Sep 14 j 18:54 9°**£**31′30 -4246 Oct 10 j 03:45 15°Ω conjunction -4251 Mar 20 j 10:05 26°≈15′14 -1°18′46 retrograde -4245 Jan 14 j 14:07 26°**Ω**56'01 minimum elong -4251 Mar 20 j 10:07 26°≈15'16 1°18'53 opposition -4245 Mar 16 j 11:53 22°**Ω**04'29 1°59'19 max. Earth dist. -4251 Mar 22 j 06:38 26°**≈**41′06 6.08746 AU min. Earth dist. -4245 Mar 17 j 17:35 21°**Ω**55'03 4.32152 AU morning rise -4251 Apr 03 j 04:04 29°≈26'09 direct -4245 May 17 j 19:52 17°**Ω**05'40 -4251 Apr 05 j 15:00 0°**)**€ -4245 Aug 28 j 01:48 0° m retrograde -4251 Aug 10 j 00:00 18°**¥**50′56 evening set -4245 Sep 20 j 19:05 5° m 12'45 min. Earth dist. -4251 Oct 07 j 10:01 13°**¥**55′04 4.13658 AU max. Earth dist. -4245 Oct 01 j 17:16 7°**™**41'25 6.27550 AU opposition -4251 Oct 08 j 11:02 13°\(\)46'32 -1°40'00 direct -4251 Dec 06 j 06:40 8°**)** 46′05 conjunction -4245 Oct 03 j 07:23 8° Mp 03'06 1°12'45 evening set -4250 Apr 12 j 03:04 27°**)** 35'57 minimum elong -4245 Oct 03 j 07:26 8°1003'08 1°12'50 -4250 Apr 22 j 18:09 $0^{\circ}\Upsilon$ morning rise -4245 Oct 15 j 19:00 10° m 53'15 retrograde -4244 Feb 17 j 07:31 28° m 59'50 conjunction -4250 Apr 25 j 21:38 0°Y42'45 -0°50'26 opposition -4244 Apr 18 j 09:30 24° M 06'42 1°25'50 -4250 Apr 25 j 21:42 0°**Υ**42'47 0°50'26 min. Earth dist. -4244 Apr 19 j 08:46 23° m 59'17 4.22437 AU minimum elong max. Earth dist. -4250 Apr 27 j 04:40 1°Y00'20 6.18979 AU direct -4244 Jun 18 j 20:03 19° m 10'43 -4250 May 09 j 15:50 3°**Y**49'12 -4244 Sep 17 j 06:12 0∘**⊽** morning rise -4250 Sep 12 j 00:29 22°Y15'35 -4244 Oct 21 j 16:45 7°**£**36'42 retrograde evening set -4250 Nov 10 j 09:52 17°Υ14'16 -0°43'33 -4244 Nov 02 j 09:23 10°**≏**19'33 6.17048 AU max Earth dist opposition -4250 Nov 09 j 21:44 17°Υ18'22 4.24336 AU min. Earth dist. -4249 Jan 09 j 11:09 12° **Y**11'27 -4244 Nov 03 j 07:31 conjunction 10°**£**32'26 0°38'45 direct -4249 May 14 j 07:15 -4244 Nov 03 j 07:33 10°**△**32'27 0°8 minimum elong 0°38'43 -4244 Nov 15 j 23:06 -4249 May 17 j 01:53 0°**8**36'38 13°**2**28′50 evening set morning rise -4243 Feb 10 j 23:27 0°M -4249 May 30 j 17:14 3°**8**37'48 -0°06'29 -4243 Mar 23 j 17:50 2°M29'24 conjunction retrograde -4249 May 30 j 17:15 -4243 May 03 j 22:11 minimum elong 3°**8**37'49 0°06'24 -4249 May 30 j 09:27 -4243 May 23 j 19:07 behind sun begin 3°**8**33'31 opposition 27°**♀**33'09 0°22'44 -4249 May 31 j 01:02 -4243 May 24 j 02:27 behind sun end 3°**8**42'06 min. Earth dist. 27°**£**30'47 4.11846 AU -4249 May 30 j 23:32 -4243 Jul 22 j 20:55 max. Earth dist. 3°**8**41'17 6.29342 AU direct 22°**₽**39'31 morning rise -4249 Jun 13 j 06:30 6°**8**37'46 desc. node -4243 Sep 23 j 19:46 28°**£**31'46 -4249 Jul 23 j 06:23 15°8 -4243 Oct 02 j 01:36 0°M -4249 Jul 24 j 19:19 15°**8**17'41 evening set -4243 Nov 24 j 01:49 11°ML28'17 asc. node -4249 Oct 13 j 13:12 24°813'47 retrograde -4249 Dec 12 j 04:29 19°**8**16'22 0°23'49 -4243 Dec 06 j 22:13 14°ML30'40 -0°09'19 opposition conjunction -4249 Dec 12 j 07:45 19°**8**15'17 4.33515 AU -4243 Dec 06 j 22:13 min. Earth dist. minimum elong 14°M30'40 0°09'27 -4248 Jan 19 j 22:59 behind sun begin -4243 Dec 06 j 15:26 15°R₩ 14°M26'40 14°**8**12'37 behind sun end -4243 Dec 07 j 04:59 direct -4248 Feb 11 j 11:58 14°M34'39 -4248 Mar 05 i 07:30 15°8 max. Earth dist. -4243 Dec 06 i 23:34 14°M31'27 6.07378 AU -4248 Jun 07 j 18:18 $\mathbb{I}^{\circ 0}$ -4243 Dec 08 i 23:42 15°M -4248 Jun 18 j 09:47 2°**Ⅲ**17'55 morning rise -4243 Dec 19 j 21:11 17°M34'32 evening set -4242 Feb 15 i 15:25 0°×7 -4248 Jul 01 j 17:22 5°II12'52 0°38'15 retrograde -4242 Apr 29 j 14:17 7°**х** 25'34 conjunction -4248 Jul 01 j 17:20 5°II12'51 0°38'25 -4242 Jun 29 j 07:14 2°\$\sqrt{25'18} -0°51'14 minimum elong opposition 5°**Ⅱ**03'45 6.36657 AU -4248 Jul 01 j 00:45 min. Earth dist. -4242 Jun 28 j 20:29 2° ₹ 28'51 4.03963 AU max. Earth dist. 8°II06'09 -4242 Jul 18 j 13:25 morning rise -4248 Jul 14 j 21:35 30°RM retrograde -4248 Nov 12 j 10:45 25°**Ⅲ**13'03 direct -4242 Aug 27 j 03:33 27°MJ32'18 -4247 Jan 11 j 11:15 20°**Ⅱ**19'08 1°22'13 -4242 Oct 05 j 02:34 0°×7 opposition min. Earth dist. -4247 Jan 12 j 05:08 20°**Ⅲ**13′19 4.38551 AU -4242 Dec 29 j 06:07 16°**х** 40'49 evening set -4247 Mar 14 j 17:40 15°**Ⅱ**15'56 direct -4247 Jul 05 j 14:32 -4241 Jan 11 j 09:53 19° ₹ 48'44 -0°55'14 0.00 conjunction -4241 Jan 11 j 09:50 evening set -4247 Jul 20 j 09:58 3°9511'09 minimum elong 19°**∡** 48'42 0°55'25 -4241 Jan 12 j 13:44 max. Earth dist. -4247 Jul 31 j 20:36 5°9541'43 6.38917 AU max. Earth dist. 20°**₹**'05'20 6.01971 AU 22°**₹**¹58'25 morning rise -4241 Jan 24 j 16:51 conjunction -4247 Aug 02 j 08:05 6°501'14 1°11'12 -4241 Feb 24 j 09:20 0°궁 minimum elong -4247 Aug 02 j 08:01 6°901'12 1°11'24 retrograde -4241 Jun 05 j 20:11 13°**る**15'13

morning rise

retrograde

opposition

min. Earth dist.

-4247 Aug 15 j 03:06

-4247 Dec 13 j 13:10

-4246 Feb 12 j 00:14

-4246 Feb 13 j 04:29

8°9549'47

25°953'04

21°901'14

1°57'06

20°552'11 4.38051 AU

opposition

evening set

direct

min. Earth dist.

-4241 Aug 04 j 23:39

-4241 Aug 03 j 23:00

-4241 Oct 02 j 02:01

-4240 Feb 03 j 21:04

8°**궁**11'32 -1°47'41

3°る17'01

22°る33'36

8°る19'49 4.01743 AU

•	-		•		4241 BCE in historical c	, .	gc 13
conjunction	-4240 Feb 17 j 07:51	25° ⋜ 44'04			-4235 Dec 02 j 14:51	0°N	
minimum elong	-4240 Feb 17 j 07:50	25° る 44'03	1°21'07	retrograde	-4235 Dec 18 j 00:28	0° Ω 22'26	
max. Earth dist.	-4240 Feb 19 j 02:58	26° පි 09'32	6.02974 AU	C	-4234 Jan 02 j 10:52	30° ℝ ∽	
morning rise	-4240 Mar 01 j 21:53	28° ප 56'04		opposition	-4234 Feb 16 j 13:26	25° © 30'47	1°59'32
	-4240 Mar 06 j 11:23	0° ≈		min. Earth dist.	-4234 Feb 17 j 17:45	25° © 21'44	4.37492 AU
	-4240 May 20 j 17:32	15° ≈		direct	-4234 Apr 20 j 04:55	20°529'42	
retrograde	-4240 Jul 11 j 02:16	18° ≈ 59'44			-4234 Jul 15 j 17:13	$0^{\circ}\Omega$	
	-4240 Aug 31 j 17:57	15°R ≈		evening set	-4234 Aug 25 j 01:27	8° Ω 26'47	
opposition	-4240 Sep 08 j 19:24	13° ≈ 54'29	-2°03'07	max. Earth dist.	-4234 Sep 04 j 21:24	10° Q 51′30	6.34776 AU
min. Earth dist.	-4240 Sep 07 j 13:53	14° ≈ 04'33	4.05988 AU				
direct	-4240 Nov 05 j 23:04	8° ≈ 56'51		conjunction	-4234 Sep 06 j 15:40	11° Ω 15′06	1°23'55
	-4239 Jan 08 j 05:43	15° ≈		minimum elong	-4234 Sep 06 j 15:40	11° Ω 15′06	1°24'04
evening set	-4239 Mar 11 j 20:49	28° ≈ 04'54		morning rise	-4234 Sep 19 j 03:53	14° Ω 02'30	
	-4239 Mar 20 j 04:21	0° ∀			-4234 Sep 23 j 11:43	15° Ω	
					-4234 Dec 18 j 16:08	0° m)	
conjunction	-4239 Mar 25 j 13:30	1° ∺ 14'44		retrograde	-4233 Jan 19 j 07:03	1° mp 31'23	
minimum elong	-4239 Mar 25 j 13:33	1° ∺ 14'46			-4233 Feb 20 j 02:53	30°R Ω	
max. Earth dist.	-4239 Mar 27 j 09:33		6.10012 AU	opposition	-4233 Mar 21 j 05:14	26° Ω 39'43	
morning rise	-4239 Apr 08 j 07:39	4° ¥ 25′09		min. Earth dist.	-4233 Mar 22 j 10:34	26° Ω 30′23	4.31156 AU
retrograde	-4239 Aug 14 j 17:38	23°) 42′18		direct	-4233 May 22 j 11:37	21° Ω 41'16	
min. Earth dist.	-4239 Oct 12 j 04:24		4.15028 AU		-4233 Aug 09 j 13:59	0° m)	
opposition	-4239 Oct 13 j 03:09	18°) 38′14	-1°33'37	evening set	-4233 Sep 25 j 06:01	9° m 49'44	
direct	-4239 Dec 11 j 03:06	13°) 37′22		max. Earth dist.	-4233 Oct 06 j 07:22	12° m 20'33	6.26462 AU
	-4238 Apr 06 j 07:07	0° Υ					
evening set	-4238 Apr 17 j 02:03	2° Y ′24'08		conjunction	-4233 Oct 07 j 18:28	12° m 40'34	
				minimum elong	-4233 Oct 07 j 18:31	12° m 40'36	1°09'15
conjunction	-4238 Apr 30 j 20:28	5° Y 30′19		morning rise	-4233 Oct 20 j 06:11	15° m ₂ 31'15	
minimum elong	-4238 Apr 30 j 20:31	5° Υ 30'21			-4232 Jan 02 j 15:33	0∘ ⊽	
max. Earth dist.	-4238 May 01 j 23:49	5° Y 45'45	6.20343 AU	retrograde	-4232 Feb 22 j 03:25	3° ≏ 43'36	
morning rise	-4238 May 14 j 14:26	8° Y 36'03		*,*	-4232 Apr 14 j 01:24	30°R, Mp	101010.5
retrograde	-4238 Sep 16 j 11:07	26° Y 55'09	0024116	opposition	-4232 Apr 23 j 06:46	28° m 50'07	
opposition	-4238 Nov 14 j 21:41	21° Y 54'18	4.25574 AU	min. Earth dist.	-4232 Apr 24 j 03:37	28° Mp 43'28	4.21325 AU
min. Earth dist.	-4238 Nov 14 j 11:13	16° Υ 51'13	4.25574 AU	direct	-4232 Jun 23 j 12:47	23° M 54'34 0° <u>₽</u>	
direct	-4237 Jan 14 j 02:44 -4237 Apr 27 j 11:29	0.8		avanina aat	-4232 Aug 27 j 21:35	12° £ 22'07	
evening set	-4237 Apr 27 j 11.29 -4237 May 21 j 20:00	5° 8 13'55		evening set	-4232 Oct 26 j 06:38	12 == 22 07	
asc. node	-4237 Jun 03 j 11:35	8° 8 01'36		conjunction	-4232 Nov 07 j 21:48	15° ≏ 18'31	0°32'35
asc. Houc	-4237 Juli 03 j 11.33	8 001 30		minimum elong	-4232 Nov 07 j 21:48	15° 2 18'32	
conjunction	-4237 Jun 04 j 10:33	8° 8 14'19	0°00'07	max. Earth dist.	-4232 Nov 07 j 21:31	15° ⊆ 07'01	6.16008 AU
minimum elong	-4237 Jun 04 j 10:33	8° 8 14'19	0°00'15	morning rise	-4232 Nov 20 j 14:17	18° 2 15'44	0.10000710
behind sun begin	-4237 Jun 04 j 02:20	8° 8 09'48	0 00 15	morning rise	-4231 Jan 14 j 19:22	0° M .	
behind sun end	-4237 Jun 04 j 18:46	8° 8 18'50		retrograde	-4231 Mar 28 j 18:58	7°M22'17	
max. Earth dist.	-4237 Jun 04 j 13:40	8° 8 15'59	6.30373 AU	opposition	-4231 May 28 j 19:35	2°M25'28	0°12'31
morning rise	-4237 Jun 17 j 22:42	11° 8 13'24		min. Earth dist.	-4231 May 29 j 00:47	2°M23'47	4.10936 AU
3	-4237 Jul 05 j 09:22	15° 8			-4231 Jun 17 j 10:31	30° ₽ Ω	
retrograde	-4237 Oct 17 j 22:55	28° 8 44'43		direct	-4231 Jul 27 j 18:08	27° ♀ 32'00	
opposition	-4237 Dec 16 j 14:22	23° 8 47'52	0°32'59	desc. node	-4231 Aug 04 j 02:34	27° ≏ 37'20	
min. Earth dist.	-4237 Dec 16 j 20:12	23° 8 45'56	4.34264 AU		-4231 Sep 05 j 08:20	0°M	
direct	-4236 Feb 16 j 02:02	18° 8 44'06			-4231 Nov 22 j 23:26	15° ™	
	-4236 May 21 j 13:42	$\Pi^{\circ}0$		evening set	-4231 Nov 28 j 19:45	16°M22'19	
evening set	-4236 Jun 22 j 23:52	6° Ⅱ 48'12		-	,		
max. Earth dist.	-4236 Jul 05 j 09:48	9° Ⅱ 31'18	6.37053 AU	conjunction	-4231 Dec 11 j 17:09	19°M25'24	-0°16'12
				minimum elong	-4231 Dec 11 j 17:08	19°M25'23	0°16'20
conjunction	-4236 Jul 06 j 06:08	9° Ⅱ 42'28	0°43'51	max. Earth dist.	-4231 Dec 11 j 22:46	19°M28'43	6.06689 AU
minimum elong	-4236 Jul 06 j 06:05	9° Ⅱ 42'26	0°44'01	morning rise	-4231 Dec 24 j 17:03	22°M30'00	
morning rise	-4236 Jul 19 j 09:08	12° Ⅲ 35′03			-4230 Jan 26 j 18:11	0° ∡ ¹	
retrograde	-4236 Nov 16 j 19:51	29° Ⅱ 40'38		retrograde	-4230 May 04 j 17:04	12° ∡ ¹25′04	
opposition	-4235 Jan 15 j 21:37	24° Ⅱ 47'05	1°28'51	opposition	-4230 Jul 04 j 08:23	7° ∡ ¹24'21	-1°00'40
min. Earth dist.	-4235 Jan 16 j 17:03	24° Ⅱ 40'46	4.38613 AU	min. Earth dist.	-4230 Jul 03 j 19:50	7° ∡ ¹28'30	4.03577 AU
direct	-4235 Mar 19 j 05:49	19° Ⅱ 44'01		direct	-4230 Sep 01 j 01:34	2° ₹ 31'18	
	-4235 Jun 18 j 03:11	0°€		evening set	-4229 Jan 03 j 04:50	21° ∡ °40′51	
evening set	-4235 Jul 24 j 21:11	7° © 39'25					
max. Earth dist.	-4235 Aug 05 j 06:51	10° © 09'38	6.38644 AU	conjunction	-4229 Jan 16 j 09:23	24° ₹ °49′10	-1°00'17
				minimum elong	-4229 Jan 16 j 09:19	24° ₹ ¹49'08	1°00'28
conjunction	-4235 Aug 06 j 18:13	10° ട്ട 29'07	1°14'23	max. Earth dist.	-4229 Jan 17 j 14:05	25° ∡ 06'16	6.01891 AU
minimum elong	-4235 Aug 06 j 18:11	10° ട്ട 29'06	1°14'35	morning rise	-4229 Jan 29 j 17:28	27° ₹ ′59′19	
morning rise	-4235 Aug 19 j 11:59	13° © 17'18			-4229 Feb 07 j 06:58	0°ප	

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -4229 in astronomical counting style is the year 4230 BCE in historical counting style. -4229 Jun 10 j 19:47 18°**る**16'19 retrograde -4224 Nov 21 j 05:29 4°9508'05 retrograde -4229 Aug 09 j 22:31 13°る12'18 -1°52'31 -4223 Jan 14 j 12:00 30°RⅡ opposition -4229 Aug 08 j 20:32 13°る21'04 4.01998 AU -4223 Jan 20 j 08:07 29°**Ⅱ**14'53 1°34'56 min. Earth dist. opposition -4229 Oct 06 j 23:40 -4223 Jan 21 j 05:14 29°**Ⅱ**08'03 4.38809 AU 8°る17'25 min. Earth dist. direct -4228 Feb 08 j 22:17 -4223 Mar 23 j 18:41 evening set 27°る34'00 direct 24°**Ⅲ**12'03 -4228 Feb 19 j 06:28 0°≈ -4223 May 28 j 13:50 0ಂತಾ -4223 Jul 29 j 07:19 evening set 12°506'44 -4228 Feb 22 j 10:11 conjunction 0°≈44'39 -1°22'08 max. Earth dist. -4223 Aug 09 j 13:33 14°935'15 6.38501 AU 1°22'17 0°≈44'39 minimum elong -4228 Feb 22 j 10:10 max. Earth dist. -4228 Feb 24 j 06:44 1°≈10'55 6.03544 AU conjunction -4223 Aug 11 j 03:08 14°955'59 1°17'06 morning rise -4228 Mar 07 j 00:49 3°≈56'40 minimum elong -4223 Aug 11 j 03:05 14°955'57 1°17'17 -4223 Aug 23 j 19:56 -4228 Apr 26 j 17:06 15°≈ morning rise 17°5643'47 -4223 Oct 25 j 15:15 retrograde -4228 Jul 16 j 00:02 23°**≈**56′18 0° Ω min. Earth dist. -4228 Sep 12 j 10:30 19°**≈**00'44 4.06809 AU retrograde -4223 Dec 22 j 11:27 4° Ω 50'26 opposition -4228 Sep 13 j 14:35 18°**≈**51'08 -2°01'32 -4222 Feb 20 j 22:12 30°Rூ -4228 Oct 16 j 03:39 15°R≈ opposition -4222 Feb 21 j 01:56 29°958'48 2°01'14 direct -4228 Nov 10 j 20:06 13°≈53'07 min. Earth dist. -4222 Feb 22 j 06:37 29°5549'38 4.37015 AU -4228 Dec 06 j 16:18 15°≈ direct -4222 Apr 24 j 16:42 24°957'58 -4227 Mar 03 j 17:20 0°\ -4222 Jun 24 j 09:16 $0^{\circ}\Omega$ evening set -4227 Mar 16 j 21:41 2° **H** 59'47 evening set -4222 Aug 29 j 10:05 12°**Ω**55'34 -4222 Sep 07 j 17:19 15°**Ω** conjunction -4227 Mar 30 j 14:54 6°\(\)409'27 -1°13'18 max. Earth dist. -4222 Sep 09 i 07:06 15°**Ω**21'09 6.33983 AU -4227 Mar 30 j 14:58 6°\(\)09'29 1°13'23 minimum elong max. Earth dist. -4227 Apr 01 i 08:59 6°**升**33'43 6.11020 AU conjunction -4222 Sep 10 j 23:50 15°**Ω**43'58 1°23'18 morning rise -4227 Apr 13 j 09:31 9°**¥**19'36 -4222 Sep 10 j 23:51 15°**Ω**43'58 1°23'27 minimum elong -4227 Aug 19 j 08:20 28°\ 30'18 -4222 Sep 23 j 11:30 18°**Ω**31'29 retrograde morning rise -4227 Oct 17 j 17:57 -4222 Nov 19 j 04:40 opposition 23°\ 26'37 -1°26'43 0° m -4227 Oct 16 j 19:48 -4221 Jan 23 j 22:01 6° 1004'48 min. Earth dist. 23°\(\mathbf{3}4'10\) 4.16126 AU retrograde -4221 Mar 25 j 21:27 direct -4227 Dec 15 j 20:20 18°**¥**25′26 opposition 1° m/ 12'58 1°53'21 $0^{\circ}\Upsilon$ min. Earth dist. -4221 Mar 27 j 02:17 1° Mg 03'49 4.30071 AU -4226 Mar 19 j 20:08 -4221 Apr 04 j 13:26 7°Υ10'14 -4226 Apr 22 j 00:04 30°R€ evening set -4221 May 27 j 01:16 direct 26°**Ω**14'55 -4226 May 05 j 18:22 10°Υ15'54 -0°39'05 conjunction -4221 Jul 17 j 05:17 0° m -4226 May 05 j 18:25 10°Υ15'56 0°39'04 -4221 Sep 29 j 15:51 minimum elong evening set 14° m 25'09 10°**Υ**29'25 6.21476 AU -4226 May 06 j 18:22 -4221 Oct 10 j 17:22 max. Earth dist. max. Earth dist. 16° **m** 56'33 6.25163 AU -4226 May 19 j 11:54 13°**Y**20′59 morning rise -4226 Aug 20 j 15:50 -4221 Oct 12 j 04:17 17° Mp 16'31 1°05'14 0° 8 conjunction retrograde -4226 Sep 20 j 23:54 1°833'50 minimum elong -4221 Oct 12 j 04:20 17° Mp 16'33 1°05'16 -4226 Oct 22 j 01:31 30°R℃ morning rise -4221 Oct 24 j 16:32 20° m 07'57 opposition -4226 Nov 19 j 09:19 26°**Y**33'35 -0°24'52 -4221 Dec 10 j 01:16 0∘**⊽** min. Earth dist. -4226 Nov 19 j 01:35 26°Υ36'11 4.26633 AU retrograde -4220 Feb 27 j 00:30 8°**£**27'11 -4225 Jan 18 j 19:21 21°Y30'21 -4220 Apr 28 j 03:50 3°**△**33'14 1°10'31 direct opposition -4225 Apr 08 j 17:12 0° 8 min. Earth dist. -4220 Apr 28 j 23:02 3°**£**27'06 4.19870 AU -4225 Apr 13 j 02:29 0°849'12 -4220 May 29 j 07:35 asc. node 30°R, M) -4225 May 26 j 13:50 9°**8**51'05 -4220 Jun 28 j 05:55 28° m 37'57 evening set direct -4220 Jul 27 i 23:32 0∘**⊽** conjunction -4225 Jun 09 i 03:35 12°**8**50'47 0°06'41 evening set -4220 Oct 30 j 20:22 17°**♀**08'28 minimum elong -4225 Jun 09 i 03:33 12°**8**50'47 0°06'49 behind sun begin -4225 Jun 08 j 19:54 12°**8**46'34 conjunction -4220 Nov 12 j 12:24 20°**2**05'48 0°26'10 behind sun end -4225 Jun 09 j 11:13 12°855'00 minimum elong -4220 Nov 12 i 12:26 20°**£**05'49 0°26'07 max. Earth dist. -4225 Jun 09 j 04:03 12°**8**51'02 6.31290 AU -4220 Nov 11 j 20:36 19°**£**56'34 6.14543 AU max. Earth dist. -4225 Jun 18 j 21:28 15°8 -4220 Nov 25 j 05:39 23°**₽**04'02 morning rise 15°**8**49'03 -4220 Dec 26 j 02:29 morning rise -4225 Jun 22 j 14:38 oom. -4225 Sep 05 j 23:33 $0^{\circ}II$ retrograde -4219 Apr 02 j 21:11 12°M18'11 retrograde -4225 Oct 22 j 07:15 3°**Ⅱ**16'07 opposition -4219 Jun 02 j 20:54 7°M20'52 0°02'06 -4225 Dec 08 j 02:05 30°R₩ min. Earth dist. -4219 Jun 03 j 00:08 7°M19'49 4.09581 AU opposition -4225 Dec 21 j 00:23 28°**8**19'44 0°41'55 desc. node -4219 Jun 14 j 02:14 5°M54'45 28°**8**17'30 4.34991 AU -4219 Aug 01 j 15:05 2°M27'33 min. Earth dist. -4225 Dec 21 j 07:10 direct 23°**8**15'59 15°M direct -4224 Feb 20 j 14:18 -4219 Nov 05 j 22:14 $0^{\circ}\Pi$ -4219 Dec 03 j 15:59 21°M21'17 -4224 May 01 j 17:03 evening set -4224 Jun 27 j 13:22 11°**Ⅱ**18'41 evening set conjunction -4219 Dec 16 j 14:12 24°M25'15 -0°23'05 conjunction -4224 Jul 10 j 18:18 14°**Ⅱ**12'11 0°49'10 minimum elong -4219 Dec 16 j 14:10 24°M25'14 0°23'14 minimum elong -4224 Jul 10 j 18:15 14°**Ⅱ**12'09 0°49'21 max. Earth dist. -4219 Dec 16 j 21:44 24°M29'43 6.05553 AU max. Earth dist. -4224 Jul 09 j 20:04 13°**Ⅲ**59'59 6.37532 AU morning rise -4219 Dec 29 j 15:24 27°M30'53 -4224 Jul 23 j 19:56 17°**I**104'01 -4218 Jan 09 j 06:17 morning rise 0°×7 -4224 Sep 29 j 08:15 0ಂತಾ -4218 May 09 j 21:43 retrograde 17°**∡**³31'37

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -4218 in astronomical counting style is the year 4219 BCE in historical counting style. -4218 Jul 09 j 11:48 12°**₹**30'19 -1°09'52 -4212 Jan 16 j 18:19 30°R₩ opposition -4218 Jul 08 j 20:30 -4212 Feb 25 j 04:04 27°842'39 min. Earth dist. 12°**х** 35′24 4.02785 AU direct -4212 Apr 04 j 22:13 $0^{\circ}\Pi$ -4218 Sep 06 j 01:16 7° 2 37'05 direct -4217 Jan 08 j 07:04 15°**Ⅱ**41'34 26°**х** 49′18 -4212 Jul 01 j 23:50 evening set evening set -4212 Jul 14 j 02:46 max. Earth dist. 18°**Ⅲ**20'33 6.38555 AU conjunction -4217 Jan 21 j 12:52 29° 2758'17 -1°05'01 -4217 Jan 21 j 12:48 minimum elong 29°**₹**58'14 1°05'13 conjunction -4212 Jul 15 j 03:28 18°**Ⅲ**34′05 0°54'01 -4212 Jul 15 j 03:25 -4217 Jan 21 j 15:45 0°ಕ minimum elong 18°**Ⅲ**34′03 0°54'13 max. Earth dist. -4217 Jan 22 j 21:41 0°る17'50 6.01510 AU morning rise -4212 Jul 28 j 03:37 21°**Ⅲ**24'55 morning rise -4217 Feb 03 j 21:52 3°る09'00 -4212 Sep 07 j 20:09 0ಂತಾ retrograde -4217 Jun 16 j 01:26 23°**る**26'58 retrograde -4212 Nov 25 j 09:33 8°926'03 -4211 Jan 24 j 15:04 min. Earth dist. -4217 Aug 13 j 23:03 18°**る**31'30 4.02090 AU opposition 3°533'08 1°40'12 -4211 Jan 25 j 13:17 opposition -4217 Aug 15 j 01:16 18°る22'38 -1°56'40 min. Earth dist. 3°**9**25'58 4.39402 AU direct -4217 Oct 12 j 02:00 13°る27'24 -4211 Feb 24 j 07:21 30°RⅡ -4216 Feb 02 j 08:50 0°≈ direct -4211 Mar 28 j 02:35 28° **II**30′28 evening set -4216 Feb 14 j 04:06 2°≈44'24 -4211 Apr 29 j 04:52 0ಂತಾ evening set -4211 Aug 02 j 13:15 16°9523'25 conjunction -4216 Feb 27 j 16:50 5°≈55'12 -1°22'45 max. Earth dist. -4211 Aug 13 j 16:59 18°**©**50'39 6.38596 AU minimum elong -4216 Feb 27 j 16:50 5°≈55'12 1°22'54 max. Earth dist. -4216 Feb 29 j 14:05 6°≈21'49 6.04089 AU conjunction -4211 Aug 15 j 07:55 19°9512'09 1°19'16 morning rise -4216 Mar 12 j 08:24 9°**≈**07'19 minimum elong -4211 Aug 15 j 07:53 19°9512'08 1°19'26 -4216 Apr 07 j 04:41 15°≈ morning rise -4211 Aug 27 i 23:40 21°959'29 -4216 Jul 20 j 23:09 29°≈02'16 -4211 Oct 05 i 08:24 $0^{\circ}\Omega$ retrograde min. Earth dist. -4216 Sep 17 i 08:16 24°≈07'06 4.07788 AU retrograde -4211 Dec 26 j 19:08 9°**Ω**07'19 -4216 Sep 18 j 13:16 23°≈57'11 -1°59'00 opposition -4210 Feb 25 j 10:25 4°Ω15'50 2°02'10 opposition -4216 Nov 15 j 19:54 min. Earth dist. -4210 Feb 26 j 16:58 direct 18°≈58'45 4°Ω06'06 4 36594 AU 0°**₩** -4210 Apr 06 j 16:58 -4215 Feb 13 j 11:41 30°R9 -4215 Mar 22 j 02:40 8°**₩**03'15 -4210 Apr 29 j 01:41 29°9515'19 direct evening set -4210 May 21 j 11:13 $0^{\circ}\Omega$ -4215 Apr 04 j 20:19 -4210 Aug 23 j 12:12 conjunction 11°**X** 12'31 -1°09'43 15°€ -4210 Sep 02 j 14:24 11°**升**12'33 1°09'46 -4215 Apr 04 j 20:23 evening set minimum elong 17°**Ω**13'33 -4210 Sep 13 j 08:56 max. Earth dist. -4215 Apr 06 j 12:48 6.33055 AU max. Earth dist. 19°**Ω**38′08 11°**)** ₹35'48 6.12383 AU -4215 Apr 18 j 15:06 morning rise 14°**)** 22'07 -4215 Jul 08 j 00:31 $0^{\circ}\Upsilon$ -4210 Sep 15 j 03:38 20°Ω02'06 1°22'14 conjunction -4215 Aug 24 j 02:48 3°**Y**24'33 -4210 Sep 15 j 03:39 retrograde minimum elong 20°**Ω**02'07 1°22'23 -4215 Oct 10 j 03:38 -4210 Sep 27 j 15:10 30°**₹**₩ morning rise 22°**Ω**49'56 -4210 Oct 31 j 01:17 opposition -4215 Oct 22 j 11:27 28°**H**21'15 -1°19'04 0° M min. Earth dist. -4215 Oct 21 j 15:15 28°**)** €28'07 4.17741 AU retrograde -4209 Jan 28 j 09:40 10° m 28'37 -4215 Dec 20 j 19:04 23°¥19'43 -4209 Mar 30 j 09:58 5° Mp 36'36 1°49'30 direct opposition -4214 Feb 27 j 05:36 $0^{\circ}\Upsilon$ min. Earth dist. -4209 Mar 31 j 14:27 5° Mp 27′32 4.28682 AU -4214 Apr 27 j 00:02 12°\mathbf{9}00'16 direct -4209 May 31 j 10:19 0° My 38'52evening set -4209 Oct 03 j 22:29 18° m 52'23 evening set -4214 May 10 j 18:04 15°Υ05'04 -0°32'58 max. Earth dist. -4209 Oct 15 j 02:36 21°M)25'48 conjunction 6.23440 AU -4214 May 10 j 18:07 minimum elong 15°**Y**05′06 0°32′56 -4214 May 11 j 16:49 -4209 Oct 16 j 11:21 21° Mp 44'36 max. Earth dist. 15°**Y**17′50 6.23248 AU conjunction morning rise -4214 May 24 j 10:52 18°**℃**09'06 minimum elong -4209 Oct 16 j 11:24 21° m 44'38 1°01'02 -4214 Jul 21 i 20:56 0°8 morning rise -4209 Oct 28 i 23:56 24° m 36'57 retrograde -4214 Sep 25 i 10:10 6°813'13 -4209 Nov 22 i 03:54 0∘**⊽** opposition -4214 Nov 23 j 21:34 1°813'29 -0°15'19 retrograde -4208 Mar 02 j 20:01 13°**♀**04'49 min. Earth dist. -4214 Nov 23 j 14:32 1°815'50 4.28415 AU opposition -4208 May 02 j 22:18 8°**₽**10'35 1°02'24 -4214 Dec 03 j 03:12 30°RY min. Earth dist. -4208 May 03 j 16:51 4.17917 AU 8°<u>₽</u>04'39 -4213 Jan 23 j 11:03 26°**Y**10′07 -4208 Jul 02 j 20:20 3°**£**15'40 direct direct 27°**Y**′24'45 asc. node -4213 Feb 20 j 23:42 evening set -4208 Nov 04 j 09:07 21°**£**51'24 -4213 Mar 15 j 23:59 0°8 max. Earth dist. -4208 Nov 16 j 11:05 24°**-**41'17 6.12536 AU -4213 May 31 j 06:57 14°**8**26'07 evening set -4208 Nov 17 j 01:52 0°19'43 -4213 Jun 02 j 20:47 15°8 conjunction 24°**£**49'58 -4208 Nov 17 j 01:54 24°**₽**49'58 0°19'39 minimum elong -4213 Jun 13 j 19:23 17°**8**24'37 0°13'04 -4208 Nov 29 j 20:23 27°**£**49'35 conjunction morning rise -4213 Jun 13 j 19:22 17°**8**24'37 0°M minimum elong 0°13'12 -4208 Dec 09 j 05:29 17°**8**22'02 behind sun begin -4213 Jun 13 j 14:40 -4207 Feb 28 j 14:44 15°M behind sun end -4213 Jun 14 j 00:04 17°**8**27'11 retrograde -4207 Apr 07 j 23:03 17°M13'36 max. Earth dist. -4213 Jun 13 j 15:57 17°**8**22'44 6.32945 AU -4207 Apr 25 j 07:13 16°M45'21 desc. node morning rise -4213 Jun 27 j 05:14 20°**8**21'40 -4207 May 16 j 13:28 15°RM -4213 Aug 13 j 06:56 Π °0 opposition -4207 Jun 07 j 21:34 12° M $15'45 - 0^{\circ}08'12$ retrograde -4213 Oct 26 j 15:06 7°**Ⅱ**42'14 min. Earth dist. -4207 Jun 07 j 21:44 12°M15'42 4.07692 AU 2°**∏**46′22 opposition -4213 Dec 25 j 09:00 0°50'21 direct -4207 Aug 06 j 10:09 7°M22'35

min. Earth dist.

-4213 Dec 25 j 18:44

2°**耳**43'10 4.36397 AU

-4207 Oct 17 j 13:13

15°M

-	_				4208 BCE in historical c	_	50 10
evening set	-4207 Dec 08 j 12:50			max. Earth dist.	-4201 Jun 18 j 06:09		6.34214 AU
C	J			morning rise	-4201 Jul 01 j 20:19	24° 8 56'32	
conjunction	-4207 Dec 21 j 12:22	29°M27'16	-0°29'45	C	-4201 Jul 25 j 13:00	Π°	
minimum elong	-4207 Dec 21 j 12:19	29°M27'14	0°29'53	retrograde	-4201 Oct 30 j 22:29	12° Ⅱ 12'10	
max. Earth dist.	-4207 Dec 22 j 01:01	29°M34'48	6.03969 AU	opposition	-4201 Dec 29 j 19:00	7° Ⅱ 16'46	0°58'42
	-4207 Dec 23 j 19:18	0° ∡ ¹		min. Earth dist.	-4201 Dec 30 j 06:06	7° Ⅱ 13′08	4.37302 AU
morning rise	-4206 Jan 03 j 14:40	2° ∡ ³34′07		direct	-4200 Feb 29 j 16:13	2° Ⅱ 13'07	
retrograde	-4206 May 15 j 06:20	22° ∡ ¹42′10		evening set	-4200 Jul 06 j 12:18	20° Ⅱ 10′02	
opposition	-4206 Jul 14 j 16:28	17° ∡ ¹40'22	-1°18'33	max. Earth dist.	-4200 Jul 18 j 09:59	22° II 46'11	6.39012 AU
min. Earth dist.	-4206 Jul 13 j 23:39	17° ∡ ¹45'58	4.01682 AU				
direct	-4206 Sep 11 j 02:49	12° ∡ ¹47′00		conjunction	-4200 Jul 19 j 14:26	23° Ⅱ 01'46	0°58'44
	-4205 Jan 04 j 18:45	0° ට		minimum elong	-4200 Jul 19 j 14:23	23° Ⅱ 01'45	0°58'56
evening set	-4205 Jan 13 j 11:45	2° る 03'04		morning rise	-4200 Aug 01 j 13:22	25° Ⅱ 51'54	
					-4200 Aug 20 j 21:04	0 \circ \odot	
conjunction	-4205 Jan 26 j 18:36	5° る 12'47		retrograde	-4200 Nov 29 j 19:48	12° © 52'10	
minimum elong	-4205 Jan 26 j 18:32	5° る 12'45		opposition	-4199 Jan 29 j 01:49	7° 9 59'34	1°45'12
max. Earth dist.	-4205 Jan 28 j 06:16		6.00972 AU	min. Earth dist.	-4199 Jan 30 j 02:43	7° © 51'32	4.39400 AU
morning rise	-4205 Feb 09 j 04:53	8° ට 24'15		direct	-4199 Apr 01 j 16:05	2°957'06	
retrograde	-4205 Jun 21 j 06:29	28° る 42'58		evening set	-4199 Aug 06 j 22:44	20°950'01	
min. Earth dist.	-4205 Aug 19 j 00:27		4.02203 AU	max. Earth dist.	-4199 Aug 18 j 00:05	23° © 16'11	6.38112 AU
opposition	-4205 Aug 20 j 05:07	23° る 38'20	-1°59'50				
direct	-4205 Oct 17 j 04:02	18° る 42'41		conjunction	-4199 Aug 19 j 16:29	23° © 38'31	1°21'07
	-4204 Jan 14 j 22:29	0° ≈		minimum elong	-4199 Aug 19 j 16:27	23° © 38'30	1°21'18
evening set	-4204 Feb 19 j 12:07	7° ≈ 59'52		morning rise	-4199 Sep 01 j 07:19	26° © 25'41	
					-4199 Sep 17 j 19:02	0 \circ Ω	
conjunction	-4204 Mar 04 j 01:47	11° ≈ 10'44		retrograde	-4199 Dec 31 j 06:25	13° Ω 36'35	
minimum elong	-4204 Mar 04 j 01:47	11° ≈ 10'45		opposition	-4198 Mar 02 j 00:06	8° Ω 45'06	2°02'32
max. Earth dist.	-4204 Mar 05 j 23:53	11°≈37'48	6.04814 AU	min. Earth dist.	-4198 Mar 03 j 06:20	8° Ω 35'28	4.35684 AU
morning rise	-4204 Mar 17 j 18:04	14°≈22'48		direct	-4198 May 03 j 13:19	3° Ω 44'55	
	-4204 Mar 20 j 10:09	15° ≈			-4198 Aug 06 j 13:12	15° Ω	
	-4204 Jun 03 j 08:01	0° ∀		evening set	-4198 Sep 07 j 00:04	21° Ω 45'07	6 2 1 T 2 2 1 X X
retrograde	-4204 Jul 26 j 00:21	4° ₩ 11'47		max. Earth dist.	-4198 Sep 17 j 19:20	24° Ω 10′34	6.31792 AU
i E d lid	-4204 Sep 17 j 00:03	30°R≈	4.00001 ATT	. ,.	4100 0 10:12.56	240 024100	1020140
min. Earth dist.	-4204 Sep 22 j 08:41		4.09001 AU	conjunction	-4198 Sep 19 j 12:56	24° Ω 34'00	1°20'40
opposition	-4204 Sep 23 j 12:50	29°≈06'40	-1°55′29	minimum elong	-4198 Sep 19 j 12:58 -4198 Oct 02 j 00:16	24° Ω 34'01	1°20'46
direct	-4204 Nov 20 j 23:15	24°≈07'40		morning rise	-	27° Ω 22'17	
	-4203 Jan 22 j 13:48	0° \ 13° \ 08'49			-4198 Oct 13 j 20:44	0°M)	
evening set	-4203 Mar 27 j 08:12	13 π 08 49		retrograde	-4197 Feb 02 j 04:48 -4197 Apr 04 j 05:00	15° Mp 07'20 10° Mp 15'09	1°44'47
conjunction	4202 Amr. 10:02:22	16° ₩ 17'35	1905122	opposition min. Earth dist.			4.27137 AU
minimum elong	-4203 Apr 10 j 02:22 -4203 Apr 10 j 02:26	16° X 17'37		direct	-4197 Apr 05 j 09:28 -4197 Jun 05 j 03:13	10° Mp 06'06 5° Mp 17'51	4.2/13/ AU
max. Earth dist.	-4203 Apr 11 j 18:44	16° X 1737	6.13958 AU		-4197 Oct 08 j 11:06	23° M) 34'42	
morning rise	-4203 Apr 23 j 21:07	19° H 26'28	0.13938 AU	evening set max. Earth dist.	-4197 Oct 18 j 11:00	26° M) 09'24	6.21755 AU
morning rise	-4203 Apr 23 j 21.07 -4203 Jun 12 j 16:37	19 γ (2028		max. Earm dist.	-419/ Oct 19 j 10.20	20 IIJ 09 24	0.21/33 AU
retrograde	-4203 Juli 12 j 10:37	8° Υ 19'39		conjunction	-4197 Oct 21 j 00:15	26° m) 27'47	0°56'09
min. Earth dist.	-4203 Oct 26 j 09:29	3° Υ 23'19	4.19472 AU	minimum elong	-4197 Oct 21 j 00:13	26° m) 27'49	0°56'10
opposition	-4203 Oct 20 j 04:54	3° Υ 16'43		morning rise	-4197 Nov 02 j 13:36	20° m/27° 49 29° m/21'09	0 30 10
opposition	-4203 Nov 22 j 15:23	30° R ₩	-1 1049	morning risc	-4197 Nov 05 j 09:32	0° ⊽	
direct	-4203 Nov 22 j 15:23 -4203 Dec 25 j 15:44	28° ₩ 14'48		retrograde	-4196 Mar 07 j 20:10	0 == 17° £ 57'27	
uncet	-4202 Jan 28 j 03:13	20 γ (1440		opposition	-4196 May 07 j 23:13	17 — 3727 13° ≏ 02'46	0°53'21
evening set	-4202 May 02 j 00:03	16° Y 50′50		min. Earth dist.	-4196 May 08 j 14:32	13 — 02 4 0 12° ⊆ 57'51	4.16226 AU
evening set	4202 May 02 j 00.03	10 3030		direct	-4196 Jul 07 j 15:44	8° ⊆ 08'12	4.10220710
conjunction	-4202 May 15 j 17:26	19° Ƴ 54'40	-0°26'36	evening set	-4196 Nov 09 j 03:18	26° £ 47'52	
minimum elong	-4202 May 15 j 17:28	19° Y ′54'41	0°26'31	evening sec	11701101 07 105.10	20 - 17 32	
max. Earth dist.	-4202 May 16 j 11:19	20° Υ '04'40	6.24977 AU	conjunction	-4196 Nov 21 j 21:00	29° ≏ 47'28	0°12'48
morning rise	-4202 May 29 j 09:37	22° Υ 57'39	0.21777110	minimum elong	-4196 Nov 21 j 21:01	29° ≏ 47'28	0°12'42
morning rise	-4202 Jul 01 j 07:58	0°8		behind sun begin	-4196 Nov 21 j 15:50	29° Ω 44'26	V 12 .2
retrograde	-4202 Sep 29 j 22:16	10° 8 53'35		behind sun end	-4196 Nov 22 j 02:12	29° £ 50'31	
opposition	-4202 Nov 28 j 10:08	5° 8 54'20	-0°05'35	max. Earth dist.	-4196 Nov 21 j 11:11	29° ≏ 41'42	6.11024 AU
min. Earth dist.	-4202 Nov 28 j 06:13	5° 8 55'38	4.29973 AU		-4196 Nov 22 j 18:17	0° M	
asc. node	-4202 Dec 30 j 21:46	2° 8 05'55		morning rise	-4196 Dec 04 j 16:25	2°M48'12	
direct	-4201 Jan 28 j 05:12	0° 8 50'45		-0~*	-4195 Jan 30 j 16:24	15°M	
	-4201 May 17 j 03:50	15° 8		desc. node	-4195 Mar 04 j 09:46	19°M56'01	
evening set	-4201 Jun 05 j 00:28	19° 8 03'02		retrograde	-4195 Apr 13 j 07:05	22°M19'56	
		. 0.502		opposition	-4195 Jun 13 j 02:58	17°ML21'35	-0°18'56
conjunction	-4201 Jun 18 j 11:56	22° 8 00'34	0°19'29	min. Earth dist.	-4195 Jun 13 j 01:05		4.06515 AU
minimum elong	-4201 Jun 18 j 11:55	22° 8 00'33			-4195 Jul 01 j 23:59	15°RM₊	-
3	<i>J</i>				J	•	

•	omena of Jupiter fro		_	unting style is the year		, .	ge 19
Attention, astronom	nical year style is used: Th -4195 Aug 11 j 11:58	ie year -4195 i 12°M28'34	in astronomical co	evening set	-4189 Jun 09 j 14:58	23° 8 33'15	
direct	-4195 Sep 20 j 04:59	12 11628 34 15°M		evening set	-4189 Juli 09 J 14.38	25 (35) 15	
	-4195 Dec 07 j 03:32	13 IIC 0° ⊼ ¹		conjunction	-4189 Jun 23 j 01:08	26° 8 29'58	0°25'37
evening set	-4195 Dec 13 j 13:41	1° ∡ 30′54		minimum elong	-4189 Jun 23 j 01:06	26° 8 29'57	0°25'46
evening sec	1175 Bec 15 j 15.11	1 7 3031		max. Earth dist.	-4189 Jun 22 j 14:07		6.35018 AU
conjunction	-4195 Dec 26 j 14:07	4° ∡ ³36'52	-0°36'25	morning rise	-4189 Jul 06 j 08:26	29° 8 25'08	0.50010110
minimum elong	-4195 Dec 26 j 14:04	4° ∡ ³36′50		, , , , , , , , , , , , , , , , , , ,	-4189 Jul 09 j 00:24	0°II	
max. Earth dist.	-4195 Dec 27 j 06:07	4° ∡ ¹46'24	6.03240 AU	retrograde	-4189 Nov 04 j 06:49	16° Ⅱ 37'55	
morning rise	-4194 Jan 08 j 17:41	7° х 44′33		opposition	-4188 Jan 03 j 03:44	11° II 43'00	1°06'33
retrograde	-4194 May 20 j 12:22	27° ₹ '55'54		min. Earth dist.	-4188 Jan 03 j 17:54	11° Ⅱ 38′22	4.37688 AU
opposition	-4194 Jul 19 j 22:09	22° ₹ 53'35	-1°26'44	direct	-4188 Mar 05 j 04:39	6° Ⅱ 39'27	
min. Earth dist.	-4194 Jul 19 j 02:01	23° ∡ °00′19	4.01526 AU	evening set	-4188 Jul 10 j 23:14	24° Ⅱ 36′07	
direct	-4194 Sep 16 j 04:54	18° ₹ 00'03		max. Earth dist.	-4188 Jul 22 j 18:39	27° Ⅱ 11′08	6.38943 AU
	-4194 Dec 17 j 22:00	0°ප					
evening set	-4193 Jan 18 j 16:57	7° る 16'30		conjunction	-4188 Jul 24 j 00:17	27° Ⅱ 27'24	1°03'03
		_		minimum elong	-4188 Jul 24 j 00:14	27° Ⅱ 27'22	1°03'13
conjunction	-4193 Feb 01 j 00:45	10° る 26'25			-4188 Aug 04 j 14:39	0ංම	
minimum elong	-4193 Feb 01 j 00:42	10° පි 26'23		morning rise	-4188 Aug 05 j 21:50	0°9517'01	
max. Earth dist.	-4193 Feb 02 j 15:05	10°₹49'14	6.01370 AU	retrograde	-4188 Dec 04 j 03:56	17°5518'17	1040122
morning rise	-4193 Feb 14 j 11:54	13° る 38'03		opposition	-4187 Feb 02 j 12:21	12°525'59	1°49'33
. 1	-4193 May 06 j 15:00	0°≈ 20~~52140		min. Earth dist.	-4187 Feb 03 j 13:40	12°517'50	4.38918 AU
retrograde	-4193 Jun 26 j 10:06	3°≈53'48		direct	-4187 Apr 06 j 02:21	7°523'51	
min Earth diat	-4193 Aug 16 j 11:56	30°Rる	4.03115 AU	evening set	-4187 Aug 11 j 08:32	25°©18'17 27°©43'35	6.37246 AU
min. Earth dist. opposition	-4193 Aug 24 j 02:23 -4193 Aug 25 j 07:10	28°る48'54		max. Earth dist.	-4187 Aug 22 j 07:34	21 3943 33	0.37240 AU
direct	-4193 Oct 22 j 08:05	23°る52'47	-2 02 00	conjunction	-4187 Aug 24 j 01:15	28° © 06'42	1022128
direct	-4193 Dec 24 j 14:34	23 ⊙ 32 4 7		minimum elong	-4187 Aug 24 j 01:14	28°906'41	1°22'39
evening set	-4192 Feb 24 j 17:15	13°≈07'23		minimum ciong	-4187 Sep 01 j 13:44	0° Ω	1 22 37
evening sec	-4192 Mar 03 j 18:21	15° ≈		morning rise	-4187 Sep 05 j 15:26	0° Ω 53'56	
	11,21,141 05 , 10.21	10			-4187 Nov 19 j 19:09	15° Ω	
conjunction	-4192 Mar 09 j 07:45	16° ≈ 17'59	-1°21'59	retrograde	-4186 Jan 04 j 21:34	18° Ω 09'14	
minimum elong	-4192 Mar 09 j 07:46			8	-4186 Feb 20 j 22:37	15°R Ω	
max. Earth dist.	-4192 Mar 11 j 07:15	16° ≈ 45'45	6.06142 AU	opposition	-4186 Mar 06 j 15:22	13° Ω 17'48	2°02'09
morning rise	-4192 Mar 23 j 00:28	19° ≈ 29'37		min. Earth dist.	-4186 Mar 07 j 22:33	13° Ω 07'52	4.34497 AU
	-4192 May 10 j 08:38	0° ∀		direct	-4186 May 08 j 04:19	8° Ω 18′02	
retrograde	-4192 Jul 30 j 20:41	9°) 1 0′40			-4186 Jul 17 j 18:06	15° Ω	
min. Earth dist.	-4192 Sep 27 j 04:52		4.10599 AU	evening set	-4186 Sep 11 j 10:37	26° Ω 20'46	
opposition	-4192 Sep 28 j 08:24	4° ∺ 05'46	-1°51'12	max. Earth dist.	-4186 Sep 22 j 06:42	28° Ω 47'11	6.30384 AU
	-4192 Nov 02 j 20:33	30° R ≈					
direct	-4192 Nov 25 j 21:11	29° ≈ 06′21		conjunction	-4186 Sep 23 j 23:20	29° Ω 10′08	1°18'33
	-4192 Dec 19 j 03:15	0°) {		minimum elong	-4186 Sep 23 j 23:22	29° Ω 10′09	1°18'38
evening set	-4191 Apr 01 j 09:43	18°) €03'20			-4186 Sep 27 j 15:35	0° Mp	
. ,.	4101 A 15:02.52	2101/11/24	1001105	morning rise	-4186 Oct 06 j 10:39	1° Mp 59'00	
conjunction	-4191 Apr 15 j 03:52	21°) 11'24 21°) 11'26		retrograde opposition	-4185 Feb 06 j 23:35	19° Mp 50'52	1°39'16
minimum elong max. Earth dist.	-4191 Apr 15 j 03:56 -4191 Apr 16 j 15:59	21°\(\)32'00		min. Earth dist.	-4185 Apr 09 j 01:44	14° m 58'24 14° m 50'11	4.25611 AU
morning rise	-4191 Apr 16 j 13.39	24° X 19'31	0.13070 AU	direct	-4185 Apr 10 j 03:34 -4185 Jun 09 j 19:28	14 my 30 11 10° my 01'33	4.23011 AU
morning risc	-4191 May 24 j 16:20	0° Υ		evening set	-4185 Oct 13 j 01:06	28° m) 21'23	
retrograde	-4191 Sep 02 j 08:42	13° Υ 03'45		evening set	-4185 Oct 20 j 04:28	0° ರ	
opposition	-4191 Oct 31 j 18:16	8° Υ 01'16	-1°02'25	max. Earth dist.	-4185 Oct 24 j 10:27	0° £ 58'57	6.20255 AU
min. Earth dist.	-4191 Oct 31 j 01:25	8° Y '07'00					
direct	-4191 Dec 30 j 09:52	2° Y ′59'02		conjunction	-4185 Oct 25 j 14:39	1° ≙ 15'15	0°50'51
evening set	-4190 May 06 j 19:41	21° Y ′31'14		minimum elong	-4185 Oct 25 j 14:42	1° ≙ 15'17	0°50'52
				morning rise	-4185 Nov 07 j 04:34	4° £ 09'32	
conjunction	-4190 May 20 j 12:41	24° Y '34'16	-0°20'16	retrograde	-4184 Mar 12 j 23:34	22° ≏ 53'20	
minimum elong	4100 M 20 : 12-42	24° Y 34'17	0°20'12	opposition	-4184 May 13 j 01:06	17° ≙ 58'11	0°43'48
minimum elong	-4190 May 20 j 12:43	2. (9.1)			, ,		
max. Earth dist.	-4190 May 20 j 12:43 -4190 May 21 j 04:00	24° Y ′42'48	6.26466 AU	min. Earth dist.	-4184 May 13 j 14:46	17° ≏ 53'47	4.14842 AU
_	-4190 May 21 j 04:00 -4190 Jun 03 j 03:53	24° Υ 42'48 27° Υ '36'15	6.26466 AU	min. Earth dist. direct	-4184 May 13 j 14:46 -4184 Jul 12 j 14:25	13° ≏ 03'54	4.14842 AU
max. Earth dist.	-4190 May 21 j 04:00 -4190 Jun 03 j 03:53 -4190 Jun 14 j 02:03	24° Y 42'48 27° Y 36'15 0° 8	6.26466 AU	direct	-4184 May 13 j 14:46 -4184 Jul 12 j 14:25 -4184 Nov 06 j 07:49	13° £ 03'54 0° ™	4.14842 AU
max. Earth dist. morning rise	-4190 May 21 j 04:00 -4190 Jun 03 j 03:53 -4190 Jun 14 j 02:03 -4190 Sep 18 j 03:15	24°Y42'48 27°Y36'15 0°℧ 15°℧	6.26466 AU		-4184 May 13 j 14:46 -4184 Jul 12 j 14:25	13° ≏ 03'54	4.14842 AU
max. Earth dist.	-4190 May 21 j 04:00 -4190 Jun 03 j 03:53 -4190 Jun 14 j 02:03 -4190 Sep 18 j 03:15 -4190 Oct 04 j 06:41	24°Y42'48 27°Y36'15 0°8 15°8 15°825'30	6.26466 AU	direct evening set	-4184 May 13 j 14:46 -4184 Jul 12 j 14:25 -4184 Nov 06 j 07:49 -4184 Nov 13 j 22:12	13° Ω 03'54 0° M 1° M 46'12	
max. Earth dist. morning rise retrograde	-4190 May 21 j 04:00 -4190 Jun 03 j 03:53 -4190 Jun 14 j 02:03 -4190 Sep 18 j 03:15 -4190 Oct 04 j 06:41 -4190 Oct 20 j 08:05	24°Y42'48 27°Y36'15 0°8 15°8 15°825'30 15°88	6.26466 AU	direct evening set conjunction	-4184 May 13 j 14:46 -4184 Jul 12 j 14:25 -4184 Nov 06 j 07:49 -4184 Nov 13 j 22:12 -4184 Nov 26 j 16:41	13° Ω 03'54 0° M 1° M 46'12 4° M 46'39	0°05'46
max. Earth dist. morning rise retrograde asc. node	-4190 May 21 j 04:00 -4190 Jun 03 j 03:53 -4190 Jun 14 j 02:03 -4190 Sep 18 j 03:15 -4190 Oct 04 j 06:41 -4190 Oct 20 j 08:05 -4190 Nov 10 j 08:10	24°Y42'48 27°Y36'15 0°8 15°8 15°825'30 15°88 13°815'44		direct evening set conjunction minimum elong	-4184 May 13 j 14:46 -4184 Jul 12 j 14:25 -4184 Nov 06 j 07:49 -4184 Nov 13 j 22:12 -4184 Nov 26 j 16:41 -4184 Nov 26 j 16:42	13° £ 03'54 0° M 1° M 46'12 4° M 46'39 4° M 46'39	
max. Earth dist. morning rise retrograde asc. node opposition	-4190 May 21 j 04:00 -4190 Jun 03 j 03:53 -4190 Jun 14 j 02:03 -4190 Sep 18 j 03:15 -4190 Oct 04 j 06:41 -4190 Oct 20 j 08:05 -4190 Nov 10 j 08:10 -4190 Dec 02 j 19:38	24°Y42'48 27°Y36'15 0°8 15°8 15°825'30 15°88 13°815'44 10°826'53	0°03'51	evening set conjunction minimum elong behind sun begin	-4184 May 13 j 14:46 -4184 Jul 12 j 14:25 -4184 Nov 06 j 07:49 -4184 Nov 13 j 22:12 -4184 Nov 26 j 16:41 -4184 Nov 26 j 16:42 -4184 Nov 26 j 08:58	13° №03'54 0° M 1° M46'12 4° M46'39 4° M46'39 4° M42'07	0°05'46
max. Earth dist. morning rise retrograde asc. node opposition min. Earth dist.	-4190 May 21 j 04:00 -4190 Jun 03 j 03:53 -4190 Jun 14 j 02:03 -4190 Sep 18 j 03:15 -4190 Oct 04 j 06:41 -4190 Oct 20 j 08:05 -4190 Nov 10 j 08:10 -4190 Dec 02 j 19:38 -4190 Dec 02 j 17:50	24°Y42'48 27°Y36'15 0°8 15°8 15°825'30 15°88 13°815'44 10°826'53 10°827'29		evening set conjunction minimum elong behind sun begin behind sun end	-4184 May 13 j 14:46 -4184 Jul 12 j 14:25 -4184 Nov 06 j 07:49 -4184 Nov 13 j 22:12 -4184 Nov 26 j 16:41 -4184 Nov 26 j 16:42 -4184 Nov 26 j 08:58 -4184 Nov 27 j 00:26	13° \(\Omega\) 03'54 0° \(\mathref{M}\). 1° \(\mathref{M}\).46'12 4° \(\mathref{M}\).46'39 4° \(\mathref{M}\).42'07 4° \(\mathref{M}\).51'12	0°05'46 0°05'40
max. Earth dist. morning rise retrograde asc. node opposition	-4190 May 21 j 04:00 -4190 Jun 03 j 03:53 -4190 Jun 14 j 02:03 -4190 Sep 18 j 03:15 -4190 Oct 04 j 06:41 -4190 Oct 20 j 08:05 -4190 Nov 10 j 08:10 -4190 Dec 02 j 19:38	24°Y42'48 27°Y36'15 0°8 15°8 15°825'30 15°88 13°815'44 10°826'53	0°03'51	evening set conjunction minimum elong behind sun begin	-4184 May 13 j 14:46 -4184 Jul 12 j 14:25 -4184 Nov 06 j 07:49 -4184 Nov 13 j 22:12 -4184 Nov 26 j 16:41 -4184 Nov 26 j 16:42 -4184 Nov 26 j 08:58	13° №03'54 0° M 1° M46'12 4° M46'39 4° M46'39 4° M42'07	0°05'46

•	omena or Jupiter III			· //	r 4184 BCE in historical c	, .	ge 20
Attention, astronom	-4183 Jan 10 j 08:15	15°M	in astronomicai co	retrograde	-4178 Oct 08 j 15:46	19° 8 58'11	
desc. node	-4183 Jan 11 j 11:55	15°M14'48		opposition	-4178 Dec 07 j 05:48	15° 8 00'04	0912110
	3			1.1	,	_	
retrograde	-4183 Apr 18 j 11:33	27°M26'00 22°M27'02	0920121	min. Earth dist.	-4178 Dec 07 j 06:25		4.32119 AU
opposition	-4183 Jun 18 j 07:28			T' A	-4178 Dec 07 j 06:01	15°R 8	
min. Earth dist.	-4183 Jun 18 j 01:54	22°M28'51	4.05725 AU	direct	-4177 Feb 06 j 08:18	9° 8 56'21	
direct	-4183 Aug 16 j 11:17	17°M34'05		. ,	-4177 Apr 07 j 16:54	15° 8	
. ,	-4183 Nov 19 j 17:06	0° 🔏		evening set	-4177 Jun 14 j 06:04	28° 8 04'43	
evening set	-4183 Dec 18 j 13:48	6° ∡ ³38′01			-4177 Jun 23 j 00:43	Π $^{\circ}$ 0	
	4102 D 21:15:12	00 744122	0042146		4177 1 27:15:12	1° Ⅱ 00'43	0021120
conjunction	-4183 Dec 31 j 15:12	9° 🗷 44'33		conjunction	-4177 Jun 27 j 15:12 -4177 Jun 27 j 15:10	1° П 00'43	0°31'39 0°31'49
minimum elong	-4183 Dec 31 j 15:08	9° × 744'31	0°42'57	minimum elong	•		
max. Earth dist.	-4182 Jan 01 j 10:50	9° x ⁷ 56'16	6.02849 AU	max. Earth dist.	-4177 Jun 27 j 02:15	0°П53'36 3°П55'04	6.35645 AU
morning rise	-4182 Jan 13 j 19:46	12° メ 52'50 0°る		morning rise	-4177 Jul 10 j 21:05	21° Д 05'30	
	-4182 Apr 10 j 11:41	3° ろ 06'08		retrograde	-4177 Nov 08 j 15:07	21°Щ05′30 16° Ц 11′04	1014100
retrograde	-4182 May 25 j 17:47	30°R.∡ ⁷		opposition min. Earth dist.	-4176 Jan 07 j 13:38	16° Д 11'04	4.37971 AU
min Earth dist	-4182 Jul 10 j 03:39		4.01501 ATT		-4176 Jan 08 j 05:14		4.3/9/1 AU
min. Earth dist.	-4182 Jul 24 j 04:38	28° √ 10′28	4.01581 AU	direct	-4176 Mar 09 j 16:48	11° Ⅱ 07'43 29° Ⅱ 04'11	
opposition	-4182 Jul 25 j 01:59 -4182 Sep 21 j 08:02	28° ₹ 03'19 23° ₹ 09'29	-1°34′10	evening set	-4176 Jul 15 j 11:07 -4176 Jul 19 j 17:17	29° Щ 04°11 0° ©	
direct				Danth 4:-4			C 20044 ATT
. ,	-4182 Nov 27 j 10:10	0°る		max. Earth dist.	-4176 Jul 27 j 01:48	1 2036 31	6.38844 AU
evening set	-4181 Jan 23 j 20:36	12° る 25'45			4176 1 1 20:10 46	10054150	1007102
· · · · · · · · · · · ·	-4181 Feb 06 i 05:26	150=225152	1917105	conjunction	-4176 Jul 28 j 10:46	1°954'58	1°07'03 1°07'14
conjunction minimum elong	3	15°る35'52 15°る35'50		minimum elong	-4176 Jul 28 j 10:43	1°954'56	1 0 / 14
max. Earth dist.	-4181 Feb 06 j 05:23	15° る 35'50	6.01854 AU	morning rise	-4176 Aug 10 j 07:17	4°5944'10 21°5946'36	
	-4181 Feb 07 j 22:41	18° る 47'36	0.01834 AU	retrograde	-4176 Dec 08 j 15:37		1°53'22
morning rise	-4181 Feb 19 j 17:24	18 3 47 36 0° ≈		opposition min. Earth dist.	-4175 Feb 07 j 00:42	16°©54'32 16°©45'56	4.38482 AU
ratra ara da	-4181 Apr 11 j 19:13	0 ≈ 8°≈59'49			-4175 Feb 08 j 03:32	10 943 30 11°952'43	4.36462 AU
retrograde min. Earth dist.	-4181 Jul 01 j 11:46	8°≈39'49 4°≈04'42	4.04004 AU	direct	-4175 Apr 10 j 15:56	29°548'07	
	-4181 Aug 29 j 01:38	3°≈54'48		evening set	-4175 Aug 15 j 18:45 -4175 Aug 16 j 16:18	29 3 48 07 0° Ω	
opposition	-4181 Aug 30 j 06:46 -4181 Oct 02 j 17:29	30°Rる	-2 03 13	max. Earth dist.	0 3		6.36513 AU
direct	-4181 Oct 02 j 17.29	30 KO 28° ろ 58'15		max. Earth dist.	-4175 Aug 26 j 18:05	2 8613 33	0.30313 AU
direct	-4181 Nov 21 j 01:02	28 ⊙ 38 13		conjunction	-4175 Aug 28 j 10:47	2° Ω 36'30	1°23'24
	-4180 Feb 16 j 00:45	0 ∞ 15°≈		minimum elong	-4175 Aug 28 j 10:47	2°Ω36'30	1°23'33
evening set	-4180 Feb 10 j 00:43	13 ≈ 18° ≈ 10'42		morning rise	-4175 Sep 10 j 00:07	5° Ω 23'43	1 23 33
evening set	-4180 PC0 29 j 21.08	10 ~1042		morning risc	-4175 Oct 26 j 13:09	15° Ω	
conjunction	-4180 Mar 14 j 12:11	21° ≈ 21'03	-1°20'//3	retrograde	-4174 Jan 09 j 11:09	22° Ω 42'59	
minimum elong	-4180 Mar 14 j 12:11	21°≈21'04		opposition	-4174 Mar 11 j 07:28	$17^{\circ}\Omega51'32$	2001/04
max. Earth dist.	-4180 Mar 16 j 09:25		6.07336 AU	min. Earth dist.	-4174 Mar 12 j 13:12		4.33541 AU
morning rise	-4180 Mar 28 j 05:35	21°≈32'22	0.07330 AU	iiiii. Latui dist.	-4174 Apr 04 j 06:48	17 8 2 42 03	4.33341 AU
morning risc	-4180 Apr 21 j 10:10	0°) €		direct	-4174 May 12 j 17:53	13 \ 0 τ 12° Ω 52'16	
retrograde	-4180 Aug 04 j 14:31	14° ¥ 06'05		direct	-4174 Jun 20 j 00:04	15°Ω	
min. Earth dist.	-4180 Oct 02 j 00:00	9° H 10'22	4.11967 AU		-4174 Sep 11 j 16:25	0° m)	
opposition	-4180 Oct 02 j 00:00	9° ∺ 01′21		evening set	-4174 Sep 15 j 21:32	0° Mp 56'35	
direct	-4180 Nov 30 j 18:12	4°) €01'26	1 4015	max. Earth dist.	-4174 Sep 26 j 18:32	3° m/23'58	6.29290 AU
evening set	-4179 Apr 06 j 10:02	22°) 55'12		max. Earth dist.	4174 Sep 20 J 10.32	J 11/2550	0.27270710
	pr 00 j 10.02	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		conjunction	-4174 Sep 28 j 09:55	3° Mp 46'17	1°15'58
conjunction	-4179 Apr 20 j 04:33	26°) €02'45	-0°56'14	minimum elong	-4174 Sep 28 j 09:57	3° m/ 46'18	1°16'04
minimum elong	-4179 Apr 20 j 04:37	26°) €02'48	0°56'15	morning rise	-4174 Oct 10 j 21:19	6° m/35'37	
max. Earth dist.	-4179 Apr 21 j 15:01	26° ¥ 22'21	6.17132 AU	retrograde	-4173 Feb 11 j 20:42	24° m/33'18	
morning rise	-4179 May 03 j 23:04	29°) 10′08		opposition	-4173 Apr 13 j 22:28	19° m) 40'34	1°33'10
5	-4179 May 07 j 15:46	0° Υ		min. Earth dist.	-4173 Apr 14 j 23:26	19° m 32'37	4.24431 AU
retrograde	-4179 Sep 06 j 22:19	17° Ƴ 46′29		direct	-4173 Jun 14 j 13:57	14° m) 44'07	
opposition	-4179 Nov 05 j 07:25	12° Y '44'31	-0°53'40		-4173 Oct 03 j 23:05	0∘ <u>⊽</u>	
min. Earth dist.	-4179 Nov 04 j 16:50	12° Y ′49'27	4.22517 AU	evening set	-4173 Oct 17 j 14:10	3° ഫ 05'42	
direct	-4178 Jan 04 j 03:16	7° Y ′42′00		max. Earth dist.	-4173 Oct 29 j 02:55	5° ≏ 45'37	6.19106 AU
evening set	-4178 May 11 j 15:23	26° Y 11'14			, , , , , , , , , , , , , , , , , , ,		
-				conjunction	-4173 Oct 30 j 04:14	6° ≙ 00'17	0°45'18
conjunction	-4178 May 25 j 07:40	29° Y ′13'29	-0°13'48	minimum elong	-4173 Oct 30 j 04:17	6° ഫ 00'18	0°45'17
minimum elong	-4178 May 25 j 07:41	29° Y ′13'29	0°13'44	morning rise	-4173 Nov 11 j 18:50	8° ≏ 55'22	
behind sun begin	-4178 May 25 j 03:28	29° Y 11'09		retrograde	-4172 Mar 17 j 23:03	27° ≏ 45'30	
behind sun end	-4178 May 25 j 11:54	29° Y °15'49		opposition	-4172 May 18 j 01:29	22° ₽ 49'52	0°34'05
max. Earth dist.	-4178 May 25 j 18:11	29° Y 19'19	6.27675 AU	min. Earth dist.	-4172 May 18 j 11:47	22° ≏ 46'33	4.13806 AU
	-4178 May 28 j 19:19	9° 8		direct	-4172 Jul 17 j 09:14	17° ≙ 55'55	
morning rise	-4178 Jun 07 j 22:10	2° 8 14'38			-4172 Oct 20 j 06:33	0° M	
	-4178 Aug 11 j 15:56	15° 8		evening set	-4172 Nov 18 j 15:27	6° M 39′53	
asc. node	-4178 Sep 20 j 07:49	19° 8 25'19		desc. node	-4172 Nov 21 j 13:02	7°M20'45	

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conjunction	-4172 Dec 01 j 10:41	9°M41'01		behind sun end	-4166 May 30 j 09:47	3° 8 56'52	
minimum elong	-4172 Dec 01 j 10:41	9°M41'01	0°01'23	max. Earth dist.	-4166 May 30 j 10:00		6.28696 AU
	3		0.01.23		, ,		0.28090 AU
behind sun begin behind sun end	-4172 Dec 01 j 02:36	9°M36'16		morning rise	-4166 Jun 12 j 15:43	6° と 53'01 15° と	
	-4172 Dec 01 j 18:45	9°M45'46	C 00045 ATT	1	-4166 Jul 21 j 06:48	_	
max. Earth dist.	-4172 Dec 01 j 07:28	9°M39'10	6.09045 AU	asc. node	-4166 Jul 31 j 07:13	16° 8 53'11	
morning rise	-4172 Dec 14 j 08:11	12°M43'31		retrograde	-4166 Oct 13 j 02:11	24° 8 31'32	0022120
	-4172 Dec 24 j 02:33	15°M		opposition	-4166 Dec 11 j 16:12	19° 8 33'59	0°22'39
. 1	-4171 Mar 14 j 11:26	0° ₹ ¹		min. Earth dist.	-4166 Dec 11 j 19:05		4.32965 AU
retrograde	-4171 Apr 23 j 14:35	2° ∡ 26′12		11.	-4165 Jan 24 j 02:52	15°R 8	
•,•	-4171 Jun 02 j 21:44	30°RM 27°M 2€120	0020120	direct	-4165 Feb 10 j 23:02	14° 8 30'15	
opposition	-4171 Jun 23 j 09:28	27°M26'39			-4165 Feb 28 j 22:09	15° 8	
min. Earth dist.	-4171 Jun 23 j 02:04	27°M29'05	4.05155 AU	. ,	-4165 Jun 06 j 17:53	0°Ⅱ 2°Ⅱ2657	
direct	-4171 Aug 21 j 10:42	22°M33'41		evening set	-4165 Jun 18 j 20:50	2° Ⅱ 36'57	
. ,	-4171 Oct 31 j 04:41	0° ∡ ¹			4165 1 1 00:04 40	50 T 20112	0027120
evening set	-4171 Dec 23 j 11:44	11° ∡ ′38'51		conjunction	-4165 Jul 02 j 04:42	5° Ⅱ 32'12	
	4150 X 05:1400	1.40 7.4515.4	0040100	minimum elong	-4165 Jul 02 j 04:39	5° Ⅱ 32'10	0°37'39
conjunction	-4170 Jan 05 j 14:09	14° ⋌ ¹45'54		max. Earth dist.	-4165 Jul 01 j 12:24	5° Ⅱ 23'15	6.36241 AU
minimum elong	-4170 Jan 05 j 14:05	14° ₹ '45'52	0°48'50	morning rise	-4165 Jul 15 j 09:22	8° Ⅱ 25'48	
max. Earth dist.	-4170 Jan 06 j 13:25	14° ₹ ′59'46	6.02592 AU	retrograde	-4165 Nov 12 j 23:43	25° I I33'55	
morning rise	-4170 Jan 18 j 19:42	17° ∡ 754'44		opposition	-4164 Jan 11 j 23:50	20° Ⅱ 39'50	
	-4170 Mar 15 j 06:18	0° る		min. Earth dist.	-4164 Jan 12 j 16:51		4.38302 AU
retrograde	-4170 May 30 j 20:34	8° る 09'21		direct	-4164 Mar 14 j 05:20	15° Ⅱ 36'32	
min. Earth dist.	-4170 Jul 29 j 03:56				-4164 Jul 03 j 10:58	0ංම	
opposition	-4170 Jul 30 j 02:32	3° පි 06'11	-1°40'42	evening set	-4164 Jul 19 j 22:19	3° © 32'14	
	-4170 Aug 24 j 05:42	30°₽ ⋌ 7		max. Earth dist.	-4164 Jul 31 j 11:43	6° ॐ 04'15	6.38869 AU
direct	-4170 Sep 26 j 06:43	28° ∡ 12'06				_	
	-4170 Oct 29 j 03:40	0°ಕ		conjunction	-4164 Aug 01 j 20:50	6° © 22'28	1°10'39
evening set	-4169 Jan 28 j 21:56	17° る 28'28		minimum elong	-4164 Aug 01 j 20:46	6° © 22'26	1°10'51
		_		morning rise	-4164 Aug 14 j 15:59	9° © 11'07	
conjunction	-4169 Feb 11 j 07:32	20° る 38'44		retrograde	-4164 Dec 13 j 01:13	26°914'07	
minimum elong	-4169 Feb 11 j 07:30	20° පි 38'43		opposition	-4163 Feb 11 j 12:26		1°56'30
max. Earth dist.	-4169 Feb 13 j 00:20	21° る 02'54	6.02292 AU	min. Earth dist.	-4163 Feb 12 j 15:45	21° © 13'28	4.38195 AU
morning rise	-4169 Feb 24 j 20:31	23° る 50'39		direct	-4163 Apr 15 j 04:02	16° © 20'39	
	-4169 Mar 23 j 18:32	0° ≈			-4163 Jul 31 j 10:06	0 ° Ω	
retrograde	-4169 Jul 06 j 08:59	13° ≈ 59'47		evening set	-4163 Aug 20 j 04:01	4° Ω 16'14	
min. Earth dist.	-4169 Sep 02 j 22:18	9° ≈ 04'38	4.04733 AU	max. Earth dist.	-4163 Aug 31 j 00:47	6° Ω 40'55	6.35897 AU
opposition	-4169 Sep 04 j 03:35	8° ≈ 54'39	-2°03'36				
direct	-4169 Nov 01 j 05:27	3° ≈ 57'38		conjunction	-4163 Sep 01 j 19:06	7° Ω 04'29	
	-4168 Jan 29 j 06:56	15° ≈		minimum elong	-4163 Sep 01 j 19:06	7° Ω 04'29	1°23'57
evening set	-4168 Mar 05 j 22:33	23° ≈ 08'50		morning rise	-4163 Sep 14 j 07:59	9° Ω 51'42	
					-4163 Oct 08 j 02:35	15° Ω	
conjunction	-4168 Mar 19 j 14:30	26° ≈ 19′07		retrograde	-4162 Jan 14 j 01:55	27° Ω 14'33	
minimum elong	-4168 Mar 19 j 14:33	26° ≈ 19′08	1°19'01	opposition	-4162 Mar 15 j 22:46	22° Ω 22'58	1°59'15
max. Earth dist.	-4168 Mar 21 j 11:47	26° ≈ 45′26	6.08305 AU	min. Earth dist.	-4162 Mar 17 j 04:52	22° Ω 13′23	4.32607 AU
morning rise	-4168 Apr 02 j 08:13	29° ≈ 30′10		direct	-4162 May 17 j 08:00	17° Ω 23'57	
	-4168 Apr 04 j 12:07	0° ∀			-4162 Aug 26 j 04:40	0° m)	
retrograde	-4168 Aug 09 j 08:44	18° ¥ 57'40		evening set	-4162 Sep 20 j 06:51	5° m 29'40	
opposition	-4168 Oct 07 j 18:44	13° ¥ 53'15		max. Earth dist.	-4162 Oct 01 j 06:02	7° m 58'39	6.28111 AU
min. Earth dist.	-4168 Oct 06 j 18:18		4.13069 AU				
direct	-4168 Dec 05 j 13:52	8° ¥ 52'58		conjunction	-4162 Oct 02 j 19:19	8° m , 19'50	1°12'58
evening set	-4167 Apr 11 j 09:17	27°) 44′37		minimum elong	-4162 Oct 02 j 19:22	8° m) 19'51	1°13'03
	-4167 Apr 21 j 08:36	0° Υ ′		morning rise	-4162 Oct 15 j 06:45	11° m)09'42	
		••		retrograde	-4161 Feb 16 j 15:09	29° m 13'33	
conjunction	-4167 Apr 25 j 03:49	0° Y 51'43		opposition	-4161 Apr 18 j 18:12	24° m 20'28	1°26'30
minimum elong	-4167 Apr 25 j 03:53	0° Υ 51'46	0°51'05	min. Earth dist.	-4161 Apr 19 j 17:19	24° Mp 13'06	4.23063 AU
max. Earth dist.	-4167 Apr 26 j 10:56	1° Y ′09′22	6.18290 AU	direct	-4161 Jun 19 j 05:08	19° m 24'24	
morning rise	-4167 May 08 j 22:17	3° Y ′58'34			-4161 Sep 16 j 15:50	0∘ ⊽	
retrograde	-4167 Sep 11 j 09:47	22° Y ′28'11	0044/-	evening set	-4161 Oct 22 j 02:56	7° ≏ 48'36	
opposition	-4167 Nov 09 j 19:43	17° Y ′26'42			44.22.22	100 5 :-	00000
min. Earth dist.	-4167 Nov 09 j 06:31	17° Y 31'10	4.23635 AU	conjunction	-4161 Nov 03 j 17:24	10° ≏ 43'58	0°39'28
direct	-4166 Jan 08 j 19:07	12° Y ′23'56		minimum elong	-4161 Nov 03 j 17:27	10° Ω 44'00	0°39'26
	-4166 May 12 j 13:34	0°8		max. Earth dist.	-4161 Nov 02 j 17:51	10° ≏ 30'17	6.17667 AU
evening set	-4166 May 16 j 10:32	0° 8 51'06		morning rise	-4161 Nov 16 j 08:52	13° ≏ 40'02	
	44.66.3.5	201.3	000000		-4160 Feb 10 j 01:27	0°M,	
conjunction	-4166 May 30 j 02:12	3° 8 52'40		retrograde	-4160 Mar 23 j 00:38	2°M37'43	
minimum elong	-4166 May 30 j 02:12	3° 8 52'40	0°07'13		-4160 May 04 j 10:08	30° ₹ Ω	000 (10.5
behind sun begin	-4166 May 29 j 18:38	3° 8 48'29		opposition	-4160 May 23 j 01:45	27° ≏ 41'32	0°24'06

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 22 Attention, astronomical year style is used: The year -4160 in astronomical counting style is the year 4161 BCE in historical counting style.

Attention, astronom	ical year style is used: Th			unting style is the year	4161 BCE in historical c	ounting style.	_
min. Earth dist.	-4160 May 23 j 10:20	27° ≏ 38'46	4.12381 AU		-4154 Apr 25 j 10:17	0° 8	
direct	-4160 Jul 22 j 05:47	22° ≏ 47'45		evening set	-4154 May 21 j 06:28	5° 8 32'22	
	-4160 Sep 30 j 17:09	0° M					
desc. node	-4160 Oct 01 j 04:01	0°M05'01		conjunction	-4154 Jun 03 j 21:12	8° 8 32'51	-0°00'44
evening set	-4160 Nov 23 j 09:45	11°M35'06		minimum elong	-4154 Jun 03 j 21:14	8° 8 32'52	0°00'36
				behind sun begin	-4154 Jun 03 j 12:58	8° 8 28'18	
conjunction	-4160 Dec 06 j 06:03	14°M37'14	-0°08'17	behind sun end	-4154 Jun 04 j 05:30	8° 8 37'25	
minimum elong	-4160 Dec 06 j 06:01	14°M37'13	0°08'25	max. Earth dist.	-4154 Jun 04 j 02:38		6.30392 AU
behind sun begin	-4160 Dec 05 j 22:54	14°M33'02		asc. node	-4154 Jun 09 j 23:26	9° 8 53'47	
behind sun end	-4160 Dec 06 j 13:09	14°M41'25		morning rise	-4154 Jun 17 j 09:35	11° 8 32'01	
max. Earth dist.	-4160 Dec 06 j 06:50		6.07779 AU		-4154 Jul 03 j 09:21	15° 8	
	-4160 Dec 07 j 20:29	15°M		retrograde	-4154 Oct 17 j 09:40	29° 8 03'18	
morning rise	-4160 Dec 19 j 04:36	17° ™ 40'46		opposition	-4154 Dec 16 j 02:12	24° 8 06'17	0°31'43
	-4159 Feb 14 j 10:29	0° ∡		min. Earth dist.	-4154 Dec 16 j 06:10	24° 8 04'58	4.34513 AU
retrograde	-4159 Apr 28 j 19:45	7° ∡ ¹29'53		direct	-4153 Feb 15 j 12:31	19° 8 02'32	
opposition	-4159 Jun 28 j 12:43	2° ₹ 29'50			-4153 May 20 j 12:28	Π °0	
min. Earth dist.	-4159 Jun 28 j 03:08	2° ∡ ³32'59	4.04180 AU	evening set	-4153 Jun 23 j 10:06	7° Ⅱ 05'13	
	-4159 Jul 18 j 10:59	30°RM					
direct	-4159 Aug 26 j 09:44	27°M36'50		conjunction	-4153 Jul 06 j 16:31	9° Ⅱ 59'21	0°42'59
	-4159 Oct 03 j 18:37	0° ∡ ¹		minimum elong	-4153 Jul 06 j 16:28	9° Ⅱ 59'19	
evening set	-4159 Dec 28 j 12:30	16° ∡ ⁴44'58		max. Earth dist.	-4153 Jul 05 j 21:39	9° Ⅱ 49'00	6.37519 AU
				morning rise	-4153 Jul 19 j 19:41	12° Ⅱ 51'49	
conjunction	-4158 Jan 10 j 15:50	19° ₹ 52'43	-0°54'18	retrograde	-4153 Nov 17 j 06:17	29° Ⅱ 55'44	
minimum elong	-4158 Jan 10 j 15:46	19° ₹ 52'41	0°54'28	opposition	-4152 Jan 16 j 07:44	25° Ⅱ 02'05	1°27'38
max. Earth dist.	-4158 Jan 11 j 16:47	20° х 07′36	6.01969 AU	min. Earth dist.	-4152 Jan 17 j 03:04	24° Ⅱ 55'49	4.39225 AU
morning rise	-4158 Jan 23 j 22:38	23° ∡ *02'19		direct	-4152 Mar 18 j 16:45	19° Ⅱ 58'59	
	-4158 Feb 23 j 07:44	8°0			-4152 Jun 16 j 08:07	0 \circ \odot	
retrograde	-4158 Jun 05 j 01:08	13° る 19'30		evening set	-4152 Jul 24 j 05:56	7° 9 52'02	
min. Earth dist.	-4158 Aug 03 j 05:09	8° පි 24'11	4.01508 AU	max. Earth dist.	-4152 Aug 04 j 14:48	10° © 21'33	6.39328 AU
opposition	-4158 Aug 04 j 05:43	8° る 15'55	-1°46'39				
direct	-4158 Oct 01 j 07:56	3° る 21'29		conjunction	-4152 Aug 06 j 03:09	10° 5 641'32	1°13'42
evening set	-4157 Feb 03 j 03:07	22° る 39'08		minimum elong	-4152 Aug 06 j 03:06	10° 5 \$41'30	1°13'54
				morning rise	-4152 Aug 18 j 21:13	13° 5 29'32	
conjunction	-4157 Feb 16 j 13:56	25° る 49'47	-1°20'31		-4152 Nov 28 j 20:01	$0^{\circ}\Omega$	
minimum elong	-4157 Feb 16 j 13:54	25° る 49'46	1°20'41	retrograde	-4152 Dec 17 j 07:40	0° Ω 32'14	
max. Earth dist.	-4157 Feb 18 j 09:32	26° る 15'35	6.02559 AU	-	-4151 Jan 04 j 19:51	30° ₹ 5	
morning rise	-4157 Mar 02 j 03:38	29° る 01'54		opposition	-4151 Feb 15 j 20:42	25° 5 40'28	1°58'47
	-4157 Mar 06 j 07:01	0° ≈		min. Earth dist.	-4151 Feb 17 j 01:13	25°531'20	4.38170 AU
	-4157 May 20 j 03:22	15° ≈		direct	-4151 Apr 19 j 12:19	20°539'09	
retrograde	-4157 Jul 11 j 11:55	19° ≈ 08'03			-4151 Jul 14 j 07:02	$0^{\circ}\Omega$	
•	-4157 Sep 02 j 03:20	15°R≈		evening set	-4151 Aug 24 j 08:43	8° Ω 34'18	
min. Earth dist.	-4157 Sep 07 j 23:04	14°≈12'42	4.05437 AU	max. Earth dist.	-4151 Sep 04 j 05:12	10° Q 59'01	6.35375 AU
opposition	-4157 Sep 09 j 03:45	14°≈02'54	-2°03'01		1 3		
direct	-4157 Nov 06 j 06:55	9° ≈ 05'31		conjunction	-4151 Sep 05 j 23:13	11° Ω 22'27	1°23'43
	-4156 Jan 07 j 15:46	15° ≈		minimum elong	-4151 Sep 05 j 23:13	11° Ω 22'27	1°23'52
evening set	-4156 Mar 11 j 04:29	28° ≈ 15'30		morning rise	-4151 Sep 18 j 11:23	14° Ω 09'38	
C	-4156 Mar 18 j 17:18	0° ∀		C	-4151 Sep 22 j 06:28	15° Ω	
	•				-4151 Dec 17 j 00:32	0° m)	
conjunction	-4156 Mar 24 j 21:02	1°) €25'36	-1°16'27	retrograde	-4150 Jan 18 j 11:49	1° Mp 36'12	
minimum elong	-4156 Mar 24 j 21:05	1° ¥ 25'38	1°16'33	-	-4150 Feb 20 j 04:38	30° ₽ Ω	
max. Earth dist.	-4156 Mar 26 j 17:21		6.09401 AU	opposition	-4150 Mar 20 j 09:53	26° Ω 44'35	1°56'49
morning rise	-4156 Apr 07 j 15:19	4°) (36′22		min. Earth dist.	-4150 Mar 21 j 16:24	26° Ω 34'53	4.31607 AU
retrograde	-4156 Aug 14 j 03:37	23°) 56'34		direct	-4150 May 21 j 16:59	21° Ω 45'56	
opposition	-4156 Oct 12 j 13:55	18°) 52′30	-1°34'16		-4150 Aug 08 j 10:50	0° m)	
min. Earth dist.	-4156 Oct 11 j 13:25		4.14471 AU	evening set	-4150 Sep 24 j 12:31	9° m 53'43	
direct	-4156 Dec 10 j 11:45	13°) €51'52		max. Earth dist.	-4150 Oct 05 j 10:31		6.26701 AU
	-4155 Apr 04 j 11:47	0°Υ				- ·-·	
evening set	-4155 Apr 16 j 11:30	2° Υ 40'10		conjunction	-4150 Oct 07 j 00:51	12° Mp 44'26	1°09'38
<i>3</i>	r - J	0		minimum elong	-4150 Oct 07 j 00:54	12° m) 44'27	1°09'42
conjunction	-4155 Apr 30 j 05:58	5° Ƴ 46'34	-0°45'29	morning rise	-4150 Oct 19 j 12:43	15° mp 35'02	
minimum elong	-4155 Apr 30 j 06:02	5° Υ 46'36			-4149 Jan 01 j 12:28	0° ರ	
max. Earth dist.	-4155 May 01 j 10:47	6°Υ02'51	6.19932 AU	retrograde	-4149 Feb 21 j 08:08	ა <u>~</u> 3° <u>~</u> 46'18	
morning rise	-4155 May 14 j 00:03	8°Υ52'32	0.1,702110		-4149 Apr 14 j 14:09	30°R, M)	
retrograde	-4155 Sep 16 j 00:39	27°Υ13'33		opposition	-4149 Apr 23 j 10:29	28° m/52'53	1°19'32
opposition	-4155 Nov 14 j 10:05	22° Υ 12'38	-0°35'20	min. Earth dist.	-4149 Apr 24 j 08:56	28° m/45'42	4.21315 AU
min. Earth dist.	-4155 Nov 13 j 23:11	22°Υ16'18		direct	-4149 Jun 23 j 17:18	23° m 57'04	
direct	-4154 Jan 13 j 15:14	17° Υ 09'41	25505 110		-4149 Aug 27 j 20:19	ე∘ 亞	
	.10.0011 15 J 15.17	1, 10,71				~ _	

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evening set		12° £ 25'40		conjunction	-4143 May 05 j 07:54	10° Ƴ 41'09	-0°39'31
max. Earth dist.	-4149 Nov 07 j 07:42	15° ♀ 10'11	6.15751 AU	minimum elong	-4143 May 05 j 07:57	10° Ƴ 41'11	0°39'30
	J			max. Earth dist.	-4143 May 06 j 10:58	10° Y 56′24	6.21656 AU
conjunction	-4149 Nov 08 j 04:16	15° ≏ 22'11	0°33'33	morning rise	-4143 May 19 j 01:22	13° Y 46'08	
minimum elong	-4149 Nov 08 j 04:19	15° ≏ 22'13	0°33'31		-4143 Aug 16 j 04:55	9° 8	
morning rise	-4149 Nov 20 j 20:32	18° ≏ 19'27		retrograde	-4143 Sep 20 j 12:54	1° 8 58'17	
	-4148 Jan 14 j 16:13	0° ML			-4143 Oct 25 j 16:14	30° ₹ Υ	
retrograde	-4148 Mar 28 j 00:29	7°M26'41		opposition	-4143 Nov 19 j 00:03	26° Ƴ 57'50	-0°25'42
opposition	-4148 May 28 j 00:17	2°M30'04	0°14'10	min. Earth dist.	-4143 Nov 18 j 14:16	27° Ƴ 01′08	4.27029 AU
min. Earth dist.	-4148 May 28 j 07:06	2°M27'52	4.10451 AU	direct	-4142 Jan 18 j 08:42	21° Y 54'39	
	-4148 Jun 17 j 07:24	30° ₹ Ω			-4142 Apr 06 j 03:25	0° 8	
direct	-4148 Jul 26 j 23:07	27° Ω 36'31		asc. node	-4142 Apr 18 j 12:16	2° 8 20'10	
desc. node	-4148 Aug 12 j 06:41	28° ≏ 02'31		evening set	-4142 May 26 j 02:14	10° 8 13'13	
	-4148 Sep 03 j 22:10	0° M					
	-4148 Nov 21 j 19:13	15°M		conjunction	-4142 Jun 08 j 15:52	13° 8 12'39	0°05'59
evening set	-4148 Nov 28 j 03:32	16°M29'25		minimum elong	-4142 Jun 08 j 15:52	13° 8 12'39	0°06'06
	414075 41110042	1007 2014	001.510.6	behind sun begin	-4142 Jun 08 j 08:03	13° 8 08'21	
conjunction	-4148 Dec 11 j 00:43	19°M32'45		behind sun end	-4142 Jun 08 j 23:41	13° 8 16'56	C 210C0 ATT
minimum elong	-4148 Dec 11 j 00:41	19°M32'44	0°15′14	max. Earth dist.	-4142 Jun 08 j 16:36	13° 8 13'02	6.31860 AU
behind sun begin	-4148 Dec 10 j 21:50	19°M31'03			-4142 Jun 16 j 18:24	15° 8	
behind sun end max. Earth dist.	-4148 Dec 11 j 03:32 -4148 Dec 11 j 03:30	19°M34'25	C 0C004 ATT	morning rise	-4142 Jun 22 j 03:07	16° ႘ 10'43 0° 川	
max. Earth dist.	-4148 Dec 11 j 03:30	19°M34'24 22°M37'39	6.06004 AU	ratra ara da	-4142 Sep 02 j 23:41 -4142 Oct 21 j 20:21	3° Ⅱ 35'57	
morning rise	-4147 Jan 25 j 10:04	22 IIL3 / 39 0° √		retrograde	-4142 Oct 21 j 20:21 -4142 Dec 10 j 05:27	30°R 8	
retrograde	-4147 May 04 j 00:50	12° ∡ ³35'17		opposition	-4142 Dec 20 j 13:08	28° 8 39'26	0°40'44
opposition	-4147 Jul 03 j 15:55	7° × ⁷ 34'39	-0°59'12	min. Earth dist.	-4142 Dec 20 j 20:22	28° 8 37'03	4.35666 AU
min. Earth dist.	-4147 Jul 03 j 03:19	7° × ⁷ 38'49	4.02749 AU	direct	-4141 Feb 20 j 04:25	23° 8 35'40	4.55000 AC
direct	-4147 Aug 31 j 08:31	2° × ⁷ 41'34	4.02/49/10	direct	-4141 Apr 30 j 07:58	0°II	
evening set	-4146 Jan 02 j 14:31	21° х 54'29		evening set	-4141 Jun 27 j 23:55	11° I I35'40	
				max. Earth dist.	-4141 Jul 10 j 07:29		6.38251 AU
conjunction	-4146 Jan 15 j 19:12	25° х ¹03'13	-0°59'28				
minimum elong	-4146 Jan 15 j 19:08	25° ∡ 03'10	0°59'39	conjunction	-4141 Jul 11 j 05:05	14° Ⅱ 28'57	0°48'21
max. Earth dist.	-4146 Jan 17 j 01:14	25° ∡ ¹21'09	6.01020 AU	minimum elong	-4141 Jul 11 j 05:02	14° Ⅱ 28'55	0°48'32
morning rise	-4146 Jan 29 j 03:02	28° ∡ 13'42		morning rise	-4141 Jul 24 j 06:48	17° Ⅱ 20'33	
-	-4146 Feb 05 j 15:32	0°ප		_	-4141 Sep 28 j 02:03	0ං ව	
retrograde	-4146 Jun 10 j 08:49	18° る 34'11		retrograde	-4141 Nov 21 j 14:05	4°522'22	
min. Earth dist.	-4146 Aug 08 j 08:33	13° る 38'48	4.01164 AU		-4140 Jan 16 j 18:16	30°RⅡ	
opposition	-4146 Aug 09 j 10:05	13° ප 30'11	-1°51'43	opposition	-4140 Jan 20 j 18:04	29° Ⅱ 29'03	1°33'48
direct	-4146 Oct 06 j 11:00	8° ප 35'24		min. Earth dist.	-4140 Jan 21 j 14:32	29° Ⅱ 22'25	4.39519 AU
evening set	-4145 Feb 08 j 10:26	27° る 54'40		direct	-4140 Mar 23 j 03:52	24° Ⅱ 26′06	
	-4145 Feb 17 j 07:05	0° ≈			-4140 May 26 j 13:43	0 \circ \odot	
				evening set	-4140 Jul 28 j 16:20	12° © 18'34	
conjunction	-4145 Feb 21 j 22:11	1° ≈ 05'37		max. Earth dist.	-4140 Aug 08 j 22:36	14°9546'51	6.39150 AU
minimum elong	-4145 Feb 21 j 22:10		1°21'56				
max. Earth dist.	-4145 Feb 23 j 19:27	1°≈32'21	6.02822 AU	conjunction	-4140 Aug 10 j 12:18	15° © 07'37	1°16'30
morning rise	-4145 Mar 07 j 12:58	4°≈18'00		minimum elong	-4140 Aug 10 j 12:16	15°507'36	1°16'40
	-4145 Apr 25 j 07:17	15° ≈		morning rise	-4140 Aug 23 j 05:15	17°955'14	
retrograde	-4145 Jul 16 j 13:26	24°≈20'19	4.06270 ATT	. 1	-4140 Oct 23 j 22:12	0° Ω	
min. Earth dist.	-4145 Sep 12 j 22:46	19°≈25'21	4.06278 AU	retrograde	-4140 Dec 21 j 19:42	4° £ 59'47	2000127
opposition	-4145 Sep 14 j 04:56	19°≈15'03	-2*01*23	opposition	-4139 Feb 20 j 09:21	0° £ 08'12	2°00'37
direct	-4145 Oct 21 j 22:50	15°R≈ 14°≈17'07		min. Earth dist.	-4139 Feb 21 j 11:02	30° ₹© 29° © 58'34	4.37539 AU
direct	-4145 Nov 11 j 08:53 -4145 Dec 01 j 23:47	14 ≈1707 15°≈		direct	-4139 Feb 21 j 15:33 -4139 Apr 24 j 01:31	29 \$38 34 25°\$07'13	4.37339 AU
	-4144 Mar 01 j 10:30	0° ∺		direct	-4139 Apr 24 j 01.31 -4139 Jun 22 j 17:45	23 20 07 13 0° Ω	
evening set	-4144 Mar 16 j 11:20	3° ∺ 24'54		evening set	-4139 Juli 22 j 17:43	13° Ω 03'44	
evening set	-4144 Wiai 10 J 11.20	J /(2+3+		evening set	-4139 Sep 06 j 10:56	15° Ω	
conjunction	-4144 Mar 30 j 04:27	6° ₩ 34'39	-1°13'22	max. Earth dist.	-4139 Sep 00 j 10:30		6.34325 AU
minimum elong	-4144 Mar 30 j 04:31		1°13'26	Durun dist.	1137 Sep 00 J 12.31	10 062173	3.5 1525 AU
max. Earth dist.	-4144 Mar 31 j 23:51	6° H 59'42	6.10720 AU	conjunction	-4139 Sep 10 j 08:01	15° Ω 52'03	1°23'12
morning rise	-4144 Apr 12 j 23:00	9°) (44'54	20110	minimum elong	-4139 Sep 10 j 08:02	15°Ω52'03	1°23'20
retrograde	-4144 Aug 19 j 00:13	28°) 56'38		morning rise	-4139 Sep 22 j 19:57	18° £ 32'33	- = -
min. Earth dist.	-4144 Oct 16 j 11:04		4.16067 AU	<i>3</i> - <i>7</i>	-4139 Nov 17 j 19:22	0° mp	
opposition	-4144 Oct 17 j 09:36	23° ¥ 52'46		retrograde	-4138 Jan 23 j 04:15	6° Mp 11'37	
direct	-4144 Dec 15 j 12:42	18° ∺ 51'39		opposition	-4138 Mar 25 j 03:15	1° m 19'50	1°53'36
	-4143 Mar 17 j 07:42	$0^{\circ}\mathbf{\Upsilon}$		min. Earth dist.	-4138 Mar 26 j 09:00	1° mp 10'22	4.30206 AU
evening set	-4143 Apr 21 j 13:33	7° Ƴ 35'34			-4138 Apr 04 j 17:29	30°R Ω	
				direct	-4138 May 26 j 06:59	26° Ω 21'35	

•	nical year style is used: Th		_	` //		, .	.gc 2-1
, , , , , , , , , , , , , , , , , , , ,	-4138 Jul 15 j 16:32	0° m)		morning rise	-4132 Apr 18 j 02:50	14°) (44′03	
evening set	-4138 Sep 28 j 23:54	14° Mp 32'26			-4132 Jul 04 j 21:21	0° Y	
max. Earth dist.	-4138 Oct 10 j 01:06	17° m 03'37	6.25084 AU	retrograde	-4132 Aug 23 j 15:22	3° Y '46'27	
					-4132 Oct 12 j 12:10	30°₽ , ₩	
conjunction	-4138 Oct 11 j 12:32	17° m 23'53	1°05'42	min. Earth dist.	-4132 Oct 21 j 03:30	28° ¥ 50′18	4.17828 AU
minimum elong	-4138 Oct 11 j 12:35	17° m 23'55	1°05'44	opposition	-4132 Oct 22 j 00:54	28°) 43′01	-1°19'33
morning rise	-4138 Oct 24 j 00:37	20° Mp 15'20		direct	-4132 Dec 20 j 07:02	23°) 41′32	
	-4138 Dec 08 j 17:30	0∘ ত			-4131 Feb 24 j 15:40	0° Y	
retrograde	-4137 Feb 26 j 07:55	8° ≏ 34'41		evening set	-4131 Apr 26 j 11:20	12° Y ′21′08	
opposition	-4137 Apr 28 j 09:52	3° Ω 40'59				2 0	
min. Earth dist.	-4137 Apr 29 j 06:58	3° £ 34'15	4.19588 AU	conjunction	-4131 May 10 j 05:12	15° Y 25'51	
t' .	-4137 May 31 j 01:46	30°R Mp		minimum elong	-4131 May 10 j 05:15	15° ℃ 25'53	
direct	-4137 Jun 28 j 12:46	28° m 45'40		max. Earth dist.	-4131 May 11 j 02:56	15° Y 38'03	6.23328 AU
avanina aat	-4137 Jul 26 j 18:45	0° ჲ 17° ჲ 18'14		morning rise	-4131 May 23 j 22:13 -4131 Jul 19 j 08:14	18° Y 29'53 0° と	
evening set	-4137 Oct 31 j 05:32	1/ == 18 14		retrograde	-4131 Sep 24 j 23:35	6° 8 34'15	
conjunction	-4137 Nov 12 j 21:25	20° £ 15'46	0°27'03	opposition	-4131 Nov 23 j 10:41	1° 8 34'20	-0°16'16
minimum elong	-4137 Nov 12 j 21:23	20° ⊆ 15'47		min. Earth dist.	-4131 Nov 23 j 04:17		4.28459 AU
max. Earth dist.	-4137 Nov 12 j 02:40	20° ⊆ 04'47	6.14085 AU	mm. Larm dist.	-4131 Dec 05 j 08:55	30°RΥ	4.2043) AU
morning rise	-4137 Nov 25 j 14:48	23° £ 14'13	0.11003110	direct	-4130 Jan 23 j 00:30	26° Y ′30′56	
	-4137 Dec 25 j 15:35	0°M		asc. node	-4130 Feb 26 j 11:20	28° Y 18'38	
retrograde	-4136 Apr 02 i 05:11	12°M29'55			-4130 Mar 12 j 22:31	0°8	
opposition	-4136 Jun 02 j 04:40	7°M32'48	0°03'33	evening set	-4130 May 30 j 18:07	14° 8 46'27	
min. Earth dist.	-4136 Jun 02 j 07:56	7°M31'44	4.09003 AU	•	-4130 May 31 j 18:52	15° ∀	
desc. node	-4136 Jun 21 j 03:08	5°M11'38					
direct	-4136 Jul 31 j 22:26	2°M39'29		conjunction	-4130 Jun 13 j 06:56	17° 8 45'04	0°12'20
	-4136 Nov 04 j 07:02	15°M		minimum elong	-4130 Jun 13 j 06:55	17° 8 45'03	0°12'28
evening set	-4136 Dec 03 j 02:40	21°M36'04		behind sun begin	-4130 Jun 13 j 01:41	17° 8 42'11	
				behind sun end	-4130 Jun 13 j 12:09	17° 8 47'56	
conjunction	-4136 Dec 16 j 01:01	24°M40'20	-0°22'08	max. Earth dist.	-4130 Jun 13 j 04:58	17° 8 43'59	6.32945 AU
minimum elong	-4136 Dec 16 j 00:59	24°M40'19		morning rise	-4130 Jun 26 j 16:51	20° 8 42'11	
max. Earth dist.	-4136 Dec 16 j 09:28	24°M45'22	6.04941 AU		-4130 Aug 10 j 22:02	0°II	
morning rise	-4136 Dec 29 j 01:56	27° M 46'11		retrograde	-4130 Oct 26 j 02:44	8° Ⅱ 03'06	
	-4135 Jan 07 j 14:09	0° ∡ 7		opposition	-4130 Dec 24 j 21:35	3° Ⅱ 07'08	0°49'16
retrograde	-4135 May 09 j 10:36	17° 🖈 49'05	1000127	min. Earth dist.	-4130 Dec 25 j 06:23	3° Ⅱ 04'14	4.36353 AU
opposition min. Earth dist.	-4135 Jul 08 j 22:32 -4135 Jul 08 j 08:05	12° 尽 47'58 12° 尽 52'45	4.02209 AU	direct	-4129 Jan 19 j 13:19 -4129 Feb 24 j 14:45	30°R と 28° と 03'25	
direct	-4135 Sup 05 j 12:27	7° × 754'49	4.02209 AU	direct	-4129 Feb 24 j 14.43 -4129 Apr 02 j 03:34	28 3 03 23 0° Ⅱ	
evening set	-4134 Jan 07 j 19:12	7 x 34 49 27° x 09'08		evening set	-4129 Apr 02 j 03:34 -4129 Jul 02 j 11:53	0 H 16°H02'27	
evening set	-4134 Jan 19 j 18:08	0°る		evening set	412) Jul 02 j 11:55	10 110227	
	113.000	Ů U		conjunction	-4129 Jul 15 j 15:38	18° Ⅱ 55'05	0°53'20
conjunction	-4134 Jan 21 j 00:45	0° る 18'16	-1°04'19	minimum elong	-4129 Jul 15 j 15:34	18° Ⅲ 55'03	0°53'31
minimum elong	-4134 Jan 21 j 00:41	0° る 18'13		max. Earth dist.	-4129 Jul 14 j 13:56	18° Ⅱ 41′00	6.38477 AU
max. Earth dist.	-4134 Jan 22 j 09:31	0° る 37'48	6.01031 AU	morning rise	-4129 Jul 28 j 16:11	21° Ⅱ 46′05	
morning rise	-4134 Feb 03 j 09:46	3° る 29'11			-4129 Sep 06 j 11:36	0 \circ \odot	
retrograde	-4134 Jun 15 j 13:05	23° る 48'42		retrograde	-4129 Nov 25 j 23:53	8° 5 47'38	
min. Earth dist.	-4134 Aug 13 j 10:09		4.01763 AU	opposition	-4128 Jan 25 j 03:48	3° 9 54'41	1°39'20
opposition	-4134 Aug 14 j 14:04	18° ප් 44'22	-1°55'54	min. Earth dist.	-4128 Jan 26 j 03:03	3° 5 47'10	4.39299 AU
direct	-4134 Oct 11 j 13:21	13° る 49'14			-4128 Feb 29 j 00:41	30°RⅡ	
	-4133 Jan 31 j 06:30	0° ≈		direct	-4128 Mar 27 j 16:10	28° Ⅱ 51'56	
evening set	-4133 Feb 13 j 16:41	3° ≈ 06'49			-4128 Apr 24 j 11:45	0°95	
	4122 E 1 . 25 : 25 : 5	(01=10=	102225	evening set	-4128 Aug 02 j 02:02	16°545'21	C 20 402 137
conjunction	-4133 Feb 27 j 05:15	6°≈17'37		max. Earth dist.	-4128 Aug 13 j 06:05	19° © 12'44	6.38482 AU
minimum elong max. Earth dist.	-4133 Feb 27 j 05:15	6°≈17'37 6°≈44'41	1°22'34 6.03922 AU	agniumation	4100 Ava 14:01:00	19° © 34'16	1°18'49
	-4133 Mar 01 j 03:13	6°≈4441 9°≈29'44	6.03922 AU	conjunction minimum elong	-4128 Aug 14 j 21:06 -4128 Aug 14 j 21:04	19°934'16	1°18'49 1°18'59
morning rise	-4133 Mar 12 j 20:38 -4133 Apr 05 j 23:55	9 ≈2944 15°≈		morning rise	-4128 Aug 14 j 21.04 -4128 Aug 27 j 13:06	19 934 13 22°9521'46	1 10 37
retrograde	-4133 Apr 03 j 23:53	15 ≈ 29° ≈ 25'13		morning rise	-4128 Oct 02 j 23:36	0°Ω	
min. Earth dist.	-4133 Sur 21 j 12:37	24°≈29'52	4.07744 AU	retrograde	-4128 Oct 02 j 23:30	9° Ω 29'49	
opposition	-4133 Sep 17 j 22:03	24°≈19'59		opposition	-4127 Feb 24 j 22:57	4° Ω 38'17	2°01'44
direct	-4133 Nov 16 j 10:50	19° ≈ 21'33	-	min. Earth dist.	-4127 Feb 26 j 04:40	4°Ω28'48	4.36500 AU
	-4132 Feb 12 j 04:40	0°)			-4127 Apr 12 j 20:23	30° ₹ 5	
evening set	-4132 Mar 21 j 14:37	8°) €25'20		direct	-4127 Apr 28 j 13:01	29°537'40	
	-				-4127 May 14 j 08:26	$0^{\circ}\Omega$	
conjunction	-4132 Apr 04 j 08:15	11°) 34′32	-1°09'50		-4127 Aug 21 j 07:44	15° Ω	
minimum elong	-4132 Apr 04 j 08:19	11°)(34'34		evening set	-4127 Sep 02 j 04:19	17° Ω 36'35	
max. Earth dist.	-4132 Apr 06 j 02:54	11° ∺ 59'03	6.12426 AU	max. Earth dist.	-4127 Sep 12 j 23:35	20° Ω 01'35	6.33001 AU

-	ical year style is used: Th				4128 BCE in historical c	_	50 23
conjunction	-4127 Sep 14 j 17:43	20° Ω 25'14		opposition	-4121 Sep 23 j 23:09	29° ≈ 19'40	-1°55'35
minimum elong	-4127 Sep 14 j 17:45	20° Ω 25'15	1°22'15	min. Earth dist.	-4121 Sep 22 j 18:40	29° ≈ 29'24	4.09079 AU
morning rise	-4127 Sep 27 j 05:20	23° Ω 13′08		direct	-4121 Nov 21 j 08:39	24° ≈ 20'49	
	-4127 Oct 28 j 17:37	0° m)			-4120 Jan 21 j 16:16	0° ∀	
retrograde	-4126 Jan 27 j 23:22	10° m 51'33		evening set	-4120 Mar 26 j 16:33	13° ¥ 21′20	
opposition	-4126 Mar 29 j 22:31	5° m 59'37	1°49'36		v		
min. Earth dist.	-4126 Mar 31 j 03:58	5° m 50'16	4.28681 AU	conjunction	-4120 Apr 09 j 10:22	16°) 30′01	-1°05'53
direct	-4126 May 31 j 00:20	1° m 01'50		minimum elong	-4120 Apr 09 j 10:26	16°) € 30′03	1°05'56
evening set	-4126 Oct 03 j 12:54	19° m 15'45		max. Earth dist.	-4120 Apr 11 j 01:12	16° ¥ 52'15	6.13911 AU
max. Earth dist.	-4126 Oct 14 j 15:30	21°Mp48'20	6.23496 AU	morning rise	-4120 Apr 23 j 05:13	19°) 38′56	
					-4120 Jun 10 j 21:54	0° Y	
conjunction	-4126 Oct 16 j 01:43	22° m 07'58	1°01'15	retrograde	-4120 Aug 28 j 05:55	8° Ƴ 33'12	
minimum elong	-4126 Oct 16 j 01:46	22° m 07'59	1°01'17	opposition	-4120 Oct 26 j 15:33	3° Ƴ 30′09	-1°11'38
morning rise	-4126 Oct 28 j 14:26	25° Mp 00'18		min. Earth dist.	-4120 Oct 25 j 20:28	3° Ƴ 36'39	4.19307 AU
	-4126 Nov 19 j 23:12	0∘ ⊽			-4120 Nov 24 j 08:31	30° ₹ ₩	
retrograde	-4125 Mar 03 j 07:25	13° ≏ 27'23		direct	-4120 Dec 25 j 02:02	28° ¥ 28'19	
opposition	-4125 May 03 j 10:38	8° ഫ 33'11	1°03'02		-4119 Jan 25 j 05:15	$0^{\circ}\mathbf{\Upsilon}$	
min. Earth dist.	-4125 May 04 j 04:21	8° ≏ 27'31	4.18051 AU	evening set	-4119 May 01 j 08:27	17° Ƴ 04'37	
direct	-4125 Jul 03 j 08:31	3° ≏ 38'11					
evening set	-4125 Nov 04 j 23:08	22° ≙ 13'47		conjunction	-4119 May 15 j 02:07	20° Ƴ 08'39	-0°27'19
				minimum elong	-4119 May 15 j 02:09	20° Ƴ 08'40	0°27'15
conjunction	-4125 Nov 17 j 15:54	25° ≏ 12'13	0°20'17	max. Earth dist.	-4119 May 15 j 21:38	20° Ƴ 19'34	6.24712 AU
minimum elong	-4125 Nov 17 j 15:56	25° ≏ 12'14	0°20'13	morning rise	-4119 May 28 j 18:18	23° Ƴ 11'47	
max. Earth dist.	-4125 Nov 17 j 02:13	25° ≏ 04'12	6.12748 AU		-4119 Jun 29 j 12:16	0° ႘	
morning rise	-4125 Nov 30 j 10:06	28° £ 11'40		retrograde	-4119 Sep 29 j 09:27	11° 8 09'26	
	-4125 Dec 08 j 05:00	0° M .		opposition	-4119 Nov 27 j 21:22	6° 8 10'08	-0°06'44
	-4124 Feb 26 j 02:29	15° M ₊		min. Earth dist.	-4119 Nov 27 j 16:55	6° 8 11'37	4.29628 AU
retrograde	-4124 Apr 07 j 12:02	17°ML34'16		asc. node	-4118 Jan 06 j 04:42	1° 8 50'17	
desc. node	-4124 Apr 30 j 03:34	16°ML46'10		direct	-4118 Jan 27 j 14:34	1° 8 06'40	
	-4124 May 19 j 04:16	15°RM			-4118 May 15 j 05:50	15° 8	
opposition	-4124 Jun 07 j 09:32	12°M36'33	-0°07'10	evening set	-4118 Jun 04 j 10:32	19° 8 19'59	
min. Earth dist.	-4124 Jun 07 j 10:48	12°MJ36'08	4.07966 AU	Ü	,		
direct	-4124 Aug 05 j 23:59	7°M43'22		conjunction	-4118 Jun 17 j 22:08	22° 8 17'48	0°18'41
	-4124 Oct 15 j 06:45	15° M ₊		minimum elong	-4118 Jun 17 j 22:07	22° 8 17'47	0°18'48
evening set	-4124 Dec 08 j 01:46	26°M41'56		max. Earth dist.	-4118 Jun 17 j 15:05	22° 8 13'55	6.33805 AU
8	,			morning rise	-4118 Jul 01 j 07:03	25° 8 14'07	
conjunction	-4124 Dec 21 j 00:56	29°M46'53	-0°29'00	. <i>8</i>	-4118 Jul 23 j 13:15	0°II	
minimum elong	-4124 Dec 21 j 00:54	29°M46'52		retrograde	-4118 Oct 30 j 12:06	12° Ⅱ 31'37	
	-4124 Dec 21 j 22:58	0° ∡ ¹		opposition	-4118 Dec 29 j 07:19	7° Ⅱ 36'09	0°57'37
max. Earth dist.	-4124 Dec 21 j 12:23	29°M53'42	6.04277 AU	min. Earth dist.	-4118 Dec 29 j 19:02	7° Ⅱ 32'18	4.36864 AU
morning rise	-4123 Jan 03 j 03:07	2° ∡ 753'31		direct	-4117 Mar 01 j 04:17	2° Ⅱ 32'30	
retrograde	-4123 May 14 j 15:31	22° х 59'49		evening set	-4117 Jul 07 j 00:12	20° Ⅲ 30′56	
min. Earth dist.	-4123 Jul 13 j 09:53	18° ∡ '03'59	4.02010 AU	max. Earth dist.	-4117 Jul 19 j 00:07	23° Ⅱ 08'21	6.38594 AU
opposition	-4123 Jul 14 j 03:32	17° ∡ 758'07			, ,		
direct	-4123 Sep 10 j 13:40	13° ∡ 04'50		conjunction	-4117 Jul 20 j 02:52	23° Ⅱ 23'02	0°58'04
	-4122 Jan 03 j 01:24	0°ರ		minimum elong	-4117 Jul 20 j 02:49	23° Ⅲ 23'00	0°58'15
evening set	-4122 Jan 12 j 22:42	2° ට 19'32		morning rise	-4117 Aug 02 j 01:59	26° Ⅱ 13'26	
8	, ,			. <i>8</i>	-4117 Aug 19 j 16:17	0ಂತ	
conjunction	-4122 Jan 26 j 05:14	5° る 28'56	-1°08'37	retrograde	-4117 Nov 30 j 08:32	13° © 15'12	
minimum elong	-4122 Jan 26 j 05:11	5° ට 28'54		opposition	-4116 Jan 29 j 14:55	8°922'36	1°44'25
max. Earth dist.	-4122 Jan 27 j 16:40	5° ප 50'03	6.01287 AU	min. Earth dist.	-4116 Jan 30 j 14:31	8°9514'59	4.39050 AU
morning rise	-4122 Feb 08 j 15:07	8° පි 40'06	0.01207110	direct	-4116 Apr 01 j 03:22	3°520'12	, 000 0 110
retrograde	-4122 Jun 20 j 16:34	28° る 57'42		evening set	-4116 Aug 06 j 12:39	21°5914'28	
min. Earth dist.	-4122 Aug 18 j 11:52	24° පි 02'31	4.02457 AU	max. Earth dist.	-4116 Aug 17 j 14:08	23°5940'48	6.37886 AU
opposition	-4122 Aug 19 j 15:45	23° ප් 53'04		man. Darvii dige.	11101148 17 1 1.00	25 2 .0 .0	0.57000110
direct	-4122 Oct 16 j 16:30	18° る 57'29	1 37 07	conjunction	-4116 Aug 19 j 06:33	24°503'09	1°20'43
4.1.000	-4121 Jan 13 j 05:47	0°≈		minimum elong	-4116 Aug 19 j 06:31	24°503'08	1°20'53
evening set	-4121 Feb 18 j 21:09	8°≈13'20		morning rise	-4116 Aug 31 j 21:46	26°950'33	1 2005
evening sec	1121100 10 121.07	0 74 13 20		morning rise	-4116 Sep 15 j 10:34	0° U	
conjunction	-4121 Mar 04 j 10:40	11° ≈ 24'02	-1°22'28	retrograde	-4116 Dec 30 j 21:42	14° Ω 01'58	
minimum elong	-4121 Mar 04 j 10:40	11°≈24'02 11°≈24'03	1°22'37	opposition	-4115 Mar 01 j 13:48	9° Ω 10'33	2°02'11
max. Earth dist.	-4121 Mar 06 j 09:59	11°≈51'48	6.04988 AU	min. Earth dist.	-4115 Mar 02 j 20:31	9° Ω 00'46	4.35613 AU
morning rise	-4121 Mar 18 j 02:39	11 ≈3148 14°≈35'55	0.0 7700 AU	direct	-4115 May 03 j 04:05	4°Ω10'22	1.55015 AU
morning 1150	-4121 Mar 19 j 20:07	14 ≈33 33 15°≈		direct	-4115 May 05 j 04:05	4 8ℓ 10 22	
	-4121 Mai 19 j 20:07	0° ∺		evening set	-4115 Sep 06 j 14:51	22° Ω 11'00	
retrograde	-4121 Jul 26 j 10:15	4° ∺ 24'45		max. Earth dist.	-4115 Sep 17 j 10:44		6.31907 AU
- Dirogrado	-4121 Sep 19 j 00:43	4 7(2443 30°R≈		max. Darm dist.	1115 Sep 17 J 10.44	2.0630 TJ	3.31701 AU
	1121 Sep 17 J 00.43	20 100					

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -4115 in astronomical counting style is the year 4116 BCE in historical counting style. -4115 Sep 19 j 03:57 24°Ω59'57 1°20'36 morning rise -4109 Mar 23 j 06:15 19°≈36'24 conjunction minimum elong -4115 Sep 19 j 03:59 24°**Ω**59'58 -4109 May 09 j 23:21 0°**₩** 1°20'42 -4115 Oct 01 j 15:23 27°**Ω**48'14 -4109 Jul 31 j 04:09 9°\ 19'21 retrograde morning rise -4109 Sep 28 j 16:46 4°**)** 14'24 -1°51'35 -4115 Oct 11 j 12:39 0° m opposition -4114 Feb 01 j 16:36 -4109 Sep 27 j 13:22 retrograde 15° Mp 32'16 min. Earth dist. 4°**¥**23'46 4.10153 AU -4109 Nov 05 j 04:09 opposition -4114 Apr 03 j 17:58 10° Mp 40'06 1°44'56 30°R≈ 10° Mp 31'3229°≈15'03 min. Earth dist. -4114 Apr 04 j 20:57 4.27460 AU direct -4109 Nov 26 j 04:49 direct -4114 Jun 04 j 15:52 5° Mp 42'48 -4109 Dec 17 j 10:05 0°**)**€ evening set -4114 Oct 08 j 01:26 23° m 58'42 evening set -4108 Mar 31 j 16:46 18°**升** 13′28 max. Earth dist. -4114 Oct 19 j 07:44 26° My 33'496.22267 AU conjunction -4108 Apr 14 j 11:06 21°\(\dagger)21'49 -1°01'33 -4114 Oct 20 j 14:31 -4108 Apr 14 j 11:10 conjunction 26° My 51'320°56'28 minimum elong 21°\(\dagger)21'51 1°01'36 -4114 Oct 20 j 14:34 -4108 Apr 16 j 00:40 minimum elong 26° Mp 51'340°56'30 max. Earth dist. 21°**)**43'17 6.15105 AU morning rise -4114 Nov 02 j 03:40 29° m 44'38 morning rise -4108 Apr 28 j 05:49 24° ¥ 30'11 -4114 Nov 03 j 06:34 0∘**⊽** -4108 May 23 j 02:34 $0^{\circ}\Upsilon$ retrograde -4113 Mar 08 j 08:25 18°**≏**18'18 retrograde -4108 Sep 01 j 20:08 13°**Y**17'21 opposition -4113 May 08 j 10:40 13°**≏**23'42 0°54'07 min. Earth dist. -4108 Oct 30 j 11:49 8°**Υ**20'34 4.20498 AU 8°**Y**14'47 -1°03'22 min. Earth dist. -4113 May 09 j 02:57 13°**₽**18′28 4.16875 AU opposition -4108 Oct 31 j 04:51 direct -4113 Jul 08 j 05:46 8°**£**29'03 direct -4108 Dec 29 j 19:11 3°Y12'40 evening set -4113 Nov 09 j 15:35 27°**₽**06'30 evening set -4107 May 06 j 04:58 21° Y 46'40 -4113 Nov 21 j 23:19 0°M conjunction -4107 May 19 j 22:04 24°Y50'02 -0°21'00 -4113 Nov 22 j 09:01 0°ML05'41 0°13'31 minimum elong -4107 May 19 j 22:06 24°**Y**50'03 0°20'56 conjunction minimum elong -4113 Nov 22 j 09:02 0°M05'42 0°13'26 max. Earth dist. -4107 May 20 j 13:12 24°Y58'29 6.25817 AU behind sun begin -4113 Nov 22 j 04:20 0°M02'57 morning rise -4107 Jun 02 j 13:43 27°Y52'28 -4113 Nov 22 j 13:43 0°ML08'26 -4107 Jun 12 j 05:39 0°8 behind sun end -4113 Nov 21 j 22:03 6.11737 AU -4107 Sep 12 j 10:59 15°8 max. Earth dist. 29°**Ω**59'15 -4113 Dec 05 j 04:14 -4107 Oct 03 j 19:12 3°M,06'00 15°**8**44'23 morning rise retrograde -4107 Oct 25 j 01:13 -4112 Jan 29 j 16:01 15°M. 15°R -4112 Mar 10 j 07:51 12°**8**50'04 -4107 Nov 16 j 06:52 desc. node 20°M52'48 asc. node -4107 Dec 02 j 08:03 -4112 Apr 12 j 14:00 22°M34'14 10°**8**45'35 0°02'45 retrograde opposition -4112 Jun 12 j 11:44 -4107 Dec 02 j 05:41 17°M235'57 -0°17'37 min. Earth dist. 10°**8**46'22 4.30575 AU opposition 5°**8**41'57 min. Earth dist. -4112 Jun 12 j 09:28 17°M36'41 4.07216 AU -4106 Feb 01 j 05:20 direct 15°8 -4112 Jul 03 j 12:40 -4106 Apr 27 j 01:24 15°RM -4112 Aug 10 j 20:59 -4106 Jun 09 j 02:34 23°**8**53'34 direct 12°M42'53 evening set -4112 Sep 17 j 16:16 15°M -4106 Jun 22 j 13:11 -4112 Dec 05 j 16:13 0°**⊼** conjunction 26°**8**50'38 0°24'53 evening set -4112 Dec 12 j 23:03 1°×742'52 minimum elong -4106 Jun 22 j 13:09 26°**8**50'37 0°25'02 max. Earth dist. -4106 Jun 22 j 04:34 26°**8**45'54 6.34538 AU conjunction -4112 Dec 25 j 23:08 4°**∡**148'24 -0°35'30 morning rise -4106 Jul 05 j 20:41 29°**8**46'06 -4112 Dec 25 j 23:05 4° ₹ 48'22 0°35'39 -4106 Jul 06 j 22:08 $\Pi^{\circ}0$ minimum elong max. Earth dist. -4112 Dec 26 j 14:04 4°**≯**57'18 6.03843 AU -4106 Nov 03 j 20:22 17°**Ⅱ**00′28 retrograde -4111 Jan 08 j 02:15 7°**∡**¹55'37 -4105 Jan 02 j 17:13 12°**Ⅲ**05'27 1°05'35 morning rise opposition -4111 May 19 j 18:57 28°**х** 04′27 min. Earth dist. -4105 Jan 03 j 06:13 12°**Ⅲ**01'12 4.37349 AU retrograde -4111 Jul 18 j 10:40 23°**₹**08'28 4.01939 AU -4105 Mar 05 j 17:04 7°**Ⅱ**01'55 min. Earth dist. direct opposition -4111 Jul 19 i 05:22 23°**₹**02'14 -1°25'26 evening set -4105 Jul 11 j 12:39 24° II 59'25 18°**х** 08'41 direct -4111 Sep 15 i 14:22 max. Earth dist. -4105 Jul 23 j 07:47 27°**Ⅲ**34'21 6.38770 AU -4111 Dec 16 j 15:13 0°정 -4105 Jul 24 i 13:51 evening set -4110 Jan 17 j 23:38 7°る23'39 conjunction 27°**Ⅱ**50'51 1°02'28 minimum elong -4105 Jul 24 i 13:48 27°**Ⅱ**50'49 1°02'38 -4110 Jan 31 j 07:12 10°る33'21 -1°12'18 -4105 Aug 03 j 09:22 0ಂತಾ conjunction -4110 Jan 31 j 07:09 10°る33'19 1°12'28 morning rise -4105 Aug 06 j 11:51 minimum elong 0°9540'41 -4110 Feb 01 j 21:14 10°る55'58 6.01568 AU -4105 Dec 04 j 18:43 max. Earth dist. retrograde 17°9642'15 morning rise -4110 Feb 13 j 17:59 13°る44'45 opposition -4104 Feb 03 j 02:08 12°9549'50 1°48'52 -4110 May 05 j 03:08 0°≈ min. Earth dist. -4104 Feb 04 j 03:25 12°9541'41 4.38922 AU retrograde -4110 Jun 25 j 17:21 4°≈00'11 direct -4104 Apr 05 j 16:36 7°9547'36 -4110 Aug 16 j 14:24 30°Rる -4104 Aug 10 j 22:19 25°9541'52 evening set -4110 Aug 23 j 09:53 29°る05'01 4.03087 AU max. Earth dist. -4104 Aug 21 j 23:31 28°**©**08'14 min. Earth dist. 6.37432 AU -4110 Aug 24 j 14:16 28°る55'24 -2°01'25 opposition -4110 Oct 21 j 14:37 23°**る**59'24 -4104 Aug 23 j 15:26 direct conjunction 28°**©**30'21 1°22'09 -4110 Dec 23 j 06:10 0°≈ minimum elong -4104 Aug 23 j 15:25 28°930'20 1°22'19 evening set -4109 Feb 23 j 23:21 13°≈14'03 -4104 Aug 30 j 09:14 0° Ω -4109 Mar 03 j 12:51 15°**≈** morning rise -4104 Sep 05 j 05:40 1°**Ω**17'33 -4104 Nov 16 j 12:14 15°€

conjunction

minimum elong

max. Earth dist.

-4109 Mar 09 j 13:30

-4109 Mar 09 j 13:31

-4109 Mar 11 j 10:44

16°≈24'40 -1°21'55

16°≈51'08 6.05887 AU

1°22'02

16°≈24'40

retrograde

opposition

-4103 Jan 04 j 09:08

-4103 Feb 23 j 14:06

-4103 Mar 06 j 03:57

18°**Ω**31'44

13°**Ω**40'16 2°01'53

15°RΩ

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 27 Attention, astronomical year style is used: The year -4103 in astronomical counting style is the year 4104 BCE in historical counting style.

Attention, astronomi	ical year style is used: Th	e year -4103 i	n astronomical cou	inting style is the year	4104 BCE in historical co	ounting style.	
min. Earth dist.	-4103 Mar 07 j 09:50	13° Ω 30'45	4.34853 AU		-4097 Feb 14 j 11:31	15° ≈	
direct	-4103 May 07 j 16:25	8° Ω 40′27		evening set	-4097 Mar 01 j 05:20	18° ≈ 23′13	
	-4103 Jul 15 j 03:27	15° Ω					
evening set	-4103 Sep 11 j 00:11	26° Ω 42'09		conjunction	-4097 Mar 14 j 20:30	21° ≈ 33'52	
max. Earth dist.	-4103 Sep 21 j 19:52	29° Ω 08'13	6.30874 AU	minimum elong	-4097 Mar 14 j 20:32	21° ≈ 33'53	1°20'49
				max. Earth dist.	-4097 Mar 16 j 19:04	22° ≈ 01'03	6.06746 AU
conjunction	-4103 Sep 23 j 12:50	29° Ω 31′20		morning rise	-4097 Mar 28 j 13:43	24°≈45′26	
minimum elong	-4103 Sep 23 j 12:52	29° Ω 31'21	1°18'41		-4097 Apr 20 j 17:31	0° ∀	
	-4103 Sep 25 j 15:37	0° m/20100		retrograde	-4097 Aug 05 j 03:09	14° ¥ 22′18	4 11245 411
morning rise	-4103 Oct 06 j 00:14	2° My 20'00		min. Earth dist.	-4097 Oct 02 j 11:34	9° ¥ 26'35	4.11345 AU
retrograde	-4102 Feb 06 j 11:27	20° Mp 09'36	1°39'38	opposition	-4097 Oct 03 j 13:47	9° 升 17'38 4° 升 17'57	-1°46′38
opposition	-4102 Apr 08 j 12:33	-		direct	-4097 Dec 01 j 04:41	23° H 13'40	
min. Earth dist.	-4102 Apr 09 j 15:28	15° Mp 08'37	4.26184 AU	evening set	-4096 Apr 05 j 20:26	23 X 13 40	
direct evening set	-4102 Jun 09 j 08:30 -4102 Oct 12 j 13:02	10° Mp 20'11 28° Mp 38'26		conjunction	-4096 Apr 19 j 14:53	26° ∺ 21'29	0°56'40
evening set	-4102 Oct 12 j 13:02	0° ⊽		minimum elong	-4096 Apr 19 j 14:57	26°\(\frac{7}{21'32}\)	
max. Earth dist.	-4102 Oct 23 j 21:43	0 == 1° £ 15'23	6.20859 AU	max. Earth dist.	-4096 Apr 21 j 02:09	26° H 41'34	
max. Lattii dist.	-4102 Oct 25 j 21.45	1 -13 23	0.20037 AU	morning rise	-4096 May 03 j 09:38	29° H 29'13	0.10302 AC
conjunction	-4102 Oct 25 j 02:33	1° £ 32'02	0°51'21	morning rise	-4096 May 05 j 16:15	0° Υ	
minimum elong	-4102 Oct 25 j 02:37	1° ⊆ 32'03	0°51'22	retrograde	-4096 Sep 06 j 10:46	18° Υ 08'08	
morning rise	-4102 Nov 06 j 16:19	4° £ 25'59	0 31 22	opposition	-4096 Nov 04 j 20:49	13° Y ′06′04	-0°54'31
retrograde	-4101 Mar 13 j 06:49	23° £ 06'58		min. Earth dist.	-4096 Nov 04 j 04:32		4.22103 AU
opposition	-4101 May 13 j 09:41	18° £ 11'54	0°44'52	direct	-4095 Jan 03 j 15:08	8° Υ 03'43	
min. Earth dist.	-4101 May 13 j 23:09	18° ♀ 07'35	4.15433 AU	evening set	-4095 May 11 j 03:18	26° Ƴ 33'44	
direct	-4101 Jul 12 j 23:01	13° ≏ 17'33		<i>B</i>	, ,		
	-4101 Nov 05 j 20:36	0°M		conjunction	-4095 May 24 j 19:46	29° Ƴ 36′07	-0°14'29
evening set	-4101 Nov 14 j 08:11	1°M58'16		minimum elong	-4095 May 24 j 19:47	29° Ƴ 36′08	0°14'24
C	v			behind sun begin	-4095 May 24 j 16:19	29° Ƴ 34'13	
conjunction	-4101 Nov 27 j 02:25	4°M58'24	0°06'39	behind sun end	-4095 May 24 j 23:15	29° Ƴ 38'04	
minimum elong	-4101 Nov 27 j 02:25	4°M58'24	0°06'34	max. Earth dist.	-4095 May 25 j 08:46	29° Ƴ 43'21	6.27495 AU
behind sun begin	-4101 Nov 26 j 18:51	4°M53'58			-4095 May 26 j 14:39	9° 8	
behind sun end	-4101 Nov 27 j 09:58	5°ML02'50		morning rise	-4095 Jun 07 j 10:22	2° 8 37'26	
max. Earth dist.	-4101 Nov 26 j 18:32	4°M53'47	6.10387 AU		-4095 Aug 08 j 18:13	15° 8	
morning rise	-4101 Dec 09 j 22:39	7°M59'45		asc. node	-4095 Sep 26 j 00:23	20° 8 06'58	
	-4100 Jan 09 j 21:16	15° M ₊		retrograde	-4095 Oct 08 j 06:12	20° 8 21'40	
desc. node	-4100 Jan 19 j 05:09	16°M57'39		opposition	-4095 Dec 06 j 19:43	15° 8 23'27	0°12'14
retrograde	-4100 Apr 17 j 18:42	27°M35'11		min. Earth dist.	-4095 Dec 06 j 19:27	15° 8 23'33	4.32186 AU
opposition	-4100 Jun 17 j 14:34	22°M36'20	-0°28'02		-4095 Dec 09 j 18:19	15° ₹ 8	
min. Earth dist.	-4100 Jun 17 j 10:35	22°M37'38	4.06065 AU	direct	-4094 Feb 05 j 22:25	10° 8 19'49	
direct	-4100 Aug 15 j 20:27	17°ML43'18			-4094 Apr 04 j 15:47	15° 8	
	-4100 Nov 18 j 09:28	0° ∡		evening set	-4094 Jun 13 j 18:19	28° 8 27'12	
evening set	-4100 Dec 17 j 21:48	6° ∡ 146′29			-4094 Jun 20 j 20:02	0°Щ	
conjunction	-4100 Dec 30 j 23:01	9° ∡ 52'51	-0°41'49	conjunction	-4094 Jun 27 j 03:34	1° Ⅱ 23'09	0°30'52
minimum elong	-4100 Dec 30 j 22:57	9° ∡ ¹52'49	0°41'59	minimum elong	-4094 Jun 27 j 03:32	1° Ⅱ 23′08	0°31'02
max. Earth dist.	-4100 Dec 31 j 17:49	10° ₹ 04'04	6.02994 AU	max. Earth dist.	-4094 Jun 26 j 15:28	1° Ⅱ 16'31	6.35955 AU
morning rise	-4099 Jan 13 j 03:15	13° ∡ ¹00'57		morning rise	-4094 Jul 10 j 09:44	4° Ⅱ 17'29	
	-4099 Apr 08 j 18:47	0° ට		retrograde	-4094 Nov 08 j 02:57	21° Ⅱ 26'40	
retrograde	-4099 May 25 j 01:00	3° る 13'45		opposition	-4093 Jan 07 j 02:10	16° Ⅱ 32'04	1°12'59
	-4099 Jul 10 j 11:45	30°₹ ⋌ ¹		min. Earth dist.	-4093 Jan 07 j 16:50	16° Ⅱ 27'17	4.38490 AU
opposition	-4099 Jul 24 j 09:02	28° ⊀ 11'09	-1°32'58	direct	-4093 Mar 10 j 05:27	11° Ⅱ 28'36	
min. Earth dist.	-4099 Jul 23 j 12:27		4.01511 AU	evening set	-4093 Jul 15 j 22:11	29° Ⅱ 22'52	
direct	-4099 Sep 20 j 15:05	23° ∡ 17′25			-4093 Jul 18 j 18:23	0 \circ \odot	
	-4099 Nov 26 j 00:07	0°ප					
evening set	-4098 Jan 23 j 03:58	12° る 34'14		conjunction	-4093 Jul 28 j 22:07	2°513'26	1°06'20
	4000 E-L 05 : 12.25	150744122	1015120	minimum elong	-4093 Jul 28 j 22:03	2°913'24	1°06'31
conjunction	-4098 Feb 05 j 12:25	15° る 44'22		max. Earth dist.	-4093 Jul 27 j 15:08	1°956'26	6.39537 AU
minimum elong	-4098 Feb 05 j 12:22	15°る44'20 16°る07'20	6.01566 AU	morning rise	-4093 Aug 10 j 18:37	5°502'23	
max. Earth dist. morning rise	-4098 Feb 07 j 03:06 -4098 Feb 19 j 00:19	16°る0/20	0.01300 AU	retrograde opposition	-4093 Dec 09 j 00:30 -4092 Feb 07 j 10:32	22°502'14 17°510'04	1°52'27
morning 115¢		0°≈		min. Earth dist.		17°901'36	4.39262 AU
retrograde	-4098 Apr 10 j 07:03 -4098 Jun 30 j 19:31	0°≈ 9°≈10'19		direct	-4092 Feb 08 j 12:57 -4092 Apr 10 j 02:22	17°901'36 12°908'07	7.37202 AU
min. Earth dist.	-4098 Aug 28 j 10:18		4.03525 AU	evening set	-4092 Apr 10 J 02.22 -4092 Aug 15 j 04:08	0°Ω00'53	
opposition	-4098 Aug 29 j 15:28	4 ≈1517 4°≈05'21		erening set	-4092 Aug 15 j 02:30	0° N	
оррожион	-4098 Oct 04 j 08:37	4 ≈03 21 30°Rる	2 02 32	max. Earth dist.	-4092 Aug 26 j 01:27	2° Ω 25'19	6.37291 AU
direct	-4098 Oct 26 j 16:03	29°る08'56		Dartii dibt.	20 J 01.27	_ 002017	,_,1110
	-4098 Nov 18 j 01:51	0°≈		conjunction	-4092 Aug 27 j 20:08	2° Ω 48'59	1°23'01
				J		/	-

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 28 Attention, astronomical year style is used: The year -4092 in astronomical counting style is the year 4093 BCE in historical counting style.

Attention, astronomi	cal year style is used: Th	e year -4092 i	n astronomical cou	nting style is the year	4093 BCE in historical c	ounting style.	0° -°
minimum elong	-4092 Aug 27 j 20:08	2° Ω 48'59	1°23'10	morning rise	-4086 Feb 24 j 08:08	24° ප් 10'30	
morning rise	-4092 Sep 09 j 09:45	5° Ω 35'57			-4086 Mar 21 j 16:45	0° ≈	
	-4092 Oct 24 j 22:28	15° Ω		retrograde	-4086 Jul 06 j 00:46	14° ≈ 23′20	
retrograde	-4091 Jan 08 j 18:40	22° Ω 52′17		opposition	-4086 Sep 03 j 17:54	9° ≈ 18'10	-2°03'14
opposition	-4091 Mar 10 j 14:15	18° Ω 00'47	2°00'51	min. Earth dist.	-4086 Sep 02 j 12:29	9° ≈ 28'11	4.03946 AU
min. Earth dist.	-4091 Mar 11 j 21:27	17° Ω 50′52	4.34226 AU	direct	-4086 Oct 31 j 19:06	4° ≈ 21'18	
	-4091 Apr 05 j 01:43	15°R Ω			-4085 Jan 26 j 20:47	15° ≈	
direct	-4091 May 12 j 02:19	13° Ω 01'12		evening set	-4085 Mar 06 j 12:48	23° ≈ 34'46	
	-4091 Jun 17 j 22:36	15° Ω					
	-4091 Sep 10 j 10:59	0° ™		conjunction	-4085 Mar 20 j 04:38	26° ≈ 45′18	-1°18'49
evening set	-4091 Sep 15 j 05:10	1° ™ 03'48		minimum elong	-4085 Mar 20 j 04:40	26° ≈ 45′20	1°18'55
max. Earth dist.	-4091 Sep 26 j 01:38	3° m ∕30'37	6.29811 AU	max. Earth dist.	-4085 Mar 22 j 03:06	27° ≈ 12'21	6.07702 AU
				morning rise	-4085 Apr 02 j 22:31	29° ≈ 56'40	
conjunction	-4091 Sep 27 j 17:47	3° Mp 53′20	1°16'11		-4085 Apr 03 j 04:17	0° ℋ	
minimum elong	-4091 Sep 27 j 17:49	3° m 53'21	1°16'16	retrograde	-4085 Aug 09 j 23:51	19° ∺ 26'19	
morning rise	-4091 Oct 10 j 05:03	6° Mp 42′26		min. Earth dist.	-4085 Oct 07 j 08:29	14°) 30′51	4.12710 AU
retrograde	-4090 Feb 11 j 00:46	24° m 37'54		opposition	-4085 Oct 08 j 11:05	14°) €21'46	-1°40'50
opposition	-4090 Apr 13 j 02:59	19° m 45'14		direct	-4085 Dec 06 j 04:46	9° ∺ 21'35	
min. Earth dist.	-4090 Apr 14 j 04:56	•	4.24736 AU	evening set	-4084 Apr 11 j 00:30	28° ∺ 13'39	
direct	-4090 Jun 13 j 18:36	14° m 48'35			-4084 Apr 18 j 20:36	0 ° $\mathbf{\Upsilon}$	
	-4090 Oct 02 j 22:03	0∘ ⊽					
evening set	-4090 Oct 16 j 21:08	3° ₽ 10'04		conjunction	-4084 Apr 24 j 19:00	1° Y 20'47	
max. Earth dist.	-4090 Oct 28 j 06:56	5° ≏ 48'16	6.19150 AU	minimum elong	-4084 Apr 24 j 19:04	1° Y 20'49	
				max. Earth dist.	-4084 Apr 26 j 03:58	1° Ƴ 39'29	6.18202 AU
conjunction	-4090 Oct 29 j 11:01	6° £ 04'33	0°46'06	morning rise	-4084 May 08 j 13:26	4° Y 27'38	
minimum elong	-4090 Oct 29 j 11:04	6° £ 04'35	0°46'05	retrograde	-4084 Sep 11 j 03:06	22° Y 57'32	
morning rise	-4090 Nov 11 j 01:36	8° £ 59'35		opposition	-4084 Nov 09 j 12:34	17° Y 55'54	
retrograde	-4089 Mar 18 j 05:01	27° ≏ 49'22		min. Earth dist.	-4084 Nov 08 j 22:54	18° Y 00'31	4.23802 AU
opposition	-4089 May 18 j 06:00	22° £ 53'50		direct	-4083 Jan 08 j 12:44	12° Y 53′13	
min. Earth dist.	-4089 May 18 j 18:24	22° ≏ 49'50	4.13561 AU		-4083 May 10 j 01:18	0° 8	
direct	-4089 Jul 17 j 15:09	17° ≏ 59'40		evening set	-4083 May 16 j 01:04	1° 8 18'53	
	-4089 Oct 20 j 04:22	0°M₊					
evening set	-4089 Nov 18 j 22:48	6°M45′28		conjunction	-4083 May 29 j 16:47	4° 8 20'18	
desc. node	-4089 Nov 30 j 14:16	9°M30'22		minimum elong	-4083 May 29 j 16:48	4° 8 20'18	0°07'45
				behind sun begin	-4083 May 29 j 09:22	4° 8 16'12	
conjunction	-4089 Dec 01 j 18:05	9°M46'49		behind sun end	-4083 May 30 j 00:15	4° 8 24'25	
minimum elong	-4089 Dec 01 j 18:06	9°M46'49	0°00'16	max. Earth dist.	-4083 May 30 j 02:44	4° 8 25'48	6.29091 AU
behind sun begin	-4089 Dec 01 j 10:05	9° M .42′06		morning rise	-4083 Jun 12 j 06:22	7° 8 20'30	
behind sun end	-4089 Dec 02 j 02:07	9°M51'33			-4083 Jul 18 j 14:15	15° 8	
max. Earth dist.	-4089 Dec 01 j 13:41	9° M. 44'15	6.08543 AU	asc. node	-4083 Aug 04 j 18:56	18° 8 12'02	
morning rise	-4089 Dec 14 j 15:27	12° M .49′29		retrograde	-4083 Oct 12 j 15:39	24° 8 57'40	
	-4089 Dec 23 j 23:10	15°M		opposition	-4083 Dec 11 j 07:20	19° 8 59'59	0°21'42
	-4088 Mar 12 j 17:07	0° ∡ 7		min. Earth dist.	-4083 Dec 11 j 08:33	19° 8 59'34	4.33549 AU
retrograde	-4088 Apr 22 j 22:16	2° ∡ ³33'54			-4082 Feb 04 j 06:10	15° ₹ 8	
	-4088 Jun 03 j 08:28	30°RM₁		direct	-4082 Feb 10 j 13:21	14° 8 56'15	
opposition	-4088 Jun 22 j 16:01	27°M34'34			-4082 Feb 16 j 21:15	15° 8	
min. Earth dist.	-4088 Jun 22 j 09:41	27°M36'38	4.04438 AU		-4082 Jun 04 j 10:07	0°II	
direct	-4088 Aug 20 j 16:41	22°M41'35		evening set	-4082 Jun 18 j 09:56	3° Ⅱ 00′29	
_	-4088 Oct 29 j 17:30	0° ∡					
evening set	-4088 Dec 22 j 21:01	11° ≯ 750′00		conjunction	-4082 Jul 01 j 17:50	5° Ⅱ 55'27	0°36'47
		=		minimum elong	-4082 Jul 01 j 17:47	5° Ⅱ 55'26	0°36'56
conjunction	-4087 Jan 04 j 23:14	14° ₹ 57'24		max. Earth dist.	-4082 Jul 01 j 02:30	5° Ⅱ 47'03	6.36968 AU
minimum elong	-4087 Jan 04 j 23:10	14° ₹ 57'22		morning rise	-4082 Jul 14 j 22:35	8° Ⅱ 48'47	
max. Earth dist.	-4087 Jan 05 j 20:18	15° ∡ 09'59 −	6.01721 AU	retrograde	-4082 Nov 12 j 12:26	25° Ⅱ 54'35	
morning rise	-4087 Jan 18 j 04:50	18° ∡ 06'38		opposition	-4081 Jan 11 j 12:26	21° I I00'28	1°20'09
	-4087 Mar 13 j 10:48	0°₹		min. Earth dist.	-4081 Jan 12 j 05:43	20° Ⅱ 54'51	4.39094 AU
retrograde	-4087 May 30 j 06:56	8° る 24'47		direct	-4081 Mar 14 j 19:05	15° Ⅱ 57'10	
opposition	-4087 Jul 29 j 12:52	3°る21'40			-4081 Jul 02 j 11:06	0°©	
min. Earth dist.	-4087 Jul 28 j 13:47		4.00749 AU	evening set	-4081 Jul 20 j 09:27	3°950'09	
	-4087 Aug 26 j 06:05	30°R ✓		max. Earth dist.	-4081 Jul 31 j 21:44	6° © 21'17	6.39656 AU
direct	-4087 Sep 25 j 16:10	28° ∡ ¹27'37					
	-4087 Oct 25 j 23:49	0°₹		conjunction	-4081 Aug 02 j 08:04	6°≌40'08	1°10'00
evening set	-4086 Jan 28 j 09:34	17° る 47'28		minimum elong	-4081 Aug 02 j 08:01	6°9540'06	1°10'11
_		_		morning rise	-4081 Aug 15 j 03:27	9° 5 28'33	
conjunction	-4086 Feb 10 j 19:21	20° る 58'12		retrograde	-4081 Dec 13 j 10:42	26°529'03	
minimum elong	-4086 Feb 10 j 19:19		1°18'14	opposition	-4080 Feb 11 j 22:08	21°537'06	1°55'41
max. Earth dist.	-4086 Feb 12 j 14:10	21° る 23'38	6.01384 AU	min. Earth dist.	-4080 Feb 13 j 01:47	21° © 28'14	4.38921 AU

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 29 Attention, astronomical year style is used: The year -4080 in astronomical counting style is the year 4081 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	e year -4080 i	n astronomical cou	unting style is the year	4081 BCE in historical c	ounting style.	-8+ =>
direct	-4080 Apr 14 j 13:48	16° © 35'24		conjunction	-4074 Feb 16 j 02:45	26° ප 13'25	-1°20'03
	-4080 Jul 29 j 18:29	$0^{\circ}\Omega$		minimum elong	-4074 Feb 16 j 02:44	26° る 13'24	1°20'12
evening set	-4080 Aug 19 j 13:27	4° £ 29'01		max. Earth dist.	-4074 Feb 17 j 22:53	26° る 39'32	6.02166 AU
max. Earth dist.	-4080 Aug 30 j 10:40	6° £ 53'41	6.36507 AU	morning rise	-4074 Mar 01 j 16:32	29° る 25'42	
					-4074 Mar 04 j 03:03	0° ≈	
conjunction	-4080 Sep 01 j 04:48	7° Ω 17'06			-4074 May 16 j 22:21	15° ≈	
minimum elong	-4080 Sep 01 j 04:48	7° Ω 17'06	1°23'39	retrograde	-4074 Jul 11 j 00:46	19° ≈ 33'06	
morning rise	-4080 Sep 13 j 17:38	10° Ω 04'06			-4074 Sep 04 j 19:44	15°R≈	
	-4080 Oct 06 j 13:19	15° Ω		min. Earth dist.	-4074 Sep 07 j 11:38		4.05208 AU
retrograde	-4079 Jan 13 j 09:17	27° Ω 24'53		opposition	-4074 Sep 08 j 18:11	14° ≈ 27'50	-2°02'39
opposition	-4079 Mar 15 j 05:57	22° Ω 33'24		direct	-4074 Nov 05 j 20:18	9° ≈ 30′28	
min. Earth dist.	-4079 Mar 16 j 13:13	22° Ω 23'28	4.33047 AU		-4073 Jan 04 j 18:17	15° ≈	
direct	-4079 May 16 j 15:45	17° Ω 34'16		evening set	-4073 Mar 11 j 17:43	28°≈40′23	
	-4079 Aug 24 j 18:27	0° m y			-4073 Mar 17 j 11:35	0° ∀	
evening set	-4079 Sep 19 j 15:39	5° Mp 39'25	6 00000 AXX		405234 25:10.00	101/50105	101 (10.4
max. Earth dist.	-4079 Sep 30 j 11:32	8° m, 06'30	6.28329 AU	conjunction	-4073 Mar 25 j 10:08	1°) € 50'27	
	4070 0	00 m 2012 0	1010110	minimum elong	-4073 Mar 25 j 10:11	1° ¥ 50′28	
conjunction	-4079 Oct 02 j 04:02	8° Mp 29'30		max. Earth dist.	-4073 Mar 27 j 07:13		6.09320 AU
minimum elong	-4079 Oct 02 j 04:04	8° Mp 29'31	1°13′18	morning rise	-4073 Apr 08 j 04:18	5° ₩ 01'10	
morning rise	-4079 Oct 14 j 15:38	11° Mp 19'19 29° Mp 22'21		retrograde min. Earth dist.	-4073 Aug 14 j 18:40	24°) 21'42 19°) 25'41	4.14482 AU
retrograde opposition	-4078 Feb 15 j 22:42 -4078 Apr 18 j 00:29	24° m) 29'23	1°27'18	opposition	-4073 Oct 12 j 04:34 -4073 Oct 13 j 04:49	19 X 23 41 19° X 17'24	
min. Earth dist.	-4078 Apr 19 j 01:12	24 m/2923 24°m/21'30	4.23038 AU	direct	-4073 Dec 11 j 03:40	19 X 1724 14° X 16'45	-1 34 29
direct	-4078 Jun 18 j 11:56	19° m 33'09	4.23038 AU	direct	-4073 Dec 11 J 03:40 -4072 Apr 02 j 04:49	14 χ 10 43 0° Υ	
direct	-4078 Sep 15 j 05:47	0∘ ⊽		evening set	-4072 Apr 16 j 00:03	3°Υ04'05	
evening set	-4078 Oct 21 j 11:47	ი — 7° ჲ 58'33		evening set	-40/2 Apr 10 J 00:03	3 1 0 7 0 3	
max. Earth dist.	-4078 Nov 02 j 02:08		6.17415 AU	conjunction	-4072 Apr 29 j 18:33	6° Y 10′25	-0°45'50
max. Earth dist.	40701107 02 3 02.00	10 = 37 30	0.17413710	minimum elong	-4072 Apr 29 j 18:37	6°Υ10'27	
conjunction	-4078 Nov 03 j 02:25	10° £ 54'03	0°40'13	max. Earth dist.	-4072 May 01 j 01:10	6° Υ 27'43	6.19991 AU
minimum elong	-4078 Nov 03 j 02:28	10° £ 54'05	0°40'12	morning rise	-4072 May 13 j 12:34	9° Υ 16'20	0.17771110
morning rise	-4078 Nov 15 j 17:41	13° ♀ 50'10		retrograde	-4072 Sep 15 j 13:36	27° Y '37'25	
. <i>&</i>	-4077 Feb 07 j 22:08	0° M ,		opposition	-4072 Nov 14 j 00:25	22° Y '36'18	-0°36'04
retrograde	-4077 Mar 23 j 08:45	2°M48'41		min. Earth dist.	-4072 Nov 13 j 12:11		4.25437 AU
	-4077 May 06 j 08:39	30° Ŗ Ω		direct	-4071 Jan 13 j 03:50	17° Ƴ 33'21	
opposition	-4077 May 23 j 09:06	27° ≏ 52'44	0°25'28		-4071 Apr 23 j 02:03	0°8	
min. Earth dist.	-4077 May 23 j 19:00	27° ≏ 49'33	4.11941 AU	evening set	-4071 May 20 j 18:49	5° 8 55'14	
direct	-4077 Jul 22 j 13:07	22° ჲ 58'58					
	-4077 Sep 29 j 23:53	0° M		conjunction	-4071 Jun 03 j 09:34	8° 8 55'43	-0°01'22
desc. node	-4077 Oct 09 j 03:58	1°M44'32		minimum elong	-4071 Jun 03 j 09:34	8° 8 55'42	0°01'15
evening set	-4077 Nov 23 j 20:01	11°ML48'48		behind sun begin	-4071 Jun 03 j 01:17	8° 8 51'09	
				behind sun end	-4071 Jun 03 j 17:51	9° 8 00'16	
conjunction	-4077 Dec 06 j 16:06	14°M51'08		max. Earth dist.	-4071 Jun 03 j 14:15	8° 8 58'16	6.30452 AU
minimum elong	-4077 Dec 06 j 16:06	14°M51'08	0°07'28	asc. node	-4071 Jun 14 j 19:13	11° 8 26'54	
behind sun begin	-4077 Dec 06 j 08:43	14°M46'47		morning rise	-4071 Jun 16 j 22:11	11° 8 54'55	
behind sun end	-4077 Dec 06 j 23:29	14°M55'30			-4071 Jul 01 j 03:05	15° 8	
max. Earth dist.	-4077 Dec 06 j 14:34	14°M50'14	6.07199 AU	retrograde	-4071 Oct 17 j 00:43	29° 8 26'24	
	-4077 Dec 07 j 07:04	15°M		opposition	-4071 Dec 15 j 16:10	24° 8 29'15	0°30'45
morning rise	-4077 Dec 19 j 14:45	17°M54'57		min. Earth dist.	-4071 Dec 15 j 20:58	24° 8 27'39	4.34534 AU
. 1	-4076 Feb 13 j 11:18	0° ⊀ 7		direct	-4070 Feb 15 j 02:57	19° 8 25'26	
retrograde	-4076 Apr 28 j 05:50 -4076 Jun 27 j 22:34	7° 🗷 46'13	0040110		-4070 May 18 j 02:46	0°Ⅱ 7°Ⅱ27'51	
opposition		2° × ⁷ 46'18		evening set	-4070 Jun 22 j 22:40	7°Щ2/51 10°Щ12'00	C 27405 ATT
min. Earth dist.	-4076 Jun 27 j 12:47	2° √ 49'32 30°RM	4.03530 AU	max. Earth dist.	-4070 Jul 05 j 11:00	10 щ1200	6.37495 AU
direct	-4076 Jul 20 j 08:50 -4076 Aug 25 j 19:22	27°M53'20		conjunction	-4070 Jul 06 j 05:28	10° Ⅲ 22'07	0°42'19
direct	-4076 Sep 30 j 18:54	27 IIG33 20 0° ⊼ ¹		minimum elong	-4070 Jul 06 j 05:25	10 П 22'07 10° П 22'05	0°42'28
evening set	-4076 Dec 28 j 00:19	17° ∡ ¹04'08		morning rise	-4070 Jul 19 j 08:51	10 H 22 03	0 42 28
evening set	-4070 DCC 28 J 00.19	1/ 🗴 04 00		morning risc	-4070 Nov 02 j 19:26	0°95	
conjunction	-4075 Jan 10 j 03:44	20° ∡ 12'11	-0°53'30	retrograde	-4070 Nov 16 j 19:15	0°©18'54	
minimum elong	-4075 Jan 10 j 03:40	20° × 1211 20° × 12'09	0°53'39	10110Brude	-4070 Nov 30 j 19:24	0 3 18 34 30°R∏	
max. Earth dist.	-4075 Jan 11 j 06:25	20° × 12°07	6.01347 AU	opposition	-4069 Jan 15 j 21:16	25° ∏ 25'08	1°26'45
morning rise	-4075 Jan 23 j 10:16	23° × 22'00		min. Earth dist.	-4069 Jan 16 j 15:51	25° П 19'06	4.39166 AU
	-4075 Feb 21 j 06:16	0°중		direct	-4069 Mar 19 j 04:31	20° ∏ 21'58	
retrograde	-4075 Jun 04 j 15:10	13° ට 41'28			-4069 Jun 14 j 20:43	0.82 20.52	
opposition	-4075 Aug 03 j 18:35	8° る 37'55	-1°45'44	evening set	-4069 Jul 24 j 19:23	8° © 15'19	
min. Earth dist.	-4075 Aug 02 j 18:21		4.00981 AU	max. Earth dist.	-4069 Aug 05 j 04:51	10° © 45'10	6.39259 AU
direct	-4075 Sep 30 j 20:52	3° ⋜ 43'35			<u> </u>		
evening set	-4074 Feb 02 j 16:12	23° る 02'40		conjunction	-4069 Aug 06 j 16:49	11° © 04'57	1°13'11

•	iical year style is used: Th						ige 30
minimum elong	-4069 Aug 06 j 16:46	11° © 04'55		minimum elong	-4063 Jan 15 j 07:33	25° ₹ 23'33	0°50'00
Č		13°953'05	1 13 22	max. Earth dist.	-4063 Jan 16 j 12:31	25° x 40'49	6.01316 AU
morning rise	-4069 Aug 19 j 11:07 -4069 Nov 23 j 10:26	0°Ω		morning rise	-4063 Jan 28 j 15:19	23 x ·40 49 28° x 33'51	0.01310 AU
retrograde	-4069 Dec 17 j 22:32	0° Ω 56'00		morning rise	-4063 Feb 03 j 17:26	28 メ・33 31	
remograde	-4068 Jan 11 j 10:16	30°RS		retrograde	-4063 Jun 09 j 18:46	0 8 18° る 52'58	
onnosition	-4068 Feb 16 j 10:15	30 k≌ 26°©04'15	1°58'13	•	3	18 3 3238 13° る 49'04	1050154
opposition min. Earth dist.	-4068 Feb 17 j 15:31	26 904 13 25°954'53	4.38095 AU	opposition min. Earth dist.	-4063 Aug 08 j 21:55 -4063 Aug 07 j 19:26		4.01447 AU
direct	-4068 Apr 19 j 02:23	23 3 34 33 21° 5 02'53	4.36093 AU	direct	-4063 Oct 05 j 22:11	8°る54'24	4.01447 AU
direct	-4068 Jul 11 j 18:01	0° Ω		evening set	-4062 Feb 07 j 21:16	8 03424 28° る 12'22	
evening set	-4068 Aug 23 j 23:05	8° Ω 58'34		evening set	-4062 Feb 15 j 12:06	28 3 12 22 0° ≈	
max. Earth dist.	-4068 Sep 03 j 18:21	11° Ω 22'39	6.35305 AU		-4002 Feb 13 j 12.00	0 ~	
max. Earm dist.	-4008 Sep 05 j 18.21	11 0622 39	0.55505 AU	conjunction	-4062 Feb 21 j 08:45	1° ≈ 23'05	1021/26
conjunction	-4068 Sep 05 j 13:45	11° Ω 46'51	1°23'30	minimum elong	-4062 Feb 21 j 08:44		1°21'35
minimum elong	-4068 Sep 05 j 13:45	11°Ω46'51	1°23'37	max. Earth dist.	-4062 Feb 23 j 05:46	1°≈49'40	6.03062 AU
morning rise	-4068 Sep 18 j 02:15	14° Ω 34'09	1 23 37	morning rise	-4062 Mar 06 j 23:12	4°≈35'14	0.03002 AC
morning risc	-4068 Sep 20 j 00:54	15° Ω		morning rise	-4062 Apr 23 j 07:05	15° ≈	
	-4068 Dec 12 j 14:14	0° mp		retrograde	-4062 Jul 16 j 00:57	24° ≈ 37'06	
retrograde	-4067 Jan 18 j 01:38	2° Mg 00'42		min. Earth dist.	-4062 Sep 12 j 11:11	19° ≈ 41'51	4.06435 AU
retrograde	-4067 Feb 23 j 22:21	2 11/00 42 30°RΩ		opposition	-4062 Sep 13 j 16:30	19°≈31'51	
opposition	-4067 Mar 19 j 23:13	27° Ω 09'04	1°56'43	оррозиюн	-4062 Oct 26 j 00:05	15°R≈	-2 01 12
min. Earth dist.	-4067 Mar 21 j 05:29	26° Ω 59'26	4.31565 AU	direct	-4062 Nov 10 j 21:51	14° ≈ 34'00	
direct	-4067 May 21 j 05:48	22°Ω10'20	4.51505710	direct	-4062 Nov 26 j 20:13	15° ≈	
direct	-4067 Aug 05 j 19:38	0° m)			-4061 Feb 28 j 15:35	0° ∀	
evening set	-4067 Sep 24 j 03:31	10° mp 18'44		evening set	-4061 Mar 16 j 20:57	3°) 40′51	
max. Earth dist.	-4067 Oct 05 j 02:52	12° Mp 48'17	6.26708 AU	evening set	4001 With 10 J 20.57	3 7(4031	
max. Lartii dist.	4007 Oct 05 J 02.52	12 110 17	0.20700710	conjunction	-4061 Mar 30 j 13:59	6° ¥ 50'31	-1°13'30
conjunction	-4067 Oct 06 j 16:05	13° m 09'31	1°09'44	minimum elong	-4061 Mar 30 j 14:03	6° ¥ 50'33	
minimum elong	-4067 Oct 06 j 16:08	13° m) 09'32	1°09'48	max. Earth dist.	-4061 Apr 01 j 10:32		6.10780 AU
morning rise	-4067 Oct 19 j 03:49	16° my 00'06	1 05 10	morning rise	-4061 Apr 13 j 08:21	10°) €00'42	0.10700710
morning rise	-4067 Dec 29 j 05:41	0∘ ⊽		retrograde	-4061 Aug 19 j 11:03	29°) 12'55	
retrograde	-4066 Feb 20 j 22:07	4° ユ 10'52		opposition	-4061 Oct 17 j 20:59	24°) (12°03	-1°27'38
	-4066 Apr 17 j 10:17	30°R, M)		min. Earth dist.	-4061 Oct 16 j 21:41		4.16031 AU
opposition	-4066 Apr 22 j 23:50		1°19'56	direct	-4061 Dec 15 j 22:29	19°) €08'02	
min. Earth dist.	-4066 Apr 23 j 22:53	29° m) 10'14	4.21387 AU		-4060 Mar 15 j 09:16	0° Υ	
direct	-4066 Jun 23 j 07:38	24° m/21'48		evening set	-4060 Apr 20 j 23:05	7° Υ 51'51	
	-4066 Aug 24 j 23:51	0∘ ⊽					
evening set	-4066 Oct 26 j 04:06	12° ≏ 50'33		conjunction	-4060 May 04 j 17:15	10° Ƴ 57'27	-0°40'05
				minimum elong	-4060 May 04 j 17:19	10° Ƴ 57'29	0°40'04
conjunction	-4066 Nov 07 j 19:12	15° ≏ 46'58	0°33'58	max. Earth dist.	-4060 May 05 j 18:53	11° Y 11'53	6.21510 AU
minimum elong	-4066 Nov 07 j 19:15	15° ≏ 47'00	0°33'56	morning rise	-4060 May 18 j 10:57	14° Y °02'34	
max. Earth dist.	-4066 Nov 06 j 21:04	15° ≏ 34'03	6.15883 AU		-4060 Aug 13 j 00:32	$0^{\circ}S$	
morning rise	-4066 Nov 20 j 11:31	18° ≏ 44'10		retrograde	-4060 Sep 20 j 01:39	2° 8 16'05	
	-4065 Jan 12 j 01:55	0° M			-4060 Oct 27 j 21:14	30° ₹Ƴ	
retrograde	-4065 Mar 28 j 12:39	7° M 50′25		opposition	-4060 Nov 18 j 11:59	27° Y 15'31	
opposition	-4065 May 28 j 13:19	2°M53'52	0°15'00	min. Earth dist.	-4060 Nov 18 j 02:59	27° Y 18'33	4.26787 AU
min. Earth dist.	-4065 May 28 j 19:34	2°M51'51	4.10645 AU	direct	-4059 Jan 17 j 20:28	22° Y 12'21	
	-4065 Jun 21 j 13:36	30° ₹ Ω			-4059 Apr 03 j 21:49	0°8	
direct	-4065 Jul 27 j 12:35	28° ≏ 00'18		asc. node	-4059 Apr 24 j 09:22	3° 8 55'13	
desc. node	-4065 Aug 17 j 16:08	28° ≏ 43'44		evening set	-4059 May 25 j 12:25	10° 8 31'34	
	-4065 Sep 01 j 00:17	0° M					
	-4065 Nov 20 j 17:25	15° ™		conjunction	-4059 Jun 08 j 02:30	13° 8 31'17	
evening set	-4065 Nov 28 j 17:50	16° ™ 52'47		minimum elong	-4059 Jun 08 j 02:28	13° 8 31'16	0°05'21
				behind sun begin	-4059 Jun 07 j 18:30	13° 8 26'53	
conjunction	-4065 Dec 11 j 15:00	19°M55'58		behind sun end	-4059 Jun 08 j 10:26	13° 8 35'38	
minimum elong	-4065 Dec 11 j 14:59	19° ™ 55'57	0°14'36	max. Earth dist.	-4059 Jun 08 j 04:42	13° 8 32'28	6.31540 AU
behind sun begin	-4065 Dec 11 j 11:20	19°M53'48			-4059 Jun 14 j 19:07	15° 8	
behind sun end	-4065 Dec 11 j 18:37	19° ™ 58'06		morning rise	-4059 Jun 21 j 13:51	16° 8 29'34	
max. Earth dist.	-4065 Dec 11 j 19:02	19°M58'21	6.06259 AU		-4059 Aug 31 j 02:43	0°П	
morning rise	-4065 Dec 24 j 14:32	23°M00'37		retrograde	-4059 Oct 21 j 08:21	3° ∏ 56′24	
, 1	-4064 Jan 24 j 05:50	0° ₹ ⁷		•.•	-4059 Dec 12 j 09:57	30°₹8	0020120
retrograde	-4064 May 03 j 14:23	12° х 56'47	0050110	opposition	-4059 Dec 20 j 01:35	28° 8 59'49	
opposition	-4064 Jul 03 j 04:27	7° × 756'19		min. Earth dist.	-4059 Dec 20 j 07:50	28° 8 57'45	4.35299 AU
min. Earth dist.	-4064 Jul 02 j 16:55	8° √ 00'08	4.03041 AU	direct	-4058 Feb 19 j 14:21	23° 8 56'04	
direct	-4064 Aug 30 j 22:36	3°×703'18		ovenina+	-4058 Apr 27 j 16:45	0°Ⅱ 11°Ⅲ57'21	
evening set	-4063 Jan 02 j 03:23	22° ∡ 15′08		evening set	-4058 Jun 27 j 12:03	11° ∏ 57′21	
conjunction	-4063 Jan 15 j 07:37	25° ∡ ¹23'35	-0°58'49	conjunction	-4058 Jul 10 j 17:24	14° ∏ 50'54	0°47'40
2011/011/011	.005 0411 15 107.57		5 55 17	2011,011011011	.000 tui 10 j 17.24		3 .7 10

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minimum elong	-4058 Jul 10 j 17:21	14° I I50′52		max. Earth dist.	-4053 Dec 16 j 18:29	25°M00'05	6.05605 AU
max. Earth dist.	-4058 Jul 09 j 18:57		6.37865 AU	morning rise	-4053 Dec 29 j 12:45	28°M01'39	
morning rise	-4058 Jul 23 j 19:37	17° Ⅱ 42'50			-4052 Jan 06 j 22:34	0° ∡ ¹	
	-4058 Sep 25 j 01:58	0°9		retrograde	-4052 May 08 j 16:50	18° ∡ *01'25	
retrograde	-4058 Nov 21 j 05:32	4°9546'05		opposition	-4052 Jul 08 j 07:06	13° ∡ 00′22	
	-4057 Jan 19 j 09:08	30°RⅡ		min. Earth dist.	-4052 Jul 07 j 16:28	13° ∡ ¹05'13	4.02763 AU
opposition	-4057 Jan 20 j 07:30	29° I 52'45		direct	-4052 Sep 04 j 21:16	8° ∡ 107'13	
min. Earth dist.	-4057 Jan 21 j 04:48	29° Ⅱ 45'51	4.39145 AU	evening set	-4051 Jan 07 j 03:44	27° ∡ 19'35	
direct	-4057 Mar 23 j 17:36	24° Ⅱ 49'48			-4051 Jan 18 j 09:24	0° ප	
	-4057 May 24 j 12:35	0°€					
evening set	-4057 Jul 29 j 06:08	12°5643'37		conjunction	-4051 Jan 20 j 08:58	0°る28'22	
max. Earth dist.	-4057 Aug 09 j 13:24	15°©12'31	6.38834 AU	minimum elong	-4051 Jan 20 j 08:55	0° ප 28'20	
				max. Earth dist.	-4051 Jan 21 j 16:38		6.01415 AU
conjunction	-4057 Aug 11 j 02:33	15° © 32'59	1°16'02	morning rise	-4051 Feb 02 j 17:32	3° る 38'57	
minimum elong	-4057 Aug 11 j 02:31	15° © 32'57	1°16'11	retrograde	-4051 Jun 14 j 20:48	23° ප 57'15	
morning rise	-4057 Aug 23 j 19:46	18° © 20'51		opposition	-4051 Aug 13 j 22:01	18° ප 53'00	
	-4057 Oct 21 j 18:57	$0^{\circ}\Omega$		min. Earth dist.	-4051 Aug 12 j 19:37		4.01918 AU
retrograde	-4057 Dec 22 j 09:29	5° Ω 26'16		direct	-4051 Oct 10 j 23:12	13° る 57'55	
opposition	-4056 Feb 20 j 23:23	0° Ω 34'39	2°00'08		-4050 Jan 29 j 23:27	0° ≈	
min. Earth dist.	-4056 Feb 22 j 04:15	0° Ω 25′26	4.37338 AU	evening set	-4050 Feb 12 j 23:33	3°≈14'52	
	-4056 Feb 25 j 12:03	30° ₹ 5					
direct	-4056 Apr 23 j 13:57	25°533'40		conjunction	-4050 Feb 26 j 11:59	6° ≈ 25'37	
	-4056 Jun 19 j 07:49	$0^{\circ}\Omega$		minimum elong	-4050 Feb 26 j 11:58	6° ≈ 25'37	
evening set	-4056 Aug 28 j 09:25	13° Ω 31′04		max. Earth dist.	-4050 Feb 28 j 10:13	6°≈52'50	6.03854 AU
	-4056 Sep 04 j 01:18	15° Ω		morning rise	-4050 Mar 12 j 03:08	9° ≈ 37'41	
max. Earth dist.	-4056 Sep 08 j 05:15	15° Ω 55'52	6.34286 AU		-4050 Apr 04 j 15:51	15° ≈	
				retrograde	-4050 Jul 20 j 21:35	29° ≈ 34'14	
conjunction	-4056 Sep 09 j 23:29	16° Ω 19'30	1°23'00	min. Earth dist.	-4050 Sep 17 j 06:38	24° ≈ 38'58	4.07477 AU
minimum elong	-4056 Sep 09 j 23:30	16° Ω 19'30	1°23'08	opposition	-4050 Sep 18 j 11:39	24° ≈ 29'04	-1°58'56
morning rise	-4056 Sep 22 j 11:32	19° Ω 07'03		direct	-4050 Nov 15 j 18:06	19° ≈ 30'46	
	-4056 Nov 14 j 18:54	0° m)			-4049 Feb 10 j 17:19	0° ∀	
retrograde	-4055 Jan 22 j 19:17	6° Mp 38′44		evening set	-4049 Mar 21 j 22:05	8° ∺ 35'26	
opposition	-4055 Mar 24 j 17:18	1° m 47'01	1°53'34				
min. Earth dist.	-4055 Mar 25 j 23:26	1° ™ 37'27	4.30351 AU	conjunction	-4049 Apr 04 j 15:30	11°) 44′46	-1°10'09
	-4055 Apr 08 j 01:35	30° R €		minimum elong	-4049 Apr 04 j 15:33	11°) 44'49	1°10'12
direct	-4055 May 25 j 22:30	26° Ω 48'46		max. Earth dist.	-4049 Apr 06 j 08:26	12° ₩ 08'20	6.11982 AU
	-4055 Jul 11 j 21:21	0° m)		morning rise	-4049 Apr 18 j 10:16	14°) ₹ 54'33	
evening set	-4055 Sep 28 j 15:21	14° m 59'15			-4049 Jul 03 j 19:35	0 ° $\mathbf{\gamma}$	
max. Earth dist.	-4055 Oct 09 j 15:45	17° m 29'55	6.25411 AU	retrograde	-4049 Aug 24 j 01:53	3° Y 59'34	
					-4049 Oct 14 j 14:15	30° ₹ ₩	
conjunction	-4055 Oct 11 j 03:56	17° ™ 50'36	1°05'51	opposition	-4049 Oct 22 j 11:26	28° ¥ 56′03	-1°20'21
minimum elong	-4055 Oct 11 j 03:59	17° m 50'38	1°05'53	min. Earth dist.	-4049 Oct 21 j 14:19	29° ₭ 03'15	4.17265 AU
morning rise	-4055 Oct 23 j 16:08	20° Mp 41'55		direct	-4049 Dec 20 j 16:51	23° ¥ 54'39	
	-4055 Dec 06 j 02:37	0∘ ⊽			-4048 Feb 23 j 16:14	0 ° $\mathbf{\Upsilon}$	
retrograde	-4054 Feb 25 j 19:15	8° ≏ 59'17		evening set	-4048 Apr 25 j 20:23	12° Ƴ 35'58	
opposition	-4054 Apr 27 j 22:41	4° £ 05'34	1°12'06				
min. Earth dist.	-4054 Apr 28 j 18:39	3° ჲ 59'12	4.20092 AU	conjunction	-4048 May 09 j 14:35	15° Ƴ 41′03	
	-4054 Jun 04 j 22:32	30°R, Mp		minimum elong	-4048 May 09 j 14:38		0°34'07
direct	-4054 Jun 28 j 02:04	29° m 10'09		max. Earth dist.	-4048 May 10 j 14:23	15° Y 54'26	6.22716 AU
	-4054 Jul 21 j 04:27	0∘ ⊽		morning rise	-4048 May 23 j 07:37	18° Ƴ 45'25	
evening set	-4054 Oct 30 j 19:31	17° ≏ 41'03			-4048 Jul 17 j 03:39	$0^{\circ}S$	
				retrograde	-4048 Sep 24 j 12:13	6° 8 52'34	
conjunction	-4054 Nov 12 j 11:22	20° ≏ 38'15	0°27'36	opposition	-4048 Nov 22 j 23:06	1° 8 52'35	-0°17'19
minimum elong	-4054 Nov 12 j 11:24	20° ≏ 38'16	0°27'33	min. Earth dist.	-4048 Nov 22 j 15:44		4.27861 AU
max. Earth dist.	-4054 Nov 11 j 17:54	20° ≏ 28'02	6.14722 AU		-4048 Dec 07 j 07:22	30° ₹Ƴ	
morning rise	-4054 Nov 25 j 04:21	23° ≏ 36'17		direct	-4047 Jan 22 j 10:49	26° Ƴ 49'18	
	-4054 Dec 23 j 13:09	0°M		asc. node	-4047 Mar 04 j 05:50	29° Ƴ 17'56	
retrograde	-4053 Apr 02 j 16:30	12°M48'46			-4047 Mar 10 j 00:13	$_{0\circ}$ 8	
opposition	-4053 Jun 02 j 15:34	7°M51'42	0°04'38		-4047 May 29 j 17:44	15° 8	
min. Earth dist.	-4053 Jun 02 j 20:06	7°M50'14	4.09700 AU	evening set	-4047 May 30 j 05:40	15° 8 06'32	
desc. node	-4053 Jun 27 j 13:43	4°M51'53					
direct	-4053 Aug 01 j 11:51	2°M58'18		conjunction	-4047 Jun 12 j 18:36	18° 8 05'28	0°11'37
	-4053 Nov 03 j 11:15	15° M ₊		minimum elong	-4047 Jun 12 j 18:36	18° 8 05'28	0°11'44
evening set	-4053 Dec 03 j 14:05	21°M52'25		behind sun begin	-4047 Jun 12 j 12:53	18° 8 02'20	
				behind sun end	-4047 Jun 13 j 00:18	18° 8 08'36	
conjunction	-4053 Dec 16 j 12:00	24°M56'14		max. Earth dist.	-4047 Jun 12 j 16:09	18° 8 04'07	6.32408 AU
minimum elong	-4053 Dec 16 j 11:58	24°M56'13	0°21'26	morning rise	-4047 Jun 26 j 05:03	21° 8 03'00	

•	nical year style is used: Th		•	` //		, .	150 32
ŕ	-4047 Aug 08 j 12:02	J°0 II°0		direct	-4041 Aug 06 j 07:53	7°ML55'51	
retrograde	-4047 Oct 25 j 17:45	8° Ⅱ 25'57			-4041 Oct 14 j 14:21	15° M ₊	
opposition	-4047 Dec 24 j 11:27	3° Ⅱ 29′51	0°48'17	evening set	-4041 Dec 08 j 10:57	26°M53'13	
min. Earth dist.	-4047 Dec 24 j 20:19	3° Ⅱ 26′56	4.35920 AU				
	-4046 Jan 22 j 23:28	30°₽ ႘		conjunction	-4041 Dec 21 j 09:52	29°M57'55	-0°28'03
direct	-4046 Feb 24 j 04:19	28° 8 26'07		minimum elong	-4041 Dec 21 j 09:49	29°M57'53	0°28'12
	-4046 Mar 28 j 18:20	Π $^{\circ}0$			-4041 Dec 21 j 13:22	0° ∡ ¹	
evening set	-4046 Jul 02 j 01:15	16° Ⅱ 26′22		max. Earth dist.	-4041 Dec 21 j 20:07	0° ≯ 04'01	6.04585 AU
max. Earth dist.	-4046 Jul 14 j 06:12	19° Ⅱ 06'31	6.38194 AU	morning rise	-4040 Jan 03 j 11:37	3° ∡ 04'14	
				retrograde	-4040 May 13 j 22:50	23° ∡ 09'18	
conjunction	-4046 Jul 15 j 05:30	19° Ⅱ 19'17	0°52'43	opposition	-4040 Jul 13 j 10:52	18° ∡ 07'44	-1°16'06
minimum elong	-4046 Jul 15 j 05:26	19° Ⅱ 19'15	0°52'54	min. Earth dist.	-4040 Jul 12 j 18:55	18° ∡ 13′03	4.02096 AU
morning rise	-4046 Jul 28 j 06:12	22° Ⅱ 10′30		direct	-4040 Sep 09 j 22:48	13° ⊀ 14'26	
	-4046 Sep 03 j 22:04	0 \circ			-4039 Jan 01 j 16:56	0°ಕ	
retrograde	-4046 Nov 25 j 13:26	9° © 12'50		evening set	-4039 Jan 12 j 06:30	2° る 29'07	
opposition	-4045 Jan 24 j 18:03	4° © 19'49	1°38'34				
min. Earth dist.	-4045 Jan 25 j 15:39	4°9512'50	4.39183 AU	conjunction	-4039 Jan 25 j 12:50	5°₹38'30	
	-4045 Mar 06 j 09:47	30°R∏		minimum elong	-4039 Jan 25 j 12:47	5° そ 38′28	
direct	-4045 Mar 28 j 04:55	29° Ⅱ 17'07		max. Earth dist.	-4039 Jan 26 j 23:38	5° ⋜ 59'14	6.01149 AU
	-4045 Apr 19 j 05:06	0 \circ		morning rise	-4039 Feb 07 j 22:28	8° ろ 49'38	
evening set	-4045 Aug 02 j 16:31	17° © 10'47		retrograde	-4039 Jun 20 j 01:39	29° る 08'12	
max. Earth dist.	-4045 Aug 13 j 20:47	19° © 38'18	6.38550 AU	min. Earth dist.	-4039 Aug 17 j 20:35		4.02112 AU
				opposition	-4039 Aug 19 j 00:13	24° る 03'43	-1°58'29
conjunction	-4045 Aug 15 j 11:40	19° © 59'45	1°18'24	direct	-4039 Oct 16 j 00:07	19° る 08'17	
minimum elong	-4045 Aug 15 j 11:37	19° © 59'44	1°18'34		-4038 Jan 11 j 16:06	0° ≈	
morning rise	-4045 Aug 28 j 03:59	22°5547'20		evening set	-4038 Feb 18 j 05:23	8° ≈ 25'28	
	-4045 Oct 01 j 10:31	$0^{\circ}\Omega$					
retrograde	-4045 Dec 26 j 22:11	9° Ω 54'50	••••	conjunction	-4038 Mar 03 j 18:36	11°≈36'19	
opposition	-4044 Feb 25 j 12:48	5° Ω 03'17		minimum elong	-4038 Mar 03 j 18:36	11°≈36′20	
min. Earth dist.	-4044 Feb 26 j 18:59	4° Ω 53'39	4.36737 AU	max. Earth dist.	-4038 Mar 05 j 15:59	12°≈02'59	6.04464 AU
direct	-4044 Apr 28 j 04:14	0° Ω 02'37		morning rise	-4038 Mar 17 j 10:39	14°≈48'27	
. ,	-4044 Aug 19 j 01:02	15° Ω			-4038 Mar 18 j 06:30	15° ≈	
evening set	-4044 Sep 01 j 18:36	18° Ω 00'50	6 22200 ATT		-4038 May 31 j 00:58	0° ∀	
max. Earth dist.	-4044 Sep 12 j 14:14	20°8625'52	6.33388 AU	retrograde	-4038 Jul 25 j 20:32	4°) (40′12	
:	4044 C 14:00.12	200 0 40124	1922/02	min. Earth dist.	-4038 Sep 20 j 09:05	30°R≈	4.08441 AU
conjunction	-4044 Sep 14 j 08:13	20° Ω 49'24			-4038 Sep 22 j 05:21	29°≈44°53 29°≈35'06	
minimum elong	-4044 Sep 14 j 08:14 -4044 Sep 26 j 19:53	20°Ω49'25 23°Ω37'11	1°22'08	opposition	-4038 Sep 23 j 09:59		-1-3343
morning rise	1 3	0° m)		direct	-4038 Nov 20 j 18:33	24°≈36'21	
natra ana da	-4044 Oct 26 j 09:47 -4043 Jan 27 j 10:06			avanina aat	-4037 Jan 19 j 11:01	0° ∺ 13° ∺ 39'02	
retrograde opposition	-4043 Mar 29 j 10:27	11° Mp 13'44 6° Mp 21'48	1°49'43	evening set	-4037 Mar 27 j 02:37	13 X 39 02	
min. Earth dist.	-4043 Mar 30 j 14:50	6° M) 12'47	4.29196 AU	agnismation	-4037 Apr 09 j 20:39	16° ¥ 48'04	1906!11
direct	-4043 May 30 j 12:13	1°My 23'57	4.29190 AU	conjunction minimum elong	-4037 Apr 09 j 20:43	16° X 48'04	
evening set	-4043 Oct 03 j 02:07	19° Mp 36'28		max. Earth dist.	-4037 Apr 09 j 20:43	10 X 4800	
max. Earth dist.	-4043 Oct 14 j 05:04	22° Mp 09'02	6.24091 AU	morning rise	-4037 Apr 23 j 15:23	17 X 1137	0.13237 AU
max. Latin dist.	-4043 Oct 14 j 03.04	22 11/0902	0.24091 AU	morning risc	-4037 Apr 23 j 15:23	0° Υ	
conjunction	-4043 Oct 15 j 14:51	22° m 28'24	1°01'35	retrograde	-4037 Aug 28 j 20:04	8° Y 54'35	
minimum elong	-4043 Oct 15 j 14:54	22° m) 28'26	1°01'35 1°01'36	min. Earth dist.	-4037 Aug 28 j 20.04 -4037 Oct 26 j 09:09	8 1 34 33 3° Υ 58'15	4.18733 AU
morning rise	-4043 Oct 28 j 03:22	25° m/20'26	1 01 30	opposition	-4037 Oct 20 j 09:09	3° Υ 51'32	
morning risc	-4043 Nov 17 j 23:41	0° ⊽		opposition	-4037 Nov 28 j 20:24	30°R ∺	-1 12 19
retrograde	-4042 Mar 02 j 18:20	0 = 13° Ω 44'49		direct	-4037 Nov 28 j 20:24 -4037 Dec 25 j 14:12	28° ∺ 49'53	
opposition	-4042 May 02 j 20:41	8° ⊆ 50'44	1°03'50	direct	-4036 Jan 21 j 16:05	0° Υ	
min. Earth dist.	-4042 May 03 j 15:53	8° - 3044'36	4.18663 AU	evening set	-4036 Apr 30 j 20:48	17° Y 27'40	
direct	-4042 Jul 02 j 21:10	3° ≏ 55'39	4.10003 710	evening set	4030 Apr 30 J 20.40	17 127 40	
evening set	-4042 Nov 04 j 10:20	22° ≏ 29'31		conjunction	-4036 May 14 j 14:25	20° Ƴ 31'54	-0°27'53
max. Earth dist.	-4042 Nov 16 j 11:23	25° Ω 18'34	6.13314 AU	minimum elong	-4036 May 14 j 14:28	20° Υ 31'55	
dist.				max. Earth dist.	-4036 May 15 j 10:46	20° Υ 43'17	6.24296 AU
conjunction	-4042 Nov 17 j 02:51	25° ≏ 27'37	0°21'03	morning rise	-4036 May 28 j 06:56	23° Y 35'20	J.2 /2/0 /10
minimum elong	-4042 Nov 17 j 02:52	25° ⊆ 27'38	0°20'58		-4036 Jun 27 j 02:06	0° 8	
morning rise	-4042 Nov 29 j 20:54	28° Ω 26'43		retrograde	-4036 Sep 28 j 23:36	11° 8 34'35	
	-4042 Dec 06 j 13:46	0°M		opposition	-4036 Nov 27 j 12:06	6° 8 35'06	-0°07'41
	-4041 Feb 23 j 16:34	15° ™		min. Earth dist.	-4036 Nov 27 j 06:23	6° 8 37'01	4.29443 AU
retrograde	-4041 Apr 07 j 18:39	17°M46'41		asc. node	-4035 Jan 11 j 12:17	1° 8 55'16	,, 110
desc. node	-4041 May 07 j 14:02	16°M24'59		direct	-4035 Jan 27 j 04:42	1° 8 31'41	
	-4041 May 21 j 07:56	15°RM.		-	-4035 May 12 j 19:13	15° 8	
opposition	-4041 Jun 07 j 17:31	12°M49'05	-0°05'49	evening set	-4035 Jun 03 j 23:42	19° 8 44'53	
min. Earth dist.	-4041 Jun 07 j 18:41		4.08432 AU	<i>5</i>	j2		

•	-		•		4036 BCE in historical c		ge 33
conjunction	-4035 Jun 17 j 11:37	22° 8 42'44		min. Earth dist.	-4029 Jun 12 j 16:51		4.06719 AU
minimum elong	-4035 Jun 17 j 11:35	22° 8 42'43	0°18'06	iiiii. Latui uist.	-4029 Jul 12 j 10:31	17 11040 33 15°RM	4.00/19 AU
max. Earth dist.	-4035 Jun 17 j 07:50	22° 8 40'40	6.33899 AU	direct	-4029 Aug 11 j 03:25	13 KIIL 12°ML47'20	
morning rise	-4035 Jun 30 j 20:33	25° 8 39'04	0.55699 AU	direct	-4029 Sep 17 j 06:03	15°M	
morning risc	-4035 Jul 21 j 03:08	23 О 39 04			-4029 Dec 05 j 12:14	13 IIC 0° ∕ 7	
retrograde	-4035 Oct 30 j 01:21	12° ∏ 56'02		evening set	-4029 Dec 13 j 06:49	1° ∡ ¹50'00	
opposition	-4035 Dec 28 j 21:24	8° П 00'26	0°56'32	evening set	-4029 DCC 13 J 00.49	1 🗴 30 00	
min. Earth dist.	-4035 Dec 29 j 07:36	7° П 57'05	4.37219 AU	conjunction	-4029 Dec 26 j 06:56	4° ∡ ¹55'51	-0°34'26
direct	-4034 Feb 28 j 18:20	2° П 56'48	4.37219 AU	minimum elong	-4029 Dec 26 j 06:53	4° × 55'49	0°34'35
evening set	-4034 Jul 06 j 13:01	20°II53'23		max. Earth dist.	-4029 Dec 26 j 20:47	5° √ 04'07	6.03103 AU
evening set	-4034 Jul 00 J 13.01	20 1133 23		morning rise	-4028 Jan 08 j 09:57	8° ∡ 03′23	0.03103 AU
conjunction	-4034 Jul 19 j 15:41	23° Ⅱ 45'17	0°57'21	retrograde	-4028 May 19 j 04:29	28° × 15'15	
minimum elong	-4034 Jul 19 j 15:37		0°57'32	opposition	-4028 Jul 18 j 13:46	23°×13'15	1024100
max. Earth dist.	-4034 Jul 18 j 12:45	23° I I30'32	6.39178 AU	min. Earth dist.	-4028 Jul 17 j 19:26	23°×1513	4.01032 AU
morning rise	-4034 Aug 01 j 15:08	26° II 35'33	0.39176 AU	direct	-4028 Sep 14 j 21:29	18° x 1921	4.01032 AU
morning rise	-4034 Aug 17 j 11:58	20 π 33 33		direct	-4028 Dec 15 j 00:10	0° ろ	
retrograde	-4034 Nov 29 j 20:25	13°935'02		evening set	-4027 Jan 17 j 09:54	7°る38'28	
Č	v	8°9542'16	1042125	evening set	-402/Jan 1/J 09.34	/ 03828	
opposition	-4033 Jan 29 j 02:53 -4033 Jan 30 j 02:36	8°934'37	1°43'25	:	4007 I 20 : 17.17	100=40125	1011127
min. Earth dist.	,		4.39802 AU	conjunction	-4027 Jan 30 j 17:17	10°る48'35	
direct	-4033 Apr 01 j 16:54	3°539'42		minimum elong	-4027 Jan 30 j 17:14	10°る48'33	
evening set	-4033 Aug 06 j 23:32	21°531'11	6 00 000 4 4 4	max. Earth dist.	-4027 Feb 01 j 05:47	11°る10'21	6.00578 AU
max. Earth dist.	-4033 Aug 18 j 02:30	23° © 57'58	6.38737 AU	morning rise	-4027 Feb 13 j 04:10	14° る 00'29	
	1000 1 10:17.10	24001010	1000110		-4027 May 02 j 11:10	0° ≈	
conjunction	-4033 Aug 19 j 17:43			retrograde	-4027 Jun 25 j 05:44	4°≈20'11	
minimum elong	-4033 Aug 19 j 17:42	24°519'35	1°20'23		-4027 Aug 18 j 15:08	30°₹₹	
morning rise	-4033 Sep 01 j 08:52	27°506'40		min. Earth dist.	-4027 Aug 22 j 21:43	29° る 25'18	4.02109 AU
	-4033 Sep 14 j 16:22	0 ° Ω		opposition	-4027 Aug 24 j 02:51	29° る 15'24	-2°00'52
retrograde	-4033 Dec 31 j 04:37	14° Ω 14'52		direct	-4027 Oct 21 j 02:14	24° る 19'30	
opposition	-4032 Feb 29 j 22:22	9° Ω 23'21	2°01'40		-4027 Dec 20 j 17:03	0° ≈	
min. Earth dist.	-4032 Mar 02 j 04:34	9° Ω 13'44	4.36480 AU	evening set	-4026 Feb 23 j 12:20	13° ≈ 37′28	
direct	-4032 May 02 j 13:01	4° Ω 22'59			-4026 Mar 01 j 09:33	15° ≈	
	-4032 Aug 02 j 11:25	15° Ω					
evening set	-4032 Sep 05 j 23:48	22° Ω 21′02		conjunction	-4026 Mar 09 j 02:41	16° ≈ 48′31	
max. Earth dist.	-4032 Sep 16 j 17:51	24° Ω 45'30	6.32691 AU	minimum elong	-4026 Mar 09 j 02:42	16° ≈ 48′32	1°21'48
		_		max. Earth dist.	-4026 Mar 11 j 02:40	17° ≈ 16'40	6.05034 AU
conjunction	-4032 Sep 18 j 12:49	25° Ω 09'38	1°20'35	morning rise	-4026 Mar 22 j 19:19	20° ≈ 00'39	
minimum elong	-4032 Sep 18 j 12:51	25° Ω 09'39	1°20'41		-4026 May 07 j 08:49	0° ∀	
morning rise	-4032 Oct 01 j 00:20	27° Ω 57'37		retrograde	-4026 Jul 30 j 21:22	9°) 47′03	
	-4032 Oct 10 j 04:58	0° ™		min. Earth dist.	-4026 Sep 27 j 04:44		4.09498 AU
retrograde	-4031 Jan 31 j 23:22	15° m 38'38		opposition	-4026 Sep 28 j 08:46	4°) 42′02	-1°51'34
opposition	-4031 Apr 02 j 23:39	10° Mp 46'31	1°45'20		-4026 Nov 12 j 21:02	30° ₹ ≈	
min. Earth dist.	-4031 Apr 04 j 04:56	10° m 37'12	4.28068 AU	direct	-4026 Nov 25 j 19:49	29° ≈ 42'51	
direct	-4031 Jun 03 j 24:00	5° m 48'55			-4026 Dec 08 j 20:23	0° ∀	
evening set	-4031 Oct 07 j 08:41	24°M 03'35		evening set	-4025 Apr 01 j 08:00	18°) (42′52	
conjunction	-4031 Oct 19 j 21:47	26° Mp 56'16	0°57'05	conjunction	-4025 Apr 15 j 02:14	21° 米 51′24	-1°01'40
minimum elong	-4031 Oct 19 j 21:50	26° Mp 56'17	0°57'07	minimum elong	-4025 Apr 15 j 02:18	21° ¥ 51′27	
max. Earth dist.	-4031 Oct 18 j 12:44	26° Mp 37'15	6.22635 AU	max. Earth dist.	-4025 Apr 16 j 17:15	22°) 13′42	6.14688 AU
morning rise	-4031 Nov 01 j 10:49	29° m 49'08		morning rise	-4025 Apr 28 j 21:10	25° ∺ 00'02	
	-4031 Nov 02 j 05:50	0∘ ⊽			-4025 May 21 j 09:50	0° Y	
retrograde	-4030 Mar 07 j 11:51	18° ≏ 21'11		retrograde	-4025 Sep 02 j 11:59	13° Y 48'38	
opposition	-4030 May 07 j 14:46	13° ≏ 26'42	0°55'27	opposition	-4025 Oct 31 j 22:10	8° Y 45'55	-1°03'45
min. Earth dist.	-4030 May 08 j 07:53	13° ≏ 21'13	4.16969 AU	min. Earth dist.	-4025 Oct 31 j 03:10	8° Ƴ 52'22	4.20352 AU
direct	-4030 Jul 07 j 09:33	8° ≏ 31'54		direct	-4025 Dec 30 j 11:28	3° Y 43'53	
evening set	-4030 Nov 08 j 22:24	27° ₽ 10'05		evening set	-4024 May 05 j 20:30	22° Y 17'30	
	-4030 Nov 20 j 23:55	0° M					
				conjunction	-4024 May 19 j 13:40	25° Y 20'49	-0°21'24
conjunction	-4030 Nov 21 j 15:42	0°M09'17	0°14'35	minimum elong	-4024 May 19 j 13:42	25° Y 20'50	0°21'19
minimum elong	-4030 Nov 21 j 15:43	0° ™ 09'18	0°14'30	max. Earth dist.	-4024 May 20 j 07:21	25° Y 30'41	6.25959 AU
behind sun begin	-4030 Nov 21 j 11:57	0°M07'06		morning rise	-4024 Jun 02 j 05:16	28° Y 23'10	
behind sun end	-4030 Nov 21 j 19:30	0°M11'30			-4024 Jun 09 j 13:09	0°8	
max. Earth dist.	-4030 Nov 21 j 02:38	0°M01'36	6.11541 AU		-4024 Sep 05 j 14:30	15° 8	
morning rise	-4030 Dec 04 j 10:46	3°M09'37		retrograde	-4024 Oct 03 j 12:01	16° 8 14'35	
C							
S	-4029 Jan 28 j 13:31	15° M ₊			-4024 Oct 31 j 04:35	15° ₹ 8	
desc. node	-4029 Jan 28 j 13:31 -4029 Mar 19 j 10:40	15°M 21°M43'10		asc. node	-4024 Oct 31 j 04:35 -4024 Nov 20 j 06:24	15° R8 12° 8 48'19	
_	-			asc. node opposition			0°02'01
desc. node	-4029 Mar 19 j 10:40	21°M43'10	-0°15'56		-4024 Nov 20 j 06:24	12° 8 48'19	0°02'01 4.30964 AU

Attention, astronomical year style is used: The year -4023 in astronomical counting style is the year 4024 BCE in historical counting style.								
direct	-4023 Jan 31 j 22:49	6° 8 12'09		max. Earth dist.	-4018 Nov 26 j 02:41		6.09967 AU	
	-4023 Apr 24 j 02:06	15° 8		morning rise	-4018 Dec 09 j 07:34	8°M10'33		
evening set	-4023 Jun 08 j 17:07	24° 8 21'40		-	-4017 Jan 08 j 09:11	15° M ₊		
				desc. node	-4017 Jan 26 j 08:47	18°M42'40		
conjunction	-4023 Jun 22 j 03:46	27° 8 18'31	0°24'16	retrograde	-4017 Apr 18 j 03:40	27°M47'29		
minimum elong	-4023 Jun 22 j 03:44	27° 8 18'30	0°24'25	opposition	-4017 Jun 17 j 22:51	22°M48'51	-0°26'35	
max. Earth dist.	-4023 Jun 21 j 19:48		6.35131 AU	min. Earth dist.	-4017 Jun 17 j 19:32	22°M49'56	4.05495 AU	
	-4023 Jul 04 j 10:11	Π $^{\circ}$ 0		direct	-4017 Aug 16 j 04:07	17°M55'51		
morning rise	-4023 Jul 05 j 11:28	0° Ⅱ 13'48			-4017 Nov 17 j 17:38	0° ∡ ¹		
retrograde	-4023 Nov 03 j 09:46	17° Ⅱ 26'11		evening set	-4017 Dec 18 j 08:33	7° ∡ 701'41		
opposition	-4022 Jan 02 j 07:43	12° Ⅱ 31'03	1°04'35					
min. Earth dist.	-4022 Jan 02 j 19:59	12° Ⅱ 27'02	4.38090 AU	conjunction	-4017 Dec 31 j 09:33	10° ∡ 708'18		
direct	-4022 Mar 05 j 07:52	7° I I27'27		minimum elong	-4017 Dec 31 j 09:30	10° ∡ 708'16		
evening set	-4022 Jul 11 j 01:21	25° Ⅱ 22'11	C 20C11 ATT	max. Earth dist.	-4016 Jan 01 j 02:41	10° ₹ 18'32	6.02342 AU	
max. Earth dist.	-4022 Jul 22 j 22:16	2/°Щ3/′44	6.39611 AU	morning rise	-4016 Jan 13 j 13:48	13°♂16'41 0°る		
conjunction	-4022 Jul 24 j 02:46	28° Ⅱ 13'22	1°01'47	retrograde	-4016 Apr 06 j 01:10 -4016 May 24 j 12:10	3° る 31'58		
minimum elong	-4022 Jul 24 j 02:40	28° I 13'20	1°01'47 1°01'57	renograde	-4016 Jul 12 j 09:08	30°R. ✓		
minimum ciong	-4022 Jul 24 j 02.43 -4022 Aug 01 j 05:28	28 ப 13 20	1 01 37	opposition	-4016 Jul 23 j 20:13	28° ∡ 129'25	1021151	
morning rise	-4022 Aug 01 j 03:28	1°902'53		min. Earth dist.	-4016 Jul 22 j 23:05		4.00853 AU	
retrograde	-4022 Aug 00 j 00:43	18°901'41		direct	-4016 Sep 20 j 01:57	23° x 35'42	4.00033 AC	
opposition	-4021 Feb 02 j 13:41	13°909'15	1°47'56	direct	-4016 Nov 23 j 17:23	0°る		
min. Earth dist.	-4021 Feb 03 j 14:46	13° 5 07'13	4.39783 AU	evening set	-4015 Jan 22 j 16:09	00 12°る54'47		
direct	-4021 Apr 06 j 04:49	8°906'59	, 700 110	evening see	1012 van 22 j 10.09	12 00		
evening set	-4021 Aug 11 j 09:03	25°958'31		conjunction	-4015 Feb 05 j 00:41	16° පි 05'10	-1°14'54	
max. Earth dist.	-4021 Aug 22 j 08:06	28°523'28	6.38241 AU	minimum elong	-4015 Feb 05 j 00:39	16° පි 05'09		
	ũ ,			max. Earth dist.	-4015 Feb 06 j 17:36	16° පි 29'31	6.00995 AU	
conjunction	-4021 Aug 24 j 02:08	28°5946'43	1°21'43	morning rise	-4015 Feb 18 j 12:20	19° ට 17'12		
minimum elong	-4021 Aug 24 j 02:07	28°5946'42	1°21'52		-4015 Apr 07 j 22:38	0° ≈		
	-4021 Aug 29 j 14:42	$0^{\circ}\Omega$		retrograde	-4015 Jun 30 j 10:18	9° ≈ 33'26		
morning rise	-4021 Sep 05 j 16:39	1° Ω 33'41		min. Earth dist.	-4015 Aug 28 j 00:07	4° ≈ 38'21	4.03093 AU	
	-4021 Nov 15 j 05:03	15° Ω		opposition	-4015 Aug 29 j 05:24	4° ≈ 28'24	-2°02'19	
retrograde	-4020 Jan 04 j 18:25	18° Ω 45'10			-4015 Oct 09 j 18:58	30°Ŗる		
	-4020 Feb 25 j 18:16	15°R Ω		direct	-4015 Oct 26 j 05:47	29° る 32'03		
opposition	-4020 Mar 05 j 12:35	13° Ω 53'42	2°01'30		-4015 Nov 11 j 17:28	0° ≈		
min. Earth dist.	-4020 Mar 06 j 19:55	13° Ω 43'43	4.35542 AU		-4014 Feb 12 j 06:40	15° ≈		
direct	-4020 May 07 j 02:30	8° Ω 53'39		evening set	-4014 Feb 28 j 18:32	18° ≈ 47'06		
	-4020 Jul 13 j 06:23	15° Ω						
evening set	-4020 Sep 10 j 09:17	26° £ 53'41		conjunction	-4014 Mar 14 j 09:28	21°≈57'47		
max. Earth dist.	-4020 Sep 21 j 04:34	29° Ω 19'16	6.31388 AU	minimum elong	-4014 Mar 14 j 09:30	21°≈57'48	1°20'37	
	4020 G 22 : 22 11	200 0 42144	1010120	max. Earth dist.	-4014 Mar 16 j 08:42	22°≈25'22	6.06460 AU	
conjunction	-4020 Sep 22 j 22:11	29° Ω 42'44	1°18'39	morning rise	-4014 Mar 28 j 02:46	25°≈09'29		
minimum elong	-4020 Sep 22 j 22:13 -4020 Sep 24 j 04:49	29° Ω 42'45 0° m	1°18'44		-4014 Apr 18 j 10:38	0° \ 14° \ 47'16		
morning rise	-4020 Sep 24 j 04.49 -4020 Oct 05 j 09:29	2°Mp31'11		retrograde min. Earth dist.	-4014 Aug 04 j 16:16 -4014 Oct 02 j 00:40		4.11210 AU	
retrograde	-4019 Feb 05 j 17:28	20° Mp 18'49		opposition	-4014 Oct 02 j 00:40	9° X 42'23		
opposition	-4019 Apr 07 j 18:54	15° Mp 26'31	1°40'08	direct	-4014 Nov 30 j 18:39	4°)(42'41	-1 4040	
min. Earth dist.	-4019 Apr 08 j 22:42	15° m) 17'40	4.26486 AU	evening set	-4013 Apr 06 j 09:36	23°) € 37'57		
direct	-4019 Jun 08 j 14:47	10° m/29'22	1.20 100 110	evening sec	1015 11p1 00 j 05.50	25 7(5757		
evening set	-4019 Oct 11 j 21:41	28° m/47'35		conjunction	-4013 Apr 20 j 03:59	26°) 45'44	-0°56'53	
	-4019 Oct 17 j 03:47	0∘ ⊽		minimum elong	-4013 Apr 20 j 04:03	26°) 45'46	0°56'54	
max. Earth dist.	-4019 Oct 23 j 03:36	1° £ 22'57	6.20915 AU	max. Earth dist.	-4013 Apr 21 j 16:11	27° ¥ 06′20	6.16543 AU	
	J			morning rise	-4013 May 03 j 22:39	29° ¥ 53'25		
conjunction	-4019 Oct 24 j 11:04	1° ≏ 41'07	0°51'59	-	-4013 May 04 j 10:20	0° Y		
minimum elong	-4019 Oct 24 j 11:07	1° ≏ 41'09	0°51'59	retrograde	-4013 Sep 07 j 02:12	18° Ƴ 32'32		
morning rise	-4019 Nov 06 j 00:50	4° ≙ 35'02		opposition	-4013 Nov 05 j 11:43	13° Y 30'17	-0°55'04	
retrograde	-4018 Mar 12 j 14:55	23° ≏ 15'44		min. Earth dist.	-4013 Nov 04 j 19:44	13° Y 35'42	4.22145 AU	
opposition	-4018 May 12 j 16:06	18° ≏ 20'50	0°46'07	direct	-4012 Jan 04 j 06:46	8° Ƴ 27'55		
min. Earth dist.	-4018 May 13 j 07:33	18° ≏ 15'52	4.15229 AU	evening set	-4012 May 10 j 15:59	26° Ƴ 57'05		
direct	-4018 Jul 12 j 06:33	13° ≏ 26′20						
	-4018 Nov 04 j 11:44	0°M₊		conjunction	-4012 May 24 j 08:33	29° Y ′59'28		
evening set	-4018 Nov 13 j 17:09	2°M08'45		minimum elong	-4012 May 24 j 08:34	29° Y ′59′29	0°14'56	
	40403-			behind sun begin	-4012 May 24 j 05:50	29° Y ′57′58		
conjunction	-4018 Nov 26 j 11:28	5°M09'03	0°07'36	behind sun end	-4012 May 24 j 11:18	0° 8 00'59		
minimum elong	-4018 Nov 26 j 11:28	5°M09'04	0°07'31	p a v	-4012 May 24 j 09:30	0°8	(27540 + **	
behind sun begin	-4018 Nov 26 j 04:08	5°M04'45		max. Earth dist.	-4012 May 24 j 22:32		6.27549 AU	
behind sun end	-4018 Nov 26 j 18:48	5° ™ 13′22		morning rise	-4012 Jun 06 j 23:15	3° 8 00'47		

Attention, astronomical year style is used: The year -4012 in astronomical counting style is the year 4013 BCE in historical counting style. -4012 Aug 05 j 22:07 15°8 evening set -4006 Nov 18 j 13:38 7°**ጤ**10'10 -4012 Sep 30 j 13:38 20°839'58 asc. node -4012 Oct 07 j 19:17 20°845'09 -4006 Dec 01 j 08:38 10°M11'21 0°00'27 retrograde conjunction -4012 Dec 06 j 09:57 -4006 Dec 01 j 08:38 0°00'21 15°**8**46'47 0°11'20 10°M11'21 opposition minimum elong -4012 Dec 06 j 08:39 -4006 Dec 01 j 00:35 min. Earth dist. 15°**8**47'13 4.32236 AU behind sun begin 10°M06'37 -4012 Dec 12 j 07:04 -4006 Dec 01 j 16:41 15°R₩ behind sun end 10°M16'05 -4011 Feb 05 j 11:08 direct 10°**8**43'06 max. Earth dist. -4006 Dec 01 j 02:52 10°M07'58 6.08746 AU -4011 Apr 01 j 13:18 15°8 desc. node -4006 Dec 04 j 20:56 11°ML01'13 evening set -4011 Jun 13 j 07:04 28°**8**50'04 morning rise -4006 Dec 14 j 05:56 13°M13'52 -4011 Jun 18 j 15:10 $0^{\circ}\Pi$ -4006 Dec 21 j 19:36 15°M -4005 Mar 10 j 02:12 0°×7 -4011 Jun 26 j 16:30 1°II46'04 0°30'13 -4005 Apr 23 j 10:06 conjunction retrograde 2°**х** 57′05 -4011 Jun 26 j 16:28 -4005 Jun 07 j 04:43 minimum elong 1°**I**I46′02 0°30′22 30°RML max. Earth dist. -4011 Jun 26 j 04:37 1°**Ⅲ**39'33 6.35990 AU opposition -4005 Jun 23 j 04:45 27°M57'51 -0°37'04 morning rise -4011 Jul 09 j 22:54 4°**Ⅱ**40′28 min. Earth dist. -4005 Jun 22 j 22:07 28°M00'02 4.04682 AU retrograde -4011 Nov 07 j 17:52 21°**Ⅱ**49'50 direct -4005 Aug 21 j 06:27 23°M04'53 opposition -4010 Jan 06 j 15:58 16°**Ⅲ**55'12 1°12'03 -4005 Oct 28 j 05:27 0°**⊼** min. Earth dist. -4010 Jan 07 j 07:11 16°**Ⅲ**50′14 4.38493 AU evening set -4005 Dec 23 j 10:28 12°**∡**12'32 direct -4010 Mar 09 j 19:23 11°**II**51'43 evening set -4010 Jul 15 j 11:30 29°**II**46'03 conjunction -4004 Jan 05 j 12:37 15°**х** 19'45 -0°47'03 -4010 Jul 16 j 13:09 0ಂತಾ minimum elong -4004 Jan 05 j 12:34 15°**х** 19'43 0°47'13 max. Earth dist. -4010 Jul 27 i 03:38 2°9519'10 6.39501 AU max. Earth dist. -4004 Jan 06 j 11:03 15°**₹**33'09 6.02000 AU morning rise -4004 Jan 18 i 17:46 18°**≯**28'42 conjunction -4010 Jul 28 i 11:41 2°936'45 1°05'47 -4004 Mar 11 i 02:35 0°궁 -4010 Jul 28 j 11:37 2°936'43 1°05'57 retrograde -4004 May 29 j 19:48 8°る45'30 minimum elong -4010 Aug 10 j 08:34 5°925'51 -4004 Jul 28 j 03:01 3°る49'58 4.01034 AU morning rise min. Earth dist. -4010 Dec 08 j 14:36 22°925'55 -4004 Jul 29 j 01:13 3°**ප්**42'31 -1°38'46 retrograde opposition -4009 Feb 07 j 00:05 -4004 Aug 29 j 14:14 30°R*x*⁷ 17°533'43 1°51'47 opposition -4009 Feb 08 j 02:27 -4004 Sep 25 j 05:37 28°**х** 48′35 min. Earth dist. 17°525'15 4.39207 AU direct -4009 Apr 10 j 14:56 -4004 Oct 21 j 18:57 0°궁 direct 12°931'41 -4009 Aug 13 j 20:40 -4003 Jan 27 j 21:19 18°る07'08 0° Ω evening set evening set -4009 Aug 15 j 18:12 0°**Ω**24'59 max. Earth dist. -4003 Feb 10 j 06:38 21°る17'36 -1°17'35 -4009 Aug 26 j 17:04 2°**\$\Omega**50'12 6.37241 AU conjunction -4003 Feb 10 j 06:36 21°る17'35 1°17'46 minimum elong -4009 Aug 28 j 10:35 3°Ω13'14 1°22'42 -4003 Feb 12 j 00:30 21°る42'27 6.01641 AU conjunction max. Earth dist. -4009 Aug 28 j 10:34 -4003 Feb 23 j 19:19 24°**る**29'42 minimum elong 3°**Ω**13'13 1°22'50 morning rise -4009 Sep 10 j 00:15 $6^{\circ}\Omega00'17$ -4003 Mar 19 j 17:40 morning rise 0°≈ -4009 Oct 23 j 08:29 15°€ retrograde -4003 Jul 05 j 10:25 14°≈41'40 retrograde -4008 Jan 09 j 08:33 23°**Ω**16'39 min. Earth dist. -4003 Sep 01 j 23:12 9°≈46'54 4.04157 AU -4008 Mar 10 j 03:35 18°**Ω**25'14 2°00'36 opposition -4003 Sep 03 j 05:37 9°≈36'32 -2°02'50 opposition min. Earth dist. -4008 Mar 11 j 10:56 18°**Ω**15'16 4.34193 AU direct -4003 Oct 31 j 06:08 4°≈39'47 -4008 Apr 08 j 20:28 15°RΩ -4002 Jan 24 j 20:59 15°**≈** direct -4008 May 11 j 15:23 13°**Ω**25'39 -4002 Mar 05 j 22:57 evening set 23°≈52'06 -4008 Jun 13 j 08:47 15°**Ω** -4008 Sep 08 j 04:45 -4002 Mar 19 j 14:35 27°≈02'29 -1°18'48 conjunction -4002 Mar 19 i 14:38 evening set -4008 Sep 14 j 20:06 1° m 28'52 minimum elong 27°≈02'30 1°18'54 -4002 Mar 21 i 12:46 max. Earth dist. -4008 Sep 25 i 14:58 3° m 54'50 6.29800 AU max. Earth dist. 27°≈29'21 6.07849 AU -4002 Apr 01 i 08:31 0°**)** -4008 Sep 27 i 08:42 conjunction 4° m 18'27 1°16'11 morning rise -4002 Apr 02 j 08:14 0° ¥ 13'41 -4008 Sep 27 i 08:45 4° m 18'29 1°16'16 retrograde -4002 Aug 09 i 11:57 19°\ 43'27 minimum elong -4008 Oct 09 j 20:15 7° m 07'39 opposition -4002 Oct 07 i 22:45 14°\(\dagger)38'52 -1°41'09 morning rise -4007 Feb 10 j 15:13 25° m 02'50 min. Earth dist. -4002 Oct 06 j 21:02 14°**)** 47'38 4.12762 AU retrograde -4007 Apr 12 j 16:17 20° m 10'15 1°34'10 -4002 Dec 05 j 17:26 9° # 38'44 opposition direct min. Earth dist. -4007 Apr 13 j 18:38 20° m 01'52 4.24760 AU evening set -4001 Apr 11 j 10:02 28° ¥ 30'14 $0^{\circ}\Upsilon$ direct -4007 Jun 13 j 08:10 15° m 13'33 -4001 Apr 18 j 00:49 -4007 Sep 30 j 15:33 0∘**⊽** evening set -4007 Oct 16 j 12:15 3°**£**35'31 conjunction -4001 Apr 25 j 04:33 1°Y37'22 -0°51'46 -4007 Oct 27 j 23:03 6°**2**14'14 6.19226 AU -4001 Apr 25 j 04:37 1° **Y**37'24 0° 51'46 max. Earth dist. minimum elong -4001 Apr 26 j 14:30 1°**Y**56'37 6.18150 AU max. Earth dist. -4007 Oct 29 j 02:18 6°**2**30'01 0°46'26 -4001 May 08 j 22:58 4°**Υ**44'16 conjunction morning rise -4007 Oct 29 j 02:21 -4001 Sep 11 j 13:58 23°Y15'02 minimum elong 6°**₽**30'03 0°46'24 retrograde morning rise -4007 Nov 10 j 16:40 9°**£**24'57 min. Earth dist. -4001 Nov 09 j 09:36 18°**Y**18'17 4.23661 AU retrograde -4006 Mar 17 j 18:09 28°**£**13'57 opposition -4001 Nov 10 j 00:18 18°**Y**13′19 -0°46'09 13°**Y**10'42 opposition -4006 May 17 j 19:11 23°**₽**18'36 0°36'18 direct -4000 Jan 08 j 22:25 min. Earth dist. -4006 May 18 j 07:48 23°**₽**14'32 4.13708 AU -4000 May 08 j 02:53 0°8 -4006 Jul 17 j 04:42 18°**♀**24'31 -4000 May 15 j 11:05 1°836'34 direct evening set

-4006 Oct 17 j 20:55

0°M

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -4000 in astronomical counting style is the year 4001 BCE in historical counting style. 4°**8**38'07 -0°08'34 conjunction -4000 May 29 j 02:51 opposition -3994 May 22 j 20:46 28°**£**13'31 0°26'22 minimum elong -4000 May 29 j 02:51 4°**8**38'07 0°08'28 min. Earth dist. -3994 May 23 j 06:06 28°**♀**10'31 4.12569 AU

minimum elong	-4000 May 29 j 02:51	4° 8 38'07	0°08'28	min. Earth dist.	-3994 May 23 j 06:06	28° ≏ 10'31	4.12569 AU
behind sun begin	-4000 May 28 j 19:38	4° 8 34'08		direct	-3994 Jul 22 j 02:00	23° ≏ 19'38	
behind sun end	-4000 May 29 j 10:04	4° 8 42'06			-3994 Sep 27 j 16:45	0° M	
max. Earth dist.	-4000 May 29 j 11:49	4° 8 43'05	6.28866 AU	desc. node	-3994 Oct 14 j 12:19	3°M14'06	
morning rise	-4000 Jun 11 j 16:43	7° 8 38'31		evening set	-3994 Nov 23 j 08:24	12° M 07'17	
	-4000 Jul 16 j 11:45	15° 8			-3994 Dec 05 j 12:48	15° M	
asc. node	-4000 Aug 10 j 13:10	19° 8 34'44			· ·		
retrograde	-4000 Oct 12 j 05:36	25° 8 17'04		conjunction	-3994 Dec 06 j 04:24	15°ML09'14	-0°06'35
opposition	-4000 Dec 10 j 19:44	20° 8 19'16	0°20'37	minimum elong	-3994 Dec 06 j 04:22	15°M09'13	0°06'43
min. Earth dist.	-4000 Dec 10 j 21:50	_	4.33252 AU	behind sun begin	-3994 Dec 05 j 20:49	15°ML04'46	0 00 15
direct	-3999 Feb 10 j 01:41	15° 8 15'31	4.55252710	behind sun end	-3994 Dec 06 j 11:56	15°M13'40	
uncet	-3999 Jun 02 j 07:38	0°Ⅱ		max. Earth dist.	-3994 Dec 06 j 03:48	15°M08'53	6.07878 AU
	v	3° ∏ 20′36			·		0.07878 AU
evening set	-3999 Jun 17 j 21:14	3 Щ2030		morning rise	-3994 Dec 19 j 02:31	18°M12'32	
	2000 1 1 01:05 25	60 T 15152	002 (102		-3993 Feb 11 j 11:48	0° ∡ 7	
conjunction	-3999 Jul 01 j 05:35	6° Ⅱ 15'52	0°36'03	retrograde	-3993 Apr 28 j 15:43	8° ∡ 700'33	00.4510.1
minimum elong	-3999 Jul 01 j 05:32	6° Ⅱ 15'51	0°36'12	opposition	-3993 Jun 28 j 08:08	3° ∡ ¹00'45	
max. Earth dist.	-3999 Jun 30 j 14:49	6° Ⅱ 07'46	6.36619 AU	min. Earth dist.	-3993 Jun 27 j 23:49		4.04172 AU
morning rise	-3999 Jul 14 j 10:36	9° Ⅱ 09'29			-3993 Jul 23 j 01:41	30°RML	
retrograde	-3999 Nov 12 j 01:08	26° Ⅱ 16'39		direct	-3993 Aug 26 j 07:06	28°M07'45	
opposition	-3998 Jan 11 j 01:18	21° Ⅱ 22'25	1°19'13		-3993 Sep 29 j 02:33	0° ∡	
min. Earth dist.	-3998 Jan 11 j 17:42	21° Ⅱ 17′04	4.38730 AU	evening set	-3993 Dec 28 j 09:59	17° ∡ 16′16	
direct	-3998 Mar 14 j 05:39	16° Ⅱ 19'04					
	-3998 Jun 30 j 04:06	0°€		conjunction	-3992 Jan 10 j 12:53	20° ҂ ¹23'54	-0°52'41
evening set	-3998 Jul 19 j 22:41	4° © 13'22		minimum elong	-3992 Jan 10 j 12:49	20° х 23′51	0°52'50
max. Earth dist.	-3998 Jul 31 j 11:45	6°9545'01	6.39323 AU	max. Earth dist.	-3992 Jan 11 j 13:13	20° х 38′25	6.01862 AU
	, , , , , , , , , , , , , , , , , , ,			morning rise	-3992 Jan 23 j 19:12	23° х 33′20	
conjunction	-3998 Aug 01 j 21:35	7° 5 03'36	1°09'26		-3992 Feb 20 j 19:20	0°ਰ	
minimum elong	-3998 Aug 01 j 21:32		1°09'37	retrograde	-3992 Jun 03 j 21:08	13° ප් 50'41	
morning rise	-3998 Aug 14 j 17:17	9° 9 52'17	1 07 57	min. Earth dist.	-3992 Aug 02 j 02:05		4.01313 AU
retrograde	-3998 Aug 14 j 17.17 -3998 Dec 13 j 02:09	26°953'47		opposition	-3992 Aug 02 j 02:03	8° る 47'16	
-			1°55'04	direct		3°る53'00	-1 44 42
opposition	-3997 Feb 11 j 11:57	22°901'51			-3992 Sep 30 j 04:37		
min. Earth dist.	-3997 Feb 12 j 16:00	21°952'52	4.38647 AU	evening set	-3991 Feb 01 j 23:31	23° る 10'57	
direct	-3997 Apr 15 j 03:48	17° © 00'08					
	-3997 Jul 28 j 07:50	0°Ω		conjunction	-3991 Feb 15 j 09:48	26° පි 21'30	
evening set	-3997 Aug 20 j 04:09	4°Ω54'48		minimum elong	-3991 Feb 15 j 09:47	26° පි 21'29	
max. Earth dist.	-3997 Aug 31 j 00:57	7° Ω 19'18	6.36334 AU	max. Earth dist.	-3991 Feb 17 j 04:55	26° る 47'03	6.02289 AU
				morning rise	-3991 Feb 28 j 23:10	29° る 33'35	
conjunction	-3997 Sep 01 j 19:44	7° Ω 43'05	1°23'14		-3991 Mar 02 j 20:14	0° ≈	
minimum elong	-3997 Sep 01 j 19:43	7° Ω 43'04	1°23'22		-3991 May 15 j 08:12	15° ≈	
morning rise	-3997 Sep 14 j 08:55	10° Ω 30′16		retrograde	-3991 Jul 10 j 09:25	19° ≈ 41'21	
	-3997 Oct 05 j 02:39	15° Ω			-3991 Sep 05 j 04:31	15°R ≈	
retrograde	-3996 Jan 13 j 23:44	27° Ω 51'14		min. Earth dist.	-3991 Sep 06 j 21:20	14° ≈ 46′06	4.05103 AU
opposition	-3996 Mar 14 j 20:00	22° Ω 59'43	1°58'59	opposition	-3991 Sep 08 j 02:31	14° ≈ 36′09	-2°02'26
min. Earth dist.	-3996 Mar 16 j 02:26	22° Ω 50′02	4.33025 AU	direct	-3991 Nov 05 j 05:44	9° ≈ 38'54	
direct	-3996 May 16 j 05:11	18° Ω 00'31			-3990 Jan 03 j 05:28	15° ≈	
	-3996 Aug 22 j 06:46	0° m)		evening set	-3990 Mar 11 j 00:34	28° ≈ 49'09	
evening set	-3996 Sep 19 j 07:05	6° Mp 05'57		evening sec	-3990 Mar 16 j 03:09	0° \	
max. Earth dist.	-3996 Sep 30 j 05:04	-	6.28488 AU		3770 Wai 10 j 03.07	٥٨	
max. Larm dist.	-3770 Sep 30 J 03.04	0 IIJ 3 + 0 /	0.20400 AU	conjunction	-3990 Mar 24 j 16:57	1° ¥ 59'19	1016122
conjunction	-3996 Oct 01 j 19:41	8° Mp 56'02	1°13'16	minimum elong	-3990 Mar 24 j 17:00	1° H 59'21	
·	v	-		_	3		
minimum elong	-3996 Oct 01 j 19:44	8° m 56'03	1°13'20	max. Earth dist.	-3990 Mar 26 j 14:41	2° ∺ 25'50	6.09013 AU
morning rise	-3996 Oct 14 j 07:10	11° m) 45'46		morning rise	-3990 Apr 07 j 11:00	5° ₩ 10'10	
retrograde	-3995 Feb 15 j 12:12	29° m 47'28		retrograde	-3990 Aug 14 j 04:14	24°) 32′51	
opposition	-3995 Apr 17 j 13:50	24° m 54'35	1°27'37	opposition	-3990 Oct 12 j 14:27	19° ∺ 28'36	-1°35'06
min. Earth dist.	-3995 Apr 18 j 14:40	24° Mp 46'41	4.23391 AU	min. Earth dist.	-3990 Oct 11 j 13:31		4.14030 AU
direct	-3995 Jun 18 j 02:40	19° m 58'20		direct	-3990 Dec 10 j 11:12	14° ∺ 28′07	
	-3995 Sep 12 j 19:58	0∘ ত			-3989 Apr 01 j 14:06	0 ° Υ	
evening set	-3995 Oct 21 j 02:37	8° ഫ 22'38		evening set	-3989 Apr 16 j 08:29	3° Ƴ 16′59	
conjunction	-3995 Nov 02 j 16:59	11° ≙ 17'51	0°40'38	conjunction	-3989 Apr 30 j 02:54	6° Ƴ 23'34	-0°46'25
minimum elong	-3995 Nov 02 j 17:02	11° ≏ 17'53	0°40'37	minimum elong	-3989 Apr 30 j 02:57	6° Y 23'36	0°46'25
max. Earth dist.	-3995 Nov 01 j 15:30	11° ≏ 03'03	6.17926 AU	max. Earth dist.	-3989 May 01 j 08:19	6° Ƴ 40'13	6.19431 AU
morning rise	-3995 Nov 15 j 08:14	14° ≙ 13'42		morning rise	-3989 May 13 j 21:11	9° Y 29'50	
5	-3994 Feb 04 j 15:23	0°M		retrograde	-3989 Sep 16 j 02:29	27° Y 53'47	
retrograde	-3994 Mar 22 j 18:58	3°ML09'28		opposition	-3989 Nov 14 j 12:05	22°Υ52'35	-0°37'06
	-3994 May 08 j 18:38	30°R ≏		min. Earth dist.	-3989 Nov 14 j 00:20		4.24835 AU
	577 . 171ay 00 j 10.30	· · · · ·		Zurur dist.	5,0,110, 1rj 00.20	1 JU J-T	2 .333 710

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 37 Attention, astronomical year style is used: The year -3988 in astronomical counting style is the year 3989 BCE in historical counting style.

Attention, astronomical year style is used: The year -3988 in astronomical counting style is the year 3989 BCE in historical counting style.							
direct	-3988 Jan 13 j 14:56	17° Ƴ 49'44		min. Earth dist.	-3983 Apr 23 j 08:43	29° m 29'30	4.22006 AU
	-3988 Apr 21 j 01:49	9° 8		direct	-3983 Jun 22 j 18:46	24° Mp 40° 46	
evening set	-3988 May 20 j 05:12	6° 8 13'27			-3983 Aug 22 j 14:34	0∘ ⊽	
				evening set	-3983 Oct 25 j 15:48	13° ≏ 07'45	
conjunction	-3988 Jun 02 j 20:22	9° 8 14'18		max. Earth dist.	-3983 Nov 06 j 09:14	15° ≏ 51'15	6.16514 AU
minimum elong	-3988 Jun 02 j 20:23	9° 8 14'19	0°02'01				
behind sun begin	-3988 Jun 02 j 12:06	9° 8 09'45		conjunction	-3983 Nov 07 j 06:51	16° ≏ 03'50	
behind sun end	-3988 Jun 03 j 04:40	9° 8 18'53		minimum elong	-3983 Nov 07 j 06:53	16° Ω 03'52	0°34'35
max. Earth dist.	-3988 Jun 03 j 03:21	9° 8 18'09	6.29871 AU	morning rise	-3983 Nov 19 j 22:45	19° ഫ 00'38	
morning rise	-3988 Jun 16 j 09:08	12° 8 13'53			-3982 Jan 10 j 03:56	0°M	
asc. node	-3988 Jun 20 j 16:25	13° 8 10'30		retrograde	-3982 Mar 27 j 21:44	8°M03'55	001715
. 1	-3988 Jun 29 j 02:24	15° 8		opposition	-3982 May 27 j 21:48	3°M07'31	0°16'15
retrograde	-3988 Oct 16 j 13:33	29° 8 47'43	0020141	min. Earth dist.	-3982 May 28 j 05:45	3°M04'56	4.11219 AU
opposition min. Earth dist.	-3988 Dec 15 j 05:16	24° 8 50'30 24° 8 49'24		direct	-3982 Jun 23 j 04:19	30°R 亞 28° 亞 13'51	
	-3988 Dec 15 j 08:33	19° 8 46'47	4.34032 AU		-3982 Jul 26 j 23:35	28° 2 30'51	
direct	-3987 Feb 14 j 13:21 -3987 May 15 j 17:07	19 3 4647 0° Ⅱ		desc. node	-3982 Aug 24 j 06:15 -3982 Aug 29 j 07:56	0°M	
evening set	-3987 May 13 j 17.07 -3987 Jun 22 j 11:23	7° П 50'40			-3982 Nov 19 j 06:21	15°M	
evening set	-3987 Juli 22 J 11.23	/ Д3040		evening set	-3982 Nov 19 j 00.21 -3982 Nov 28 j 03:22	17°M04'38	
conjunction	-3987 Jul 05 j 18:20	10° Ⅱ 45'12	0°41'38	evening set	-3982 NOV 28 J 03.22	17 11604 36	
minimum elong	-3987 Jul 05 j 18:17	10° I 45'10		conjunction	-3982 Dec 11 j 00:09	20°M07'28	-0°13'30
max. Earth dist.	-3987 Jul 04 j 23:51		6.37116 AU	minimum elong	-3982 Dec 11 j 00:08	20°M07'27	
morning rise	-3987 Jul 18 j 22:12	13° II 38'06	0.57110710	behind sun begin	-3982 Dec 10 j 19:36	20°M 04'47	0 15 50
morning rise	-3987 Oct 26 j 01:09	0°9		behind sun end	-3982 Dec 11 j 04:39	20°M10'07	
retrograde	-3987 Nov 16 j 11:07	0°9643'33		max. Earth dist.	-3982 Dec 11 j 01:36	20°M08'19	6.06708 AU
	-3987 Dec 07 j 18:15	30°RⅡ		morning rise	-3982 Dec 23 j 23:33	23°M11'48	
opposition	-3986 Jan 15 j 11:20	25° Ⅱ 49'45	1°25'53		-3981 Jan 22 j 18:54	0° ⊼ ⊓	
min. Earth dist.	-3986 Jan 16 j 06:15		4.38931 AU	retrograde	-3981 May 03 j 19:30	13° ∡ ¹05'52	
direct	-3986 Mar 18 j 18:53	20° Ⅱ 46'36		opposition	-3981 Jul 03 j 11:23	8° ₹ 05'30	-0°56'42
	-3986 Jun 12 j 05:21	0°©		min. Earth dist.	-3981 Jul 02 j 23:52	8° ₹ 09'18	4.03311 AU
evening set	-3986 Jul 24 j 09:21	8°540'34		direct	-3981 Aug 31 j 05:27	3° ∡ 12'26	
max. Earth dist.	-3986 Aug 04 j 20:26	11°5911'17	6.39190 AU	evening set	-3980 Jan 02 j 11:02	22° ₹ ¹23'36	
conjunction	-3986 Aug 06 j 07:11	11° 5 30'23	1°12'42	conjunction	-3980 Jan 15 j 15:04	25° х 31′54	-0°57'58
minimum elong	-3986 Aug 06 j 07:08	11° 5 30'21	1°12'52	minimum elong	-3980 Jan 15 j 15:00	25° ∡ ³31'52	0°58'08
morning rise	-3986 Aug 19 j 01:40	14°5918'38		max. Earth dist.	-3980 Jan 16 j 18:48	25° ∡ ¹48'27	6.01375 AU
	-3986 Nov 17 j 20:36	$0^{\circ}\Omega$		morning rise	-3980 Jan 28 j 22:21	28° ∡ ′41′59	
retrograde	-3986 Dec 17 j 11:40	1° Ω 21'29			-3980 Feb 03 j 10:41	0°ಕ	
	-3985 Jan 16 j 06:12	30° ₹ 5		retrograde	-3980 Jun 09 j 02:33	19° ප 01'11	
opposition	-3985 Feb 16 j 00:01	26° © 29'40	1°57'40	min. Earth dist.	-3980 Aug 07 j 04:34		4.01257 AU
min. Earth dist.	-3985 Feb 17 j 03:45	26° © 20'47	4.38206 AU	opposition	-3980 Aug 08 j 05:24	13° る 57'22	-1°49'57
direct	-3985 Apr 19 j 14:55	21°9528'17		direct	-3980 Oct 05 j 07:13	9° ප 02'44	
	-3985 Jul 10 j 01:45	0°N		evening set	-3979 Feb 07 j 04:26	28° る 21'26	
evening set	-3985 Aug 24 j 13:27	9° £ 23'37	(25(00 ATT		-3979 Feb 14 j 03:40	0° ≈	
max. Earth dist.	-3985 Sep 04 j 10:04	11° Ω 48′20	6.35600 AU		2070 F. L. 20 : 15 47	1022116	1021102
	2005 0 06:04.14	12° Ω 11'51	1922117	conjunction	-3979 Feb 20 j 15:47	1°≈32'16 1°≈32'16	
conjunction minimum elong	-3985 Sep 06 j 04:14 -3985 Sep 06 j 04:14	$12^{\circ}\Omega 11^{\circ}51$	1°23'24	minimum elong max. Earth dist.	-3979 Feb 20 j 15:46 -3979 Feb 22 j 12:55	1°≈58'56	6.02654 AU
morning rise	-3985 Sep 18 j 16:49	14° Ω 59'06	1 23 24	morning rise	-3979 Mar 06 j 06:04	4° ≈ 44'33	0.02034 AU
morning risc	-3985 Sep 18 j 18:27	14 ε ξ39 00		morning risc	-3979 Mar 00 J 00:04 -3979 Apr 21 j 17:45	15° ≈	
	-3985 Dec 09 j 14:07	0° m)		retrograde	-3979 Apr 21 j 17.43	13 ≈ 24° ≈ 48'44	
retrograde	-3984 Jan 18 j 14:52	2° Mp 24'07		min. Earth dist.	-3979 Sep 11 j 20:16	19° ≈ 53'38	4.05865 AU
retrograde	-3984 Feb 28 j 03:59	30°R Ω		opposition	-3979 Sep 13 j 01:55	19° ≈ 43'31	
opposition	-3984 Mar 19 j 11:48	27° Ω 32'32	1°56'38	·FF	-3979 Oct 29 j 12:39	15°R≈	
min. Earth dist.	-3984 Mar 20 j 18:39	27° Ω 22'44	4.32011 AU	direct	-3979 Nov 10 j 05:31	14° ≈ 45'50	
direct	-3984 May 20 j 20:05	22° Ω 33'45			-3979 Nov 21 j 23:53	15° ≈	
	-3984 Aug 03 j 06:25	0°m)			-3978 Feb 27 j 00:17	0°) €	
evening set	-3984 Sep 23 j 17:04	10° m 40'52		evening set	-3978 Mar 16 j 05:43	3°) 54'38	
max. Earth dist.	-3984 Oct 04 j 15:03	13° mp 09'30	6.27261 AU	2	. 3		
	,			conjunction	-3978 Mar 29 j 22:36	7° ∺ 04'35	-1°13'41
conjunction	-3984 Oct 06 j 05:35	13° m y 31'25	1°09'56	minimum elong	-3978 Mar 29 j 22:39	7°) €04'37	
minimum elong	-3984 Oct 06 j 05:38	13° mp 31'27	1°09'58	max. Earth dist.	-3978 Mar 31 j 17:56	7° ¥ 29'38	6.10102 AU
morning rise	-3984 Oct 18 j 17:23	16° Mp 21'48		morning rise	-3978 Apr 12 j 17:10	10°) 15′07	
	-3984 Dec 26 j 12:01	0∘ ⊽		retrograde	-3978 Aug 18 j 23:16	29°) 30'41	
retrograde	-3983 Feb 20 j 07:06	4° ≙ 29'56		min. Earth dist.	-3978 Oct 16 j 09:41	24°) 34'43	4.15334 AU
	-3983 Apr 19 j 09:03	30°R, Mp		opposition	-3978 Oct 17 j 09:05	24°) € 26'44	-1°28'13
opposition	-3983 Apr 22 j 10:14	29° m 36'40	1°20'31	direct	-3978 Dec 15 j 09:42	19° ¥ 25'51	

•	-		•		r 3978 BCE in historical of		.gc 50
7 ttention, astronom	-3977 Mar 14 j 06:21	0°Υ	in astronomical co	min. Earth dist.	-3972 Mar 25 j 05:47		4.31223 AU
evening set	-3977 Apr 21 j 10:10	8° Υ 11'45		mm. Earth dist.	-3972 Apr 08 j 12:06	30°RΩ	1.51225 110
evening set	-57// Apr 21 j 10.10	0 11143		direct	-3972 May 25 j 05:26	26° Ω 56'42	
conjunction	-3977 May 05 j 04:39	11° Ƴ 17'44	-0°40'36	direct	-3972 Jul 10 j 05:37	0° m)	
minimum elong	-3977 May 05 j 04:42	11° Υ 17'46	0°40'35	evening set	-3972 Sep 27 j 22:52	עוי 15° Mp 04'57	
max. Earth dist.	-3977 May 06 j 09:13	11° Y 33'50	6.20904 AU	max. Earth dist.	-3972 Scp 27 j 22:32 -3972 Oct 08 j 22:06	17° Mg 34'41	6.26118 AU
morning rise	-3977 May 18 j 22:20	14° Υ 23'09	0.20904 AU	max. Lattii dist.	-3972 Oct 08 j 22.00	17 11/25441	0.20118 AU
morning risc	-3977 Aug 10 j 08:30	0° 8		conjunction	-3972 Oct 10 j 11:24	17° m 55'59	1°06'16
retrograde	-3977 Sep 20 j 15:48	2° 8 39'10		minimum elong	-3972 Oct 10 j 11:24	17° m 56'00	1°06'18
retrograde	-3977 Oct 31 j 19:58	2 O 39 10 30° R Υ		morning rise	-3972 Oct 10 j 11:27	20° Mp 46'56	1 00 18
opposition	-3977 Nov 19 j 02:14	27° Υ 38'31	0027127	morning rise	-3972 Oct 22 j 23.23 -3972 Dec 05 j 01:19	0° ⊽	
min. Earth dist.	-3977 Nov 19 j 02:14 -3977 Nov 18 j 15:35	27° Υ 42'06	4.26361 AU	retrograde	-3971 Feb 25 j 00:23	0 = 9° ჲ 01'34	
direct	-3976 Jan 18 j 08:51	22° Y 35'33	4.20301 AU	opposition	-3971 Apr 27 j 02:37	9 2 01 34 4° Ω 08'00	1°13'11
direct	-3976 Apr 01 j 05:46	0° 8		min. Earth dist.	-3971 Apr 28 j 01:16	4° Ω 00'46	4.20551 AU
asc. node	-3976 Apr 29 j 17:00	5° 8 29'51		mm. Earth dist.	-3971 Apr 28 j 01:10	4 ==00 40 30°R, m)	4.20331 AU
evening set	-3976 May 25 j 01:24	10° 8 55'30		direct	-3971 Jun 27 j 08:32	29° mg 12'23	
evening set	-3770 Way 23 j 01.24	10 033 30		direct	-3971 Jul 19 j 21:03	0° ت 0°	
conjunction	-3976 Jun 07 j 15:27	13° 8 55'20	0°04'33	evening set	-3971 Oct 30 j 01:31	0 = 17° £ 42'45	
minimum elong	-3976 Jun 07 j 15:27	13° 8 55'19	0°04'40	evening set	-39/1 Oct 30 j 01.31	17 ==4243	
behind sun begin	-3976 Jun 07 j 07:23	13° 8 50'53	0 04 40	conjunction	-3971 Nov 11 j 17:11	20° ≏ 39'49	0°28'35
behind sun end	-3976 Jun 07 j 23:31	13° 8 59'46		minimum elong	-3971 Nov 11 j 17:11	20° ⊆ 3949 20° ⊆ 39'50	0°28'33
max. Earth dist.	-3976 Jun 07 j 18:21	13° 8 56'53	6.31357 AU	max. Earth dist.	-3971 Nov 11 j 17:13	20° ⊆ 3930 20° ⊆ 27'39	6.14882 AU
max. Earm dist.	-3976 Jun 12 j 12:31	15° 8	6.5155/ AU		-3971 Nov 10 j 20.23 -3971 Nov 24 j 10:06	20 2 27 39 23° 2 37'44	0.14882 AU
morning rise	-3976 Jun 21 j 03:15	15 8 16° 8 53'50		morning rise	-3971 Nov 24 j 10.06 -3971 Dec 22 j 16:18	0°M	
morning rise	-3976 Aug 27 j 20:47	0°Ⅱ		retrograde	-3970 Apr 01 j 19:23	12°M49'32	
retrograde	-3976 Oct 20 j 23:19	4° ∏ 21'15		opposition	-3970 Apr 01 j 19:23	7°M52'40	0°06'22
renograde	-3976 Dec 15 j 04:33	30°R ႘		min. Earth dist.	-3970 Jun 02 j 00:10	7°M50'59	4.09544 AU
opposition	-3976 Dec 13 j 04.33	29° 8 24'29	0°38'37	desc. node	-3970 Jul 06 j 02:48	4°M01'38	4.09344 AU
min. Earth dist.	-3976 Dec 19 j 10.20	29° 8 22'38	4.35388 AU	direct	-3970 Jul 31 j 14:33	2°M59'11	
	-3976 Dec 19 j 21:37 -3975 Feb 19 j 05:29	24° 8 20'46	4.33366 AU	direct	-3970 Nov 02 j 13:24	15°M	
direct	-3975 Apr 24 j 17:28	24 O 2046 0° I I		evening set	-3970 Nov 02 j 13.24 -3970 Dec 02 j 20:00	21°M54'54	
evening set	-3975 Apr 24 j 17:28 -3975 Jun 27 j 01:13	12° Ⅲ 21'01		evening set	-3970 Dec 02 j 20.00	21 1163434	
max. Earth dist.	-3975 Jul 09 j 11:38	12 Ⅲ 21 01 15° Ⅲ 03'58	6.38243 AU	conjunction	-3970 Dec 15 j 17:52	24°M58'53	0.50,08
max. Lartii dist.	-5775 Jul 07 j 11.50	13 1103 38	0.30243 AC	minimum elong	-3970 Dec 15 j 17:50	24°M58'52	0°20'15
conjunction	-3975 Jul 10 j 06:56	15° Ⅱ 14'32	0°46'57	max. Earth dist.	-3970 Dec 15 j 17:30	25°M01'48	6.05149 AU
minimum elong	-3975 Jul 10 j 06:53	15° Ⅱ 14'30	0°47'07	morning rise	-3970 Dec 28 j 18:21	28°M04'25	0.0314) AU
morning rise	-3975 Jul 23 j 09:10	18° Ⅲ 06'21	0 47 07	morning risc	-3969 Jan 05 j 23:13	20 1100∓23 0° 🗷	
morning rise	-3975 Sep 22 j 05:23	0°95		retrograde	-3969 May 09 j 00:00	18° ∡ 06′20	
retrograde	-3975 Nov 20 j 16:51	5° 5 08'03		opposition	-3969 Jul 08 j 12:50	13° ₹ 05′28	-1°05'44
opposition	-3974 Jan 19 j 20:31	0°514'34	1°31'54	min. Earth dist.	-3969 Jul 08 j 00:04	13° ₹ 03′20	4.02023 AU
min. Earth dist.	-3974 Jan 20 j 15:58	0°508'16	4.39771 AU	direct	-3969 Sep 05 j 03:39	8° ₹ 12'20	1.02023 110
mm. Earth dist.	-3974 Jan 21 j 17:32	30°R∏	1.55771110	evening set	-3968 Jan 07 j 11:23	27° × 28'03	
direct	-3974 Mar 23 j 06:11	25° Ⅱ 11'36		evening sec	-3968 Jan 18 j 02:14	0°る	
	-3974 May 21 j 17:13	0.2 2			5,00 tun 10 j 02.11.	° G	
evening set	-3974 Jul 28 j 18:14	13° © 02'56		conjunction	-3968 Jan 20 j 16:37	0° る 37'17	-1°02'41
max. Earth dist.	-3974 Aug 09 j 01:21	15° © 31'31	6.39658 AU	minimum elong	-3968 Jan 20 j 16:33	0° る 37'15	
			,	max. Earth dist.	-3968 Jan 21 j 23:47	0° る 55'54	6.00479 AU
conjunction	-3974 Aug 10 j 14:37	15° © 52'00	1°15'26	morning rise	-3968 Feb 03 j 01:09	3° ප 48'18	
minimum elong	-3974 Aug 10 j 14:34	15° © 51'58	1°15'36	retrograde	-3968 Jun 14 j 07:45	24° る 10'42	
morning rise	-3974 Aug 23 j 08:03	18° © 39'36		min. Earth dist.	-3968 Aug 12 j 04:55	19° る 15'38	4.00890 AU
	-3974 Oct 19 j 12:56	$0^{\circ}\Omega$		opposition	-3968 Aug 13 j 07:42	19° පි 06'36	-1°54'15
retrograde	-3974 Dec 21 j 20:01	5° Ω 41'58		direct	-3968 Oct 10 j 07:07	14° る 11'40	
opposition	-3973 Feb 20 j 09:39	0° Ω 50'16	1°59'25		-3967 Jan 28 j 04:17	0° ≈	
min. Earth dist.	-3973 Feb 21 j 15:22	0° Ω 40'46	4.38268 AU	evening set	-3967 Feb 12 j 10:14	3° ≈ 32'26	
	-3973 Feb 26 j 23:37	30° ₹ 5		8	, j		
direct	-3973 Apr 24 j 02:33	25°5549'08		conjunction	-3967 Feb 25 j 22:31	6° ≈ 43'38	-1°21'47
	-3973 Jun 18 j 01:20	0°N		minimum elong	-3967 Feb 25 j 22:31	6° ≈ 43'38	
evening set	-3973 Aug 28 j 19:02	13° Ω 43'27		max. Earth dist.	-3967 Feb 27 j 20:01	7° ≈ 10'30	6.02828 AU
-	-3973 Sep 03 j 13:00	15° Ω		morning rise	-3967 Mar 11 j 13:50	9° ≈ 56'14	
max. Earth dist.	-3973 Sep 08 j 14:21	16° Ω 07'37	6.35230 AU	5	-3967 Apr 02 j 15:39	15° ≈	
	. ,			retrograde	-3967 Jul 20 j 11:19	29° ≈ 57'12	
conjunction	-3973 Sep 10 j 09:16	16° Ω 31'34	1°22'48	min. Earth dist.	-3967 Sep 16 j 19:37	25° ≈ 02'09	4.06554 AU
minimum elong	-3973 Sep 10 j 09:16	16° Ω 31'34		opposition	-3967 Sep 18 j 01:29	24°≈51'56	
morning rise	-3973 Sep 22 j 21:19	19° Ω 18'45		direct	-3967 Nov 15 j 06:52	19° ≈ 53'45	
-	-3973 Nov 14 j 05:24	0° mp			-3966 Feb 08 j 06:09	0° ∀	
retrograde	-3972 Jan 23 j 00:17	6° Mp 46'55		evening set	-3966 Mar 21 j 11:31	9° ₩ 01'12	
opposition	-3972 Mar 23 j 23:48	1° m 55'10	1°53'38	-	Ÿ		
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Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 39 Attention, astronomical year style is used: The year -3966 in astronomical counting style is the year 3967 BCE in historical counting style.

Attention, astronomical year style is used: The year -3966 in astronomical counting style is the year 3967 BCE in historical counting style.								
conjunction	-3966 Apr 04 j 05:11	12° 升 10′56	-1°10'11	max. Earth dist.	-3961 Sep 12 j 21:53	20° Ω 36'55	6.34168 AU	
minimum elong	-3966 Apr 04 j 05:14	12° 升 10′58	1°10'14					
max. Earth dist.	-3966 Apr 06 j 01:31	12°) € 36'30	6.11257 AU	conjunction	-3961 Sep 14 j 17:39	21° Ω 01′25	1°21'55	
morning rise	-3966 Apr 17 j 23:52	15° ∺ 21′03		minimum elong	-3961 Sep 14 j 17:40	21° Q 01'26	1°22'01	
	-3966 Jun 30 j 05:16	$0^{\circ}\Upsilon$		morning rise	-3961 Sep 27 j 05:28	23° Ω 48'55		
retrograde	-3966 Aug 23 j 18:52	4° Ƴ 28'49			-3961 Oct 25 j 21:51	0° m		
	-3966 Oct 17 j 21:24	30° ₹ ₩		retrograde	-3960 Jan 27 j 17:43	11° m 22'37		
min. Earth dist.	-3966 Oct 21 j 05:33	29°) 32′47	4.16791 AU	opposition	-3960 Mar 28 j 17:01	6° Mp 30′44	1°49'55	
opposition	-3966 Oct 22 j 03:53	29° ∺ 25'11	-1°20'39	min. Earth dist.	-3960 Mar 29 j 23:37	6°Mp21′01	4.29802 AU	
direct	-3966 Dec 20 j 08:08	24°) €23'56		direct	-3960 May 29 j 21:05	1°My32'37		
	-3965 Feb 20 j 08:01	0° Υ		evening set	-3960 Oct 02 j 10:06	19° m 43'55		
evening set	-3965 Apr 26 j 11:38	13° Y 06′02		max. Earth dist.	-3960 Oct 13 j 11:00	22° m 15'08	6.24471 AU	
conjunction	-3965 May 10 j 05:42	16°Υ11'11		conjunction	-3960 Oct 14 j 22:56		1°02'03	
minimum elong	-3965 May 10 j 05:45	16°Υ11'13		minimum elong	-3960 Oct 14 j 22:59	22° m/35'45	1°02'05	
max. Earth dist.	-3965 May 11 j 06:45	16° \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	6.22513 AU	morning rise	-3960 Oct 27 j 11:23	25° m/27'34		
morning rise	-3965 May 23 j 23:00	0° 8		ratra arada	-3960 Nov 16 j 19:03	0° 亞 13° 亞 50'18		
retrograde	-3965 Jul 14 j 22:42 -3965 Sep 25 j 03:58	7° 8 23'26		retrograde opposition	-3959 Mar 01 j 22:42 -3959 May 02 j 01:38	8° £ 56′21	1°04'56	
opposition	-3965 Nov 23 j 16:02	2° 8 23'14	001757	min. Earth dist.	-3959 May 02 j 21:32	8° ⊆ 50'00	4.18793 AU	
min. Earth dist.	-3965 Nov 23 j 07:18		4.27939 AU	direct	-3959 Jul 02 j 01:44	4° £ 01'07	4.18793 AU	
iiiii. Lartii dist.	-3965 Dec 12 j 05:53	2 3 20 10	4.27737 AU	evening set	-3959 Nov 03 j 18:00	22° £ 35'36		
direct	-3964 Jan 23 j 03:33	27° Υ 19'59		evening set	-3/3/ NOV 03 J 10.00	22 -33 30		
direct	-3964 Mar 05 j 12:57	0°8		conjunction	-3959 Nov 16 j 10:24	25° ≏ 33'42	0°22'00	
asc. node	-3964 Mar 08 j 04:28	0° 8 19'19		minimum elong	-3959 Nov 16 j 10:26	25° △ 33'43	0°21'55	
use. Hour	-3964 May 27 j 02:34	15° 8		max. Earth dist.	-3959 Nov 15 j 17:06	25° £ 23'34	6.13187 AU	
evening set	-3964 May 29 j 20:34	15° 8 36'03		morning rise	-3959 Nov 29 j 04:16	28° ♀ 32'47	0.13107110	
		•			-3959 Dec 05 j 10:37	0°M		
conjunction	-3964 Jun 12 j 09:43	18° 8 34'52	0°11'04		-3958 Feb 22 j 02:43	15° M ₊		
minimum elong	-3964 Jun 12 j 09:42	18° 8 34'52	0°11'11	retrograde	-3958 Apr 07 j 02:16	17°ML53'13		
behind sun begin	-3964 Jun 12 j 03:41	18° 8 31'34		desc. node	-3958 May 15 j 04:56	15°M42'34		
behind sun end	-3964 Jun 12 j 15:43	18° 8 38'10			-3958 May 21 j 12:31	15°RM₊		
max. Earth dist.	-3964 Jun 12 j 10:27	18° 8 35'16	6.32767 AU	opposition	-3958 Jun 06 j 23:30	12°M55'48	-0°04'14	
morning rise	-3964 Jun 25 j 20:06	21° 8 32'15		min. Earth dist.	-3958 Jun 07 j 02:40	12°M54'46	4.08054 AU	
	-3964 Aug 05 j 14:24	$\Pi^{\circ}0$		direct	-3958 Aug 05 j 15:10	8°ML02'30		
retrograde	-3964 Oct 25 j 08:03	8° Ⅱ 53'50			-3958 Oct 13 j 05:44	15° M ₊		
opposition	-3964 Dec 24 j 02:51	3° Ⅱ 57'37	0°47'21	evening set	-3958 Dec 07 j 19:26	27°ML02'03		
min. Earth dist.	-3964 Dec 24 j 10:23		4.36507 AU					
	-3963 Jan 27 j 22:58	30° ₹ 8		conjunction	-3958 Dec 20 j 18:21	0° ∡ 106'59	-0°27'01	
direct	-3963 Feb 23 j 20:04	28° 8 53'56		minimum elong	-3958 Dec 20 j 18:19	0° ≯ 06'58	0°27'09	
	-3963 Mar 23 j 00:32	Π $^{\circ}0$			-3958 Dec 20 j 06:37	0° ∡ ¹		
evening set	-3963 Jul 01 j 14:50	16° Ⅱ 51'36		max. Earth dist.	-3958 Dec 21 j 03:42	0° ≯ 12'33	6.04030 AU	
		🗨		morning rise	-3957 Jan 02 j 20:02	3° х 13′32		
conjunction	-3963 Jul 14 j 19:03	19° Ⅱ 44'14		retrograde	-3957 May 14 j 08:04	23° ₹ 20'41		
minimum elong	-3963 Jul 14 j 19:00	19° ∏ 44'12	0°52'13	opposition	-3957 Jul 13 j 19:22	18° ∡ 19′20		
max. Earth dist.	-3963 Jul 13 j 19:18	19° Ⅱ 31'14	6.38953 AU	min. Earth dist.	-3957 Jul 13 j 03:27		4.01448 AU	
morning rise	-3963 Jul 27 j 20:04	22° Ⅱ 35'14		direct	-3957 Sep 10 j 06:14	13°ズ26'07 0°る		
ratragrada	-3963 Sep 01 j 10:29	0°ഇ 9° ഇ 34'56		avaning sat	-3956 Jan 01 j 03:00	0°る 2° る 43'27		
retrograde	-3963 Nov 25 j 01:53	9 \$34 36 4°\$41'48	1°37'35	evening set	-3956 Jan 12 j 16:48	2 04321		
opposition min. Earth dist.	-3962 Jan 24 j 06:48 -3962 Jan 25 j 04:42	4°934'43	4.40045 AU	conjunction	-3956 Jan 25 j 22:55	5°₹53'05	1°07'00	
iiiii. Eartii tiist.	-3962 Mar 12 j 13:33	4 € 33443	4.40043 AU	minimum elong	-3956 Jan 25 j 22:52		1°07'18	
direct	-3962 Mar 27 j 19:17	29° II 38'58		max. Earth dist.	-3956 Jan 27 j 08:32	6°පි13'09	6.00485 AU	
direct	-3962 Apr 12 j 02:25	0°9		morning rise	-3956 Feb 08 j 08:33	9° る 04'31	0.00483 AU	
evening set	-3962 Apr 12 j 02:25	17° 5 29'39		retrograde	-3956 Jun 19 j 12:36	9 30431 29° 3 25'44		
max. Earth dist.	-3962 Aug 13 j 09:29	19°957'29	6.39456 AU	min. Earth dist.	-3956 Aug 17 j 07:25	24° පි 30'51	4.01503 AU	
max. Earth dist.	5702 Mag 15 j 07.27	1) 3/2)	0.57450710	opposition	-3956 Aug 18 j 11:47	24° පි 21'14		
conjunction	-3962 Aug 14 j 23:21	20°518'19	1°17'52	direct	-3956 Oct 15 j 11:23	19° පි 25'51		
minimum elong	-3962 Aug 14 j 23:19	20°518'18	1°18'01		-3955 Jan 09 j 16:03	0°≈		
morning rise	-3962 Aug 27 j 15:36	23°905'34	- 7-	evening set	-3955 Feb 17 j 16:53	8° ≈ 44'47		
<i>5</i>	-3962 Sep 29 j 11:07	0° Ω		<i>3</i>		/		
retrograde	-3962 Dec 26 j 05:50	10° Ω 09'54		conjunction	-3955 Mar 03 j 06:11	11° ≈ 55'52	-1°21'57	
opposition	-3961 Feb 24 j 22:07	5° Ω 18'19	2°00'42	minimum elong	-3955 Mar 03 j 06:12		1°22'05	
min. Earth dist.	-3961 Feb 26 j 03:54	5° Ω 08'49	4.37616 AU	max. Earth dist.	-3955 Mar 05 j 06:14	12° ≈ 24′08	6.03983 AU	
direct	-3961 Apr 28 j 13:55	0° Ω 17'31		morning rise	-3955 Mar 16 j 22:00	15° ≈ 08'08		
	-3961 Aug 18 j 10:52	15° Ω			-3955 Mar 16 j 08:02	15° ≈		
evening set	-3961 Sep 02 j 04:06	18° Ω 13′09			-3955 May 28 j 07:16	0°) €		

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3955 in astronomical counting style is the year 3956 BCE in historical counting style. -3955 Jul 25 j 10:53 5° **)** 01'44 max. Earth dist. -3949 Sep 17 j 08:45 25°**Ω**09'24 6.32671 AU retrograde -3955 Sep 22 j 23:41 29°≈56'31 -1°55'37 opposition 25°**Ω**33′07 -3955 Sep 21 j 18:36 0°**)** 6'27 4.08115 AU -3949 Sep 19 j 02:58 1°20'29 min. Earth dist. conjunction -3949 Sep 19 j 03:00 -3955 Sep 22 j 13:30 30°R≈ 25°**Ω**33'08 1°20'35 minimum elong -3949 Oct 01 j 14:29 -3955 Nov 20 j 07:45 28° **Q**21'08 direct 24°≈57'52 morning rise 0°**)**€ -3949 Oct 09 j 00:27 -3954 Jan 16 j 18:21 0° m evening set -3954 Mar 26 j 14:57 14°**)**€00'50 retrograde -3948 Feb 01 j 11:38 16° Mp 01'54 1°45'27 opposition -3948 Apr 02 j 12:01 11°M 09'54 conjunction -3954 Apr 09 j 08:47 17°**)**€09'53 -1°06'18 min. Earth dist. -3948 Apr 03 j 16:56 11° Mp 00'43 4.28088 AU minimum elong -3954 Apr 09 j 08:50 17°**₩**09'55 1°06'20 direct -3948 Jun 03 j 11:38 6° Mp 12'18 max. Earth dist. -3954 Apr 11 j 02:20 17°**)** € 33'44 6.13068 AU evening set -3948 Oct 06 j 23:09 24° m 27'31 -3954 Apr 23 j 03:40 morning rise 20°**升**19′13 max. Earth dist. -3948 Oct 18 j 02:15 27° Mp 00'406.22691 AU -3954 Jun 07 j 06:06 $0^{\circ}\Upsilon$ retrograde -3954 Aug 28 j 08:25 9°Υ17'12 conjunction -3948 Oct 19 j 12:09 27° Mp 20'10 0°57'21 opposition -3954 Oct 26 j 18:58 4°Υ13'56 -1°12'46 minimum elong -3948 Oct 19 j 12:12 27° Mp 20'120°57'22 min. Earth dist. -3954 Oct 25 j 21:53 4°Υ21'06 4.18660 AU -3948 Oct 31 j 02:27 0∘**⊽** -3954 Dec 03 j 04:46 30°R₩ morning rise -3948 Nov 01 j 01:15 0°**£**13′02 direct -3954 Dec 25 j 03:28 29°¥12'17 retrograde -3947 Mar 07 j 01:39 18°**-**44'25 -3953 Jan 16 j 09:16 $0^{\circ}\Upsilon$ opposition -3947 May 07 j 03:05 13°**♀**50'04 0°56'04 17°**Y**49'35 evening set -3953 May 01 j 08:58 min. Earth dist. -3947 May 07 j 21:03 13°**≏**44'18 4.17068 AU direct -3947 Jul 06 j 22:59 8°**£**55'12 conjunction -3953 May 15 j 02:40 20°Y'53'49 -0°28'21 evening set -3947 Nov 08 j 12:29 27°**♀**33'31 -3953 May 15 j 02:43 20°**Υ**'53'50 0°28'18 -3947 Nov 18 j 22:17 0°M minimum elong max. Earth dist. -3953 May 16 j 00:19 21°**Y**05'55 6.24304 AU -3953 May 28 j 19:09 23°Y57'14 -3947 Nov 21 i 05:47 0°M32'39 0°15'08 morning rise conjunction -3953 Jun 25 j 19:53 -3947 Nov 21 j 05:48 0°15'03 0°8 minimum elong 0°M-32'39 -3953 Sep 29 j 13:56 -3947 Nov 21 j 02:38 11°**8**56'45 behind sun begin 0°M,30'49 retrograde -3953 Nov 28 j 02:00 -3947 Nov 21 j 08:57 6°857'09 -0°08'32 behind sun end 0°M,34'30 opposition -3953 Nov 27 j 20:17 6°**8**59'04 4.29484 AU 6.11690 AU min. Earth dist. max. Earth dist. -3947 Nov 20 j 17:03 0°M-25'10 -3952 Jan 17 j 07:14 2°**8**04'13 morning rise -3947 Dec 04 j 00:36 asc. node 3°M_32'49 -3946 Jan 26 j 01:51 -3952 Jan 27 j 18:49 1°**8**53'46 15°M direct -3952 May 10 j 13:32 15°8 -3946 Mar 23 j 22:56 22°M25'26 desc. node -3952 Jun 03 j 11:44 20°**8**06'23 -3946 Apr 12 j 08:09 evening set retrograde 23°M00'40 18°ML02'43 -0°14'57 -3946 Jun 12 j 05:01 opposition -3952 Jun 16 j 23:46 23°**8**04'18 0°17'18 -3946 Jun 12 j 04:47 conjunction min. Earth dist. 18°M02'48 4.06934 AU 23°**8**04'17 0°17'26 -3952 Jun 16 j 23:44 -3946 Jul 07 j 11:32 minimum elong 15°RM -3952 Jun 16 j 19:39 23°**8**02'03 6.33932 AU max. Earth dist. direct -3946 Aug 10 j 15:34 13°M09'37 -3952 Jun 30 j 09:02 26°**8**00'43 -3946 Sep 13 j 10:34 15°M morning rise -3952 Jul 18 j 22:23 $0^{\circ}II$ -3946 Dec 03 j 12:12 0°**⊼** retrograde -3952 Oct 29 j 14:22 13°**Ⅲ**17'57 evening set -3946 Dec 12 j 20:02 2°×11'40 -3952 Dec 28 j 10:41 8°II22'13 0°55'33 opposition min. Earth dist. -3952 Dec 28 j 20:37 8°**Ц**18'57 4.37236 AU -3946 Dec 25 j 19:47 5° ₹17'17 -0°33'45 conjunction -3951 Feb 28 j 06:55 3°**Ⅱ**18'32 -3946 Dec 25 j 19:44 5° ₹ 17'15 0°33'54 direct minimum elong -3951 Jul 06 j 01:28 21°II15'06 -3946 Dec 26 j 08:30 5° ₹24'52 6.03358 AU evening set max. Earth dist. 8°**∡**¹24'37 -3951 Jul 18 j 02:38 23°**Ⅲ**52'57 6.39183 AU -3945 Jan 07 j 22:38 max. Earth dist. morning rise retrograde -3945 May 19 j 15:03 28°×735'06 24°**I**07'07 0°56'44 conjunction -3951 Jul 19 i 04:30 min. Earth dist. -3945 Jul 18 i 06:47 23°**х** 39'21 4.01297 AU minimum elong -3951 Jul 19 i 04:27 24°**Ⅱ**07'05 0°56'53 opposition -3945 Jul 19 i 01:19 23°**₹**33'10 -1°23'08 morning rise 18°**√**39'44 -3951 Aug 01 i 04:05 26°**I**57′29 direct -3945 Sep 15 i 10:16 -3951 Aug 15 j 07:34 0ಂತಾ -3945 Dec 14 j 00:18 0°궁 -3951 Nov 29 j 09:24 13°957'06 -3944 Jan 17 j 21:19 7°る57'15 retrograde evening set -3950 Jan 28 j 15:41 9°904'21 opposition 1°42'38 4.39787 AU min. Earth dist. -3950 Jan 29 j 15:16 -3944 Jan 31 j 04:34 11°る07'10 -1°11'03 8°956'46 conjunction -3944 Jan 31 j 04:31 direct -3950 Apr 01 j 05:14 4°9501'48 minimum elong 11°る07'08 1°11'12 -3950 Aug 06 j 12:49 21°953'39 max. Earth dist. -3944 Feb 01 j 18:31 11°**る**29'46 6.00846 AU evening set -3944 Feb 13 j 14:59 max. Earth dist. -3950 Aug 17 j 14:11 24°9519'35 6.38707 AU 14°る18'45 morning rise -3944 Apr 29 j 23:15 0°≈ -3950 Aug 19 j 07:07 -3944 Jun 24 j 17:00 conjunction 24°9542'11 1°19'48 retrograde 4°≈37'23 -3950 Aug 19 j 07:06 30°R₹ minimum elong 24°9542'09 1°19'58 -3944 Aug 20 j 05:21 -3950 Aug 31 j 22:41 27°9529'24 29°る42'19 4.02353 AU morning rise min. Earth dist. -3944 Aug 22 j 09:33 -3950 Sep 12 j 11:42 0° Ω opposition -3944 Aug 23 j 14:05 29°**る**32'38 -2°00'15 -3950 Dec 30 j 18:49 14°**Ω**37'39 -3944 Oct 20 j 14:02 24°る36'53 retrograde direct opposition -3949 Mar 01 j 11:07 9°**Ω**46'11 2°01'17 -3944 Dec 18 j 11:44 0°≈ min. Earth dist. -3949 Mar 02 j 18:05 9°**Ω**36′18 4.36445 AU evening set -3943 Feb 22 j 22:08 13°≈53'28 direct -3949 May 03 j 02:07 4°**Ω**45'43 -3943 Feb 27 j 16:00 15°≈ 15°**Ω** -3949 Aug 01 j 02:03 -3949 Sep 06 j 13:35 22°**\Omega**44'22 -3943 Mar 08 j 12:04 17°≈04'17 -1°21'31 evening set conjunction

•	nical year style is used: Th		_	· //		, 1	80 41
minimum elong	-3943 Mar 08 j 12:05	17° ≈ 04'18		8-9	-3937 Feb 28 j 09:02	15°R Ω	
max. Earth dist.	-3943 Mar 10 j 11:12	17° ≈ 31'55	6.05219 AU	opposition	-3937 Mar 06 j 01:34	14° Ω 16'44	2°01'12
morning rise	-3943 Mar 22 j 04:38	20° ≈ 16'16		min. Earth dist.	-3937 Mar 07 j 08:32	14° Ω 06'53	4.35406 AU
	-3943 May 05 j 11:13	0°) €		direct	-3937 May 07 j 15:02	9° Ω 16'43	
retrograde	-3943 Jul 30 j 06:08	10° ∺ 02′22			-3937 Jul 11 j 10:53	15° Ω	
opposition	-3943 Sep 27 j 19:36	4°) 57'17	-1°51'41	evening set	-3937 Sep 10 j 23:46	27° Ω 17′29	
min. Earth dist.	-3943 Sep 26 j 14:35	5°) €07'12	4.09615 AU	max. Earth dist.	-3937 Sep 21 j 18:11	29° Ω 42'38	6.31398 AU
	-3943 Nov 21 j 00:49	30° R ≈					
direct	-3943 Nov 25 j 06:05	29° ≈ 58'10		conjunction	-3937 Sep 23 j 12:40		1°18'36
_	-3943 Nov 29 j 11:44	0° ∀		minimum elong	-3937 Sep 23 j 12:42	0° Mp 06'36	1°18'41
evening set	-3942 Mar 31 j 16:47	18° ¥ 57'18			-3937 Sep 23 j 01:00	0° m y	
	2042 4 14:10.57	2201/05145	100201	morning rise	-3937 Oct 06 j 00:15	2° m 55'07	
conjunction	-3942 Apr 14 j 10:57	22°) €05'45		retrograde	-3936 Feb 06 j 07:11	20° m/42'10	1040110
minimum elong	-3942 Apr 14 j 11:01	22°\cdot\05'48 22°\cdot\28'06		opposition	-3936 Apr 07 j 07:44	15° m 49'55	1°40'19
max. Earth dist.	-3942 Apr 16 j 02:01 -3942 Apr 28 j 05:45	25° H 14'19	6.14726 AU	min. Earth dist.	-3936 Apr 08 j 11:21 -3936 Jun 08 j 04:07	15° Mp 41'07 10° Mp 52'42	4.26667 AU
morning rise	-3942 Apr 28 j 05.43	23 π 1419		direct evening set	-3936 Oct 11 j 11:59	29° m) 10'34	
retrograde	-3942 Nay 19 j 13:30 -3942 Sep 01 j 23:48	14° Υ 03'31		evening set	-3936 Oct 11 j 11:39	0° ⊽	
opposition	-3942 Oct 31 j 09:12	9° Υ 00'43	-1°04'33	max. Earth dist.	-3936 Oct 13 j 02:14 -3936 Oct 22 j 19:30		6.21277 AU
min. Earth dist.	-3942 Oct 30 j 14:58	9° Υ 06'54	4.20295 AU	max. Larm dist.	-3730 OCT 22 j 17.30	1	0.212// AO
direct	-3942 Dec 29 j 23:00	3° Υ 58'44	4.202)3710	conjunction	-3936 Oct 24 j 01:30	2° ഫ 03'59	0°52'19
evening set	-3941 May 06 j 05:21	22° Υ 32'06		minimum elong	-3936 Oct 24 j 01:33	2° £ 04'01	0°52'18
e venning sec	59.11 May 00 J 00.21	22 13200		morning rise	-3936 Nov 05 j 15:01	4° £ 57'41	0 02 10
conjunction	-3941 May 19 j 22:37	25° Y '35'31	-0°22'06	retrograde	-3935 Mar 12 j 01:55	23° ჲ 36'13	
minimum elong	-3941 May 19 j 22:39	25° Y '35'32		opposition	-3935 May 12 j 03:41	18° ≏ 41'26	0°46'54
max. Earth dist.	-3941 May 20 j 16:49	25° Ƴ 45'41	6.25801 AU	min. Earth dist.	-3935 May 12 j 18:59	18° ≏ 36'32	4.15762 AU
morning rise	-3941 Jun 02 j 14:22	28° Y ′38′00		direct	-3935 Jul 11 j 19:04	13° ≏ 46'58	
	-3941 Jun 08 j 19:05	9° 8			-3935 Nov 02 j 15:16	0° M	
	-3941 Sep 03 j 03:07	15° 8		evening set	-3935 Nov 13 j 05:55	2° M $27'37$	
retrograde	-3941 Oct 03 j 22:23	16° 8 30'35					
	-3941 Nov 03 j 14:15	15°₹ ႘		conjunction	-3935 Nov 25 j 23:48	5° M 27′30	0°08'18
asc. node	-3941 Nov 27 j 08:19	12° 8 12'44		minimum elong	-3935 Nov 25 j 23:49	5° M 27′31	0°08'13
opposition	-3941 Dec 02 j 12:04	11° 8 31'31	0°00'53	behind sun begin	-3935 Nov 25 j 16:40	5° M 23′19	
min. Earth dist.	-3941 Dec 02 j 07:59	11° 8 32'53	4.30732 AU	behind sun end	-3935 Nov 26 j 06:57	5° M 31'42	
direct	-3940 Feb 01 j 08:04	6° 8 27'58		max. Earth dist.	-3935 Nov 25 j 13:46	5° M 21′36	6.10606 AU
	-3940 Apr 22 j 01:06	15° 8		morning rise	-3935 Dec 08 j 19:44	8°M28'36	
evening set	-3940 Jun 08 j 03:00	24° 8 38'03			-3934 Jan 06 j 13:03	15°M₁	
	2040 1 21:12.52	270 42 5107	0022120	desc. node	-3934 Jan 31 j 21:35	20°M08'46	
conjunction	-3940 Jun 21 j 13:53	27° 8 35'07	0°23'28	retrograde	-3934 Apr 17 j 11:44	28°M02'25	0925110
minimum elong max. Earth dist.	-3940 Jun 21 j 13:51 -3940 Jun 21 j 06:02	27° 8 35'06 27° 8 30'48	0°23'37 6.34847 AU	opposition min. Earth dist.	-3934 Jun 17 j 08:24 -3934 Jun 17 j 05:05	23°M03'50 23°M04'55	4.06162 AU
max. Earm dist.	-3940 Jul 21 j 08.02 -3940 Jul 02 j 13:48	27 O 3048 0°Ⅱ	0.34847 AU	direct	-3934 Juli 17 J 05:03	18°M10'47	4.00102 AU
morning rise	-3940 Jul 02 j 13.48	0° П 30'39		direct	-3934 Nov 16 j 03:10	0° √	
retrograde	-3940 Nov 02 j 23:08	17° ∏ 44′20		evening set	-3934 Dec 17 j 18:20	7° ∡ 14'16	
opposition	-3939 Jan 01 j 19:31	12° ∏ 49'07	1°03'30	evening set	3754 Dec 17 J 10.20	/ × 1410	
min. Earth dist.	-3939 Jan 02 j 08:17	12° ∏ 44′56	4.37766 AU	conjunction	-3934 Dec 30 j 19:09	10° ∡ ′20'29	-0°40'02
direct	-3939 Mar 04 j 19:20	7° Ⅱ 45'30		minimum elong	-3934 Dec 30 j 19:06	10° ∡ 20'27	0°40'12
evening set	-3939 Jul 10 j 12:51	25° Ⅱ 41'18		max. Earth dist.	-3934 Dec 31 j 12:53	10° ∡ ′31′03	6.02965 AU
max. Earth dist.	-3939 Jul 22 j 09:22		6.39268 AU	morning rise	-3933 Jan 12 j 22:51	13° ∡ 28′22	
					-3933 Apr 05 j 04:50	ರ°0	
conjunction	-3939 Jul 23 j 14:37	28° Ⅲ 32'45	1°01'08	retrograde	-3933 May 24 j 20:16	3° る 40'59	
minimum elong	-3939 Jul 23 j 14:33	28° Ⅲ 32'43	1°01'17		-3933 Jul 13 j 20:55	30°₽ ⋌	
	-3939 Jul 30 j 05:51	0 \circ \mathfrak{s}		min. Earth dist.	-3933 Jul 23 j 08:18	28° ∡ ¹45′08	4.01346 AU
morning rise	-3939 Aug 05 j 13:02	1° 5 22'35		opposition	-3933 Jul 24 j 03:56	28° ∡ ³38'35	-1°30'37
retrograde	-3939 Dec 03 j 18:31	18° © 22'32		direct	-3933 Sep 20 j 11:13	23° ∡ ⁴44'57	
opposition	-3938 Feb 02 j 02:07	13° © 30'02	1°47'10		-3933 Nov 23 j 06:22	0°ප	
min. Earth dist.	-3938 Feb 03 j 02:53	13°522'03	4.39459 AU	evening set	-3932 Jan 22 j 23:20	13° る 02'17	
direct	-3938 Apr 05 j 15:50	8°\$27'41				—	
evening set	-3938 Aug 10 j 22:15	26°\$20'31	C 0.000 :	conjunction	-3932 Feb 05 j 07:20	16°る12'21	
max. Earth dist.	-3938 Aug 21 j 23:20	28° © 46'35	6.37991 AU	minimum elong	-3932 Feb 05 j 07:17	16°る12'19	
	2020 4 22 117 11	200-20	1001100	max. Earth dist.	-3932 Feb 06 j 22:00	16°る35'20	6.01291 AU
conjunction	-3938 Aug 23 j 15:44	29°508'56	1°21'20	morning rise	-3932 Feb 18 j 18:48	19°る24'07	
minimum elong	-3938 Aug 23 j 15:42	29°508'56	1°21'29	natna c J -	-3932 Apr 06 j 15:37	0°≈ 0°a •20!42	
morning rice	-3938 Aug 27 j 11:59	0° Ω 1° Ω 56'05		retrograde min. Earth dist.	-3932 Jun 29 j 15:31	9°≈39'43 4°≈44'53	4 03170 ATT
morning rise	-3938 Sep 05 j 06:21 -3938 Nov 12 j 02:42	1°8 (256 05)		opposition	-3932 Aug 27 j 06:49 -3932 Aug 28 j 12:29	4°≈44°53 4°≈34'48	4.03170 AU
retrograde	-3937 Jan 04 j 07:57	15° ∂ ℓ 19° Ω 08'08		оррознин	-3932 Aug 28 j 12:29 -3932 Oct 11 j 04:24	4°≈34'48 30°Ŗる	-2 0140
Tonograde	5757 Jan 10+ J 07.57	17 060000			5752 Oct 11 J 04.24	20 I (O	

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3932 in astronomical counting style is the year 3933 BCE in historical counting style. conjunction -3932 Oct 25 j 11:56 29°**る**38'36 -3926 Aug 28 j 00:12 3°**Ω**36'30 1°22'23 direct -3932 Nov 08 j 22:32 -3926 Aug 28 j 00:11 3°**£**36′29 1°22'31 0°≈≈ minimum elong -3931 Feb 11 j 01:33 -3926 Sep 09 j 14:09 6° **Ω**23'34 15°≈ morning rise -3931 Feb 28 j 00:14 -3926 Oct 20 j 21:27 18°≈53'22 15°**Ω** evening set -3925 Jan 08 j 20:46 23°**Ω**38'54 retrograde 18°**Ω**47'24 conjunction -3931 Mar 13 j 15:00 22°≈04'02 -1°20'30 opposition -3925 Mar 10 j 15:47 2°00'22 -3931 Mar 13 j 15:02 4.34530 AU minimum elong 22°≈04'03 1°20'36 min. Earth dist. -3925 Mar 11 j 22:17 18°**Ω**37'41 max. Earth dist. -3931 Mar 15 j 13:32 22°**≈**31'14 6.06326 AU -3925 Apr 13 j 14:34 15°R€ morning rise -3931 Mar 27 j 08:02 25°≈15'43 direct -3925 May 12 j 03:21 13°**Ω**47'41 -3931 Apr 17 j 04:18 0°**)**€ -3925 Jun 09 j 17:21 15°**Ω** retrograde -3931 Aug 04 j 01:23 14°**)** 55'11 -3925 Sep 07 j 03:29 0° m -3931 Oct 01 j 10:00 -3925 Sep 15 j 09:03 min. Earth dist. 9°**∺**59'31 4.10879 AU evening set 1° m/49'53 opposition -3931 Oct 02 j 12:52 9°**¥**50'20 -1°47'06 max. Earth dist. -3925 Sep 26 j 05:41 4° Mp 16′38 6.30293 AU direct -3931 Nov 30 j 03:16 4°**¥**50'48 evening set -3930 Apr 05 j 16:07 23°**)**47'09 conjunction -3925 Sep 27 j 21:50 4°m/39'19 1°16'15 minimum elong -3925 Sep 27 j 21:52 4°m/39'21 1°16'20 conjunction -3930 Apr 19 j 10:34 26°\\$55'10 -0°57'25 morning rise -3925 Oct 10 j 09:14 7°m/28'17 minimum elong -3930 Apr 19 j 10:38 26°\\$55'12 0°57'25 retrograde -3924 Feb 11 j 01:20 25° m 21'03 max. Earth dist. -3930 Apr 20 j 23:35 27°**升**16'15 6.16057 AU opposition -3924 Apr 12 j 02:33 20° m 28'31 1°34'34 -3930 May 02 j 23:46 $0^{\circ}\Upsilon$ min. Earth dist. -3924 Apr 13 j 05:21 20° Mp 19'59 4.25371 AU morning rise -3930 May 03 j 05:18 0°Y03'07 direct -3924 Jun 12 j 20:08 15° m 31'43 retrograde -3930 Sep 06 j 11:39 18° **Y**44'58 -3924 Sep 28 i 20:50 0∘**⊽** opposition -3930 Nov 04 j 21:29 13°**Y**'42'41 -0°56'07 evening set -3924 Oct 15 i 23:49 3°**£**51'52 min. Earth dist. -3930 Nov 04 i 04:20 13°**Y**48'30 4.21577 AU max. Earth dist. -3924 Oct 27 j 08:25 6°**₽**29'07 6.19887 AU -3929 Jan 03 j 14:00 8°**Y**40'27 direct -3929 May 11 j 00:37 27°**Y**11′25 -3924 Oct 28 j 13:34 6°**£**46′00 0°46'58 conjunction evening set -3929 May 23 j 15:54 -3924 Oct 28 j 13:37 6°**£**46'02 0°8 0°46'57 minimum elong -3924 Nov 10 j 03:55 9°**£**40'36 morning rise -3929 May 24 j 17:15 0°814'07 -0°15'47 -3923 Mar 17 j 00:40 retrograde 28°**£**26'27 conjunction -3929 May 24 j 17:17 opposition -3923 May 17 j 03:03 minimum elong 0°814'08 0°15'43 23°**△**31'06 0°37'27 -3923 May 17 j 15:46 -3929 May 24 j 16:48 4.14360 AU behind sun begin 0°**8**13'52 min. Earth dist. 23°**₽**27'01 -3929 May 24 j 17:45 -3923 Jul 16 j 14:06 0°814'24 18°**2**36'51 behind sun end direct -3929 May 25 j 06:48 6.26955 AU 0°**8**21'40 -3923 Oct 16 j 09:20 max. Earth dist. 0°M -3929 Jun 07 j 08:19 3°**8**15'49 -3923 Nov 17 j 22:42 7°M20'33 morning rise evening set -3929 Aug 04 j 16:32 15°**8** -3929 Oct 07 j 21:32 21°**8**02'51 -3923 Nov 30 j 17:35 10°M21'22 0°01'25 asc. node conjunction -3929 Oct 08 j 09:00 21°**8**02'52 retrograde minimum elong -3923 Nov 30 j 17:35 10°M21'23 0°01'20 -3929 Dec 06 j 21:43 16°804'24 0°10'10 behind sun begin -3923 Nov 30 j 09:31 10°M16'38 opposition min. Earth dist. -3929 Dec 06 j 20:48 16°**8**04'42 4.31672 AU behind sun end -3923 Dec 01 j 01:39 10°M26'07 -3929 Dec 15 j 00:28 15°R₩ max. Earth dist. -3923 Nov 30 j 12:04 10°M18'09 6.09331 AU direct -3928 Feb 05 j 22:22 11°**8**00'47 desc. node -3923 Dec 11 j 20:52 12°M59'05 -3928 Mar 29 j 20:18 15°8 -3923 Dec 13 j 14:23 13°M23'28 morning rise -3928 Jun 12 j 17:46 29°809'21 -3923 Dec 20 j 11:48 evening set 15°M -3928 Jun 16 j 14:31 $\mathbb{I}^{\circ 0}$ -3922 Mar 08 j 09:34 0°×7 -3922 Apr 22 j 16:52 3°**х** 03′54 retrograde 2°**I**105'43 0°29'27 conjunction -3928 Jun 26 i 03:40 -3922 Jun 07 i 09:37 30°RM minimum elong -3928 Jun 26 i 03:38 2°**I**105'42 0°29'36 opposition -3922 Jun 22 j 10:59 28°M04'48 -0°35'30 max. Earth dist. -3928 Jun 25 i 17:22 2°**П**00'04 6.35506 AU min. Earth dist. -3922 Jun 22 i 06:09 28°M06'23 4.05130 AU morning rise -3928 Jul 09 i 10:22 5°**Ⅱ**00'28 direct -3922 Aug 20 j 14:39 23°M11'45 -3928 Nov 07 j 06:21 22°**Ⅱ**11'34 -3922 Oct 26 j 23:09 0°×7 retrograde -3927 Jan 06 j 04:43 17°**Ⅱ**16'47 1°11'03 -3922 Dec 22 j 17:22 12°**х** 18′02 opposition evening set min. Earth dist. -3927 Jan 06 j 18:24 17°**Ⅱ**12'19 4.38136 AU direct -3927 Mar 09 j 05:39 12°**Ⅱ**13'19 -3921 Jan 04 j 19:03 15°**∡**124'58 -0°46'04 conjunction -3927 Jul 14 j 08:18 0000 minimum elong -3921 Jan 04 i 19:00 15°**₹**24'56 0°46'13 evening set -3927 Jul 15 j 00:13 0°908'39 max. Earth dist. -3921 Jan 05 j 14:36 15°**х** 36′38 6.02250 AU 2°542'37 6.39314 AU max. Earth dist. -3927 Jul 26 j 17:48 morning rise -3921 Jan 18 j 00:04 18°**х** 33'41 -3921 Mar 10 j 23:09 0°궁 -3927 Jul 28 j 00:39 2°959'33 1°05'10 -3921 May 29 j 23:39 8°る49'29 conjunction retrograde -3927 Jul 28 j 00:35 -3921 Jul 28 j 08:38 3°る54'02 4.01046 AU minimum elong 2°**©**59'31 1°05'21 min. Earth dist. -3927 Aug 09 j 21:49 -3921 Jul 29 j 06:49 morning rise 5°9548'50 opposition 3°₹46'36 -1°37'31 retrograde -3927 Dec 08 j 04:59 22°549'14 -3921 Aug 30 j 15:30 30°₽**⋌**7 -3926 Feb 06 j 13:06 17°**9**57'01 1°51'05 direct -3921 Sep 25 j 10:51 28°**х** 52'40 opposition

min. Earth dist.

direct

evening set

max. Earth dist.

-3926 Feb 07 j 15:31

-3926 Apr 10 j 04:24

-3926 Aug 11 j 15:38

-3926 Aug 15 j 07:39

-3926 Aug 26 j 06:24

17°**©**48'32

12°954'58

0°**Ω** 0°**Ω**48'13 4.39192 AU

3°**Ω**13'20 6.37402 AU

evening set

conjunction

minimum elong

-3921 Oct 21 j 06:30

-3920 Jan 28 j 02:58

-3920 Feb 10 j 12:07

-3920 Feb 10 j 12:05

0°궁

18°る11'20

21° සි21'48 -1°17'01

21°**ප්**21'46 1°17'11

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3920 in astronomical counting style is the year 3921 BCE in historical counting style. -3920 Feb 12 i 05:07 21°る46'10 6.01417 AU -3914 Jul 26 i 13:03 $0^{\circ}\Omega$ max. Earth dist. 24°る33'53 -3920 Feb 24 j 00:26 -3914 Aug 19 j 14:15 5°Ω09'04 morning rise evening set 7°**Ω**33'37 -3920 Mar 18 j 14:47 -3914 Aug 30 j 11:46 0°≈≈ max. Earth dist. 6.37332 AU -3920 Jul 04 j 18:25 14°≈47'29 retrograde -3920 Sep 01 j 07:50 9°**≈**52'16 4.03701 AU -3914 Sep 01 j 05:52 min. Earth dist. conjunction 7°**Ω**56′59 1°22'53 -3920 Sep 02 j 12:51 -3914 Sep 01 j 05:51 opposition 9°≈42'23 -2°02'29 minimum elong 7°**Ω**56′59 1°23'01 -3914 Sep 13 j 19:03 direct -3920 Oct 30 j 14:13 4°≈45'42 morning rise 10°**Ω**43'48 -3914 Oct 03 j 12:18 -3919 Jan 23 j 14:23 15°≈ 15°€ evening set -3919 Mar 05 j 05:19 23°≈59'37 retrograde -3913 Jan 13 j 07:00 28°**Ω**01′02 opposition -3913 Mar 15 j 03:13 23°**Ω**09'33 1°58'46 conjunction -3919 Mar 18 j 20:56 27°≈10′16 -1°18′50 min. Earth dist. -3913 Mar 16 j 10:49 22°**Ω**59'30 4.34057 AU -3919 Mar 18 j 20:58 -3913 May 16 j 14:43 minimum elong 27°≈10'17 1°18'56 direct 18°**Ω**10′13 -3919 Mar 20 j 19:54 max. Earth dist. 27°≈37'37 6.07216 AU -3913 Aug 21 j 23:44 0° m -3919 Mar 31 j 00:54 0°**)**€ evening set -3913 Sep 19 j 14:36 6° m 12'37 morning rise -3919 Apr 01 j 14:34 0°\ 21'47 max. Earth dist. -3913 Sep 30 j 09:57 8°m/38'59 6.29446 AU retrograde -3919 Aug 08 j 21:47 19° **X** 54'50 min. Earth dist. -3919 Oct 06 j 05:46 14°**¥**59'22 4.12040 AU conjunction -3913 Oct 02 j 03:08 9°m/02'18 1°13'30 opposition -3919 Oct 07 j 08:28 14°****50'15 -1°41'39 minimum elong -3913 Oct 02 j 03:10 9° m 02'20 1°13'34 direct -3919 Dec 05 j 00:42 9° **\(**50'18 morning rise -3913 Oct 14 j 14:40 11° m 51'39 evening set -3918 Apr 10 j 18:56 28°**)**(44'10 retrograde -3912 Feb 15 j 14:35 29° m 49'39 -3918 Apr 16 j 08:52 $0^{\circ}\Upsilon$ opposition -3912 Apr 16 j 17:16 24° Mp 56'49 1°28'25 min. Earth dist. -3912 Apr 17 i 18:40 24° m 48'44 4.24184 AU -3918 Apr 24 i 13:26 1°Y51'40 -0°52'16 direct -3912 Jun 17 i 07:08 20° m 00'21 conjunction -3918 Apr 24 j 13:30 1°Υ51'42 0°52'16 -3912 Sep 11 j 23:12 0∘**⊽** minimum elong max. Earth dist. -3918 Apr 25 j 22:54 2°**Υ**10'42 6.17416 AU -3912 Oct 20 j 07:47 8°**£**22'54 evening set -3918 May 08 j 08:09 4°Y59'00 morning rise -3918 Sep 11 j 03:37 23°Y33'08 -3912 Nov 01 j 22:08 11°**♀**17'51 0°41'32 retrograde conjunction -3918 Nov 09 j 12:48 18°**Y**'31'20 -0°47'04 -3912 Nov 01 j 22:10 0°41'30 minimum elong 11°**Ω**17'53 opposition -3918 Nov 08 j 22:02 18°**Y**36'20 4.23009 AU -3912 Oct 31 j 19:36 6.18478 AU min. Earth dist. max. Earth dist. 11°**≏**02'28 -3917 Jan 08 j 10:16 13°Y28'51 -3912 Nov 14 j 13:00 direct morning rise 14°**£**13'21 -3917 May 07 j 01:50 -3911 Feb 04 j 00:53 0°M 0°8 -3911 Mar 21 j 21:50 -3917 May 15 j 22:18 1°**8**56'29 3°M06'53 evening set retrograde 30°ŖΩ -3911 May 07 j 12:07 28°**2**11'11 0°28'04 -3917 May 29 j 14:25 4°**8**58'22 -0°09'15 -3911 May 21 j 22:30 conjunction opposition -3917 May 29 j 14:26 -3911 May 22 j 10:34 minimum elong 4°**8**58'22 0°09'09 min. Earth dist. 28°**♀**07'18 4.12812 AU -3917 May 29 j 07:28 -3911 Jul 21 j 05:56 behind sun begin 4°**8**54'31 direct 23°**♀**17'11 -3917 May 29 j 21:24 5°**8**02'13 -3911 Sep 27 j 01:59 behind sun end 0°M max. Earth dist. -3917 May 30 j 02:44 5°**8**05'12 6.28400 AU desc. node -3911 Oct 23 j 17:41 5°M18'45 morning rise -3917 Jun 12 j 04:24 7°**8**59'03 -3911 Nov 22 j 12:26 12°M05'01 evening set -3917 Jul 15 j 05:26 15°8 -3911 Dec 04 j 20:25 15°M asc. node -3917 Aug 17 j 04:54 20°**8**54'51 -3917 Oct 12 j 18:37 25°839'21 -3911 Dec 05 j 08:07 15°ML06'55 -0°05'20 retrograde conjunction -3917 Dec 11 j 09:29 20°841'27 0°19'33 -3911 Dec 05 j 08:06 15°ML06'54 0°05'27 opposition minimum elong -3917 Dec 11 j 09:21 20°841'30 4.33041 AU behind sun begin -3911 Dec 05 j 00:18 15°M02'19 min. Earth dist. -3916 Feb 10 j 13:08 15°**8**37'51 behind sun end -3911 Dec 05 j 15:54 direct 15°M11'30 -3911 Dec 05 i 03:41 -3916 May 31 i 01:28 $\mathbb{I}^{\circ 0}$ max. Earth dist. 15°ML04'19 6.07785 AU evening set -3916 Jun 17 i 09:50 3°**Ⅱ**43'01 morning rise -3911 Dec 18 i 06:12 18°ML10'13 -3910 Feb 10 i 19:36 0°×7 -3916 Jun 30 j 18:15 6°**Д**38'19 0°35'18 conjunction retrograde -3910 Apr 27 i 17:40 7°**х** 58'42 -3916 Jun 30 i 18:12 6°II38'18 0°35'27 -3910 Jun 27 j 10:32 2°×759'06 -0°45'09 minimum elong opposition -3916 Jun 30 j 04:27 6°**Д**30'45 6.36711 AU min. Earth dist. -3910 Jun 27 j 02:44 3°**✗**01'40 4.03742 AU max. Earth dist. -3916 Jul 13 j 23:40 9°**Ⅲ**32′02 -3910 Jul 21 j 21:52 30°RML morning rise -3916 Nov 11 j 15:22 26°**Ⅲ**38'42 -3910 Aug 25 j 08:34 28°M06'05 retrograde direct opposition -3915 Jan 10 j 14:36 21°II44'23 1°18'08 -3910 Sep 28 j 11:08 0°×7 min. Earth dist. -3915 Jan 11 j 06:46 21°**Д**39'07 4.39110 AU evening set -3910 Dec 27 j 14:37 17°**х** 17′02 -3915 Mar 13 j 19:55 direct 16°**Ⅱ**41′03 0°ಅ -3915 Jun 28 j 00:17 conjunction -3909 Jan 09 j 17:31 20°**₹**24'58 -0°51'35 -3909 Jan 09 j 17:27 -3915 Jul 19 j 10:39 20°**₹**24'55 0°51'44 evening set 4°933'34 minimum elong -3915 Jul 31 j 01:50 -3909 Jan 10 j 16:42 20°**х** 38′50 6.01151 AU max. Earth dist. 7°**©**06'07 6.39970 AU max. Earth dist. -3909 Jan 22 j 23:34 23°×734'39 morning rise -3915 Aug 01 j 09:52 -3909 Feb 19 j 19:53 0°궁 conjunction 7°523'40 1°08'47 -3915 Aug 01 j 09:49 7°**©**23'39 1°08'57 retrograde -3909 Jun 04 j 04:24 13°**る**55'21 minimum elong morning rise -3915 Aug 14 j 05:40 10°9512'10 min. Earth dist. -3909 Aug 02 j 09:27 8°る59'46 4.00370 AU retrograde -3915 Dec 12 j 11:20 27°511'10 opposition -3909 Aug 03 j 08:19 8°る52'04 -1°43'31 opposition -3914 Feb 10 j 22:38 22°9519'07 1°54'12 direct -3909 Sep 30 j 10:46 3°る57'53 -3914 Feb 12 j 01:08 22°9510'37 4.39504 AU -3908 Feb 02 j 06:36 23°る19'35 min. Earth dist. evening set

-3914 Apr 14 j 14:09

17°9517'21

direct

Planetary Phenomena of Jupiter from -4400 through -3898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -3908 in astronomical counting style is the year 3909 BCE in historical counting style. -3908 Feb 15 j 16:53 26°る30'38 -1°19'03 conjunction -3903 Aug 05 j 18:55 11°9549'13 1°12'05 conjunction -3908 Feb 15 j 16:52 26°**ප**30'37 1°19'12 -3903 Aug 05 j 18:52 11°5649'12 1°12'15 minimum elong minimum elong 14°937'12 -3908 Feb 17 j 12:30 26°る56'31 6.01223 AU -3903 Aug 18 j 13:39 max. Earth dist. morning rise 29°る43'14 -3903 Nov 14 j 11:18 -3908 Feb 29 j 06:17 $0^{\circ}\Omega$ morning rise -3903 Dec 16 j 21:49 -3908 Mar 01 j 10:47 0°≈ retrograde 1°**Ω**36'51 -3908 May 13 j 07:36 15°≈ -3902 Jan 18 j 11:24 30°Rூ -3908 Jul 09 j 20:37 retrograde 19°≈55'38 opposition -3902 Feb 15 j 09:56 26°5944'59 1°56'53 min. Earth dist. -3908 Sep 06 j 06:28 15°≈00'45 4.04036 AU min. Earth dist. -3902 Feb 16 j 14:43 26°935'46 4.39154 AU -3908 Sep 06 j 08:41 15°R≈ direct -3902 Apr 19 j 03:16 21°5643'26 opposition -3908 Sep 07 j 12:42 14°≈50'27 -2°02'08 -3902 Jul 08 j 05:45 0° Ω -3902 Aug 23 j 22:51 direct -3908 Nov 04 j 13:38 9°≈53'21 evening set 9°**Ω**35'46 -3902 Sep 03 j 18:57 -3907 Jan 01 j 01:09 15°≈ max. Earth dist. 11°**Ω**59'51 6.36529 AU evening set -3907 Mar 10 j 10:57 29° 207'07 -3907 Mar 14 j 06:15 0°**)**€ conjunction -3902 Sep 05 j 13:50 12°**Ω**23'41 1°23'01 minimum elong -3902 Sep 05 j 13:49 12°**Ω**23'41 1°23'08 conjunction -3907 Mar 24 j 03:14 2°\dagger17'44 -1°16'31 -3902 Sep 17 j 07:17 15°€ minimum elong -3907 Mar 24 j 03:16 2°**升**17'45 1°16'36 morning rise -3902 Sep 18 j 02:24 15° **Ω**10'34 max. Earth dist. -3907 Mar 26 j 01:00 2°**)** 44'21 6.08036 AU -3902 Dec 07 j 16:11 0° M morning rise -3907 Apr 06 j 21:31 5°**¥**29'07 retrograde -3901 Jan 17 j 19:50 2° m 32'12 retrograde -3907 Aug 13 j 18:14 24°**)** 55'46 -3901 Feb 28 j 15:38 30°R€ min. Earth dist. -3907 Oct 11 j 02:38 20°**₭**00'06 4.13228 AU opposition -3901 Mar 19 j 18:12 27°Ω40'35 1°56'34 opposition -3907 Oct 12 i 04:19 19°\(\frac{1}{51}'19\) -1°35'23 min. Earth dist. -3901 Mar 21 i 00:53 27°**Ω**30′50 4.32862 AU direct -3907 Dec 10 j 00:12 14° **)** 50'53 direct -3901 May 21 i 02:52 22°Ω41'36 -3906 Mar 30 i 06:21 0° -3901 Aug 02 j 22:31 0° m -3906 Apr 15 j 21:27 3°Y41'46 -3901 Sep 24 j 00:29 10° m 46'32 evening set evening set max. Earth dist. -3901 Oct 04 j 21:27 13° m 14'19 6.27959 AU -3906 Apr 29 j 16:08 6°Y48'41 -0°46'43 conjunction -3906 Apr 29 j 16:11 6°Y48'43 0°46'43 -3901 Oct 06 j 12:59 13° m 36'48 1°10'14 conjunction minimum elong -3906 May 01 j 01:16 7°**Υ**'07'28 6.18883 AU -3901 Oct 06 j 13:02 13° m 36'49 max. Earth dist. 1°10'17 minimum elong -3906 May 13 j 10:22 9°Y55'12 -3901 Oct 19 j 00:40 morning rise 16° m 26'51 morning rise -3906 Sep 15 j 17:31 28°Y20'58 -3901 Dec 26 j 09:35 0∘ಹ retrograde -3906 Nov 14 j 03:36 -3900 Feb 20 j 12:14 23°**Y**19'36 -0°37'43 4°**£**32'15 opposition retrograde min. Earth dist. -3906 Nov 13 j 13:58 23°**Y**24'11 4.24571 AU -3900 Apr 18 j 20:40 30°R, Mp 29° m/39'09 1°21'26 -3905 Jan 13 j 04:59 18°**Y**16′50 -3900 Apr 21 j 14:09 direct opposition 29° m/31'09 4.22482 AU -3905 Apr 19 j 10:46 -3900 Apr 22 j 15:14 0° 8 min. Earth dist. -3905 May 20 j 19:20 6°**8**40'29 -3900 Jun 22 j 01:07 evening set direct 24° m 43'03 -3900 Aug 21 j 15:11 0∘**⊽** conjunction -3905 Jun 03 j 10:26 9°841'20 -0°02'39 evening set -3900 Oct 24 j 21:52 13°**♀**09'27 -3905 Jun 03 j 10:26 9°841'20 0°02'33 max. Earth dist. -3900 Nov 05 j 11:57 15°**♀**50'56 6.16722 AU minimum elong behind sun begin -3905 Jun 03 j 02:09 9°**8**36'46 behind sun end -3905 Jun 03 j 18:42 9°845'54 conjunction -3900 Nov 06 j 12:47 16° 205'23 0°35'31 6.29898 AU max. Earth dist. -3905 Jun 03 j 18:09 9°**8**45'35 -3900 Nov 06 j 12:49 16°**≏**05'25 minimum elong 0°35'29 -3905 Jun 16 j 23:30 12°840'57 -3900 Nov 19 j 04:38 19°**♀**02'03 morning rise morning rise -3905 Jun 25 j 22:56 14°**8**38'37 -3899 Jan 09 j 07:11 asc. node 0°M -3905 Jun 27 j 14:28 15°8 -3899 Mar 27 j 00:17 retrograde 8°ML04'22 -3905 Oct 05 i 00:57 $0^{\circ}II$ opposition -3899 May 27 i 00:56 3°ML08'10 0°17'54 -3905 Oct 17 i 04:30 0°**Ⅱ**14'29 min. Earth dist. -3899 May 27 i 09:27 3°ML05'25 4.11154 AU retrograde -3905 Oct 29 i 06:46 30°R₩ -3899 Jun 22 i 10:14 30°R<u>Ω</u> -3905 Dec 15 j 20:33 25°**8**17'01 0°28'48 direct -3899 Jul 26 i 02:12 28°**£**14'26 opposition min. Earth dist. -3905 Dec 15 j 23:14 25°816'08 4.34335 AU -3899 Aug 28 j 09:40 0°M direct -3904 Feb 15 j 05:22 20°813'17 desc. node -3899 Sep 01 j 16:13 0°M27'47 -3904 May 13 j 01:42 $0^{\circ}II$ -3899 Nov 18 j 09:07 15°M. -3904 Jun 22 j 00:38 8°**Ⅱ**15'20 -3899 Nov 27 j 09:17 17°MJ06'32 evening set evening set conjunction -3904 Jul 05 j 07:54 11°**Д**09'43 0°40'58 conjunction -3899 Dec 10 j 05:59 20°M09'28 -0°12'21 -3904 Jul 05 j 07:51 11°**II**09'41 0°41'07 minimum elong -3899 Dec 10 j 05:58 20°M09'27 0°12'28 minimum elong -3904 Jul 04 j 16:25 11°**Д**01'14 6.37674 AU -3899 Dec 10 j 00:37 20°M06'18 max. Earth dist. behind sun begin -3904 Jul 18 j 11:44 14°**Ⅲ**02'25 -3899 Dec 10 j 11:18 morning rise behind sun end 20°M12'37 -3904 Oct 20 j 13:09 0.00 6.06398 AU max. Earth dist. -3899 Dec 10 j 06:21 20°M09'41 -3904 Nov 15 j 22:08 -3899 Dec 23 j 05:05 retrograde 1°905'47 morning rise 23°M13'51 -3904 Dec 12 j 07:21 30°Ŗ**Ⅱ** opposition -3903 Jan 15 j 00:17 26°**Ⅲ**11'49 1°24'51 min. Earth dist. -3903 Jan 15 j 17:33 26°**Ⅲ**06′13 4.39685 AU direct -3903 Mar 18 j 07:40 21°**Ⅲ**08'37 -3903 Jun 09 j 21:18 0 \circ \odot -3903 Jul 23 j 21:09 8°959'45 evening set

max. Earth dist.

-3903 Aug 04 j 07:41

11°529'53 6.40081 AU