Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 1 Attention, astronomical year style is used: The year -2400 in astronomical counting style is the year 2401 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	e year -2400 i	n astronomical cou	inting style is the year	2401 BCE in historical c	ounting style.	<i>S</i> -
	-2400 Mar 01 j 08:18	0° Y		retrograde	-2395 Jan 12 j 14:21	8° m 44'43	
evening set	-2400 Apr 08 j 16:18	8° Y 24'08		opposition	-2395 Mar 14 j 07:13	3° m 53'04	1°53'47
		••		min. Earth dist.	-2395 Mar 15 j 14:04	3° m 43'13	4.37469 AU
conjunction	-2400 Apr 22 j 10:28	11° Υ 33'35			-2395 Apr 18 j 07:45	30°R€	
minimum elong	-2400 Apr 22 j 10:32	11° Υ 33'37		direct	-2395 May 15 j 21:59	28° Ω 52'25	
max. Earth dist.	-2400 Apr 24 j 06:39	11° Υ 58'58	6.12648 AU		-2395 Jun 12 j 14:50	0° M)	
morning rise	-2400 May 06 j 05:36	14° Y 43'19		evening set	-2395 Sep 19 j 08:14	16° Mp 47'38	6 22500 AII
retrograde	-2400 Jul 23 j 05:33 -2400 Sep 10 j 12:57	0° と 3° と 42'44		max. Earth dist.	-2395 Sep 30 j 03:00	19° m 12'03	6.33599 AU
renograde	-2400 Sep 10 j 12.37	3 042 44 30°RΥ		conjunction	-2395 Oct 01 j 22:28	19° m 36'25	101220
min. Earth dist.	-2400 Nov 08 j 01:13	28° Y 47′09	4.18450 AU	minimum elong	-2395 Oct 01 j 22:30	19° m) 36'26	1°12'21
opposition	-2400 Nov 09 j 00:02	28° Y 39'24		morning rise	-2395 Oct 01 j 22:50	22° m) 24'30	1 1221
direct	-2399 Jan 07 j 07:41	23° Y '38'05	0 33 24	morning rise	-2395 Nov 19 j 01:18	0° م	
	-2399 Mar 15 j 02:44	0°8		retrograde	-2394 Feb 14 j 04:42	10° ≏ 01'37	
evening set	-2399 May 14 j 10:25	12° 8 14'26		opposition	-2394 Apr 16 j 04:12	5° ₾ 09'33	1°29'52
	-2399 May 26 j 18:44	15° 8		min. Earth dist.	-2394 Apr 17 j 10:58	4° ჲ 59'46	4.28811 AU
	., ., .,			direct	-2394 Jun 17 j 05:08	0° ჲ 11'39	
conjunction	-2399 May 28 j 04:05	15° 8 18'41	-0°14'54	evening set	-2394 Oct 20 j 16:35	18° ≏ 25'01	
minimum elong	-2399 May 28 j 04:06	15° 8 18'42		max. Earth dist.	-2394 Oct 31 j 17:33		6.23178 AU
behind sun begin	-2399 May 28 j 01:16	15° 8 17'07			,		
behind sun end	-2399 May 28 j 06:57	15° 8 20'17		conjunction	-2394 Nov 02 j 06:26	21° ≏ 17'54	0°45'06
max. Earth dist.	-2399 May 29 j 03:46	15° 8 31'56	6.24355 AU	minimum elong	-2394 Nov 02 j 06:29	21° ≙ 17'55	0°45'05
morning rise	-2399 Jun 10 j 20:45	18° 8 22'11		morning rise	-2394 Nov 14 j 20:18	24° ≏ 10'56	
	-2399 Aug 07 j 04:51	Π °0			-2394 Dec 11 j 00:36	0° M	
asc. node	-2399 Oct 09 j 14:39	6° Ⅱ 20'56		retrograde	-2393 Mar 20 j 15:26	12°M39'41	
retrograde	-2399 Oct 12 j 18:03	6° Ⅱ 21'56		opposition	-2393 May 20 j 16:42	7° M 45′26	0°36'58
opposition	-2399 Dec 11 j 07:14	1° Ⅱ 22'09	0°10'08	min. Earth dist.	-2393 May 21 j 12:28	7° ™ 39'06	4.17235 AU
min. Earth dist.	-2399 Dec 10 j 23:54	1° Ⅱ 24'36	4.29783 AU	direct	-2393 Jul 20 j 13:34	2°M50'14	
	-2399 Dec 21 j 15:56	30° ₹ 8			-2393 Oct 24 j 12:47	15° ™	
direct	-2398 Feb 09 j 23:23	26° 8 19'00		evening set	-2393 Nov 22 j 06:28	21°M29'31	
	-2398 Apr 01 j 10:43	Π $^{\circ}0$		max. Earth dist.	-2393 Dec 04 j 08:09	24° ™ 19'30	6.11529 AU
evening set	-2398 Jun 17 j 12:30	14° Ⅱ 29'20					
		_		conjunction	-2393 Dec 05 j 00:03	24° M 28′50	
conjunction	-2398 Jul 01 j 00:20	17° Ⅱ 26'54		minimum elong	-2393 Dec 05 j 00:03	24° ™ 28'51	0°02'33
minimum elong	-2398 Jul 01 j 00:18	17° Ⅱ 26'53		behind sun begin	-2393 Dec 04 j 16:01	24°M24'09	
max. Earth dist.	-2398 Jun 30 j 23:24	17° Ⅱ 26′23	6.34477 AU	behind sun end	-2393 Dec 05 j 08:04	24°M33'32	
morning rise	-2398 Jul 14 j 09:21	20° Ⅱ 23'00		morning rise	-2393 Dec 17 j 18:57	27°M29'09	
	-2398 Aug 30 j 12:41 -2398 Nov 12 j 16:38	0° ഇ 7° ഇ 39'13		desc. node	-2393 Dec 26 j 19:25 -2393 Dec 28 j 15:13	29° ™ 34'49 0° √	
retrograde opposition	-2398 Nov 12 j 16:38 -2397 Jan 11 j 14:15	2°943'19	1°07'54	retrograde	-2393 Dec 28 j 15:13 -2392 Apr 25 j 00:21	16° ∡ 56'54	
min. Earth dist.	-2397 Jan 11 j 14:13	2°940'38	4.37995 AU	opposition	-2392 Apr 23 j 00:21 -2392 Jun 24 j 19:03	11° x 50'34	0°31'25
min. Earth dist.	-2397 Feb 02 j 13:24	2 34 0 38 30°R Ⅱ	4.37993 AU	min. Earth dist.	-2392 Jun 24 j 21:36	11° x 5910	4.06419 AU
direct	-2397 Mar 14 j 09:19	27° ∏ 39'47		direct	-2392 Juli 24 j 21:30 -2392 Aug 23 j 07:19	7° х 05′54	4.00419 AU
ancet	-2397 Apr 23 j 16:18	0°9		evening set	-2392 Dec 25 j 16:02	26° × 11'51	
evening set	-2397 Jul 20 j 00:34	15°533'00		evening sec	2372 BCC 23 J 10.02	20 % 1131	
max. Earth dist.	-2397 Aug 01 j 02:39	18°9511'02	6.40101 AU	conjunction	-2391 Jan 07 j 15:28	29° х 17'41	-0°42'23
				minimum elong	-2391 Jan 07 j 15:25	29° х 17′39	0°42'25
conjunction	-2397 Aug 02 j 03:23	18° 5 24'34	1°02'03	max. Earth dist.	-2391 Jan 08 j 01:12	29° ∡ °23′29	6.02525 AU
minimum elong	-2397 Aug 02 j 03:20	18° © 24'32	1°02'07		-2391 Jan 10 j 14:17	8°0	
morning rise	-2397 Aug 15 j 03:02	21°514'32		morning rise	-2391 Jan 20 j 17:55	2° පි 25'10	
	-2397 Sep 26 j 21:40	$0^{\circ}\Omega$		retrograde	-2391 Jun 01 j 10:29	22° る 38'44	
retrograde	-2397 Dec 13 j 09:44	8° Ω 11'58		opposition	-2391 Jul 31 j 19:06	17° る 37'08	-1°30'58
opposition	-2396 Feb 11 j 16:07	3° Ω 19′02	1°45'20	min. Earth dist.	-2391 Jul 31 j 01:46	17° る 42'55	4.00225 AU
min. Earth dist.	-2396 Feb 12 j 15:22	3° £ 11′32	4.40812 AU	direct	-2391 Sep 28 j 03:23	12° る 43'40	
	-2396 Mar 10 j 20:26	30°R≌			-2390 Jan 21 j 21:56	0° ≈	
direct	-2396 Apr 14 j 05:46	28°9516'26		evening set	-2390 Jan 30 j 20:09	2° ≈ 06'32	
	-2396 May 18 j 19:43	0 $^{\circ}\Omega$					
	-2396 Aug 14 j 10:58	15° Ω		conjunction	-2390 Feb 13 j 03:06	5°≈16'52	-1°12'28
evening set	-2396 Aug 19 j 09:28	16° Ω 04'24		minimum elong	-2390 Feb 13 j 03:04	5° ≈ 16'51	1°12'30
max. Earth dist.	-2396 Aug 30 j 12:06	18° Ω 30'37	6.39771 AU	max. Earth dist.	-2390 Feb 14 j 15:32	5° ≈ 38'40	5.99631 AU
				morning rise	-2390 Feb 26 j 13:14	8°≈28'55	
conjunction	-2396 Sep 01 j 04:17	18° Ω 52'43	1°18'06		-2390 Mar 26 j 20:18	15° ≈	
minimum elong	-2396 Sep 01 j 04:16	18° Ω 52'42	1°18'08	retrograde	-2390 Jul 08 j 17:15	28°≈52'19	4.01112 177
morning rise	-2396 Sep 13 j 20:17	21° Ω 39'43		min. Earth dist.	-2390 Sep 05 j 08:59	23°≈57'28	4.01113 AU
	-2396 Oct 24 j 01:17	0° m)		opposition	-2390 Sep 06 j 13:29	23° ≈ 47'47	-1-30.10

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 2 Attention, astronomical year style is used: The year -2390 in astronomical counting style is the year 2391 BCE in historical counting style.

Attention, astronomic	cal year style is used: Th	e year -2390 i	n astronomical cou	nting style is the year	2391 BCE in historical co	ounting style.	<i>6</i> -
direct	-2390 Nov 03 j 13:00	18° ≈ 52'12		max. Earth dist.	-2384 Sep 03 j 14:19	22° Ω 44'27	6.39612 AU
	-2389 Jan 31 j 10:39	0°)					
evening set	-2389 Mar 08 j 23:40	8° 升 13′12		conjunction	-2384 Sep 05 j 08:03	23° Ω 07′26	1°18'34
				minimum elong	-2384 Sep 05 j 08:02	23° Ω 07′26	1°18'36
conjunction	-2389 Mar 22 j 13:52	11°) €24'43	-1°14'58	morning rise	-2384 Sep 17 j 23:14	25° Ω 54'12	
minimum elong	-2389 Mar 22 j 13:54	11°) €24'44	1°14'59		-2384 Oct 07 j 00:03	0° m	
max. Earth dist.	-2389 Mar 24 j 14:58	11° ¥ 53'35	6.04111 AU	retrograde	-2383 Jan 16 j 21:46	13°Mp01'14	
morning rise	-2389 Apr 05 j 06:35	14°) 37′23		opposition	-2383 Mar 18 j 15:28	8° m 09'41	1°52'21
	-2389 Jun 20 j 02:17	0 ° $\mathbf{\gamma}$		min. Earth dist.	-2383 Mar 20 j 00:11	7° m 59'16	4.36771 AU
retrograde	-2389 Aug 13 j 11:25	4° Ƴ 27'20		direct	-2383 May 20 j 06:30	3° m 09'20	
	-2389 Oct 07 j 09:29	30° ₹ ₩		evening set	-2383 Sep 23 j 12:20	21°M/06'00	
min. Earth dist.	-2389 Oct 10 j 17:35	29°) (32′44	4.08750 AU	max. Earth dist.	-2383 Oct 04 j 04:44	23° m 29'35	6.32396 AU
opposition	-2389 Oct 12 j 00:02	29°) 22′21	-1°37'03				
direct	-2389 Dec 09 j 09:37	24°) €23'35		conjunction	-2383 Oct 06 j 02:13	23° m 55'08	1°09'48
	-2388 Feb 08 j 11:46	0° Υ		minimum elong	-2383 Oct 06 j 02:15	23° m 55'10	1°09'48
evening set	-2388 Apr 13 j 20:03	13° Y 24'20		morning rise	-2383 Oct 18 j 14:38	26° Mp 43'42	
•					-2383 Nov 02 j 10:19	0∘ ⊽	
conjunction	-2388 Apr 27 j 14:25	16° Ƴ 33'13	-0°49'52	retrograde	-2382 Feb 18 j 16:46	14° ≏ 27'05	
minimum elong	-2388 Apr 27 j 14:29	16° Ƴ 33'15	0°49'50	opposition	-2382 Apr 20 j 17:06	9° £ 34'49	1°24'14
max. Earth dist.	-2388 Apr 29 j 08:08	16° Ƴ 57'06	6.14244 AU	min. Earth dist.	-2382 Apr 21 j 23:09	9° ≏ 25'14	4.27166 AU
morning rise	-2388 May 11 j 09:39	19° Ƴ 42'15		direct	-2382 Jun 21 j 14:26	4° ≏ 37'12	
8	-2388 Jun 28 j 20:49	0°8		evening set	-2382 Oct 25 j 00:01	22° £ 54'45	
retrograde	-2388 Sep 15 j 05:15	8° 8 32'48		max. Earth dist.	-2382 Nov 05 j 03:49		6.21239 AU
opposition	-2388 Nov 13 j 15:57	3° 8 29'53	-0°44'48	man. Darun dibt.	2502 1101 00 j 05.15	20 —20 .0	0.21237110
min. Earth dist.	-2388 Nov 12 j 19:11	_	4.20239 AU	conjunction	-2382 Nov 06 j 14:22	25° ≏ 48'36	0°40'02
mm. Earth dist.	-2388 Dec 12 j 09:18	30°RY	1.2023) 110	minimum elong	-2382 Nov 06 j 14:25	25° ⊆ 48'37	0°40'01
direct	-2387 Jan 12 j 04:45	28° Y 28'16		morning rise	-2382 Nov 19 j 04:38	28° ≏ 42'41	0 4001
direct	-2387 Feb 12 j 09:09	0°8		morning risc	-2382 Nov 19 j 04:38 -2382 Nov 24 j 20:05	0°M	
	-2387 May 10 j 06:28	15° 8			-2381 Feb 13 j 23:36	15°M	
avanina aat	-2387 May 19 j 08:17	16° 8 59'57		rotro ara do	·	17°M20'53	
evening set	-238/ May 19 J 08.1/	10 03937		retrograde	-2381 Mar 25 j 12:46		
:	2207 I 02:01.22	200 402112	0000144		-2381 May 04 j 11:28	15°RM	0020111
conjunction	-2387 Jun 02 j 01:32	20° 8 03'12		opposition	-2381 May 25 j 12:21	12°M26'19	
minimum elong	-2387 Jun 02 j 01:32	20° 8 03'12	0-08-40	min. Earth dist.	-2381 May 26 j 07:17		4.15127 AU
behind sun begin	-2387 Jun 01 j 18:22	19° 8 59'14		direct	-2381 Jul 25 j 04:57	7°M31'26	
behind sun end	-2387 Jun 02 j 08:42	20° 8 07'11	C 0 C 0 0 1 1 1 1 1		-2381 Oct 05 j 14:25	15°M	
max. Earth dist.	-2387 Jun 02 j 23:58		6.26231 AU	desc. node	-2381 Nov 07 j 04:33	21°M45'03	
morning rise	-2387 Jun 15 j 17:13	23° 8 05'31		evening set	-2381 Nov 26 j 20:50	26°M16'37	
	-2387 Jul 18 j 02:19	0°II					
asc. node	-2387 Aug 19 j 16:13	5° ∏ 55'03		conjunction	-2381 Dec 09 j 15:06	29°MJ17'11	
retrograde	-2387 Oct 17 j 02:25	10° I 56'44		minimum elong	-2381 Dec 09 j 15:05	29°M17'11	0°03'55
opposition	-2387 Dec 15 j 17:49	5° Ⅱ 57'31	0°18'55	behind sun begin	-2381 Dec 09 j 07:08	29°M12'30	
min. Earth dist.	-2387 Dec 15 j 11:27	5° ∏ 59'38	4.31593 AU	behind sun end	-2381 Dec 09 j 23:03	29°M21'52	
direct	-2386 Feb 14 j 13:24	0° Ⅱ 54'17		max. Earth dist.	-2381 Dec 09 j 00:38	29°M08'39	6.09438 AU
evening set	-2386 Jun 22 j 03:34	18° Ⅱ 59'59			-2381 Dec 12 j 15:33	0° ∡	
				morning rise	-2381 Dec 22 j 11:14	2° ≯ 18'54	
conjunction	-2386 Jul 05 j 14:00	21° I I56′21	0°33'44	retrograde	-2380 Apr 30 j 03:54	21° ≯ 56′52	
minimum elong	-2386 Jul 05 j 13:57	21° I I56′20	0°33'47	opposition	-2380 Jun 29 j 21:12	16° ₹ 58'40	
max. Earth dist.	-2386 Jul 05 j 08:43	21° I 53′28	6.36079 AU	min. Earth dist.	-2380 Jun 29 j 20:08	16° ₹ 59'01	4.04545 AU
morning rise	-2386 Jul 18 j 21:46	24° Ⅱ 51'15		direct	-2380 Aug 28 j 03:15	12° ₹ 05'24	
	-2386 Aug 12 j 03:04	0 \circ			-2380 Dec 25 j 04:50	0° ට	
retrograde	-2386 Nov 16 j 23:01	12° © 01'35		evening set	-2380 Dec 30 j 14:55	1° る 17'09	
opposition	-2385 Jan 15 j 21:24	7° 5 06'10	1°14'25				
min. Earth dist.	-2385 Jan 16 j 08:43	7° 5 02'28	4.39281 AU	conjunction	-2379 Jan 12 j 15:35	4° る 24'08	-0°47'46
direct	-2385 Mar 18 j 21:35	2° © 02'41		minimum elong	-2379 Jan 12 j 15:32	4° る 24′06	0°47'50
evening set	-2385 Jul 24 j 09:14	19° © 52'35		max. Earth dist.	-2379 Jan 13 j 06:33	4° ට 33'07	6.01048 AU
max. Earth dist.	-2385 Aug 05 j 07:48	22° © 28'31	6.40948 AU	morning rise	-2379 Jan 25 j 19:05	7° る 32'47	
				retrograde	-2379 Jun 06 j 19:23	27° る 52'55	
conjunction	-2385 Aug 06 j 10:53	22°5643'18	1°05'22	min. Earth dist.	-2379 Aug 05 j 05:46	22° る 57'08	3.99321 AU
minimum elong	-2385 Aug 06 j 10:50	22°5643'16	1°05'25	opposition	-2379 Aug 06 j 00:47	22°る50'47	-1°36'59
morning rise	-2385 Aug 19 j 09:09	25°532'24		direct	-2379 Oct 03 j 06:41	17° る 57'08	
	-2385 Sep 09 j 08:37	$0^{\circ}\Omega$			-2378 Jan 03 j 23:22	0° ≈	
retrograde	-2385 Dec 17 j 12:49	12° Ω 27'42		evening set	-2378 Feb 05 j 02:11	7° ≈ 23'00	
opposition	-2384 Feb 15 j 22:12	7° Ω 35′01	1°48'11		-		
min. Earth dist.	-2384 Feb 16 j 22:26	7° Ω 27'13	4.41182 AU	conjunction	-2378 Feb 18 j 10:15	10° ≈ 33'59	-1°14'34
direct	-2384 Apr 18 j 12:34	2° Ω 32'36		minimum elong	-2378 Feb 18 j 10:13	10° ≈ 33'58	1°14'36
	-2384 Jul 29 j 12:36	15° Ω		max. Earth dist.	-2378 Feb 20 j 02:18	10° ≈ 57'54	5.99366 AU
evening set	-2384 Aug 23 j 14:11	20° Ω 19'27		morning rise	-2378 Mar 03 j 21:37	13° ≈ 46′38	
	-				-		

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 3 Attention, astronomical year style is used: The year -2378 in astronomical counting style is the year 2379 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	ne year -2378 i	in astronomical co	unting style is the year	2379 BCE in historical c	counting style.	
	-2378 Mar 09 j 01:54	15° ≈			-2372 Jan 25 j 21:08	15°R Ω	
	-2378 May 22 j 11:49	0° ∀		opposition	-2372 Feb 20 j 08:08	11° Ω 58'47	1°50'39
retrograde	-2378 Jul 13 j 22:49	4°) €09'08		min. Earth dist.	-2372 Feb 21 j 11:05	11° Ω 50′07	4.40963 AU
	-2378 Sep 04 j 20:43	30° R ≈		direct	-2372 Apr 23 j 00:49	6° Ω 56'34	
min. Earth dist.	-2378 Sep 10 j 10:43		4.01539 AU		-2372 Jul 11 j 02:57	15° Ω	
opposition	-2378 Sep 11 j 17:29	29° ≈ 04'18	-1°56'00	evening set	-2372 Aug 27 j 22:42	24° Ω 44'02	
direct	-2378 Nov 08 j 16:06	24°≈08'16		max. Earth dist.	-2372 Sep 07 j 20:41	27° Ω 08'09	6.38894 AU
	-2377 Jan 09 j 10:23	0°) {				0	
evening set	-2377 Mar 14 j 07:36	13°) €28'03		conjunction	-2372 Sep 09 j 15:51	27° Ω 31'59	
	2277) (27 : 22 2 (1.60 1/20107	1010140	minimum elong	-2372 Sep 09 j 15:51	27° Ω 31'59	1°18'43
conjunction	-2377 Mar 27 j 22:36	16°) (39′27			-2372 Sep 20 j 20:12	0° Mp	
minimum elong	-2377 Mar 27 j 22:39	16°) ₹39'28		morning rise	-2372 Sep 22 j 06:19	0° Mp 18'45	
max. Earth dist.	-2377 Mar 29 j 23:50		6.05154 AU	retrograde	-2371 Jan 21 j 09:16	17° Mp 29'39	1050110
morning rise	-2377 Apr 10 j 16:04	19° ¥ 51'53 0° Υ		opposition	-2371 Mar 23 j 04:55	12° M 38'05	1°50'18
retrograde	-2377 May 27 j 00:20 -2377 Aug 18 j 10:21	9° Υ 34'27		min. Earth dist. direct	-2371 Mar 24 j 13:13 -2371 May 24 j 17:34	12° Mp 27'48 7° Mp 38'06	4.35611 AU
opposition	-2377 Oct 16 j 22:43	4° Υ 29'25	1031103	evening set	-2371 Nay 24 j 17.34 -2371 Sep 27 j 21:52	25° m 37'32	
min. Earth dist.	-2377 Oct 16 j 22:43		4.10245 AU	max. Earth dist.	-2371 Sep 27 j 21:32 -2371 Oct 08 j 15:16	28° My 02'12	6.30893 AU
mm. Lartii dist.	-2377 Nov 27 j 08:53	30° ₹	4.10243 AU	max. Lartii dist.	-23/1 Oct 00 j 13.10	20 1100212	0.50075 AC
direct	-2377 Dec 14 j 12:05	29°) € 30'06		conjunction	-2371 Oct 10 j 11:34	28° m) 27'11	1°06'46
uncet	-2377 Dec 31 j 17:51	0°Υ		minimum elong	-2371 Oct 10 j 11:36		1°06'45
evening set	-2376 Apr 19 j 00:14	18° Υ 26'26		mmmum viong	-2371 Oct 17 j 08:05	0° ⊽	1 00 .5
e venning see	20,011p1 15 J 00.11	10 12020		morning rise	-2371 Oct 22 j 23:57	1° ≏ 16'23	
conjunction	-2376 May 02 j 18:55	21° Y '34'37	-0°44'34	retrograde	-2370 Feb 23 j 12:56	19° ≏ 07'01	
minimum elong	-2376 May 02 j 18:59	21° Y '34'39		opposition	-2370 Apr 25 j 12:41	14° ≏ 14'36	1°17'45
max. Earth dist.	-2376 May 04 j 12:28	21° Y ′58'18	6.16048 AU	min. Earth dist.	-2370 Apr 26 j 18:42	14° ≏ 05'02	4.25398 AU
morning rise	-2376 May 16 j 13:50	24° Y '42'43		direct	-2370 Jun 26 j 07:20	9° ≙ 17'25	
C	-2376 Jun 09 j 12:36	0°8		evening set	-2370 Oct 29 j 13:31	27° ₽ 39'12	
retrograde	-2376 Sep 19 j 20:17	13° 8 23'31			-2370 Nov 08 j 17:29	0° M	
opposition	-2376 Nov 18 j 07:59	8° 8 21'00	-0°35'51	max. Earth dist.	-2370 Nov 09 j 18:55	0° M 14'43	6.19372 AU
min. Earth dist.	-2376 Nov 17 j 12:27	8° 8 27'37	4.22131 AU				
direct	-2375 Jan 17 j 00:53	3° 8 19'04		conjunction	-2370 Nov 11 j 04:12	0°M33'59	0°34'24
	-2375 Apr 22 j 14:36	15° 8		minimum elong	-2370 Nov 11 j 04:14	0° M 34′01	0°34'23
evening set	-2375 May 24 j 06:22	21° 8 45'46		morning rise	-2370 Nov 23 j 19:15	3°M29'11	
					-2369 Jan 17 j 06:00	15° ™	
conjunction	-2375 Jun 06 j 22:41	24° 8 47'53		retrograde	-2369 Mar 30 j 14:39	22°M16'35	
minimum elong	-2375 Jun 06 j 22:43	24° 8 47'54	0°02'24	opposition	-2369 May 30 j 14:18	17°M21'36	0°18'39
behind sun begin	-2375 Jun 06 j 14:24	24° 8 43'19		min. Earth dist.	-2369 May 31 j 05:44		4.13317 AU
behind sun end	-2375 Jun 07 j 07:01				-2369 Jun 18 j 17:35		
max. Earth dist.	-2375 Jun 07 j 16:08		6.28035 AU	direct	-2369 Jul 30 j 00:48	12°M27'06	
morning rise	-2375 Jun 20 j 13:35	27° 8 49'04			-2369 Sep 08 j 14:38	15°M₁	
asc. node	-2375 Jun 28 j 13:00	29° 8 33'59		desc. node	-2369 Sep 16 j 02:03	15°M58'10	
. 1	-2375 Jun 30 j 12:53	0°П 150П22121		. ,	-2369 Nov 26 j 05:28	0° ₹ 1	
retrograde	-2375 Oct 21 j 12:30	15° П 32'21 10° П 33'38	0027142	evening set	-2369 Dec 01 j 16:49	1° ∡ 16'55	
opposition min. Earth dist.	-2375 Dec 20 j 04:51 -2375 Dec 20 j 01:38	10 Д3338 10°Д34'42	0°27'42 4.33160 AU	agniumation	2260 Dec. 14 : 11:57	4° ∡ 18'32	0010120
direct	-2374 Feb 19 j 06:06	10 П 3442 5° П 30'13	4.33100 AU	conjunction minimum elong	-2369 Dec 14 j 11:57 -2369 Dec 14 j 11:56	4 × 1832 4° × 18'31	
evening set	-2374 Jun 26 j 19:00	23° Ⅲ 32'15		behind sun begin	-2369 Dec 14 j 11:30	4°×714'47	0 10 32
evening set	25/4 Juli 20 j 17.00	23 1132 13		behind sun end	-2369 Dec 14 j 18:16	4° × ⁷ 22'15	
conjunction	-2374 Jul 10 j 04:22	26° Ⅱ 27'39	0°39'06	max. Earth dist.	-2369 Dec 14 j 02:43	4°×713'04	6.07879 AU
minimum elong	-2374 Jul 10 j 04:20	26° ∏ 27'37	0°39'09	morning rise	-2369 Dec 27 j 08:56	7° ∡ 721'20	0.07077110
max. Earth dist.	-2374 Jul 09 j 20:50	26° ∏ 23'31	6.37284 AU	retrograde	-2368 May 05 j 12:50	27° ₹ 07'12	
morning rise	-2374 Jul 23 j 10:37	29° ∏ 21′28		opposition	-2368 Jul 05 j 03:42	22° ₹ '08'29	-0°50'11
	-2374 Jul 26 j 09:42	0.ಪ		min. Earth dist.	-2368 Jul 05 j 00:25	22° х 09'34	4.03408 AU
retrograde	-2374 Nov 21 j 05:10	16° © 27'32		direct	-2368 Sep 02 j 06:15	17° ∡ 15′22	
opposition	-2373 Jan 20 j 06:15	11° © 32'34	1°20'43		-2368 Dec 07 j 15:28	8°0	
min. Earth dist.	-2373 Jan 20 j 19:03	11° © 28'24		evening set	-2367 Jan 04 j 17:34	6° ප 30'04	
direct	-2373 Mar 23 j 08:50	6°529'11		-	v		
evening set	-2373 Jul 28 j 19:57	24°517'26		conjunction	-2367 Jan 17 j 19:10	9° ට 37'45	-0°53'00
	-			minimum elong	-2367 Jan 17 j 19:07	9° る 37'43	0°53'04
conjunction	-2373 Aug 10 j 20:11	27° © 07'28	1°08'28	max. Earth dist.	-2367 Jan 18 j 14:18	9° ට 49'13	6.00443 AU
minimum elong	-2373 Aug 10 j 20:09	27° © 07'27	1°08'30	morning rise	-2367 Jan 30 j 23:52	12° る 47'10	
max. Earth dist.	-2373 Aug 09 j 13:13	26°950'34	6.41230 AU		-2367 Apr 27 j 12:29	0° ≈	
morning rise	-2373 Aug 23 j 17:23	29° © 56'00		retrograde	-2367 Jun 12 j 02:42	3° ≈ 09'45	
	-2373 Aug 24 j 00:46	$0^{\circ}\Omega$			-2367 Jul 27 j 22:05	30°Ŗる	
	-2373 Nov 17 j 02:46	15° Ω		min. Earth dist.	-2367 Aug 10 j 08:55		3.99362 AU
retrograde	-2373 Dec 21 j 22:13	16° Ω 51'11		opposition	-2367 Aug 11 j 07:13	28° る 07'10	-1°42'18

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 4 Attention, astronomical year style is used: The year -2367 in astronomical counting style is the year 2368 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	ne year -2367 i	n astronomical co	unting style is the year	r 2368 BCE in historical c	ounting style.	8
direct	-2367 Oct 08 j 10:18	23° る 13'22			-2361 Aug 08 j 06:58	0 $^{\circ}\Omega$	
	-2367 Dec 14 j 01:56	0°≈		max. Earth dist.	-2361 Aug 13 j 20:24	1° Ω 12'52	6.40998 AU
evening set	-2366 Feb 10 j 08:21	12° ≈ 38'46					
	-2366 Feb 20 j 05:45	15° ≈		conjunction	-2361 Aug 15 j 04:43	1° Ω 30'32	
				minimum elong	-2361 Aug 15 j 04:40	1° Ω 30'31	1°11'10
conjunction	-2366 Feb 23 j 17:21	15° ≈ 49'52		morning rise	-2361 Aug 28 j 00:40	4° Ω 18'41	
minimum elong	-2366 Feb 23 j 17:20	15° ≈ 49'51			-2361 Oct 20 j 15:44	15° Ω	
max. Earth dist.	-2366 Feb 25 j 11:22		6.00015 AU	retrograde	-2361 Dec 26 j 06:07	21° Ω 15′28	
morning rise	-2366 Mar 09 j 05:41	19° ≈ 02'35		opposition	-2360 Feb 24 j 18:06	16° Ω 23′18	
	-2366 Apr 27 j 19:03	0° ∀		min. Earth dist.	-2360 Feb 25 j 21:30		4.40283 AU
retrograde	-2366 Jul 19 j 01:04	9° ∺ 20'41			-2360 Mar 06 j 17:22	15°R Ω	
opposition	-2366 Sep 16 j 19:15	4° ¥ 15'36		direct	-2360 Apr 27 j 10:05	11° Ω 21′23	
min. Earth dist.	-2366 Sep 15 j 12:06		4.02718 AU		-2360 Jun 17 j 14:48	15° Ω	
	-2366 Oct 24 j 21:23	30° R ≈		evening set	-2360 Sep 01 j 07:30	29° Ω 10'48	
direct	-2366 Nov 13 j 19:48	29° ≈ 19′06			-2360 Sep 05 j 00:57	0° m)	
	-2366 Dec 03 j 19:31	0° ∀		max. Earth dist.	-2360 Sep 12 j 03:17	1° m 34'10	6.37810 AU
evening set	-2365 Mar 19 j 12:31	18°) ₹35′13					
				conjunction	-2360 Sep 13 j 23:51	1° m)58'51	
conjunction	-2365 Apr 02 j 04:22	21°) (46'14		minimum elong	-2360 Sep 13 j 23:51	1° m 58'51	1°18'19
minimum elong	-2365 Apr 02 j 04:25	21°) 46′16		morning rise	-2360 Sep 26 j 13:54	4° Mp 45'51	
max. Earth dist.	-2365 Apr 04 j 06:50		6.06754 AU	retrograde	-2359 Jan 26 j 00:46	22°m/01'52	
morning rise	-2365 Apr 15 j 22:09	24°) 58′06		opposition	-2359 Mar 27 j 20:09	17° m) 10'18	1°47'33
	-2365 May 08 j 03:12	0° Y		min. Earth dist.	-2359 Mar 29 j 05:20	16° m 59'44	4.34194 AU
retrograde	-2365 Aug 23 j 05:20	14° Y 31'33		direct	-2359 May 29 j 07:49	12° Mp 10'40	
opposition	-2365 Oct 21 j 17:16	9° Y 26'48			-2359 Oct 01 j 08:39	0∘ ⊽	
min. Earth dist.	-2365 Oct 20 j 12:43		4.12079 AU	evening set	-2359 Oct 02 j 08:22	0° ≏ 13'18	
direct	-2365 Dec 19 j 09:50	4° Y 27'06		max. Earth dist.	-2359 Oct 13 j 02:58	2° ჲ 39'11	6.29267 AU
evening set	-2364 Apr 24 j 00:27	23° Y 18'26					
				conjunction	-2359 Oct 14 j 22:05	3° ჲ 03'36	
conjunction	-2364 May 07 j 18:58	26° Y 25'46	-0°39'09	minimum elong	-2359 Oct 14 j 22:08	3° ჲ 03'37	1°03'14
minimum elong	-2364 May 07 j 19:01	26° Y 25'47	0°39'07	morning rise	-2359 Oct 27 j 10:35	5° ≙ 53'31	
max. Earth dist.	-2364 May 09 j 08:14	26° Ƴ 46'54	6.17950 AU	retrograde	-2358 Feb 28 j 08:53	23° ≙ 51'41	
morning rise	-2364 May 21 j 13:46	29° Y 32'56		opposition	-2358 Apr 30 j 09:53	18° ≏ 58'56	1°10'38
	-2364 May 23 j 13:56	0° 8		min. Earth dist.	-2358 May 01 j 13:08	18° ≏ 50'15	4.23682 AU
	-2364 Aug 10 j 15:53	15° 8		direct	-2358 Jun 30 j 23:24	14° ഫ 02'11	
retrograde	-2364 Sep 24 j 07:12	18° 8 04'27			-2358 Oct 23 j 09:38	0° M	
	-2364 Nov 07 j 22:13	15° ₹႘		evening set	-2358 Nov 03 j 04:24	2°M27'41	
opposition	-2364 Nov 22 j 20:02	13° 8 02'25	-0°27'00				
min. Earth dist.	-2364 Nov 22 j 02:52	13° 8 08'13	4.23918 AU	conjunction	-2358 Nov 15 j 19:30	5° M 23′20	0°28'29
direct	-2363 Jan 21 j 17:48	8° 8 00'09		minimum elong	-2358 Nov 15 j 19:32	5°M23'22	0°28'26
	-2363 Apr 02 j 20:31	15° 8		max. Earth dist.	-2358 Nov 14 j 14:04	5° ™ 06'14	6.17725 AU
asc. node	-2363 May 08 j 17:20	21° 8 59'29		morning rise	-2358 Nov 28 j 11:10	8° ™ 19'31	
evening set	-2363 May 29 j 00:11	26° 8 22'41			-2358 Dec 28 j 07:33	15° ™	
				retrograde	-2357 Apr 04 j 19:28	27°M15'02	
conjunction	-2363 Jun 11 j 15:56	29° 8 23'54	0°03'48	opposition	-2357 Jun 04 j 17:12	22° M 19'32	0°08'52
minimum elong	-2363 Jun 11 j 15:56	29° 8 23'54	0°03'50	min. Earth dist.	-2357 Jun 05 j 06:44	22°M15'09	4.11852 AU
behind sun begin	-2363 Jun 11 j 07:44	29° 8 19'23		desc. node	-2357 Jul 26 j 00:16	17° M 33'09	
behind sun end	-2363 Jun 12 j 00:07	29° 8 28'25		direct	-2357 Aug 04 j 00:08	17° M 25'17	
max. Earth dist.	-2363 Jun 12 j 06:26	29° 8 31'55	6.29583 AU		-2357 Nov 08 j 23:51	0° ∡ ¹	
	-2363 Jun 14 j 09:03	Π $^{\circ}0$		evening set	-2357 Dec 06 j 13:12	6° ∡ 18'12	
morning rise	-2363 Jun 25 j 05:40	2° Ⅲ 23'59					
retrograde	-2363 Oct 25 j 19:48	20° Ⅱ 00′50		conjunction	-2357 Dec 19 j 09:07	9° х 20′39	-0°17'04
opposition	-2363 Dec 24 j 13:06	15° Ⅲ 02'45	0°36'02	minimum elong	-2357 Dec 19 j 09:06	9° ∡ ¹20'38	0°17'07
min. Earth dist.	-2363 Dec 24 j 12:14	15° Ⅲ 03′02	4.34353 AU	max. Earth dist.	-2357 Dec 19 j 03:43	9° ∡ 17'27	6.06723 AU
direct	-2362 Feb 23 j 18:21	9° Ⅱ 59'18		morning rise	-2356 Jan 01 j 07:09	12° ∡ ¹24'24	
evening set	-2362 Jul 01 j 07:43	27° Ⅱ 59'04		-	-2356 Apr 02 j 05:10	ರ∘ರ	
-	-2362 Jul 10 j 13:37	0ಂತಾ		retrograde	-2356 May 10 j 18:34	2° ප 16'10	
					-2356 Jun 18 j 11:28	30°R. ✓	
conjunction	-2362 Jul 14 j 15:46	0° © 53'39	0°44'05	opposition	-2356 Jul 10 j 09:19	27° ∡ 16'51	-0°59'12
minimum elong	-2362 Jul 14 j 15:43	0° © 53'38	0°44'09	min. Earth dist.	-2356 Jul 10 j 02:20	27° ∡ 19′09	4.02688 AU
max. Earth dist.	-2362 Jul 14 j 02:54	0° © 46'37	6.38017 AU	direct	-2356 Sep 07 j 07:00	22° ∡ ¹23'46	
morning rise	-2362 Jul 27 j 20:55	3° © 46'42			-2356 Nov 17 j 19:21	გ∘0	
retrograde	-2362 Nov 25 j 12:17	20° © 50'23		evening set	-2355 Jan 09 j 19:16	11° る 39'54	
opposition	-2361 Jan 24 j 13:53	15° © 55'52	1°26'29		,		
min. Earth dist.	-2361 Jan 25 j 05:37	15° © 50'44	4.40327 AU	conjunction	-2355 Jan 22 j 21:44	14° る 48'05	-0°57'46
direct	-2361 Mar 27 j 19:38	10° © 52'32		minimum elong	-2355 Jan 22 j 21:41	14° ₹ 48'03	0°57'50
evening set	-2361 Aug 02 j 05:24	28°540'50		max. Earth dist.	-2355 Jan 23 j 20:14		6.00191 AU
J	<i>y</i>						

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -2355 in astronomical counting style is the year 2356 BCE in historical counting style. opposition -2355 Feb 05 i 03:27 17°る58'01 -2349 Jan 28 j 22:48 20°921'11 1°31'50 morning rise -2355 Mar 31 j 22:10 min. Earth dist. -2349 Jan 29 j 16:17 20°915'30 0°≈≈ 4 40475 AU 15°9518'04 -2355 Jun 17 j 08:17 -2349 Apr 01 j 06:22 8°21'40 direct retrograde -2349 Jul 23 j 03:29 min. Earth dist. -2355 Aug 15 j 11:39 3°**≈**26'36 3.99620 AU $0^{\circ}\Omega$ -2349 Aug 06 j 15:45 opposition -2355 Aug 16 j 11:30 3°≈18'34 -1°46'44 evening set 3°**Ω**06'34 -2355 Sep 12 j 15:03 30°Ŗる max. Earth dist. -2349 Aug 18 j 02:10 5°**Ω**36′23 6.40725 AU direct -2355 Oct 13 j 14:02 28°る24'25 -2355 Nov 13 j 09:39 -2349 Aug 19 j 13:49 0°≈ conjunction 5°**Ω**55'54 1°13'26 -2354 Feb 03 j 12:49 15°≈ minimum elong -2349 Aug 19 j 13:47 5°**Ω**55'53 1°13'29 evening set -2354 Feb 15 j 12:44 17°≈48'51 morning rise -2349 Sep 01 j 08:55 8°**Ω**43'47 -2349 Oct 01 j 03:36 15°€ -2354 Feb 28 j 22:52 -2349 Dec 30 j 17:31 25°**Ω**42'25 conjunction 21°≈00'04 -1°17'05 retrograde minimum elong -2354 Feb 28 j 22:52 21°≈00'04 1°17'08 opposition -2348 Feb 29 j 05:48 20°**Ω**50′29 1°53'45 max. Earth dist. -2354 Mar 02 j 20:08 21°**≈**26′58 6.00750 AU min. Earth dist. -2348 Mar 01 j 10:42 20°**Ω**41'14 4.39641 AU morning rise -2354 Mar 14 j 11:58 24°≈12'47 direct -2348 May 01 j 22:14 15°**Ω**48'53 -2354 Apr 08 j 15:45 0°**)**€ -2348 Aug 19 j 18:48 retrograde -2354 Jul 24 j 02:04 14°**¥**26′00 evening set -2348 Sep 05 j 16:59 3°m/39'53 min. Earth dist. -2354 Sep 20 j 11:31 9°**)** 31'25 4.03866 AU max. Earth dist. -2348 Sep 16 j 13:27 6° m 03'59 6.36866 AU opposition -2354 Sep 21 j 18:33 9°**升**20'51 -1°53'02 direct -2354 Nov 18 j 19:56 4°**)**€23'56 conjunction -2348 Sep 18 j 08:52 6° M 28'05 1°17'30 evening set -2353 Mar 24 j 15:52 23°\(\frac{1}{36}\)'51 minimum elong -2348 Sep 18 j 08:53 6° Mp 28'06 1°17'31 morning rise -2348 Sep 30 j 22:17 9° m 15'15 conjunction -2353 Apr 07 j 08:14 26°**)** 47'29 -1°07'06 retrograde -2347 Jan 30 i 14:50 26° m 35'53 -2353 Apr 07 j 08:17 26°**)**(47'31 1°07'07 opposition -2347 Apr 01 j 12:03 21° m 44'19 1°44'11 minimum elong max. Earth dist. -2353 Apr 09 i 08:25 27°**¥**15'30 6.08195 AU min. Earth dist. -2347 Apr 02 j 19:57 21° m 34'10 4.33023 AU -2353 Apr 21 j 02:38 29°\ 58'55 -2347 Jun 02 j 20:40 morning rise direct 16° m 45'11 -2353 Apr 21 j 04:31 $0^{\circ}\Upsilon$ -2347 Sep 14 j 19:40 0∘Ω -2353 Aug 27 j 21:35 19°**Y**24′06 -2347 Oct 06 j 19:22 4°**£**50'07 retrograde evening set -2353 Oct 25 j 06:40 -2347 Oct 17 j 15:09 14°**Υ**29'00 4.13659 AU max. Earth dist. 7°**£**17'11 6.27979 AU min. Earth dist. -2353 Oct 26 j 10:16 14°**Y**19'35 -1°17'41 opposition 9°Υ19'27 -2347 Oct 19 j 08:52 -2353 Dec 24 j 06:13 conjunction 7°**2**40'53 0°59'23 direct 28°Y06'52 minimum elong -2352 Apr 28 j 23:23 -2347 Oct 19 j 08:55 7°**£**40'55 evening set 0°59'23 -2352 May 07 j 08:02 0°8 -2347 Oct 31 j 21:37 10°**2**31'26 morning rise -2346 Mar 05 j 06:54 retrograde 28°**♀**36'05 1°813'31 -0°33'32 23°**△**43'04 1°03'07 -2352 May 12 j 17:59 -2346 May 05 j 07:07 conjunction opposition 23°**2**34'42 4.22339 AU -2352 May 12 j 18:02 -2346 May 06 j 09:19 minimum elong 1°**8**13'33 0°33'29 min. Earth dist. -2346 Jul 05 j 17:45 max. Earth dist. -2352 May 14 j 04:50 1°**8**33'14 6.19564 AU direct 18°**≏**46'43 morning rise -2352 May 26 j 12:18 4°**8**19'49 -2346 Oct 06 j 02:59 0°M -2352 Jul 16 j 17:19 15°8 evening set -2346 Nov 07 j 18:24 7°ML14'39 retrograde -2352 Sep 28 j 19:42 22°**8**43'19 max. Earth dist. -2346 Nov 19 j 07:55 9°M55'50 6.16461 AU -2352 Nov 27 j 07:52 17°841'51 -0°18'02 opposition min. Earth dist. -2352 Nov 26 j 17:21 17°**8**46'44 4.25405 AU -2346 Nov 20 j 10:02 10°M11'03 0°22'27 conjunction -2352 Dec 18 j 12:28 -2346 Nov 20 j 10:04 10°M11'04 15°**₹**8 minimum elong 0°22'25 -2351 Jan 26 j 10:31 12°839'22 -2346 Dec 03 j 02:20 13°MJ08'04 direct morning rise -2346 Dec 11 j 04:47 -2351 Mar 06 j 18:41 15°8 15°M asc. node -2351 Mar 18 j 14:02 16°**8**29'28 -2345 Mar 02 j 22:01 0°×7 -2351 May 29 i 06:46 $\mathbb{I}^{\circ 0}$ -2345 Apr 09 i 19:45 2°×10'19 retrograde evening set -2351 Jun 02 j 18:05 0°**I**58'45 -2345 May 18 j 00:36 30°RML desc. node -2345 Jun 05 i 05:03 27°M49'35 opposition -2351 Jun 16 j 08:58 3°II59'06 0°09'51 -2345 Jun 09 i 18:22 27°ML14'20 -0°00'47 conjunction -2351 Jun 16 i 08:57 3°**Ⅱ**59'06 0°09'54 min. Earth dist. -2345 Jun 10 j 04:37 27°ML11'01 4.10770 AU minimum elong -2351 Jun 16 j 02:18 3°II55'26 direct -2345 Aug 08 j 20:08 22°M20'23 behind sun begin -2351 Jun 16 j 15:36 4°**I**I02'45 -2345 Oct 20 j 16:29 0°×7 behind sun end 4°**П**04'33 6.30824 AU max. Earth dist. -2351 Jun 16 j 18:50 evening set -2345 Dec 11 j 08:04 11°**х** 15′22 morning rise -2351 Jun 29 j 21:48 6°**Ⅱ**58'16 -2351 Oct 30 j 03:34 24°**Ⅲ**29'48 conjunction -2345 Dec 24 j 04:38 14° **₹** 18'27 -0°23'23 retrograde -2351 Dec 28 j 21:55 19°**Ⅲ**32'15 0°44'12 minimum elong -2345 Dec 24 j 04:36 14°**∡**18′26 0°23'26 opposition 19°**Ⅲ**31'47 4.35278 AU -2345 Dec 24 j 02:32 14°**∡**17'13 6.05908 AU min. Earth dist. -2351 Dec 28 j 23:21 max. Earth dist. 14°**Ⅲ**28'43 -2344 Jan 06 j 03:35 17°**∡**¹22'57 direct -2350 Feb 28 j 06:35 morning rise 0ಂತಾ 0°궁 -2350 Jun 24 j 11:14 -2344 Mar 04 j 16:44 7°る19'25 evening set -2350 Jul 05 j 21:00 2°9527'04 retrograde -2344 May 15 j 22:10 -2344 Jul 15 j 11:52 2°**ට**19'32 -1°07'32 opposition conjunction -2350 Jul 19 j 03:57 5°920'58 0°48'53 min. Earth dist. -2344 Jul 15 j 02:46 2°る22'32 4.02219 AU minimum elong -2350 Jul 19 j 03:54 5°920'56 0°48'56 -2344 Aug 02 j 21:25 30°R.**✓** max. Earth dist. -2350 Jul 18 j 12:49 5°9512'41 6.38560 AU direct -2344 Sep 12 j 07:34 27°**х** 26′22 -2350 Aug 01 j 07:42 8°9513'15 -2344 Oct 22 j 00:50 0°정 morning rise

-2350 Nov 29 j 20:08

retrograde

25°9515'12

-2343 Jan 14 j 18:30

evening set

16°る43'26

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -2343 in astronomical counting style is the year 2344 BCE in historical counting style. -2343 Jan 27 j 22:03 19°る52'05 -1°01'59 -2337 Jul 05 j 20:03 $0^{\circ}\Omega$ conjunction -2343 Jan 27 j 22:00 19°る52'03 1°02'01 -2337 Aug 11 j 01:31 7°**Ω**31'13 minimum elong evening set 6.00106 AU -2343 Jan 29 j 00:46 20°る08'05 10°**Ω**00′30 max. Earth dist. max. Earth dist. -2337 Aug 22 j 10:45 6.40567 AU 23°る02'27 -2343 Feb 10 j 04:40 morning rise -2343 Mar 12 j 10:10 0°≈ conjunction -2337 Aug 23 j 22:36 10°**Ω**20′10 1°15'18 -2337 Aug 23 j 22:34 retrograde -2343 Jun 22 j 11:04 13°≈26'18 minimum elong 10°**Ω**20′09 1°15'20 -2337 Sep 05 j 16:32 min. Earth dist. -2343 Aug 20 j 11:22 8°**≈**31'11 3.99953 AU morning rise 13°**Ω**07'39 -2337 Sep 14 j 08:05 opposition -2343 Aug 21 j 12:08 8°≈22'51 -1°50'14 15°Ω 0°Щ direct -2343 Oct 18 j 13:14 3°≈28'24 -2337 Dec 26 j 04:59 -2342 Jan 17 j 00:26 15°≈ retrograde -2336 Jan 04 j 02:58 0°m/07'30 evening set -2342 Feb 20 j 14:23 22°**≈**51'58 -2336 Jan 13 j 00:51 30°R€ -2336 Mar 04 j 16:52 1°54'20 opposition 25°**Ω**15'41 -2342 Mar 06 j 01:19 conjunction 26°≈03'15 -1°17'26 min. Earth dist. -2336 Mar 05 j 22:26 25°**Ω**06'14 4.39142 AU minimum elong -2342 Mar 06 j 01:19 26°≈03'16 1°17'28 direct -2336 May 06 j 09:17 20°**Ω**14'21 max. Earth dist. -2342 Mar 07 j 22:04 26°**≈**29'48 6.01439 AU -2336 Aug 02 j 08:20 0° m morning rise -2342 Mar 19 j 15:29 29°≈16'04 evening set -2336 Sep 10 j 01:23 8°1006'08 -2342 Mar 22 j 18:22 0°**)**€ max. Earth dist. -2336 Sep 20 j 19:31 10° m 29'19 6.36023 AU retrograde -2342 Jul 28 j 21:51 19°**¥**24'42 min. Earth dist. -2342 Sep 25 j 07:09 14°**)** 30'11 4.04844 AU conjunction -2336 Sep 22 j 16:31 10° **m** 54'23 1°16'15 opposition -2342 Sep 26 j 14:33 14°**)** 19'29 -1°50'24 minimum elong -2336 Sep 22 j 16:32 10° m 54'23 direct -2342 Nov 23 j 17:05 9°**升**22'06 morning rise -2336 Oct 05 j 05:42 13° mp 41'45 evening set -2341 Mar 29 j 16:38 28° **)** 32'45 -2335 Jan 08 i 07:18 0∘**⊽** -2341 Apr 04 j 23:44 $0^{\circ}\Upsilon$ retrograde -2335 Feb 04 i 05:43 1°**£**06'45 -2335 Mar 03 i 05:59 30°R M -2341 Apr 12 j 09:45 1°Y43'10 -1°03'38 opposition -2335 Apr 06 j 03:16 26° m 15'00 1°40'11 conjunction -2341 Apr 12 j 09:49 1°Y43'12 1°03'38 min. Earth dist. -2335 Apr 07 j 11:17 26° m 04'49 minimum elong 4.31860 AU max. Earth dist. -2341 Apr 14 j 08:58 2°Υ10'31 6.09398 AU direct -2335 Jun 07 j 10:01 21° Mp 16'09 -2341 Apr 26 j 04:24 4°Y54'10 -2335 Aug 27 j 19:26 0∘**⊽** morning rise -2341 Sep 01 j 14:24 24° Y 12'10 -2335 Oct 11 j 04:46 9°**£**23'18 evening set retrograde -2341 Oct 29 j 23:51 19°**Y**16'38 4.14951 AU max. Earth dist. -2335 Oct 22 j 02:56 min. Earth dist. 11°**≏**52'08 6.26585 AU -2341 Oct 31 j 01:10 19°**Y**′08′00 -1°10′27 opposition 14°**Y**07'29 -2335 Oct 23 j 18:29 -2341 Dec 29 j 01:19 conjunction 12°**£**14'40 0°55'10 direct -2340 Apr 20 j 22:57 0° 8 -2335 Oct 23 j 18:32 12°**₽**14'42 minimum elong 0°55'09 -2340 May 03 j 21:01 2°**8**52'09 -2335 Nov 05 j 07:20 15°**♀**05'53 evening set morning rise -2334 Jan 21 j 20:18 0°M -2340 May 17 j 15:31 5°**8**58'13 -0°27'48 -2334 Mar 10 j 02:17 conjunction retrograde 3°**M**₁7'31 -2340 May 17 j 15:33 minimum elong 5°**8**58'14 0°27'46 -2334 Apr 27 j 09:14 max. Earth dist. -2340 May 18 j 23:19 6°816'08 6.20859 AU opposition -2334 May 10 j 03:17 28°**2**24'10 0°55'12 morning rise -2340 May 31 j 09:32 9°**8**03'49 min. Earth dist. -2334 May 11 j 03:37 28°**≏**16′23 4.20793 AU -2340 Jun 27 j 16:42 15°8 direct -2334 Jul 10 j 09:26 23°**₽**28'12 retrograde -2340 Oct 03 j 05:34 27°**8**20'26 -2334 Sep 16 j 06:50 0°M -2340 Dec 01 j 18:37 22°819'27 -0°09'07 -2334 Nov 12 j 08:11 11°M59'34 opposition evening set min. Earth dist. -2340 Dec 01 j 05:23 22°**8**23'54 4.26605 AU max. Earth dist. -2334 Nov 23 j 23:49 6.14892 AU $14^{\circ}M42'35$ -2339 Jan 26 j 23:38 17°**8**18'18 asc. node -2339 Jan 31 j 00:11 17°816'43 conjunction -2334 Nov 25 j 00:12 14°M56'50 direct 0°16'16 -2334 Nov 25 i 00:13 -2339 May 12 j 10:21 $\mathbb{I}^{\circ 0}$ minimum elong 14°M56'50 0°16'15 evening set -2339 Jun 07 j 11:18 5°**Ⅱ**33'51 behind sun begin -2334 Nov 24 i 23:34 14°M56'28 behind sun end -2334 Nov 25 i 00:52 14°M57'13 8°II33'26 0°15'48 conjunction -2339 Jun 21 i 01:20 -2334 Nov 25 i 05:38 15°M -2339 Jun 21 i 01:18 8°II33'25 0°15'52 -2334 Dec 07 i 17:21 17°**M**₅54'52 minimum elong morning rise -2339 Jun 21 j 07:48 8°**П**37'00 6.31858 AU -2333 Feb 02 j 16:06 0°**∡**7 max. Earth dist. retrograde -2339 Jul 04 j 13:06 11°**Ⅲ**31'44 -2333 Apr 14 j 21:54 7°**х** 05′15 morning rise -2333 Apr 15 j 07:14 -2339 Nov 03 j 12:49 28°**I**I58'36 desc. node 7°**₹**05'15 retrograde opposition -2338 Jan 02 j 06:54 24°**I**101'34 0°52'03 opposition -2333 Jun 14 j 19:31 2°**₹**08'44 -0°10'31 4.36079 AU min. Earth dist. -2338 Jan 02 j 10:54 24°**Ⅲ**00′15 min. Earth dist. -2333 Jun 15 j 03:34 2° ₹ 06'08 4.09289 AU -2338 Mar 04 j 19:35 18°**Ⅲ**58′01 -2333 Jul 01 j 23:04 30°RML direct -2338 Jun 07 j 06:34 0ಂತಾ direct -2333 Aug 13 j 17:20 27°M14'58 -2338 Jul 10 j 09:55 6°954'54 0°**∡**7 evening set -2333 Sep 24 j 13:57 -2333 Dec 16 j 03:48 evening set 16°**х** 13′48 -2338 Jul 23 j 15:38 conjunction 9°548'04 0°53'22 -2333 Dec 29 j 01:24 minimum elong -2338 Jul 23 j 15:35 9°**©**48'03 0°53'25 conjunction 19°**∡**17'51 -0°29'36 max. Earth dist. -2338 Jul 22 j 21:13 9°938'00 6.39053 AU minimum elong -2333 Dec 29 j 01:21 19°**х** 17′50 0°29'40 morning rise -2338 Aug 05 j 18:11 12°539'39 max. Earth dist. -2333 Dec 29 j 03:52 19°**₹**19'19 6.04658 AU retrograde -2338 Dec 04 j 03:40 29°939'51 morning rise -2332 Jan 11 j 01:18 22°×23'21

opposition

direct

min. Earth dist.

-2337 Feb 02 j 07:50

-2337 Feb 03 j 02:39

-2337 Apr 05 j 16:48

24°9546'07

24°9540'01

19°5543'04

1°36'37

4.40658 AU

retrograde

opposition

-2332 Feb 13 j 10:33

-2332 May 21 j 05:13

-2332 Jul 20 j 16:02

0°궁

12°る26'10

7°る25'48 -1°15'32

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -2332 in astronomical counting style is the year 2333 BCE in historical counting style. 7°る29'29 4.01344 AU min. Earth dist. -2332 Jul 20 j 04:54 evening set -2326 Jul 14 j 21:05 11°9519'27 13°**©**59'59 -2332 Sep 17 j 07:54 2°る32'37 -2326 Jul 27 j 04:07 6.40194 AU direct max. Earth dist. -2331 Jan 19 j 20:33 21°る52'22 evening set -2326 Jul 28 j 01:23 conjunction 14°9511'35 0°57'26 minimum elong -2326 Jul 28 j 01:20 conjunction -2331 Feb 02 j 00:58 25°る01'38 -1°05'48 14°9511'33 0°57'29 17°502'08 -2326 Aug 10 j 02:31 minimum elong -2331 Feb 02 j 00:55 25°**る**01'37 1°05'51 morning rise -2326 Oct 17 j 10:01 max. Earth dist. -2331 Feb 03 j 05:30 25°**る**18'44 5.99654 AU $0^{\circ}\Omega$ morning rise -2331 Feb 15 j 08:52 28°る12'43 retrograde -2326 Dec 08 j 09:26 3°**£**58′50 -2331 Feb 22 j 22:24 0°≈ -2325 Jan 30 j 12:49 30°R∽ -2331 May 09 j 16:24 15°≈ opposition -2325 Feb 06 j 14:41 29°905'29 1°40'40 retrograde -2331 Jun 27 j 15:01 18°≈38'03 min. Earth dist. -2325 Feb 07 j 12:05 28°958'34 4.41384 AU -2325 Apr 10 j 03:05 -2331 Aug 15 j 22:04 15°R≈ direct 24°902'36 opposition -2331 Aug 26 j 15:29 13°≈34'13 -1°53'00 -2325 Jun 16 j 00:43 0° Ω min. Earth dist. -2331 Aug 25 j 12:33 13°≈43'19 3.99999 AU evening set -2325 Aug 15 j 07:35 11°**Ω**48'34 direct -2331 Oct 23 j 14:31 8°≈39'28 max. Earth dist. -2325 Aug 26 j 12:38 14°**Ω**15'38 6.40791 AU -2331 Dec 26 j 21:57 15°≈ conjunction evening set -2330 Feb 25 j 19:54 28°≈03'23 -2325 Aug 28 j 03:33 14°**Ω**36′58 1°16'39 -2330 Mar 06 j 01:29 0°**)**€ minimum elong -2325 Aug 28 j 03:32 14°**Ω**36'57 1°16'41 -2325 Aug 29 j 21:33 15°€ conjunction -2330 Mar 11 j 08:01 1°**)** 14'55 -1°17'13 morning rise -2325 Sep 09 j 20:35 17°**Ω**23'59 minimum elong -2330 Mar 11 j 08:02 1°**)** 14'56 1°17'14 -2325 Nov 14 j 07:04 0° m max. Earth dist. -2330 Mar 13 j 07:11 1°**)** 42′50 6.01982 AU retrograde -2324 Jan 08 i 08:55 4° m 24'20 morning rise -2330 Mar 24 j 22:56 4°**)**(27'50 -2324 Mar 05 i 10:35 30°RΩ retrograde -2330 Aug 02 j 23:53 24°**)** 32'04 opposition -2324 Mar 09 i 00:36 29°**Ω**32'34 1°54'11 min. Earth dist. -2330 Sep 30 j 07:30 19°**)**(37'19 4.05824 AU min. Earth dist. -2324 Mar 10 j 07:14 29°**Ω**22'47 4.38849 AU -2330 Oct 01 j 14:02 19°**)** 26'54 -1°46'51 direct -2324 May 10 j 16:44 opposition 24°Ω31'27 -2330 Nov 28 j 19:11 -2324 Jul 13 j 07:21 direct 14°**¥**29′08 O° m $0^{\circ}\Upsilon$ -2324 Sep 14 j 05:33 12° m 23'31 -2329 Mar 18 j 22:16 evening set 3°**Y**37′28 -2324 Sep 24 j 23:34 -2329 Apr 03 j 21:30 max. Earth dist. 14° m 46'54 6.35230 AU evening set 6°Y47'33 -0°59'35 conjunction -2329 Apr 17 j 15:10 conjunction -2324 Sep 26 j 20:18 15° mg 11'52 1°14'36 -2329 Apr 17 j 15:13 6°**Y**47'35 0°59'34 minimum elong -2324 Sep 26 j 20:20 15° m 11'53 1°14'37 minimum elong -2324 Oct 09 j 08:58 max. Earth dist. -2329 Apr 19 j 13:59 7°**Υ**14'35 6.10754 AU morning rise 17° m 59'23 -2329 May 01 j 10:11 9°Y58'06 -2324 Dec 08 j 13:08 morning rise 0∘**⊽** -2329 Sep 06 j 07:51 29°**Y**07′57 -2323 Feb 08 j 15:58 retrograde retrograde 5°**£**28'54 24°**Y**04'11 -1°02'32 -2329 Nov 04 j 19:05 -2323 Apr 10 j 14:30 opposition opposition 0°**£**37'03 1°35'44 -2329 Nov 03 j 17:47 -2323 Apr 11 j 23:00 min. Earth dist. 24°Υ12'48 4.16569 AU min. Earth dist. 0°**£**26'44 4.30588 AU -2328 Jan 02 j 21:53 19°**Y**03′23 -2323 Apr 15 j 11:20 30°R, M) direct -2328 Apr 02 j 21:08 0° 8 direct -2323 Jun 11 j 19:09 25° m 38'33 -2328 May 08 j 21:19 7°**8**43'57 -2323 Aug 06 j 05:41 0∘**⊽** evening set evening set -2323 Oct 15 j 10:54 13°**△**48'35 -2328 May 22 j 15:25 10°849'07 -0°21'45 max. Earth dist. -2323 Oct 26 j 08:01 16°**≙**17'27 6.24933 AU conjunction -2328 May 22 j 15:27 10°849'08 0°21'43 minimum elong max. Earth dist. -2328 May 23 j 20:05 11°805'14 6.22650 AU -2323 Oct 28 j 00:35 16°**≏**40'39 0°50'47 conjunction -2328 Jun 05 j 08:52 13°**8**53'41 -2323 Oct 28 j 00:38 16°**♀**40'41 morning rise minimum elong 0°50'45 -2328 Jun 10 j 08:20 15°8 morning rise -2323 Nov 09 i 13:58 19°**£**32'45 -2328 Sep 01 i 19:36 $\mathbb{I}^{\circ 0}$ -2323 Dec 29 i 01:08 0°M retrograde -2328 Oct 07 j 18:29 2°**Ⅱ**01'41 retrograde -2322 Mar 14 j 19:52 7°M52'37 -2328 Nov 12 j 11:03 30°R₩ opposition -2322 May 14 j 20:32 2°ML58'53 0°47'12 -2328 Dec 06 j 07:21 27°801'14 -0°00'04 min. Earth dist. -2322 May 15 j 19:44 2°M51'27 4.18846 AU opposition min. Earth dist. -2328 Dec 05 j 20:42 27°**8**04'49 4.28412 AU -2322 Jun 08 j 21:46 asc. node -2328 Dec 06 j 16:17 26°858'14 -2322 Jul 14 j 22:35 28°**₽**03'10 direct direct 21°858'22 0°M -2327 Feb 04 j 18:33 -2322 Aug 19 j 13:30 -2327 Apr 23 j 06:35 $0^{\circ}II$ -2322 Nov 09 j 15:25 15°M -2327 Jun 12 j 04:59 -2322 Nov 16 j 19:36 10°**Ⅲ**10'51 evening set 16°M39'42 evening set conjunction -2327 Jun 25 j 18:01 13°**耳**09'18 0°21'40 conjunction -2322 Nov 29 j 12:29 19°MJ38'10 0°10'10 -2327 Jun 25 j 17:59 13°**I**109'17 0°21'43 -2322 Nov 29 j 12:30 0°10'08 minimum elong minimum elong 19°M38'10 -2322 Nov 29 j 06:01 max. Earth dist. -2327 Jun 25 j 22:13 13°**Ⅱ**11'36 6.33554 AU behind sun begin 19°M34'23 morning rise -2327 Jul 09 j 04:27 16°**Ⅱ**06'21 behind sun end -2322 Nov 29 j 18:58 19°**™**41'57 -2327 Sep 21 j 00:20 0ಂತಾ max. Earth dist. -2322 Nov 28 j 15:29 19°**™**25'50 6.12839 AU retrograde -2327 Nov 07 j 18:30 3°926'27 morning rise -2322 Dec 12 j 06:24 22°M37'27 -2327 Dec 26 j 01:13 30°R∏ -2321 Jan 14 j 01:52 0°**∡**7 opposition -2326 Jan 06 j 15:22 28°**Ⅲ**29'55 0°59'28 desc. node -2321 Feb 24 j 23:35 7°**х** 41'46 min. Earth dist. -2326 Jan 06 j 20:33 28°**Ⅲ**28'12 4.37558 AU retrograde -2321 Apr 20 j 00:08 11° 🗷 57'54 -2326 Mar 09 j 06:54 23°**Ⅲ**26′22 -2321 Jun 19 j 19:27 direct opposition 7°**∡**100'57 -0°20'00

min. Earth dist.

-2321 Jun 20 j 01:42

6°**≯**58'55 4.07303 AU

-2326 May 18 j 12:51

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Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 8 Attention, astronomical year style is used: The year -2321 in astronomical counting style is the year 2322 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	e year -2321 i	n astronomical cou	unting style is the year	2322 BCE in historical c	ounting style.	<i>6</i>
direct	-2321 Aug 18 j 12:23	2° ₹ 07'22			-2315 Mar 29 j 11:02	$\Pi^{\circ}0$	
evening set	-2321 Dec 20 j 23:44	21° ₹ 12'08		evening set	-2315 Jun 16 j 22:49	14° Ⅱ 47'27	
conjunction	-2320 Jan 02 j 22:10	24° ∡ 17′22		conjunction	-2315 Jun 30 j 10:34	17° Ⅱ 44'48	
minimum elong	-2320 Jan 02 j 22:08	24° ⊀ 17′20		minimum elong	-2315 Jun 30 j 10:32	17° Ⅱ 44'47	
max. Earth dist.	-2320 Jan 03 j 02:48	24° ∡ ¹20′08	6.02914 AU	max. Earth dist.	-2315 Jun 30 j 09:45	17° Ⅱ 44'21	6.35009 AU
morning rise	-2320 Jan 15 j 23:25	27° ∡ ¹24'11		morning rise	-2315 Jul 13 j 19:51	20° Ⅱ 40'45	
_	-2320 Jan 27 j 00:10	0°₹			-2315 Aug 28 j 09:51	0° ©	
retrograde	-2320 May 26 j 10:46	17°る35'08		retrograde	-2315 Nov 12 j 03:50	7°\$55'21	
opposition	-2320 Jul 25 j 20:23	12°る34'11		opposition	-2314 Jan 11 j 01:04	2°\$59'20	
min. Earth dist.	-2320 Jul 25 j 05:50		4.00043 AU	min. Earth dist.	-2314 Jan 11 j 09:41	2°956'30	4.38635 AU
direct	-2320 Sep 22 j 07:34	7°る40'53		1.	-2314 Feb 04 j 12:00	30°RⅡ	
evening set	-2319 Jan 25 j 00:21	27°る05'00		direct	-2314 Mar 13 j 21:31	27° Ⅱ 55'47	
	-2319 Feb 06 j 04:52	0° ≈			-2314 Apr 20 j 16:10	0°95	
conjunction	2210 Eab 07; 06:09	0° ≈ 15'09	1000'04	evening set	-2314 Jul 19 j 09:13	15° © 46'32	
-	-2319 Feb 07 j 06:08	0°≈15'08		agniumation	-2314 Aug 01 j 12:21	18° © 37'55	1001110
minimum elong max. Earth dist.	-2319 Feb 07 j 06:05 -2319 Feb 08 j 15:38		5.98921 AU	conjunction minimum elong	-2314 Aug 01 j 12:21		1°01'18
morning rise	-2319 Feb 08 j 15:38 -2319 Feb 20 j 15:04	0 ≈33 13 3°≈27'02	3.98921 AU	max. Earth dist.	-2314 Aug 01 j 12:19 -2314 Jul 31 j 12:30	18°937'34 18°924'54	
morning rise	-2319 Feb 20 J 13:04 -2319 Apr 13 j 20:56	3 ≈2702 15°≈		morning rise	-2314 Aug 14 j 12:07	21°9527'41	0.40/91 AU
retrograde	-2319 Apr 13 j 20:30	23°≈54'19		morning risc	-2314 Aug 14 j 12:07 -2314 Sep 25 j 04:27	0°Ω	
opposition	-2319 Aug 31 j 20:21	18°≈50'05	-1°54'48	retrograde	-2314 Dec 12 j 16:14	8° Ω 22'59	
min. Earth dist.	-2319 Aug 30 j 16:30		3.99924 AU	opposition	-2314 Bec 12 j 10:14 -2313 Feb 11 j 00:05	3° Ω 29'57	10/1/23
iiiii. Eartii tist.	-2319 Aug 30 j 10:30	18 ≈3931 15°R≈	3.99924 AU	min. Earth dist.	-2313 Feb 11 j 22:33		4.41498 AU
direct	-2319 Oct 28 j 19:24	13°≈54'57		iiiii. Lattii dist.	-2313 Mar 13 j 02:56	30°RS	4.41470 AC
anoct	-2319 Nov 23 j 01:42	15° ≈		direct	-2313 Apr 14 j 13:06	28° 5 27'16	
	-2318 Feb 16 j 20:55	0° ₩		uncer	-2313 May 17 j 06:14	0°Ω	
evening set	-2318 Mar 03 j 03:41	3° ¥ 19'17			-2313 Aug 14 j 01:44	15° Ω	
evening see	2310 Mar 03 j 03.11	3 7(1) 17		evening set	-2313 Aug 19 j 16:50	16° Ω 13'13	
conjunction	-2318 Mar 16 j 16:50	6°) 31′02	-1°16'18	max. Earth dist.	-2313 Aug 30 j 19:17		6.40401 AU
minimum elong	-2318 Mar 16 j 16:51	6° ¥ 31'03					
max. Earth dist.	-2318 Mar 18 j 18:15		6.02551 AU	conjunction	-2313 Sep 01 j 11:47	19° Ω 01'21	1°17'42
morning rise	-2318 Mar 30 j 08:45	9°) 44'04		minimum elong	-2313 Sep 01 j 11:46	19° Ω 01'20	
retrograde	-2318 Aug 08 j 00:57	29°) 42′54		morning rise	-2313 Sep 14 j 03:55	21° Ω 48'10	
min. Earth dist.	-2318 Oct 05 j 06:53	24°) 48′30	4.06963 AU	C	-2313 Oct 23 j 16:43	0° m	
opposition	-2318 Oct 06 j 14:40	24°) 37′39	-1°42'22	retrograde	-2312 Jan 12 j 20:43	8° m 51'09	
direct	-2318 Dec 03 j 20:59	19°) 39′23		opposition	-2312 Mar 13 j 12:57	3° m 59'32	1°53'31
	-2317 Feb 28 j 04:47	$0^{\circ}\mathbf{\Upsilon}$		min. Earth dist.	-2312 Mar 14 j 21:16	3° m)49'14	4.37982 AU
evening set	-2317 Apr 09 j 03:40	8° Y 44'23			-2312 Apr 18 j 22:45	30° R Ω	
				direct	-2312 May 15 j 05:11	28° Ω 58'47	
conjunction	-2317 Apr 22 j 21:40	11° Y 53'55	-0°55'01		-2312 Jun 10 j 12:33	0° m	
minimum elong	-2317 Apr 22 j 21:43	11° Y 53'57	0°54'59	evening set	-2312 Sep 18 j 14:34	16° m 52'56	
max. Earth dist.	-2317 Apr 24 j 18:37	12° Ƴ 19'47	6.12335 AU	max. Earth dist.	-2312 Sep 29 j 06:37	19° M 15'44	6.33939 AU
morning rise	-2317 May 06 j 16:51	15° Ƴ 03'47					
	-2317 Jul 21 j 05:38	9° 8		conjunction	-2312 Oct 01 j 04:54	19° m ,41'39	1°12'29
retrograde	-2317 Sep 11 j 02:27	4° 8 04'22		minimum elong	-2312 Oct 01 j 04:56	19° m 41'40	1°12'30
	-2317 Nov 02 j 06:17	30° Ŗ ♈		morning rise	-2312 Oct 13 j 17:31	22° m 29'40	
opposition	-2317 Nov 09 j 13:26	29° Y 00′51			-2312 Nov 17 j 22:11	0∘ ত	
min. Earth dist.	-2317 Nov 08 j 14:14	29° Y 08'44	4.18369 AU	retrograde	-2311 Feb 13 j 08:59	10° Ω 05'34	
direct	-2316 Jan 07 j 21:32	23° Y ′59'35		opposition	-2311 Apr 15 j 08:14	5° 2 13'33	1°30'31
	-2316 Mar 12 j 12:08	0°8		min. Earth dist.	-2311 Apr 16 j 15:39	5° ₾ 03'33	4.28956 AU
evening set	-2316 May 13 j 21:45	12° 8 35'17		direct	-2311 Jun 16 j 09:17	0° £ 15'27	
	-2316 May 24 j 17:00	15° 8		evening set	-2311 Oct 19 j 22:52	18° £ 29'24	6 0 0 1 1 0 1 1 1 1
	2216 M 27 : 15 22	150 - 20120	0015121	max. Earth dist.	-2311 Oct 30 j 23:29	21° ≏ 00'50	6.23113 AU
conjunction	-2316 May 27 j 15:33	15° 8 39'29			2211.31 01:12.56	210 2 2221	0045140
minimum elong	-2316 May 27 j 15:34	15° 8 39'30	0-15/28	conjunction	-2311 Nov 01 j 12:56	21° £ 22'21	0°45'49
behind sun begin	-2316 May 27 j 13:59	15° 8 38'37		minimum elong	-2311 Nov 01 j 12:58	21° £ 22'23	0°45'48
behind sun end	-2316 May 27 j 17:09	15° 8 40'23	6 24500 411	morning rise	-2311 Nov 14 j 02:37	24° £ 15'24	
max. Earth dist.	-2316 May 28 j 18:30	15° 8 54'34 18° 8 42'54	6.24509 AU	ratrograda	-2311 Dec 09 j 22:23	0° ጤ 12° ጤ 44'11	
morning rise	-2316 Jun 10 j 08:07	18° O 42′54 0° Ⅱ		retrograde	-2310 Mar 19 j 21:05	7°M50'10	0°38'20
retrograde	-2316 Aug 04 j 17:03 -2316 Oct 12 j 05:04	0°Щ 6°Щ42'06		opposition min. Earth dist.	-2310 May 19 j 20:52 -2310 May 20 j 18:37	7°M43'12	4.16967 AU
asc. node	-2316 Oct 12 j 05:04 -2316 Oct 15 j 09:19	6° Ц 42'06 6° Ц 41'06		direct	-2310 May 20 j 18:37 -2310 Jul 19 j 18:44	2°M54'55	7.1070/ AU
opposition	-2316 Oct 13 j 09.19 -2316 Dec 10 j 19:54	1° П 42'11	0°09'05	uncci	-2310 Jul 19 j 18.44 -2310 Oct 23 j 08:26	2 1163433 15°M	
min. Earth dist.	-2316 Dec 10 j 19:34	1° ∏ 4211 1° ∏ 45'17	4.30145 AU	evening set	-2310 Oct 23 j 08.20 -2310 Nov 21 j 13:44	21°M36'12	
Darm dist.	-2316 Dec 23 j 19:57	30°R 8	1.50175710	J. Gilling Sot	2510 1101 21 j 15. 14	21 NV3012	
direct	-2315 Feb 09 j 10:38	26° 8 39'07		conjunction	-2310 Dec 04 j 07:10	24°M35'42	0°03'37
		_0 0000		5011,011011	23.0 Dec 01 j 07.10	- · · · · · · · · · · · · · · · · · · ·	5 55 51

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -2310 in astronomical counting style is the year 2311 BCE in historical counting style. -2310 Dec 04 i 07:10 24°MJ35'42 0°03'34 behind sun end -2304 Jun 01 j 17:51 20°**8**24'16 minimum elong -2310 Dec 03 j 23:12 -2304 Jun 02 j 08:28 20°**8**32'26 6.26270 AU behind sun begin 24°M-31'02 max Earth dist -2310 Dec 04 j 15:08 -2304 Jun 15 j 02:53 23°**8**22'47 behind sun end 24°M40'22 morning rise -2304 Jul 16 j 02:02 max. Earth dist. -2310 Dec 03 j 12:21 24° M24'38 $0^{\circ}\Pi$ 6.11082 AU -2304 Aug 25 j 12:27 7°**Ⅱ**10′28 morning rise -2310 Dec 17 j 02:11 27°M36'13 asc. node -2304 Oct 16 j 13:48 -2310 Dec 27 j 09:44 0°**∡**¹ retrograde 11°**Ⅲ**14'20 $0^{\circ}17'50$ desc. node -2309 Jan 03 j 21:02 1°**х** 42′12 opposition -2304 Dec 15 j 05:20 6°**Ⅱ**14'55 retrograde -2309 Apr 25 j 06:37 17°**₹**05'31 min. Earth dist. -2304 Dec 14 j 23:24 6°**Ⅱ**16'54 4.31604 AU opposition -2309 Jun 25 j 01:07 12°**₹**08'02 -0°29'54 direct -2303 Feb 14 j 01:25 1°**Ⅱ**11'40 min. Earth dist. -2309 Jun 25 j 03:22 12°**х** 07′18 4.05855 AU evening set -2303 Jun 21 j 13:00 19°**Ⅱ**16'53 direct -2309 Aug 23 j 12:21 7°**∡**14'40 -2303 Jul 04 j 23:50 evening set -2309 Dec 26 j 00:41 26°**х** 23′18 conjunction 22°**Ⅲ**13′22 0°32'59 -2303 Jul 04 j 23:48 minimum elong 22°**Ⅲ**13'21 0°33'02 conjunction -2308 Jan 08 j 00:14 29°**х** 29'25 -0°41'26 max. Earth dist. -2303 Jul 04 j 20:21 22°**Ⅲ**11′28 6.36061 AU minimum elong -2308 Jan 08 j 00:11 29° ₹29'24 0°41'29 morning rise -2303 Jul 18 j 07:42 25°**Ⅲ**08'21 max. Earth dist. -2308 Jan 08 j 10:47 29°**∡**³35'45 6.01930 AU -2303 Aug 10 j 03:51 0ಂತಾ -2308 Jan 10 j 03:16 0°정 retrograde -2303 Nov 16 j 09:01 12°9519'05 morning rise -2308 Jan 21 j 02:25 2°る37'07 opposition -2302 Jan 15 j 08:27 7°523'34 1°13'23 retrograde -2308 May 31 j 20:53 22°る52'52 min. Earth dist. -2302 Jan 15 j 18:46 7°9520'11 4.39234 AU min. Earth dist. -2308 Jul 30 j 11:35 17°る56'52 3.99662 AU direct -2302 Mar 18 j 07:15 2°520'04 opposition -2308 Jul 31 j 04:05 17°**る**51'23 -1°29'50 evening set -2302 Jul 23 j 19:36 20°910'02 direct -2308 Sep 27 i 12:56 12°る58'00 -2307 Jan 20 j 04:38 0°**≈** conjunction -2302 Aug 05 j 21:23 23°900'52 1°04'46 -2307 Jan 30 j 06:17 2°≈22'49 -2302 Aug 05 j 21:21 23°900'50 1°04'48 evening set minimum elong max. Earth dist. -2302 Aug 04 j 17:16 22°9545'31 6.40880 AU -2307 Feb 12 j 13:02 5°≈33'18 -1°11'53 -2302 Aug 18 j 20:07 conjunction morning rise 25°950'09 -2302 Sep 07 j 09:15 -2307 Feb 12 j 12:59 5°≈33'17 1°11'55 $0^{\circ}\Omega$ minimum elong -2302 Dec 17 j 01:14 max. Earth dist. -2307 Feb 14 j 01:58 5°≈55'25 5.99157 AU retrograde 12°**Ω**45'47 -2301 Feb 15 j 09:14 1°47'30 -2307 Feb 25 j 23:07 8°≈45'32 7°**Ω**53′03 morning rise opposition -2301 Feb 16 j 10:28 -2307 Mar 24 j 23:24 15°≈ min. Earth dist. 7°**Ω**44'55 4.41096 AU -2301 Apr 19 j 00:27 -2307 Jul 08 j 03:51 29°≈10′26 2°**£**50′33 retrograde direct -2301 Jul 28 j 11:40 4.00785 AU -2307 Sep 04 j 18:28 24°≈16′05 min. Earth dist. 15°Ω -2307 Sep 06 j 00:31 24°≈05'54 -1°55'41 evening set -2301 Aug 24 j 01:24 20°**Ω**37'51 opposition -2307 Nov 02 j 22:55 -2301 Sep 04 j 01:51 23°**Ω**02'59 direct 19°**≈**10′23 max. Earth dist. 6.39528 AU -2306 Jan 29 j 10:10 0°**∀** -2306 Mar 08 j 10:09 -2301 Sep 05 j 19:39 23°**\O**26'00 1°18'16 evening set 8°**)**31'50 conjunction -2301 Sep 05 j 19:38 minimum elong 23°**Ω**26′00 1°18'18 conjunction -2306 Mar 22 j 00:03 11°\dagger43'19 -1°14'51 -2301 Sep 18 j 11:02 26° **Ω**12'53 morning rise -2306 Mar 22 j 00:05 11°\dagger43'20 1°14'52 -2301 Oct 06 j 00:25 0° m minimum elong max. Earth dist. -2306 Mar 24 j 01:23 12°**升** 12′20 6.03929 AU retrograde -2300 Jan 17 j 08:15 13° m/20'03 -2306 Apr 04 j 16:40 14°**)** 55'58 -2300 Mar 18 j 02:19 8° m/28'27 1°52'11 morning rise opposition -2306 Jun 17 j 10:50 $0^{\circ}\Upsilon$ min. Earth dist. -2300 Mar 19 j 10:05 8° m/18'20 4.36715 AU -2306 Aug 12 j 22:37 4°Y46'37 -2300 May 19 j 16:13 3°m/28'03 retrograde direct -2306 Oct 09 j 05:35 -2300 Sep 23 j 00:31 21°m/25'17 30°R¥ evening set min. Earth dist. -2306 Oct 10 j 05:27 29°**₭**51'51 4.08682 AU max. Earth dist. -2300 Oct 03 j 17:43 23°M/49'16 6.32391 AU opposition -2306 Oct 11 j 12:02 29° **\(**41'24 -1°37'14 -2300 Oct 05 i 14:35 direct -2306 Dec 08 j 22:11 24° **)** 42'37 conjunction 24° m 14'29 1°09'53 -2305 Feb 06 i 00:55 $0^{\circ}\Upsilon$ minimum elong -2300 Oct 05 i 14:37 24° m 14'30 1°09'52 -2305 Apr 14 j 05:55 13°Y42'38 morning rise -2300 Oct 18 i 03:04 27° m 03'06 evening set -2300 Oct 31 i 11:10 0∘**⊽** retrograde -2305 Apr 28 j 00:21 16°Υ51'28 -0°50'13 -2299 Feb 18 j 04:48 14°**£**46'05 conjunction -2305 Apr 28 j 00:24 16°**Υ**51'30 0°50'12 -2299 Apr 20 j 03:48 9°**£**53'55 minimum elong opposition 1°24'38 17°**Υ**16'49 6.14259 AU -2305 Apr 29 j 20:37 min. Earth dist. -2299 Apr 21 j 10:57 9°**£**44'01 4.27215 AU max. Earth dist. 20°\bar{0}00'25 morning rise -2305 May 11 j 19:21 direct -2299 Jun 21 j 02:28 4°£56'15 -2305 Jun 27 j 16:43 0°8 evening set -2299 Oct 24 j 12:36 23°**£**14'07 retrograde -2305 Sep 15 j 16:01 8°**8**51'06 max. Earth dist. -2299 Nov 04 j 15:01 25°**£**47'14 6.21344 AU min. Earth dist. -2305 Nov 13 j 06:03 3°**8**55'23 4.20291 AU 3°**8**48'02 -0°45'35 -2299 Nov 06 j 02:55 0°40'29 opposition -2305 Nov 14 j 03:44 conjunction 26°**♀**07'55 30°R℃ -2299 Nov 06 j 02:57 -2305 Dec 16 j 04:43 minimum elong 26°**£**07'57 0°40'27 28°**Y**46'28 29°**2**01'59 direct -2304 Jan 12 j 15:33 morning rise -2299 Nov 18 j 17:17 0° 8 -2304 Feb 09 j 11:36 -2299 Nov 22 j 22:47 0°M -2304 May 08 j 08:12 15°8 -2298 Feb 10 j 19:54 15°M evening set -2304 May 18 j 17:51 17°**8**17'15 retrograde -2298 Mar 24 j 22:16 17°M39'13 -2298 May 06 j 15:55 15°RM conjunction -2304 Jun 01 j 10:56 20°**8**20'26 -0°09'24 opposition -2298 May 24 j 22:35 12°M44'44 0°29'04

-2304 Jun 01 j 10:57

-2304 Jun 01 j 04:02

minimum elong

behind sun begin

20°**8**20'26

20°**8**16'36

0°09'21

min. Earth dist.

direct

-2298 May 25 j 16:42

-2298 Jul 24 j 14:52

12°M38'55

7°ML49'49

4.15301 AU

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 10 Attention, astronomical year style is used: The year -2298 in astronomical counting style is the year 2299 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	e year -2298 i	in astronomical cou	inting style is the year	2299 BCE in historical c	ounting style.	6 * - *
	-2298 Oct 03 j 10:23	15° ™		conjunction	-2292 Jun 06 j 06:09	24° 8 59'51	-0°03'16
desc. node	-2298 Nov 12 j 14:01	23°M23'13		minimum elong	-2292 Jun 06 j 06:08	24° 8 59'51	0°03'14
evening set	-2298 Nov 26 j 08:52	26° ™ 34'47		behind sun begin	-2292 Jun 05 j 21:52	24° 8 55'16	
				behind sun end	-2292 Jun 06 j 14:24	25° 8 04'25	
conjunction	-2298 Dec 09 j 03:07	29°M35'13	-0°03'09	max. Earth dist.	-2292 Jun 07 j 01:00	25° 8 10'20	6.27724 AU
minimum elong	-2298 Dec 09 j 03:05	29°M35'12	0°03'13	morning rise	-2292 Jun 19 j 21:02	28° 8 01'12	
behind sun begin	-2298 Dec 08 j 19:05	29° M 30′30			-2292 Jun 28 j 21:56	0 ° Π	
behind sun end	-2298 Dec 09 j 11:06	29° ™ 39'55		asc. node	-2292 Jul 05 j 10:24	1° Ⅱ 24'24	
max. Earth dist.	-2298 Dec 08 j 13:39		6.09679 AU	retrograde	-2292 Oct 20 j 22:37	15° Ⅱ 46'15	
	-2298 Dec 10 j 21:03	0° ⋌ ¹		opposition	-2292 Dec 19 j 14:43	10° Ⅱ 47'29	
morning rise	-2298 Dec 21 j 22:53	2° х 36'42		min. Earth dist.	-2292 Dec 19 j 11:01	10° Ⅱ 48'42	4.32784 AU
retrograde	-2297 Apr 30 j 14:38	22°×713'13	0000106	direct	-2291 Feb 18 j 14:48	5° Ⅱ 44'09	
opposition	-2297 Jun 30 j 07:06	17° 🗷 15'09		evening set	-2291 Jun 26 j 03:42	23° Ⅱ 47'17	
min. Earth dist.	-2297 Jun 30 j 07:11	17° ∡ 15′08	4.04831 AU		2201 1 1 00 12 15	2 COTT 42150	0020110
direct	-2297 Aug 28 j 15:02	12° メ *21'55 0° る		conjunction	-2291 Jul 09 j 13:15	26° Ⅱ 42'58	0°38'18 0°38'22
avanina aat	-2297 Dec 24 j 13:09	0°5 1° る 32'44		minimum elong max. Earth dist.	-2291 Jul 09 j 13:13	26° Ⅱ 42'56 26° Ⅱ 38'14	6.36861 AU
evening set	-2297 Dec 31 j 01:42	1 632 44		max. Earth dist.	-2291 Jul 09 j 04:36 -2291 Jul 22 j 20:03	26°Щ38°14 29°Щ37'09	0.30801 AU
conjunction	-2296 Jan 13 j 02:04	4° る 39'29	0047102	morning rise	-2291 Jul 22 j 20.03	29 Ⅲ 3709	
minimum elong	-2296 Jan 13 j 02:04 -2296 Jan 13 j 02:00	4 03929 4° る 39'27		retrograde	-2291 Jul 24 j 14.08 -2291 Nov 20 j 17:11	16°9345'01	
max. Earth dist.	-2296 Jan 13 j 16:15	4°る47'59		opposition	-2290 Jan 19 j 17:07	11°5549'58	1°19'44
morning rise	-2296 Jan 26 j 05:24	7°る47'54	0.01330 AC	min. Earth dist.	-2290 Jan 20 j 06:15	11° S 45'40	4.39633 AU
retrograde	-2296 Jun 06 j 02:56	28°る06'20		direct	-2290 Mar 22 j 19:18	6°9346'31	4.57055 AC
opposition	-2296 Aug 05 j 09:45	23° පි 04'21	-1°36'00	evening set	-2290 Jul 28 j 06:34	24°936'15	
min. Earth dist.	-2296 Aug 04 j 14:03		3.99632 AU	max. Earth dist.	-2290 Aug 09 j 02:01	27°5010'36	6.40839 AU
direct	-2296 Oct 02 j 15:30	18° る 10'49	2.55032110	man. Darin digi.	22,011 u g 0, j 02.01	2, 01030	0.10037110
	-2295 Jan 02 j 08:59	0°≈		conjunction	-2290 Aug 10 j 07:21	27° 5 26'38	1°07'54
evening set	-2295 Feb 04 j 11:06	7° ≈ 35'27		minimum elong	-2290 Aug 10 j 07:19	27° © 26'37	
Č	,			Č	-2290 Aug 22 j 00:19	$0^{\circ}\Omega$	
conjunction	-2295 Feb 17 j 18:47	10° ≈ 46′08	-1°14'06	morning rise	-2290 Aug 23 j 04:45	0° Ω 15'26	
minimum elong	-2295 Feb 17 j 18:45	10° ≈ 46′07	1°14'08	Č	-2290 Nov 13 j 09:57	15° Ω	
max. Earth dist.	-2295 Feb 19 j 09:40	11° ≈ 09'22	5.99641 AU	retrograde	-2290 Dec 21 j 09:26	17° Ω 11'53	
morning rise	-2295 Mar 03 j 05:49	13° ≈ 58'30			-2289 Jan 28 j 17:17	15°R Ω	
	-2295 Mar 07 j 14:00	15° ≈		opposition	-2289 Feb 19 j 19:37	12° Ω 19′28	1°50'04
	-2295 May 20 j 13:19	0° ∀		min. Earth dist.	-2289 Feb 20 j 21:18	12° Ω 11'13	4.40656 AU
retrograde	-2295 Jul 13 j 06:25	4° ∺ 20′09		direct	-2289 Apr 23 j 10:41	7° Ω 17'18	
	-2295 Sep 05 j 14:19	30° R ≈			-2289 Jul 09 j 14:57	15° Ω	
min. Earth dist.	-2295 Sep 09 j 19:48		4.01734 AU	evening set	-2289 Aug 28 j 11:14	25° Ω 05'58	
opposition	-2295 Sep 11 j 02:07	29° ≈ 15′21	-1°55'40	max. Earth dist.	-2289 Sep 08 j 09:13	27° Ω 30′10	6.38721 AU
direct	-2295 Nov 08 j 02:00	24° ≈ 19′24					
	-2294 Jan 07 j 17:22	0° ∀		conjunction	-2289 Sep 10 j 04:31		1°18'26
evening set	-2294 Mar 13 j 14:37	13° ¥ 38′07		minimum elong	-2289 Sep 10 j 04:31	27° Ω 54'05	1°18'28
					-2289 Sep 19 j 16:41	0° m)	
conjunction	-2294 Mar 27 j 05:30	16°) 49′23		morning rise	-2289 Sep 22 j 19:21	0° mp 41'02	
minimum elong	-2294 Mar 27 j 05:32	16°) 49′25		retrograde	-2288 Jan 21 j 22:56	17° m 52'11	1050112
max. Earth dist.	-2294 Mar 29 j 08:09	17°) 19'04 20°) 01'40	6.05260 AU	opposition	-2288 Mar 22 j 17:00	13° Mp 00'41	1°50'12
morning rise	-2294 Apr 09 j 22:36	20° Υ 01′40 0° Υ		min. Earth dist. direct	-2288 Mar 24 j 01:47	12° mp 50'15 8° mp 00'39	4.35608 AU
retrograde	-2294 May 25 j 11:19 -2294 Aug 17 j 18:51	0 1 9° Υ 44'29		evening set	-2288 May 24 j 06:39 -2288 Sep 27 j 10:58	26° Mp 00'14	
min. Earth dist.	-2294 Aug 17 j 18:31 -2294 Oct 15 j 01:38	4° Υ 49'38	4.10254 AU	max. Earth dist.	-2288 Oct 08 j 05:08	28° m) 25'14	6.31087 AU
opposition	-2294 Oct 16 j 07:22	4° Υ '39'30		max. Larm dist.	-2200 Oct 00 j 03.00	20 11/2314	0.51007 AC
оррозиюн	-2294 Nov 29 j 22:55	30° R ₩	-1 3133	conjunction	-2288 Oct 10 j 00:54	28° m 49'54	1°06'53
direct	-2294 Dec 13 j 19:52	29°) 40′21		minimum elong	-2288 Oct 10 j 00:56	28° m/49'55	1°06'53
anoot	-2294 Dec 27 j 19:32	0°Υ		minimum crong	-2288 Oct 15 j 05:14	0∘ ⊽	1 00 33
evening set	-2293 Apr 19 j 06:54	18° Ƴ 36'18		morning rise	-2288 Oct 22 j 13:21	1° ₽ 39'03	
evening sec	22/3/1pi 1/1 00:31	10 13010		retrograde	-2287 Feb 22 j 23:00	19° ≏ 28'18	
conjunction	-2293 May 03 j 01:19	21° Y ′44'28	-0°45'08	opposition	-2287 Apr 24 j 23:43	19 — 28 18 14° — 35'52	1°18'13
minimum elong	-2293 May 03 j 01:13	21° Υ '44'30	0°45'07	min. Earth dist.	-2287 Apr 26 j 04:19	14° ⊆ 26'46	4.25809 AU
max. Earth dist.	-2293 May 04 j 17:35	22° Υ '07'25	6.15932 AU	direct	-2287 Jun 25 j 17:54	9° ₽ 38'38	
morning rise	-2293 May 16 j 20:24	24° Y ′52'40		evening set	-2287 Oct 29 j 01:59	27° ♀ 59'10	
5	-2293 Jun 09 j 00:22	0°8		3	-2287 Nov 06 j 19:46	0°M	
retrograde	-2293 Sep 20 j 04:28	13° 8 34'45		max. Earth dist.	-2287 Nov 09 j 08:15	0° M 34'59	6.19965 AU
opposition	-2293 Nov 18 j 16:59	8° 8 32'08	-0°36'56		, ·		
min. Earth dist.	-2293 Nov 17 j 21:28	8° 8 38'45	4.21907 AU	conjunction	-2287 Nov 10 j 16:34	0°M53'40	0°34'56
direct	-2292 Jan 17 j 09:20	3° 8 30'14		minimum elong	-2287 Nov 10 j 16:36	0° M 53'42	0°34'54
	-2292 Apr 20 j 23:08	15°₩		morning rise	-2287 Nov 23 j 07:24	3° M 48′32	
evening set	-2292 May 23 j 13:30	21° 8 57'29			-2286 Jan 15 j 01:54	15° M	

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -2286 in astronomical counting style is the year 2287 BCE in historical counting style. -2286 Mar 30 i 00:38 22°M32'52 retrograde -2281 Sep 24 j 17:35 18°**8**14'32 retrograde opposition 17°M37'56 -2286 May 29 j 23:27 0°19'43 -2281 Nov 09 j 15:23 15°R₩ min. Earth dist. -2286 May 30 j 15:59 4.14036 AU min. Earth dist. -2281 Nov 22 j 11:52 13°**8**18'14 4.23218 AU 17°M32'36 -2286 Jun 20 j 14:05 -2281 Nov 23 j 05:00 15°RM 13°**8**12'26 -0°28'13 opposition direct -2286 Jul 29 j 12:31 12°M43'19 -2280 Jan 22 j 01:48 8°810'18 direct -2280 Apr 01 j 02:49 15°8 -2286 Sep 05 j 19:18 15°M₊ desc. node -2286 Sep 22 j 11:01 17°M14'42 asc. node -2280 May 15 j 20:45 23°**8**51'34 -2286 Nov 24 j 15:44 0°**∡**¹ evening set -2280 May 28 j 07:57 26°**8**34'53 1°**∡**³30′39 evening set -2286 Dec 01 j 02:50 0°02'56 conjunction -2280 Jun 10 j 23:51 29°**8**36'29 conjunction -2286 Dec 13 j 21:41 4°**₹**31'48 -0°09'38 minimum elong -2280 Jun 10 j 23:51 29°**8**36'29 0°02'58 -2286 Dec 13 j 21:41 -2280 Jun 10 j 15:35 29°831'55 minimum elong 4°**∡**³31'47 0°09'40 behind sun begin -2286 Dec 13 j 15:00 -2280 Jun 11 j 08:08 behind sun begin 4°**∡**°27'51 behind sun end 29°**8**41'03 behind sun end -2286 Dec 14 j 04:22 4°**х**³35'43 max. Earth dist. -2280 Jun 11 j 14:32 29°**8**44'37 6.28881 AU max. Earth dist. -2286 Dec 13 j 11:30 4°**∡**°25'47 6.08643 AU -2280 Jun 12 j 18:14 $0^{\circ}\Pi$ morning rise -2286 Dec 26 j 18:26 7°**х**³34′08 morning rise -2280 Jun 24 j 14:02 2°**I**I37′02 retrograde -2285 May 05 j 17:20 27°**х** 16′12 retrograde -2280 Oct 25 j 06:54 20°**Ⅱ**16'42 opposition -2285 Jul 05 j 10:11 22°**∡**17'34 -0°48'45 opposition -2280 Dec 24 j 00:02 15°**Ⅱ**18'27 0°34'51 min. Earth dist. -2285 Jul 05 j 06:46 22°**҂**18'41 4.04140 AU min. Earth dist. -2280 Dec 23 j 22:16 15°**Ⅱ**19′02 4.33723 AU 17°**∡**¹24'24 direct -2285 Sep 02 j 13:15 direct -2279 Feb 23 j 03:33 10°**Ⅱ**15'00 -2285 Dec 07 j 09:40 0°궁 evening set -2279 Jun 30 j 17:48 28° II 16'31 evening set -2284 Jan 05 i 00:26 6°**ප**36'31 -2279 Jul 08 j 15:42 conjunction -2284 Jan 18 i 01:39 9°**ප්**43'46 -0°52'07 conjunction -2279 Jul 14 i 02:18 1°9511'28 0°43'21 -2284 Jan 18 j 01:36 9°**ප**43'44 0°52'11 minimum elong -2279 Jul 14 i 02:15 1°9511'26 0°43'24 minimum elong -2284 Jan 18 j 19:08 9°る54'14 6.01049 AU max. Earth dist. -2279 Jul 13 j 15:41 1°905'39 6.37525 AU max. Earth dist. -2284 Jan 31 j 05:57 12°る52'42 -2279 Jul 27 j 07:41 4°904'50 morning rise morning rise -2284 Apr 26 j 06:33 -2279 Nov 25 j 00:48 21°9510'08 0°≈≈ retrograde -2284 Jun 11 j 06:45 -2278 Jan 24 j 01:53 1°25'34 3°≈12'49 opposition 16°9515'33 retrograde -2284 Jul 27 j 12:33 -2278 Jan 24 j 16:35 30°R♂ min. Earth dist. 16°9510'46 4.39995 AU opposition -2284 Aug 10 j 12:02 -2278 Mar 27 j 06:28 28°**ට**10'18 -1°41'13 11°9512'16 direct -2284 Aug 09 j 15:01 min. Earth dist. 28°る17'21 3.99748 AU -2278 Aug 01 j 17:19 29°901'25 evening set -2284 Oct 07 j 17:05 23°**る**16'27 -2278 Aug 06 j 05:05 direct $0^{\circ}\Omega$ -2284 Dec 13 j 01:38 -2278 Aug 13 j 08:06 0°≈ max. Earth dist. 1°**Ω**33'24 6.40849 AU -2283 Feb 09 j 12:40 evening set 12°**≈**40'31 -2278 Aug 14 j 16:48 1°**Ω**51'17 1°10'37 -2283 Feb 19 j 07:11 15°**≈** conjunction -2278 Aug 14 j 16:46 minimum elong 1°**Ω**51'16 1°10'39 conjunction -2283 Feb 22 j 21:28 15°≈51'25 -1°15'42 morning rise -2278 Aug 27 j 13:14 4° **Ω**39'39 -2283 Feb 22 j 21:27 15°≈51'25 1°15'44 -2278 Oct 18 j 03:05 15°**Ω** minimum elong max. Earth dist. -2283 Feb 24 j 15:29 16°≈16'28 6.00161 AU retrograde -2278 Dec 25 j 19:24 21°**Ω**36'38 -2283 Mar 08 j 09:21 19°**≈**03'55 opposition -2277 Feb 24 j 06:14 16° **Ω**44'24 1°51'58 morning rise -2283 Apr 26 j 20:10 0°**)**€ min. Earth dist. -2277 Feb 25 j 09:34 16°**Ω**35'38 4.40322 AU -2283 Jul 18 j 06:19 9°**¥**22'02 -2277 Mar 10 j 02:31 15°RΩ retrograde -2283 Sep 14 j 17:52 4°**)** 4.02617 AU -2277 Apr 27 j 22:28 11°**Ω**42'25 min. Earth dist. direct -2283 Sep 16 j 00:15 4°**升**17'05 -1°54'49 -2277 Jun 15 j 10:13 opposition 15°**Ω** -2283 Oct 24 i 11:45 30°R≈ evening set -2277 Sep 01 i 19:49 29°**£**31'39 -2277 Sep 03 i 23:26 direct -2283 Nov 13 j 00:14 29°≈20'43 0° m -2283 Dec 02 j 15:02 0°**)**€ max. Earth dist. -2277 Sep 12 j 17:54 1° m 56'08 6.38046 AU evening set -2282 Mar 18 j 16:24 18° **)** 37'10 conjunction -2277 Sep 14 j 12:31 2° mb 19'44 1°18'08 -2282 Apr 01 j 07:52 21°\dagger48'13 -1°10'26 -2277 Sep 14 j 12:32 2° m 19'44 1°18'08 conjunction minimum elong -2282 Apr 01 j 07:55 21°**X**48'15 1°10'26 -2277 Sep 27 j 02:34 5° m 06'41 minimum elong morning rise -2282 Apr 03 j 08:17 22°\(\mathbf{1}6'30\) 6.06412 AU -2276 Jan 26 j 10:44 22° m/21'25 max. Earth dist. retrograde morning rise -2282 Apr 15 j 01:43 25°**)**€00'14 opposition -2276 Mar 27 j 07:01 17° **m** 29'51 1°47'34 $0^{\circ}\Upsilon$ 17° **m** 19'40 -2282 May 07 j 02:19 min. Earth dist. -2276 Mar 28 j 15:04 4.34613 AU retrograde -2282 Aug 22 j 10:52 14°**Y**36'02 direct -2276 May 28 j 18:15 12° m/30'13 opposition -2282 Oct 20 j 23:50 9°**Y**31'13 -1°25'24 -2276 Sep 29 j 11:40 0∘**⊽** -2282 Oct 19 j 18:58 9°**Υ**41'05 4.11552 AU -2276 Oct 01 j 20:14 min. Earth dist. evening set 0°**£**31'38 4°Υ31'37 -2276 Oct 12 j 14:26 direct -2282 Dec 18 j 15:19 max. Earth dist. 2°**♀**57'09 6.29830 AU 23°**Y**24'40 evening set -2281 Apr 24 j 05:40 -2276 Oct 14 j 09:50 3°**º**21'42 1°03'30 conjunction conjunction -2281 May 08 j 00:23 26°**Y**32'20 -0°39'52 minimum elong -2276 Oct 14 j 09:53 3°**£**21'43 1°03'30 minimum elong -2281 May 08 j 00:26 26°**Y**32'22 0°39'50 morning rise -2276 Oct 26 j 22:25 6°**£**11'24 max. Earth dist. -2281 May 09 j 14:38 26°**Y**54'04 6.17306 AU retrograde -2275 Feb 27 j 18:43 24°**₽**07'01 morning rise -2281 May 21 j 19:11 29°**Y**39′50 opposition -2275 Apr 29 j 18:42 19°**₽**14'21 1°11'19 -2281 May 23 j 07:01 0°8 min. Earth dist. -2275 Apr 30 j 23:04 19°**≏**05'18 4.24331 AU

-2275 Jun 30 j 10:17

direct

14°**♀**17'28

-2281 Aug 09 j 18:37

15°8

•	omena of Jupiter fro iical year style is used: Th		_	. ,,		, .	ge 12
Attention, astronom	-2275 Oct 21 j 19:23	0°M	in astronomicai co	conjunction	-2269 May 13 j 02:29	1° 8 28'35	-0°34'11
evening set	-2275 Nov 02 j 14:22	2°M41'09		minimum elong	-2269 May 13 j 02:31	1° 8 28'37	
max. Earth dist.	-2275 Nov 13 j 23:24	5°M19'03	6.18401 AU	max. Earth dist.	-2269 May 14 j 14:45	1° 8 49'07	6.18948 AU
man. Darm uist.	2270 1101 13 j 23.21	5 me 19 05	0.10101110	morning rise	-2269 May 26 j 21:01	4° 8 35'15	0.107 10110
conjunction	-2275 Nov 15 j 05:27	5° ™ 36′29	0°29'11		-2269 Jul 15 j 14:34	15° 8	
minimum elong	-2275 Nov 15 j 05:29	5°M36'31	0°29'08	retrograde	-2269 Sep 29 j 06:32	23° 8 01'21	
morning rise	-2275 Nov 27 j 20:53	8°M32'18		opposition	-2269 Nov 27 j 19:21	17° 8 59'45	-0°19'08
C	-2275 Dec 26 j 18:22	15° ™		min. Earth dist.	-2269 Nov 27 j 02:54	18° 8 05'17	4.24954 AU
retrograde	-2274 Apr 04 j 00:16	27°M24'37			-2269 Dec 21 j 17:05	15° ₹ 8	
opposition	-2274 Jun 03 j 23:28	22°M29'15	0°10'13	direct	-2268 Jan 26 j 19:48	12° 8 57'23	
min. Earth dist.	-2274 Jun 04 j 13:08	22°M24'51	4.12501 AU		-2268 Mar 03 j 10:37	15° ∀	
desc. node	-2274 Aug 02 j 08:17	17°M35'02		asc. node	-2268 Mar 25 j 04:46	17° 8 50'38	
direct	-2274 Aug 03 j 06:52	17° M 34'57			-2268 May 27 j 06:23	Π °0	
	-2274 Nov 07 j 16:17	0°⊀		evening set	-2268 Jun 02 j 04:18	1° Ⅱ 17'37	
evening set	-2274 Dec 05 j 20:54	6° ∡ ¹26′05					
				conjunction	-2268 Jun 15 j 19:18	4° Ⅱ 18′07	0°09'03
conjunction	-2274 Dec 18 j 16:28	9° ∡ °28'09	-0°16'04	minimum elong	-2268 Jun 15 j 19:18	4° Ⅱ 18′07	0°09'06
minimum elong	-2274 Dec 18 j 16:27	9° ≯ 28'08	0°16'07	behind sun begin	-2268 Jun 15 j 12:20	4° Ⅱ 14'17	
behind sun begin	-2274 Dec 18 j 15:25	9° ∡ 27'31		behind sun end	-2268 Jun 16 j 02:16	4° Ⅱ 21'57	
behind sun end	-2274 Dec 18 j 17:28	9° ∡ 28'44		max. Earth dist.	-2268 Jun 16 j 07:09	4° Ⅱ 24'40	6.30612 AU
max. Earth dist.	-2274 Dec 18 j 09:23	9° ∡ ¹23'57	6.07267 AU	morning rise	-2268 Jun 29 j 08:19	7° Ⅱ 17'27	
morning rise	-2274 Dec 31 j 14:12	12° ∡ 31'31		retrograde	-2268 Oct 29 j 16:38	24° Ⅱ 49'41	
	-2273 Apr 01 j 16:42	0°る		opposition	-2268 Dec 28 j 10:07	19° Ⅱ 51'58	0°43'01
retrograde	-2273 May 10 j 22:54	2° る 20'53		min. Earth dist.	-2268 Dec 28 j 10:49	19° Ⅱ 51'44	4.35321 AU
	-2273 Jun 19 j 09:07	30°₹ ҂ 7		direct	-2267 Feb 27 j 18:43	14° Ⅱ 48'29	
opposition	-2273 Jul 10 j 14:03	27° ₹ 21'42		_	-2267 Jun 22 j 09:59	0ංම	
min. Earth dist.	-2273 Jul 10 j 08:31		4.03045 AU	evening set	-2267 Jul 05 j 07:25	2° © 45'52	
direct	-2273 Sep 07 j 14:09	22° 🗷 28'33			22/7/1 10:11/22	50000110	00.4010.6
	-2273 Nov 17 j 16:01	0°る		conjunction	-2267 Jul 18 j 14:33	5°539'43	0°48'06
evening set	-2272 Jan 10 j 00:49	11° る 43'48		minimum elong	-2267 Jul 18 j 14:30	5°939'41	0°48'08
. ,.	2272 1 22 : 02 00	140751150	0056154	max. Earth dist.	-2267 Jul 18 j 00:32	5°932'03	6.38854 AU
conjunction	-2272 Jan 23 j 03:09 -2272 Jan 23 j 03:05	14°る51'50 14°る51'48		morning rise	-2267 Jul 31 j 18:36	8°531'58	
minimum elong				retrograde	-2267 Nov 29 j 06:14	25°532'42	1920145
max. Earth dist.	-2272 Jan 24 j 01:10	15° る 05'02	6.00334 AU	opposition min. Earth dist.	-2266 Jan 28 j 09:34	20°538'27	1°30'45
morning rise	-2272 Feb 05 j 08:28	18°る01'33 0°≈			-2266 Jan 29 j 01:57	20°533'07 15°535'12	4.40988 AU
retrograde	-2272 Mar 30 j 19:50 -2272 Jun 16 j 13:37	0 ≈ 8°≈24'46		direct	-2266 Mar 31 j 16:38 -2266 Jul 21 j 07:55	13 3 33 12 0° Ω	
opposition	-2272 Juli 10 j 13:37	3°≈21'52	1045147	evening set	-2266 Aug 06 j 01:13	3° Ω 21'32	
min. Earth dist.	-2272 Aug 13 j 10:11 -2272 Aug 14 j 17:33	3°≈29'28	3.99520 AU	evening set	-2200 Aug 00 J 01.13	J 0 (21 J2	
iiiii. Lattii dist.	-2272 Rug 14 j 17:33 -2272 Sep 12 j 09:45	30°Rる	3.77320 AO	conjunction	-2266 Aug 18 j 23:33	6° Ω 10'40	1°12'50
direct	-2272 Oct 12 j 18:46	28°る27'49		minimum elong	-2266 Aug 18 j 23:31	6° Ω 10'39	1°12'53
uncer	-2272 Nov 12 j 01:03	0°≈		max. Earth dist.	-2266 Aug 17 j 13:53	5° Ω 52'15	6.41415 AU
	-2271 Feb 02 j 11:00	15° ≈		morning rise	-2266 Aug 31 j 18:40	8° Ω 58'18	0.11113710
evening set	-2271 Feb 14 j 17:47	17° ≈ 52'56			-2266 Sep 29 j 09:46	15° Ω	
				retrograde	-2266 Dec 30 j 00:50	25° Ω 54'17	
conjunction	-2271 Feb 28 j 03:30	21° ≈ 04'10	-1°16'45	opposition	-2265 Feb 28 j 13:49	21° Ω 02'14	1°53'06
minimum elong	-2271 Feb 28 j 03:29	21° ≈ 04'09		min. Earth dist.	-2265 Mar 01 j 18:31	20° Ω 53'03	4.40422 AU
max. Earth dist.	-2271 Mar 01 j 22:07	21° ≈ 29'32	6.00409 AU	direct	-2265 May 02 j 07:02	16° Ω 00'29	
morning rise	-2271 Mar 13 j 16:34	24°≈17'01			-2265 Aug 19 j 08:36	0° m)	
	-2271 Apr 07 j 12:02	0°) €		evening set	-2265 Sep 06 j 00:48	3° m/48'54	
retrograde	-2271 Jul 23 j 07:19	14°) 32′20		max. Earth dist.	-2265 Sep 16 j 19:14	6° Mp 11'38	6.37645 AU
min. Earth dist.	-2271 Sep 19 j 17:40	9°) 37′58	4.03326 AU				
opposition	-2271 Sep 21 j 01:06	9° ∺ 27'15	-1°53'04	conjunction	-2265 Sep 18 j 16:37	6° Mp 36′48	1°17'22
direct	-2271 Nov 18 j 01:26	4°) € 30′28		minimum elong	-2265 Sep 18 j 16:38	6° Mp 36′48	1°17'23
evening set	-2270 Mar 23 j 21:52	23°) 45′23		morning rise	-2265 Oct 01 j 06:16	9° ™ 23'42	
				retrograde	-2264 Jan 30 j 20:29	26°M)41'24	
conjunction	-2270 Apr 06 j 14:17	26° ¥ 56′19	-1°07'23	opposition	-2264 Mar 31 j 17:12	21° m 49'44	1°44'21
minimum elong	-2270 Apr 06 j 14:20	26° ¥ 56′21	1°07'23	min. Earth dist.	-2264 Apr 02 j 02:22	21° m 39'10	4.33715 AU
max. Earth dist.	-2270 Apr 08 j 15:17	27°) €24'51	6.07541 AU	direct	-2264 Jun 02 j 03:21	16° m 50'17	
	-2270 Apr 19 j 18:36	$0^{\circ}\Upsilon$			-2264 Sep 13 j 18:30	0∘ 亚	
morning rise	-2270 Apr 20 j 08:30	0° Y 08'01		evening set	-2264 Oct 06 j 01:18	4° ≏ 53'28	
retrograde	-2270 Aug 27 j 08:42	19° Ƴ 36'36		max. Earth dist.	-2264 Oct 16 j 20:29	7° ≏ 19'56	6.28508 AU
opposition	-2270 Oct 25 j 19:46	14° Y °32′06					
min. Earth dist.	-2270 Oct 24 j 16:23	14° Y 41′27	4.12980 AU	conjunction	-2264 Oct 18 j 15:01	7° ≏ 44'04	0°59'51
direct	-2270 Dec 23 j 15:14	9° Ƴ 32'10		minimum elong	-2264 Oct 18 j 15:04	7° ≏ 44'05	0°59'51
evening set	-2269 Apr 29 j 07:50	28° Y 21′37		morning rise	2264 Oct 21:02:27	10° ♀ 34'21	
e e	-2269 May 06 j 14:02	0° 8		retrograde	-2264 Oct 31 j 03:37 -2263 Mar 04 j 09:11	28° £ 36'46	

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 13

Attention, astronomical year style is used: The year -2263 in astronomical counting style is the year 2264 BCE in historical counting style.

opposition -2263 May 04 j 09:52 23° ♣43'49 1°04'15 evening set -2257 May 04 j 10:31 3° ௧18'32

Attention, astronom	ical year style is used: Th	ie year -2263 i	n astronomical co	ounting style is the year	2264 BCE in historical c	ounting style.	_
opposition	-2263 May 04 j 09:52	23° ≏ 43'49	1°04'15	evening set	-2257 May 04 j 10:31	3° 8 18'32	
min. Earth dist.	-2263 May 05 j 13:12	23° ₽ 35'06	4.22654 AU				
direct	-2263 Jul 04 j 21:01	18° ≏ 47'16		conjunction	-2257 May 18 j 04:56	6° 8 24'37	-0°28'12
	-2263 Oct 05 j 07:06	0°M		minimum elong	-2257 May 18 j 04:58	6° 8 24'39	0°28'10
evening set	-2263 Nov 06 j 23:40	7° M 15′06		max. Earth dist.	-2257 May 19 j 13:58		6.20767 AU
max. Earth dist.	-2263 Nov 18 j 09:51	9° ™ 54'23	6.16508 AU	morning rise	-2257 May 31 j 23:02	9° 8 30'16	
					-2257 Jun 26 j 03:39	15° 8	
conjunction	-2263 Nov 19 j 15:07	10°M11'25	0°23'27	retrograde	-2257 Oct 03 j 21:26	27° 8 47'15	
minimum elong	-2263 Nov 19 j 15:08	10°M11'26	0°23'24	opposition	-2257 Dec 02 j 09:54	22° 8 46'07	-0°09'53
morning rise	-2263 Dec 02 j 07:24	13°M08'22	0 23 2 .	min. Earth dist.	-2257 Dec 01 j 20:21		4.26758 AU
morning rise	-2263 Dec 10 j 09:19	15°M		direct	-2256 Jan 31 j 16:04	17° 8 43'28	4.20/30/10
	-2262 Mar 02 j 02:11	0° ∡ 7		asc. node	-2256 Feb 01 j 15:31	17° 8 43'33	
retrograde	-2262 Apr 08 j 23:20	2° × ⁷ 10'16		asc. node	-2256 May 09 j 21:15	0°Ⅱ	
retrograde	-2262 May 17 j 03:18	30°RM		evening set	-2256 Jun 07 j 00:10	5° Ⅱ 59'10	
opposition	-2262 Jun 08 j 21:03	27°M14'24	0°00'54	evening set	-2230 Juli 07 J 00.10	3 1137 10	
min. Earth dist.	-2262 Jun 09 j 09:10	27°M10'29	4.10519 AU	conjunction	-2256 Jun 20 j 14:19	8° Ⅱ 58'38	0°15'11
desc. node	-2262 Jun 14 j 02:00	26°M34'06	4.10317 AC	minimum elong	-2256 Jun 20 j 14:18	8° Ц 58'37	
direct	-2262 Aug 08 j 00:06	20°M20'16		behind sun begin	-2256 Jun 20 j 12:04	8° Ⅱ 57′24	0 13 14
direct	-2262 Aug 08 j 00:06 -2262 Oct 19 j 19:48	22 IIG20 16 0° √		behind sun begin		8° П 59'50	
avanina aat	-	0 x . 11° ∡ 17'08		max. Earth dist.	-2256 Jun 20 j 16:31		6.32238 AU
evening set	-2262 Dec 10 j 13:31	11 × 1/08		morning rise	-2256 Jun 20 j 23:15	9 П 03 32 11° П 56'47	0.32238 AU
	22(2 D 22:10.00	1.40 70007	0022115	Č	-2256 Jul 04 j 02:07		
conjunction	-2262 Dec 23 j 10:09	14° ₹ 20'27		retrograde	-2256 Nov 03 j 00:40	29° Ⅱ 22'25	0051102
minimum elong	-2262 Dec 23 j 10:07	14° ₹ 20′26		opposition	-2255 Jan 01 j 20:33	24° Ⅱ 25'14	
max. Earth dist.	-2262 Dec 23 j 07:05		6.05395 AU	min. Earth dist.	-2255 Jan 01 j 22:50	24° Ⅱ 24'29	4.36645 AU
morning rise	-2261 Jan 05 j 08:54	17° ∡ ¹25'07		direct	-2255 Mar 04 j 07:55	19° Ⅱ 21'43	
	-2261 Mar 04 j 14:46	0°る			-2255 Jun 04 j 21:03	0°5	
retrograde	-2261 May 16 j 04:57	7°る23'32		evening set	-2255 Jul 09 j 21:23	7° © 16'09	
opposition	-2261 Jul 15 j 16:54	2°る23'53		max. Earth dist.	-2255 Jul 22 j 09:33	9° © 59'28	6.39765 AU
min. Earth dist.	-2261 Jul 15 j 09:08		4.01488 AU			_	
	-2261 Aug 03 j 17:15	30°Ŗ ⋌ ¹		conjunction	-2255 Jul 23 j 03:09	10° © 09'04	
direct	-2261 Sep 12 j 12:11	27° ∡ ³30'45		minimum elong	-2255 Jul 23 j 03:06	10° © 09'03	0°52'43
	-2261 Oct 21 j 15:07	0°ಕ		morning rise	-2255 Aug 05 j 05:50	13° © 00'25	
evening set	-2260 Jan 15 j 01:57	16° පි 51'08		retrograde	-2255 Dec 03 j 15:08	29° © 58'22	
				opposition	-2254 Feb 01 j 18:55	25° © 04'35	1°35'38
conjunction	-2260 Jan 28 j 05:17	20° ろ 00'08		min. Earth dist.	-2254 Feb 02 j 14:11	24° 9 58'21	4.41436 AU
minimum elong	-2260 Jan 28 j 05:14	20° ろ 00'06		direct	-2254 Apr 05 j 05:12	20° © 01'31	
max. Earth dist.	-2260 Jan 29 j 05:41		5.99219 AU		-2254 Jul 03 j 19:04	0 $^{\circ}$ Ω	
morning rise	-2260 Feb 10 j 12:01	23° る 10'56		evening set	-2254 Aug 10 j 11:11	7° Ω 47'00	
	-2260 Mar 11 j 00:22	0° ≈		max. Earth dist.	-2254 Aug 21 j 19:27	10° Ω 15'30	6.41342 AU
retrograde	-2260 Jun 21 j 19:34	13° ≈ 38′32					
opposition	-2260 Aug 20 j 20:54	8° ≈ 35'09	-1°49'28	conjunction	-2254 Aug 23 j 08:24	10° Ω 35'43	1°14'47
min. Earth dist.	-2260 Aug 19 j 19:29	8° ≈ 43'43	3.98994 AU	minimum elong	-2254 Aug 23 j 08:22	10° Ω 35'42	1°14'49
direct	-2260 Oct 17 j 20:33	3° ≈ 40'48		morning rise	-2254 Sep 05 j 02:34	13° Ω 22'59	
	-2259 Jan 15 j 06:44	15° ≈			-2254 Sep 12 j 13:53	15° Ω	
evening set	-2259 Feb 20 j 00:20	23° ≈ 07'57			-2254 Dec 19 j 18:53	0° m y	
				retrograde	-2253 Jan 03 j 10:54	0° Mp 20′21	
conjunction	-2259 Mar 05 j 11:23	26° ≈ 19'42	-1°17'07		-2253 Jan 18 j 02:49	30° R Ω	
minimum elong	-2259 Mar 05 j 11:23	26° ≈ 19'42	1°17'08	opposition	-2253 Mar 05 j 01:05	25° Ω 28′27	1°53'48
max. Earth dist.	-2259 Mar 07 j 09:56	26° ≈ 47′22	6.00520 AU	min. Earth dist.	-2253 Mar 06 j 06:49	25° Ω 18'56	4.39853 AU
morning rise	-2259 Mar 19 j 01:21	29° ≈ 32'54		direct	-2253 May 06 j 17:41	20° Ω 26′58	
	-2259 Mar 20 j 23:25	0° ∀			-2253 Aug 01 j 16:34	o° m y	
retrograde	-2259 Jul 28 j 12:14	19°) √ 45′24		evening set	-2253 Sep 10 j 09:27	8° m) 16'48	
min. Earth dist.	-2259 Sep 24 j 20:00	14° ¥ 50′52	4.04046 AU	max. Earth dist.	-2253 Sep 21 j 03:57	10° m 39'56	6.36621 AU
opposition	-2259 Sep 26 j 03:22	14°) 40′10	-1°50'19				
direct	-2259 Nov 23 j 05:46	9°) 42′56		conjunction	-2253 Sep 23 j 00:50	11° m)04'53	1°16'11
evening set	-2258 Mar 29 j 05:00	28° ¥ 55'51		minimum elong	-2253 Sep 23 j 00:51	11° m)04'53	1°16'12
	-2258 Apr 02 j 19:55	0° Y		morning rise	-2253 Oct 05 j 13:56	13° m 52'02	
					-2252 Jan 06 j 21:57	0∘ ⊽	
conjunction	-2258 Apr 11 j 22:03	2° Y ′06'32	-1°03'44	retrograde	-2252 Feb 04 j 11:36	1° ≏ 14'56	
minimum elong	-2258 Apr 11 j 22:07	2° Y 06'34	1°03'44		-2252 Mar 04 j 04:04	30°R, Mp	
max. Earth dist.	-2258 Apr 13 j 23:25	2° Y 35'10	6.08790 AU	opposition	-2252 Apr 05 j 09:07	26° Mp 23'16	1°40'28
morning rise	-2258 Apr 25 j 16:48	5° Ƴ 17'51		min. Earth dist.	-2252 Apr 06 j 18:21	26° Mp 12'41	4.32290 AU
retrograde	-2258 Sep 01 j 04:22	24° Y ′38'09		direct	-2252 Jun 06 j 16:44	21°M)24'16	
opposition	-2258 Oct 30 j 16:02	19° Ƴ 33'51	-1°10'51		-2252 Aug 26 j 09:59	0∘ ⊽	
min. Earth dist.	-2258 Oct 29 j 12:27		4.14590 AU	evening set	-2252 Oct 10 j 12:11	9° ₽ 30'47	
direct	-2258 Dec 28 j 14:20	14° Ƴ 33'28		max. Earth dist.	-2252 Oct 21 j 06:55	11° ≏ 57'39	6.26798 AU
	-2257 Apr. 19 i 12:20	0∘∺			-		

-2257 Apr 19 j 12:20 0°**8**

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -2252 in astronomical counting style is the year 2253 BCE in historical counting style. morning rise -2252 Oct 23 i 01:47 12°**△**22'04 0°55'40 -2246 Apr 30 j 21:55 10°Y20'20 conjunction minimum elong -2252 Oct 23 j 01:50 12°**£**22'05 -2246 Sep 05 j 21:26 29°Y30'38 0°55'39 retrograde -2252 Nov 04 j 14:50 15°**♀**13'13 -2246 Nov 03 j 07:44 24°**Ƴ**35′09 min. Earth dist. 4.16561 AU morning rise -2246 Nov 04 j 08:49 24° Y 26'37 -1° 03'01 -2251 Jan 20 j 06:54 o°m. opposition -2245 Jan 02 j 12:20 19°Y25'46 retrograde -2251 Mar 09 j 07:45 3°M23'57 direct 30°**₽**Ω -2251 Apr 27 j 11:40 -2245 Apr 01 j 13:39 0° 8 opposition -2251 May 09 j 08:06 28°**♀**30'41 0°56'18 evening set -2245 May 09 j 08:50 8°**8**05'31 min. Earth dist. -2251 May 10 j 09:49 28°**£**22'27 4.20762 AU direct -2251 Jul 09 j 15:10 23°**△**34'30 conjunction -2245 May 23 j 03:04 11°**8**10'40 -0°22'14 -2251 Sep 14 j 21:56 0° M minimum elong -2245 May 23 j 03:06 11°**8**10'41 0°22'12 evening set -2251 Nov 11 j 15:39 12° ML 07'03max. Earth dist. -2245 May 24 j 09:53 11°**8**27'58 6.22692 AU -2245 Jun 05 j 20:25 14°815'11 max. Earth dist. -2251 Nov 23 j 06:44 14°M49'46 6.14632 AU morning rise -2245 Jun 09 j 05:03 15°8 conjunction -2251 Nov 24 j 07:51 15°ML04'28 0°17'11 -2245 Aug 30 j 02:46 $0^{\circ}\Pi$ minimum elong -2251 Nov 24 j 07:52 15°M04'29 0°17'09 retrograde -2245 Oct 08 j 06:16 2°**Ⅲ**23'15 -2251 Nov 24 j 00:12 15°M₀ -2245 Nov 16 j 06:14 30°R₩ morning rise -2251 Dec 07 j 00:48 18°M02'34 opposition -2245 Dec 06 j 20:30 27°822'39 -0°00'56 -2250 Feb 01 j 05:06 0°×7 min. Earth dist. -2245 Dec 06 j 08:40 27°**8**26'38 4.28471 AU retrograde -2250 Apr 14 j 05:12 7°**х** 13′42 asc. node -2245 Dec 12 j 14:35 26°**8**36'32 desc. node -2250 Apr 22 j 23:14 7°**₹**06'28 direct -2244 Feb 05 j 06:10 22°819'48 opposition -2250 Jun 14 j 01:30 2°**х** 17′26 -0°09′03 -2244 Apr 20 j 19:23 $0^{\circ}\Pi$ min. Earth dist. -2250 Jun 14 j 11:03 2°**х** 14′20 4.08833 AU -2244 Jun 11 j 16:25 10°**Ⅲ**31'37 evening set -2250 Jul 02 j 10:58 30°RM direct -2250 Aug 12 j 23:44 27°M23'38 conjunction -2244 Jun 25 j 05:25 13°**II**30'04 0°21'01 -2250 Sep 22 j 16:16 0°×7 -2244 Jun 25 j 05:23 13° II 30'03 0°21'04 minimum elong -2250 Dec 15 j 12:39 16°**₹**24'55 -2244 Jun 25 j 08:47 6.33602 AU max. Earth dist. 13°T31'55 evening set -2244 Jul 08 j 16:09 morning rise 16°**Ⅲ**27'11 -2250 Dec 28 j 10:02 19°**₹**'29'12 -0°28'38 -2244 Sep 17 j 23:33 0ംഉ conjunction 19°**≯**29'10 0°28'42 -2244 Nov 07 j 08:23 -2250 Dec 28 j 10:00 retrograde 3°9547'30 minimum elong -2250 Dec 28 j 10:01 -2244 Dec 28 j 08:09 max. Earth dist. 19°**₹**′29'11 6.04061 AU 30°R II opposition -2243 Jan 06 j 04:16 -2249 Jan 10 j 10:02 22°×34'58 28°**II**50'51 0°58'31 morning rise -2249 Feb 11 j 20:24 0°ಕ min. Earth dist. -2243 Jan 06 j 10:17 28°**I**I48'52 4.37580 AU -2249 May 21 j 13:22 12°る40'00 -2243 Mar 08 j 20:28 23°**Ⅱ**47'16 retrograde direct 7°る39'44 -1°14'18 -2249 Jul 21 j 00:41 opposition -2243 May 15 j 22:09 0.00 7°る43'36 4.00682 AU min. Earth dist. -2249 Jul 20 j 13:01 evening set -2243 Jul 14 j 08:36 11°9540'07 direct -2249 Sep 17 j 15:43 2°**る**46'34 -2243 Jul 27 j 13:18 evening set -2248 Jan 20 j 07:07 22°**る**08'59 conjunction 14°932'24 0°56'50 minimum elong -2243 Jul 27 j 13:15 14°932'23 0°56'53 conjunction -2248 Feb 02 j 11:38 25°る18'33 -1°05'07 max. Earth dist. -2243 Jul 26 j 16:47 14°9521'13 6.40183 AU -2248 Feb 02 j 11:35 25°る18'31 1°05'10 -2243 Aug 09 j 14:40 17°9523'03 minimum elong morning rise max. Earth dist. -2248 Feb 03 j 17:35 25°る36'32 5.99024 AU -2243 Oct 14 j 12:30 $0^{\circ}\Omega$ -2248 Feb 15 j 19:15 28°る29'50 -2243 Dec 07 j 21:00 4° **Ω**20′01 morning rise retrograde -2248 Feb 22 j 03:28 -2242 Feb 01 j 19:27 0°≈ 30°Rூ -2248 May 06 j 21:42 -2242 Feb 06 j 02:59 29°526'34 1°39'55 15°≈ opposition -2248 Jun 27 j 03:52 -2242 Feb 06 j 23:29 29°**©**19'56 retrograde 18°≈57'29 min. Earth dist. 4.41353 AU -2248 Aug 17 j 21:02 15°R≈ direct -2242 Apr 09 j 13:49 24°9523'39 min. Earth dist. -2248 Aug 25 i 00:39 14°≈02'36 3.99460 AU -2242 Jun 13 i 07:28 $0^{\circ}\Omega$ opposition -2248 Aug 26 i 03:07 13°≈53'40 -1°52'20 evening set -2242 Aug 14 j 20:03 12°Ω09'57 direct -2248 Oct 23 i 02:59 8°≈58'58 max. Earth dist. -2242 Aug 26 j 01:27 14°Ω37'12 6.40753 AU -2248 Dec 24 j 12:21 15°≈ 28°≈24'20 -2242 Aug 27 j 16:13 14°Ω58'28 1°16'16 evening set -2247 Feb 25 j 07:47 conjunction -2247 Mar 04 j 01:42 0°**)**€ -2242 Aug 27 j 16:12 14°**Ω**58′28 minimum elong 1°16'18 -2242 Aug 27 j 19:01 15°**Ω** conjunction -2247 Mar 10 j 19:42 1° **★**35'59 -1°16'56 morning rise -2242 Sep 09 j 09:29 17°**Ω**45'37 0° m minimum elong -2247 Mar 10 j 19:42 1° **★**35'59 1°16'57 -2242 Nov 11 j 10:34 -2247 Mar 12 j 20:01 2°**₭**04'36 6.01574 AU retrograde -2241 Jan 07 j 22:19 4° Mp 46'04 max. Earth dist. -2247 Mar 24 j 10:36 4°**)** 49′02 -2241 Mar 08 j 19:09 30°R€ morning rise 24° **X** 54'33 -2241 Mar 09 j 12:48 29° **Ω**54'22 1°53'51 retrograde -2247 Aug 02 j 12:10 opposition -2247 Sep 29 j 18:59 min. Earth dist. 20°**₭**00'16 4.05582 AU min. Earth dist. -2241 Mar 10 j 20:15 29°**Ω**44'19 4.38810 AU 19°**¥**49'15 -1°46'47 opposition -2247 Oct 01 j 03:19 direct -2241 May 11 j 05:32 24°**£**53′13 direct -2247 Nov 28 j 07:09 14°**)** 51'31 -2241 Jul 11 j 11:32 0° m $0^{\circ}\Upsilon$ -2246 Mar 16 j 18:22 evening set -2241 Sep 14 j 18:47 12° m 45'49 evening set -2246 Apr 03 j 09:29 3°**Y**59'46 max. Earth dist. -2241 Sep 25 j 11:27 15° Mp 08'29 6.35198 AU conjunction -2246 Apr 17 j 02:57 7°**Y**09'48 -0°59'44 conjunction -2241 Sep 27 j 09:41 15° Mp 34'16 1°14'32 7°**Υ**09'50 0°59'43 15° m 34'17 minimum elong -2246 Apr 17 j 03:00 minimum elong -2241 Sep 27 j 09:42 1°14'33 max. Earth dist. -2241 Oct 09 j 22:38 -2246 Apr 19 j 02:01 7°**Υ**37'00 6.10653 AU morning rise 18° Mp 21'55

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -2241 in astronomical counting style is the year 2242 BCE in historical counting style. -2241 Dec 06 j 19:44 0∘**⊽** retrograde -2235 Aug 07 j 10:45 29° **\(**58'12 -2240 Feb 09 j 04:26 5°**£**51'19 min. Earth dist. -2235 Oct 04 j 17:53 25°₩03'34 4.07057 AU retrograde -2240 Apr 10 j 02:32 0°**£**59'30 opposition -2235 Oct 06 j 01:03 24°\\$52'55 -1°42'33 opposition 1°35'54 0°**2**49'18 4.30590 AU -2235 Dec 03 j 08:15 19°**)** 54'44 min. Earth dist. -2240 Apr 11 j 10:35 direct -2240 Apr 17 j 22:46 -2234 Feb 26 j 08:24 $0^{\circ}\Upsilon$ 30°R M -2240 Jun 11 j 06:45 26° Mp 00'55 8°Y58'58 direct evening set -2234 Apr 08 j 11:59 -2240 Aug 03 j 03:56 0∘**⊽** 12°**Υ**08'29 -0°55'23 -2234 Apr 22 j 06:00 evening set -2240 Oct 15 j 00:34 14°**£**11'31 conjunction -2234 Apr 22 j 06:03 12°**Υ**08'31 0°55'21 max. Earth dist. -2240 Oct 25 j 23:02 16°**₽**41'05 6.24982 AU minimum elong 12° **Y**35'17max. Earth dist. -2234 Apr 24 j 04:35 6.12340 AU 15°**Y**18′17 conjunction -2240 Oct 27 j 14:29 17°**≏**03'39 0°51'03 morning rise -2234 May 06 j 00:58 -2240 Oct 27 j 14:32 -2234 Jul 18 j 22:03 minimum elong 17°**£**03'40 0°51'02 0°8 -2240 Nov 09 j 03:45 -2234 Sep 10 j 12:15 morning rise 19°**£**55'42 retrograde 4°**8**19'33 -2240 Dec 26 j 13:54 0°M -2234 Nov 03 j 13:55 30°RY retrograde -2239 Mar 14 j 08:28 8°M14'57 opposition -2234 Nov 08 j 23:53 29°Y16'00 -0°54'53 opposition -2239 May 14 j 08:21 3°M21'24 0°47'50 min. Earth dist. -2234 Nov 08 j 00:07 29°**Υ**24'04 4.18285 AU min. Earth dist. -2239 May 15 j 08:22 3°M13'43 4.18953 AU direct -2233 Jan 07 j 06:35 24°Y14'51 -2239 Jun 12 j 06:23 -2233 Mar 11 j 08:29 0°8 direct -2239 Jul 14 j 11:24 28°**♀**25'42 evening set -2233 May 14 j 06:22 12°850'30 -2239 Aug 15 j 08:57 0°M -2233 May 23 j 22:15 15°8 -2239 Nov 07 j 13:36 15°M₀ -2239 Nov 16 j 09:23 17°ML02'23 conjunction -2233 May 28 j 00:03 15°854'46 -0°16'12 evening set max. Earth dist. -2239 Nov 28 j 03:23 19°**™**47'27 6.12994 AU minimum elong -2233 May 28 i 00:04 15°**8**54'47 0°16'09 max. Earth dist. -2233 May 29 i 01:39 16°**8**09'06 6.24323 AU conjunction -2239 Nov 29 i 02:02 20°M200'44 0°10'43 morning rise -2233 Jun 10 j 16:56 18°**8**58'22 -2239 Nov 29 j 02:03 20°ML00'44 0°10'41 -2233 Aug 03 j 13:52 $0^{\circ}\Pi$ minimum elong -2239 Nov 28 j 19:48 19°ML57'06 -2233 Oct 12 j 16:20 6°**I**I58'55 behind sun begin retrograde -2239 Nov 29 j 08:17 -2233 Oct 22 j 12:21 6°**Ⅱ**49'16 20°M,04'23 behind sun end asc. node -2239 Dec 11 j 20:00 -2233 Dec 11 j 06:59 22°M59'57 1°**I**58'52 0°07'59 morning rise opposition 2°**I**101'47 4.29872 AU -2233 Dec 10 j 22:16 -2238 Jan 11 j 21:25 0°×7 min. Earth dist. -2233 Dec 26 j 12:32 -2238 Mar 01 j 15:17 desc. node 8°**х** 47′17 30°R₩ 26°**8**55'48 -2238 Apr 19 j 10:47 12°**₹**19'18 direct -2232 Feb 09 j 21:42 retrograde -2238 Jun 19 j 06:51 7°**₹**'22'28 -0°19'02 -2232 Mar 26 j 16:07 Π $^{\circ}0$ opposition -2238 Jun 19 j 12:23 -2232 Jun 16 j 08:14 15°**Ⅲ**04'46 min. Earth dist. 7°×20'40 4.07508 AU evening set direct -2238 Aug 17 j 23:50 2°×28'53 -2238 Dec 20 j 12:26 -2232 Jun 29 j 20:24 18°**I**102'24 0°26'44 evening set 21°**х** 33′12 conjunction -2232 Jun 29 j 20:22 minimum elong 18°**I**102'22 0°26'47 conjunction -2237 Jan 02 j 10:49 24°**∡**38'17 -0°34'50 max. Earth dist. -2232 Jun 29 j 21:19 18°**Ⅲ**02'53 6.34676 AU -2237 Jan 02 j 10:47 24°**∡**138'15 0°34'53 morning rise -2232 Jul 13 j 05:48 20°**Ⅲ**58'34 minimum elong max. Earth dist. -2237 Jan 02 j 16:37 24°**∡**°41'45 6.03167 AU -2232 Aug 26 j 04:25 0ಂತಾ morning rise -2237 Jan 15 j 11:40 27°**х** 44′51 retrograde -2232 Nov 11 j 14:47 8°9514'43 -2237 Jan 25 j 01:10 0°궁 -2231 Jan 10 j 12:44 3°9518'35 1°05'42 opposition -2237 May 26 j 22:27 17°る54'26 min. Earth dist. -2231 Jan 10 j 20:18 3°9516'06 4.38270 AU retrograde -2237 Jul 26 j 07:30 12°る53'37 -1°21'55 -2231 Feb 07 j 03:14 30°R∏ opposition -2237 Jul 25 j 18:02 12°る58'06 4.00317 AU -2231 Mar 13 j 07:27 28°**Ⅱ**15'04 min. Earth dist. direct direct -2237 Sep 22 j 20:07 8°る00'24 -2231 Apr 16 j 21:56 0ಂತಾ evening set -2236 Jan 25 j 11:36 27°る23'28 evening set -2231 Jul 18 j 20:30 16°906'55 -2236 Feb 05 j 09:21 0°≈ -2231 Jul 31 i 23:49 conjunction 18°958'34 1°00'42 -2236 Feb 07 j 17:02 0°≈33'22 -1°08'32 minimum elong -2231 Jul 31 i 23:46 18°958'32 1°00'45 conjunction -2236 Feb 07 i 16:59 0°≈33'21 1°08'35 max. Earth dist. -2231 Jul 30 j 23:02 18°9545'02 6.40424 AU minimum elong -2236 Feb 09 j 01:48 0°≈53'00 5.99186 AU -2231 Aug 14 j 00:05 21°548'39 max. Earth dist. morning rise -2236 Feb 21 j 01:49 3°≈45'02 -2231 Sep 22 j 18:50 $0^{\circ}\Omega$ morning rise -2231 Dec 12 j 06:20 -2236 Apr 11 j 19:39 15°22 retrograde 8°**Ω**45'14 retrograde -2236 Jul 02 j 08:12 24°≈11'07 opposition -2230 Feb 10 j 12:36 3°**£**52′09 1°43'42 min. Earth dist. -2236 Aug 30 j 02:09 19°≈16'42 4.00163 AU min. Earth dist. -2230 Feb 11 j 11:49 3°**Ω**44'40 4.41156 AU opposition -2236 Aug 31 j 06:48 19°≈07'00 -1°54'15 -2230 Mar 16 j 21:33 30°R55 -2236 Oct 06 j 15:06 -2230 Apr 14 j 02:07 28°9549'25 15°R≈ direct 14°≈12'00 -2230 May 12 j 10:43 $0^{\circ}\Omega$ direct -2236 Oct 28 j 05:28 15°≈ 15°Ω -2236 Nov 18 j 21:56 -2230 Aug 11 j 19:24 -2235 Feb 15 j 02:35 0°**₩** evening set -2230 Aug 19 j 05:46 16°**£**36'35 evening set -2235 Mar 02 j 13:12 3°**¥**35′10 max. Earth dist. -2230 Aug 30 j 09:10 19°**Ω**03′01 6.40128 AU

conjunction

minimum elong

max. Earth dist.

morning rise

-2235 Mar 16 j 01:59

-2235 Mar 16 j 02:00

-2235 Mar 18 j 02:25

-2235 Mar 29 j 17:39

6°**)**46'41 -1°16'10

6°**¥**46'42 1°16'11

6.02733 AU

7°**)** 15′17

9°**¥**59'32

conjunction

morning rise

minimum elong

-2230 Sep 01 j 01:09

-2230 Sep 01 j 01:08

-2230 Sep 13 j 17:30

-2230 Oct 21 j 03:57

19°**Ω**24'59

19°**Ω**24'59

22°Ω12'02

0° M

1°17'22

1°17'23

-	cal year style is used: Th					_	50 10
retrograde	-2229 Jan 12 j 09:20	9° m 15'39		evening set	-2223 Mar 07 j 15:31	8°) 37′06	
opposition	-2229 Mar 14 j 01:55	4° m 24'01	1°53'16	C	,		
min. Earth dist.	-2229 Mar 15 j 08:51	4° m 14'09		conjunction	-2223 Mar 21 j 05:19	11°) 48′33	-1°14'52
	-2229 Apr 25 j 11:53	30°R€		minimum elong	-2223 Mar 21 j 05:20	11°) 48′34	1°14'53
direct	-2229 May 15 j 16:54	29° Ω 23'15		max. Earth dist.	-2223 Mar 23 j 07:07	12° 升 17'52	6.03787 AU
	-2229 Jun 05 j 00:58	0° m		morning rise	-2223 Apr 03 j 21:34	15° ₩ 01'11	
evening set	-2229 Sep 19 j 04:47	17° Mp 18'04		•	-2223 Jun 16 j 00:46	$0^{\circ}\mathbf{\Upsilon}$	
max. Earth dist.	-2229 Sep 29 j 22:20	19° m 41'42	6.33956 AU	retrograde	-2223 Aug 12 j 06:26	4° Υ 53'20	
				-	-2223 Oct 09 j 08:53	30° ₹ ₩	
conjunction	-2229 Oct 01 j 19:16	20° m 06'51	1°12'28	opposition	-2223 Oct 10 j 19:29	29°) 48′12	-1°37'44
minimum elong	-2229 Oct 01 j 19:17	20° Mp 06'52	1°12'28	min. Earth dist.	-2223 Oct 09 j 13:00	29°) 58′36	4.08342 AU
morning rise	-2229 Oct 14 j 07:57	22° m 54'54		direct	-2223 Dec 08 j 04:14	24°) 49'37	
	-2229 Nov 16 j 10:23	0∘ ⊽			-2222 Feb 04 j 13:19	$0^{\circ}\mathbf{\Upsilon}$	
retrograde	-2228 Feb 13 j 22:47	10° ≏ 30'12		evening set	-2222 Apr 13 j 12:03	13° Ƴ 50'47	
opposition	-2228 Apr 14 j 21:10	5° Ω 38'15	1°30'44	-			
min. Earth dist.	-2228 Apr 16 j 05:03	5° £ 28'07	4.29161 AU	conjunction	-2222 Apr 27 j 06:15	16° Ƴ 59'49	-0°50'46
direct	-2228 Jun 15 j 23:40	0° Ω 40'06		minimum elong	-2222 Apr 27 j 06:19	16° Ƴ 59'51	0°50'45
evening set	-2228 Oct 19 i 13:04	18° ≏ 53'28		max. Earth dist.	-2222 Apr 29 j 01:03	17° Ƴ 24'21	6.13742 AU
max. Earth dist.	-2228 Oct 30 j 12:59	21° ≏ 24'25	6.23501 AU	morning rise	-2222 May 11 j 01:30	20° Ƴ 09'04	
	,			S	-2222 Jun 26 j 03:02	0°8	
conjunction	-2228 Nov 01 j 03:04	21° ≏ 46'15	0°46'09	retrograde	-2222 Sep 15 j 01:04	9° 8 02'41	
minimum elong	-2228 Nov 01 j 03:06	21° ≏ 46'17	0°46'08	opposition	-2222 Nov 13 j 13:07	3° 8 59'31	-0°46'39
morning rise	-2228 Nov 13 j 16:50	24° ₽ 39'08		min. Earth dist.	-2222 Nov 12 j 15:20	_	4.19670 AU
morning rise	-2228 Dec 07 j 16:57	0°M		min. Burur uist.	-2222 Dec 17 j 20:42	30°R Y	,0,0110
retrograde	-2227 Mar 19 j 07:09	13°M05'39		direct	-2221 Jan 11 j 23:51	28° Υ 58'02	
opposition	-2227 May 19 j 08:08	8°M11'38	0°39'06	direct	-2221 Feb 06 j 10:40	0°8	
min. Earth dist.	-2227 May 20 j 04:48	8°ML05'01	4.17528 AU		-2221 May 07 j 15:54	15° 8	
direct	-2227 Jul 19 j 06:18	3°M16'17	4.17320 AU	evening set	-2221 May 07 j 13:34 -2221 May 19 j 02:00	17° 8 30'49	
direct	-2227 Oct 21 j 07:16	15°M		evening set	2221 Way 17 J 02.00	17 03049	
evening set	-2227 Nov 21 j 02:16	21°M55'42		conjunction	-2221 Jun 01 j 19:25	20° 8 34'24	-0°10'11
evening set	-2227 NOV 21 J 02.10	21 11633 42		minimum elong	-2221 Jun 01 j 19:26	20° 8 34'25	
conjunction	-2227 Dec 03 j 19:34	24°M54'49	0°04'18	behind sun begin	-2221 Jun 01 j 12:51	20° 8 30'45	0 1008
minimum elong	-2227 Dec 03 j 19:35	24°M54'50	0°04'15	behind sun end	-2221 Jun 02 j 02:01	20° 8 38'04	
behind sun begin	-2227 Dec 03 j 11:41	24°M50'13	0 0415	max. Earth dist.	-2221 Jun 02 j 02:01	20° 8 47'30	6.25614 AU
behind sun end	-2227 Dec 03 j 11:41 -2227 Dec 04 j 03:29	24°M59'27		morning rise	-2221 Jun 15 j 11:25	23° 8 37'07	0.23014 AO
max. Earth dist.	-2227 Dec 04 j 03:29	24°M44'27	6.11764 AU	morning risc	-2221 Jul 15 j 05:18	0°Ⅱ	
morning rise	-2227 Dec 03 j 01:33	27°M54'53	0.11704 AU	asc. node	-2221 Sep 02 j 01:32	8° Ⅱ 25'28	
morning risc	-2227 Dec 16 j 14:11 -2227 Dec 25 j 13:43	27 11 6 3433		retrograde	-2221 Sep 02 j 01:32	11° II 31'32	
desc. node	-2226 Jan 09 j 10:27	0 x . 3° x 21'39		opposition	-2221 Oct 17 j 01.47 -2221 Dec 15 j 16:43	6° Ц 32'05	0°16'42
retrograde	-2226 Apr 24 j 16:07	17°×20'46		min. Earth dist.	-2221 Dec 15 j 10:43	6° ∏ 34'21	4.30974 AU
opposition	-2226 Jun 24 j 10:20	17 × 2040 12° × 23'22	0020140	direct	-2221 Bec 13 j 09:37 -2220 Feb 14 j 11:16	1° II 28'58	4.30974 AU
min. Earth dist.	-2226 Jun 24 j 13:58	12° × 23′22′11				1 II 28 38 19° II 36′01	
		7° × ⁷ 29'55	4.06573 AU	evening set	-2220 Jun 20 j 23:39	19 113001	
direct evening set	-2226 Aug 23 j 00:11 -2226 Dec 25 j 10:17	7 x ⋅29 33 26° x 35'58		conjunction	-2220 Jul 04 j 10:37	22° I 32'50	0°32'14
evening set	-2220 Dec 23 j 10.17	20 8 33 36		minimum elong	-2220 Jul 04 j 10:34	22° II 32'30	0°32'17
agniumation	2225 Ion 07:00:25	29° ∡ 741'37	0940126	max. Earth dist.	-2220 Jul 04 j 10:34	22° II 30'45	6.35504 AU
conjunction minimum elong	-2225 Jan 07 j 09:25 -2225 Jan 07 j 09:22		0°40'39		-2220 Jul 04 j 06.48	25° I 28'13	0.55504 AU
max. Earth dist.		29° ₹ 41'35 29° ₹ 46'58	6.02596 AU	morning rise	•	0°9	
max. Earth dist.	-2225 Jan 07 j 18:22	29 x ·40 38	0.02390 AU	ratra arada	-2220 Aug 08 j 00:06	0 ୬ 12°9341'01	
mamina rica	-2225 Jan 08 j 16:10	0 0 2° 石 48'52		retrograde opposition	-2220 Nov 15 j 22:52 -2219 Jan 14 j 21:20	7°945'23	1°12'27
morning rise	-2225 Jan 20 j 11:22	23°る4832		min. Earth dist.	•	7°943'23	4.38800 AU
retrograde	-2225 Jun 01 j 01:58	23 30131 18° 3 00'10	1929/20		-2219 Jan 15 j 07:26	7 9942 04 2°9541'53	4.38800 AU
opposition	-2225 Jul 31 j 11:03			direct	-2219 Mar 17 j 19:40		
min. Earth dist.	-2225 Jul 30 j 18:23		4.00198 AU	evening set	-2219 Jul 23 j 07:58	20°533'03	C 40C12 ATT
direct	-2225 Sep 27 j 20:09	13° る 06'47		max. Earth dist.	-2219 Aug 04 j 08:33	23° © 10'06	6.40612 AU
. ,	-2224 Jan 19 j 23:26	0°≈			2210 4 05:10.15	220524100	1004112
evening set	-2224 Jan 30 j 13:10	2° ≈ 29'46		conjunction	-2219 Aug 05 j 10:15	23°524'09	1°04'12
	2224 E 1 12 : 10 21	5020156	1011110	minimum elong	-2219 Aug 05 j 10:13	23°924'07	1°04'14
conjunction	-2224 Feb 12 j 19:31	5°≈39'56		morning rise	-2219 Aug 18 j 09:08	26°©13'38	
minimum elong	-2224 Feb 12 j 19:29	5°≈39'54			-2219 Sep 05 j 01:06	0° Ω	
max. Earth dist.	-2224 Feb 14 j 06:31		5.99499 AU	retrograde	-2219 Dec 16 j 13:42	13° Ω 09'59	194652
morning rise	-2224 Feb 26 j 05:13	8°≈51'49		opposition	-2218 Feb 14 j 22:19	8° Ω 17'11	1°46'52
	-2224 Mar 23 j 18:29	15° ≈		min. Earth dist.	-2218 Feb 15 j 21:58	8° Ω 09'35	4.41011 AU
retrograde	-2224 Jul 07 j 09:29	29°≈15'49	4.00070 411	direct	-2218 Apr 18 j 12:15	3° Ω 14'44	
min. Earth dist.	-2224 Sep 04 j 02:02	24°≈21'09	4.00879 AU		-2218 Jul 26 j 00:45	15° Ω	
opposition	-2224 Sep 05 j 06:52	24°≈11'22	-1~55.15	evening set	-2218 Aug 23 j 14:58	21° Ω 02'15	(20/24 : **
direct	-2224 Nov 02 j 06:38	19°≈15'55		max. Earth dist.	-2218 Sep 03 j 15:29	25° 8 l 27'25	6.39634 AU
	-2223 Jan 28 j 06:01	0° ∺					

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -2218 in astronomical counting style is the year 2219 BCE in historical counting style. -2218 Sep 05 j 09:15 23°Ω50'26 1°17'59 retrograde -2212 Jul 12 j 14:01 4° **\(**27'39 conjunction -2218 Sep 05 j 09:15 23°**Ω**50′25 -2212 Sep 05 j 19:48 minimum elong 1°18'01 30°R≈ -2218 Sep 18 j 00:57 26°**Ω**37'22 min. Earth dist. -2212 Sep 09 j 03:25 29°≈33'04 4.01340 AU morning rise -2212 Sep 10 j 09:08 -2218 Oct 03 j 16:06 0° m opposition 29°≈22'58 -1°55'23 -2212 Nov 07 j 07:59 24°≈27'09 retrograde -2217 Jan 16 j 21:56 13° m 43'47 direct 1°51'59 -2211 Jan 06 j 04:51 0°**)**€ opposition -2217 Mar 18 j 14:56 8° m 52'13 13°**)** 47′22 min. Earth dist. -2217 Mar 19 j 23:15 8° Mp 41'55 4.36997 AU evening set -2211 Mar 12 j 21:18 direct -2217 May 20 j 06:22 3° m 51'44 evening set -2217 Sep 23 j 13:40 21° m 48'06 conjunction -2211 Mar 26 j 11:51 16°**¥**58'48 -1°12'57 max. Earth dist. -2217 Oct 04 j 07:22 24° My 12'136.32830 AU minimum elong -2211 Mar 26 j 11:53 16°**¥** 58'49 1°12'57 max. Earth dist. -2211 Mar 28 j 12:36 17°**₩**27'25 6.04678 AU -2217 Oct 06 j 03:54 -2211 Apr 09 j 05:03 conjunction 24° My 37'121°09'58 morning rise 20°\ 11'21 -2211 May 23 j 20:17 $0^{\circ}\Upsilon$ minimum elong -2217 Oct 06 j 03:56 24° My 37'131°09'57 morning rise -2217 Oct 18 j 16:25 27° m 25'39 retrograde -2211 Aug 17 j 03:27 9°Y57'17 -2217 Oct 30 j 07:30 0∘**⊽** min. Earth dist. -2211 Oct 14 j 10:33 5°**Y**02'37 4.09566 AU retrograde -2216 Feb 18 j 14:14 15°**♀**06'33 opposition -2211 Oct 15 j 16:53 4°Υ52'15 -1°32'04 opposition -2216 Apr 19 j 14:31 10°**≏**14'23 1°25'01 -2211 Dec 05 j 01:54 30°**₹** 10°**≏**04'48 min. Earth dist. -2216 Apr 20 j 20:37 4.27791 AU direct -2211 Dec 13 j 04:16 29°¥53'14 direct -2216 Jun 20 j 13:03 5° **2**16'38 -2211 Dec 21 j 07:49 $0^{\circ}\Upsilon$ evening set -2216 Oct 24 j 00:29 23°**₽**32'51 evening set -2210 Apr 18 j 15:30 18° **Y**51'24 max. Earth dist. -2216 Nov 04 j 03:08 26°**♀**05'52 6.21997 AU conjunction -2210 May 02 j 10:08 21°Y59'57 -0°45'38 conjunction -2216 Nov 05 j 14:43 26°**₽**26'21 0°40'59 -2210 May 02 j 10:11 21°Υ59'58 0°45'37 minimum elong minimum elong -2216 Nov 05 i 14:45 26°**♀**26'22 0°40'58 max. Earth dist. -2210 May 04 i 04:11 22°**Y**23'58 6.15244 AU morning rise -2216 Nov 18 j 04:53 29°**£**20′04 morning rise -2210 May 16 j 05:10 25°**Y**08′29 -2216 Nov 21 j 02:50 -2210 Jun 07 j 02:49 o°M. 0°8 -2215 Feb 08 j 02:27 15°M -2210 Sep 19 j 18:00 13°**8**53'41 retrograde -2215 Mar 24 j 07:49 -2210 Nov 17 j 09:06 17°M54'16 min. Earth dist. 8°**8**57'49 4.21310 AU retrograde -2215 May 08 j 04:38 -2210 Nov 18 j 05:11 8°851'02 -0°37'51 15°RM opposition -2215 May 24 j 07:04 -2209 Jan 16 j 20:40 3°849'18 opposition 12°M 59'53 0°30'07 direct -2209 Apr 19 j 18:24 -2215 May 25 j 02:50 min. Earth dist. 12°M53'32 4.15964 AU 15°8 -2215 Jul 24 j 01:48 -2209 May 24 j 00:33 22°818'01 8°M04'50 direct evening set -2215 Oct 01 j 12:52 15°M₊ -2215 Nov 19 j 06:55 -2209 Jun 06 j 17:14 25°**8**20'37 -0°03'58 desc. node 25°**™**17'14 conjunction -2209 Jun 06 j 17:15 25°**8**20'38 0°03'56 evening set -2215 Nov 25 j 18:31 26°**™**47'52 minimum elong -2209 Jun 06 j 09:02 25°**8**16'05 behind sun begin -2215 Dec 08 j 12:30 -2209 Jun 07 j 01:28 conjunction 29°M47'56 -0°02'17 behind sun end 25°**8**25'11 minimum elong -2215 Dec 08 j 12:30 29°M47'56 0°02'20 max. Earth dist. -2209 Jun 07 j 13:15 25°**8**31'46 6.27297 AU behind sun begin -2215 Dec 08 j 04:27 29°M43'12 morning rise -2209 Jun 20 j 08:30 28°**8**22'17 behind sun end -2215 Dec 08 j 20:33 29°M52'39 -2209 Jun 27 j 18:25 $0^{\circ}II$ max. Earth dist. -2215 Dec 07 j 21:20 29°M39'00 6.10281 AU asc. node -2209 Jul 12 j 07:17 3°**Ⅲ**07′03 -2215 Dec 09 j 08:59 0°**∡**7 -2209 Oct 21 j 11:40 16°**Ⅱ**08'54 retrograde -2215 Dec 21 j 08:06 2°**х** 49′03 -2209 Dec 20 j 04:14 11°**II**09'58 0°25'25 morning rise opposition -2214 Apr 29 j 19:12 22°**х** 22'38 -2209 Dec 19 j 23:00 11°**I**I1'43 4.32594 AU retrograde min. Earth dist. -2214 Jun 29 j 13:25 17°**∡**124'42 -0°38'09 -2208 Feb 19 j 03:08 6°**Ⅱ**06'41 opposition direct 24°**Ⅱ**09'39 min. Earth dist. -2214 Jun 29 i 13:39 17°**₹**24'38 4.05316 AU evening set -2208 Jun 25 j 15:36 direct -2214 Aug 27 j 21:29 12°**∡**31'24 -2208 Jul 09 i 01:26 27°**I**05'23 0°37'33 -2214 Dec 23 i 06:35 0°정 conjunction evening set -2214 Dec 30 j 09:04 1°る40'51 minimum elong -2208 Jul 09 i 01:23 27°**Ⅱ**05'22 0°37'37 max. Earth dist. -2208 Jul 08 i 19:48 27°**Ⅱ**02'18 6.36958 AU -2213 Jan 12 j 09:07 4°る47'18 -0°46'08 -2208 Jul 22 j 08:18 29°**Ⅱ**59'35 conjunction morning rise -2213 Jan 12 j 09:04 4°る47'16 0°46'11 -2208 Jul 22 j 09:04 0ಂತಾ minimum elong max. Earth dist. 17°9506'56 -2213 Jan 12 j 21:41 4°る54'50 6.01666 AU retrograde -2208 Nov 20 j 05:44 12°**©**11'45 morning rise -2213 Jan 25 j 12:06 7°る55'26 opposition -2207 Jan 19 j 06:03 1°18'41 -2213 Jun 06 j 08:42 retrograde 28°る12'39 min. Earth dist. -2207 Jan 19 j 17:49 12°**©**07'55 4.39996 AU opposition -2213 Aug 05 j 15:31 23°る10'46 -1°34'51 direct -2207 Mar 22 j 07:59 7°9508'21 min. Earth dist. -2213 Aug 04 j 21:19 23°る16'50 3.99698 AU evening set -2207 Jul 27 j 18:04 24°956'12 -2213 Oct 02 j 23:08 18°る17'09 direct -2207 Aug 09 j 18:53 -2212 Jan 02 j 03:43 0°≈ conjunction 27°9546'25 1°07'16 -2212 Feb 04 j 17:07 evening set 7°**≈**41'48 minimum elong -2207 Aug 09 j 18:50 27°**©**46'23 1°07'18 max. Earth dist. -2207 Aug 08 j 13:21 27°**©**30'18 6.41436 AU conjunction -2212 Feb 18 j 00:41 10°≈52'29 -1°13'36 -2207 Aug 20 j 00:01 0° Ω minimum elong -2212 Feb 18 j 00:39 10°≈52'28 1°13'37 morning rise -2207 Aug 22 j 16:38 0°**£**35′04 max. Earth dist. -2212 Feb 19 j 15:28 11°**≈**15'39 5.99469 AU -2207 Nov 10 j 06:47 15°€ morning rise -2212 Mar 02 j 11:24 14°≈04'50 retrograde -2207 Dec 20 j 20:16 17°**Ω**29'15 -2212 Mar 06 j 08:45 15°**≈** -2206 Jan 30 j 18:55 15°RΩ

-2206 Feb 19 j 06:16

opposition

12°**Ω**36'41 1°49'17

-2212 May 19 j 00:19

0°**)**€

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -2206 in astronomical counting style is the year 2207 BCE in historical counting style. min. Earth dist. -2206 Feb 20 j 08:05 12°**Ω**28'23 4.41422 AU evening set -2200 Feb 09 j 21:58 12°≈54'28 7°**Ω**34'20 -2206 Apr 22 j 22:33 -2200 Feb 18 j 16:28 direct 15°≈ -2206 Jul 07 j 13:05 15°€ -2200 Feb 23 j 06:34 -2206 Aug 27 j 20:54 25°**Ω**20′17 16°≈05'49 -1°15'13 evening set conjunction max. Earth dist. -2206 Sep 07 j 20:26 27°**Ω**44'58 6.39586 AU -2200 Feb 23 j 06:33 minimum elong 16°**≈**05'48 1°15'15 max. Earth dist. -2200 Feb 24 j 23:05 16°**≈**30′01 5.99138 AU conjunction -2206 Sep 09 j 14:28 28°**Ω**08′08 1°18'07 morning rise -2200 Mar 07 j 18:37 19°≈18'50 -2206 Sep 09 j 14:28 minimum elong 28°**Ω**08′08 1°18'09 -2200 Apr 24 j 19:48 0°**)**€ 0° M -2200 Jul 17 j 17:29 -2206 Sep 18 j 01:30 retrograde 9°**∺**41′22 morning rise -2206 Sep 22 j 05:13 0° My 54'45min. Earth dist. -2200 Sep 14 j 04:27 4°**¥**47'08 4.01619 AU retrograde -2205 Jan 21 j 04:42 18° Mp 02'41 opposition -2200 Sep 15 j 11:57 4°**¥**36'25 -1°54'33 -2200 Oct 29 j 15:51 opposition -2205 Mar 23 j 00:19 13° Mp 11'07 1°50'03 30°R≈ min. Earth dist. -2205 Mar 24 j 08:44 13°M)00'47 4.36484 AU direct -2200 Nov 12 j 10:18 29°≈40'11 direct -2205 May 24 j 14:15 8° Mp 10'56 -2200 Nov 26 j 07:09 0°**)**€ evening set -2205 Sep 27 j 18:37 26° Mp 07'56 evening set -2199 Mar 18 j 04:30 19°**₩**00'00 max. Earth dist. -2205 Oct 08 j 10:58 28° Mp 31'41 6.31875 AU conjunction -2199 Mar 31 j 20:08 22°\dagger11'29 -1°10'23 conjunction -2205 Oct 10 j 08:25 28° Mp 57'16 1°07'07 minimum elong -2199 Mar 31 j 20:11 22°\dagger11'31 1°10'23 minimum elong -2205 Oct 10 j 08:28 28° Mp 57'17 1°07'07 max. Earth dist. -2199 Apr 02 j 22:54 22°**)** 41'13 6.05549 AU -2205 Oct 14 j 23:53 0∘**⊽** morning rise -2199 Apr 14 j 13:50 25° ¥23'54 morning rise -2205 Oct 22 j 20:57 1°**2**46′06 -2199 May 04 j 18:40 $0^{\circ}\Upsilon$ retrograde -2204 Feb 23 i 04:31 19°**♀**32'24 retrograde -2199 Aug 22 i 03:34 15°**Y**03′10 opposition -2204 Apr 24 i 04:11 14°**♀**40'02 1°18'58 min. Earth dist. -2199 Oct 19 i 09:42 10°**Y**08'18 4.10895 AU min. Earth dist. -2204 Apr 25 j 11:01 14°**♀**30'12 4.26417 AU opposition -2199 Oct 20 i 15:04 9°Υ58'17 -1°25'37 -2204 Jun 25 j 00:39 9°**₽**42'32 direct -2199 Dec 18 j 06:08 4°Υ58'49 direct -2204 Oct 28 j 07:52 28°**₽**01'52 evening set -2198 Apr 23 j 19:52 23°Y53'21 evening set -2204 Nov 05 j 21:12 oom. -2204 Nov 08 j 11:55 0°M36'13 6.20326 AU -2198 May 07 j 14:34 27°Υ01'13 -0°40'07 max. Earth dist. conjunction -2198 May 07 j 14:37 27°Υ01'15 0°40'06 minimum elong -2204 Nov 09 j 22:31 0°M56'13 0°35'45 -2198 May 09 j 06:56 27°**Υ**24'11 6.16896 AU conjunction max. Earth dist. -2204 Nov 09 j 22:33 -2198 May 20 j 17:40 0°M56'14 0°35'43 0° 8 minimum elong -2204 Nov 22 j 13:14 0°**8**08'57 -2198 May 21 j 09:32 3°M50'52 morning rise morning rise -2198 Aug 05 j 17:23 -2203 Jan 14 j 03:44 15°8 15°M -2203 Mar 29 j 02:51 -2198 Sep 24 j 08:46 retrograde 22°M33'38 retrograde 18°**8**45'02 -2203 May 29 j 02:12 -2198 Nov 13 j 06:26 opposition 17°M38'51 0°21'14 15°₹**8** -2203 May 29 j 19:47 -2198 Nov 22 j 21:20 min. Earth dist. 17°M33'12 4.14114 AU opposition 13°**8**42'46 -0°28'45 -2198 Nov 22 j 02:03 -2203 Jun 19 j 20:18 15°RM min. Earth dist. 13°**8**49'17 4.23086 AU direct -2203 Jul 28 j 15:07 12°M44'06 direct -2197 Jan 21 j 16:39 8°840'41 -2203 Sep 04 j 20:38 15°M₀ -2197 Mar 29 j 18:50 15°8 desc. node -2203 Oct 01 j 01:38 18°M47'51 asc. node -2197 May 20 j 17:24 25°816'48 -2203 Nov 23 j 18:25 0°⊀ -2197 May 28 j 22:40 27°**8**04'50 evening set -2203 Nov 30 j 08:19 evening set 1°**∡**³32'18 -2197 Jun 11 j 14:36 0°П06'22 0°02'27 conjunction -2203 Dec 13 j 03:02 4°**₹**33'29 -0°08'31 -2197 Jun 11 j 14:36 0°П06'22 0°02'29 conjunction minimum elong -2203 Dec 13 j 03:01 4°**х**³33′28 -2197 Jun 11 j 06:18 0°**I**I01'48 minimum elong 0°08'34 behind sun begin behind sun begin -2203 Dec 12 j 19:58 4°×29'19 behind sun end -2197 Jun 11 i 22:53 0°**Ⅱ**10'57 behind sun end -2203 Dec 13 j 10:04 4°**х** 37′38 -2197 Jun 11 i 03:05 $0^{\circ}II$ max. Earth dist. -2203 Dec 12 j 14:17 4°**∡**°25′56 6.08418 AU max. Earth dist. -2197 Jun 12 i 07:16 0°**Ⅱ**15'37 6.29034 AU morning rise -2203 Dec 25 i 23:37 7°**∡**35'51 morning rise -2197 Jun 25 j 04:48 3°**Ⅱ**06'51 -2202 May 04 j 22:35 27°**∡**18'55 -2197 Oct 25 j 23:12 20°**Ⅱ**45'53 retrograde retrograde -2202 Jul 04 j 14:17 22°×20'28 -0°47'09 -2197 Dec 24 j 15:48 15°**Ⅱ**47'30 0°34'02 opposition opposition min. Earth dist. -2202 Jul 04 j 12:47 22°**₹**'20'58 4.03603 AU min. Earth dist. -2197 Dec 24 j 13:30 15°**Ⅱ**48'16 4.34119 AU direct -2202 Sep 01 j 18:31 17°**₹**27'14 -2196 Feb 23 j 19:52 10°**Ⅱ**44'07 direct -2202 Dec 06 j 07:13 0°정 evening set -2196 Jun 30 j 07:23 28°II43'31 -2201 Jan 04 j 06:53 6°**ප**42'11 -2196 Jul 06 j 04:02 0ಂತಾ evening set conjunction -2201 Jan 17 j 08:09 9°る49'48 -0°51'11 conjunction -2196 Jul 13 j 15:56 1°938'14 0°42'44 -2201 Jan 17 j 08:06 9°る49'46 0°51'14 -2196 Jul 13 j 15:53 0°42'47 minimum elong minimum elong 1°938'13 -2201 Jan 18 j 01:08 9°**る**59'59 -2196 Jul 13 j 06:13 max. Earth dist. 6.00271 AU max. Earth dist. 1°532'56 6.38122 AU 12°**る**59'04 morning rise -2201 Jan 30 j 12:19 morning rise -2196 Jul 26 j 21:30 4°931'25 -2201 Apr 25 j 10:30 0°≈ retrograde -2196 Nov 24 j 13:17 21°534'41 retrograde -2201 Jun 11 j 16:08 3°≈22'34 -2195 Jan 23 j 15:20 16°**©**39'55 1°24'38 opposition min. Earth dist. -2201 Jul 29 j 03:51 30°Ŗる -2195 Jan 24 j 05:11 16°935'24 4.40742 AU opposition -2201 Aug 10 j 19:36 28°る20'16 -1°40'12 direct -2195 Mar 26 j 19:33 11°536'33 min. Earth dist. -2201 Aug 09 j 23:12 28°る27'05 3.98806 AU evening set -2195 Aug 01 j 05:00 29°9522'54

-2201 Oct 07 j 23:29

-2201 Dec 12 j 08:45

direct

23°**る**26'31

0°≈

-2195 Aug 04 j 01:30

-2195 Aug 12 j 21:35

max. Earth dist.

 $0^{\circ}\Omega$

1°**£**55'30 6.41695 AU

Attention astronom	ical year style is used: Th	e vear -2195 i	in astronomical co	unting style is the year	2196 BCE in historical c	ounting style	
conjunction	-2195 Aug 14 j 04:42	2° Ω 12'30		anting style is the year	-2189 Mar 29 j 20:41	0° ≈	
minimum elong	-2195 Aug 14 j 04:40			retrograde	-2189 Jun 16 j 23:38	8° ≈ 42'02	
morning rise	-2195 Aug 27 j 01:08	5°Ω00'33	1 10 00	min. Earth dist.	-2189 Aug 15 j 03:21		3.98831 AU
morning risc	-2195 Oct 15 j 17:53	15° Ω		opposition	-2189 Aug 16 j 02:48	3°≈39'10	
retrograde	-2195 Dec 25 j 05:08	21° Ω 54'41		оррозион	-2189 Sep 15 j 23:08	30°Rる	-1 44 37
opposition	-2194 Feb 23 j 16:35	$17^{\circ}\Omega_{02'25}$	1°51'16	direct	-2189 Oct 13 j 04:30	28°る45'09	
min. Earth dist.	-2194 Feb 24 j 19:58	16°Ω53'38	4.41187 AU	direct	-2189 Nov 09 j 09:10	28 ○ 43 09 09	
iiiii. Lattii dist.	-2194 Mar 12 j 01:42	10 % 233 38	4.4116/ AU		-2188 Feb 01 j 13:11	0 ∞ 15°≈	
direct	-2194 Mar 12 j 01:42 -2194 Apr 27 j 09:32	13°Ω00'20		evening set	-2188 Feb 15 j 05:27	13 ∞ 18° ≈ 12'42	
direct	-2194 Apr 27 j 09:32 -2194 Jun 12 j 13:24	12 00 0 20		evening set	-2166 FC0 15 J 05.27	16 21242	
evening set	-2194 Sep 01 j 05:41	29° Ω 46'52		conjunction	-2188 Feb 28 j 15:14	21° ≈ 24'12	1916!20
evening set	-2194 Sep 02 j 05:39	0° m)		minimum elong	-2188 Feb 28 j 15:14	21 ≈24 12 21°≈24'12	
max. Earth dist.	-2194 Sep 02 j 03:39 -2194 Sep 12 j 01:31	2° Mg 09'53	6.38852 AU	max. Earth dist.	-2188 Mar 01 j 11:55	21°≈50'51	5.99814 AU
max. Earth dist.	-2194 Sep 12 j 01.31	2 1100933	0.38832 AU	morning rise	-2188 Mar 13 j 04:03	21°≈30'31' 24°≈37'16	3.99814 AU
conjunction	-2194 Sep 13 j 22:20	2° m/34'38	1°17'54	morning rise	-2188 Apr 05 j 10:26	0° \	
		2° m/34'39	1°17'54 1°17'54	ratragrada		14° ¥ 54'50	
minimum elong	-2194 Sep 13 j 22:20		1 1/34	retrograde min. Earth dist.	-2188 Jul 22 j 21:53		4.02868 AU
morning rise	-2194 Sep 26 j 12:38	5° Th 21'20			-2188 Sep 19 j 07:11 -2188 Sep 20 j 14:31	9°) 49'40	
retrograde	-2193 Jan 25 j 18:53	22° Tp 33'16	1047122	opposition	1 3		-1°52′48
opposition	-2193 Mar 27 j 14:32	17° Mp 41'40	1°47'32	direct	-2188 Nov 17 j 15:20	4°) 52'58 24°) 08'45	
min. Earth dist.	-2193 Mar 28 j 23:54	17° Tp 31'03	4.35294 AU	evening set	-2187 Mar 23 j 10:32	24°π08'45	
direct	-2193 May 29 j 03:04	12° Tp 41'46			2107 4 06:02 45	2701/10146	1007122
	-2193 Sep 29 j 01:59	0∘ ত 41133		conjunction	-2187 Apr 06 j 02:45	27°) 19'46	
evening set	-2193 Oct 02 j 04:22	0° Ω 41'32	C 20222 ATT	minimum elong	-2187 Apr 06 j 02:48	27°) € 19'47	
max. Earth dist.	-2193 Oct 12 j 22:05	3° ჲ 06'31	6.30333 AU	max. Earth dist.	-2187 Apr 08 j 05:16	27°) (49'11	6.07236 AU
	21020	20.0.2110.6	1002145		-2187 Apr 17 j 14:24	0°Υ 0° Ω 2442.5	
conjunction	-2193 Oct 14 j 18:12	3° £ 31′26	1°03'47	morning rise	-2187 Apr 19 j 21:00	0° Υ 31'35	
minimum elong	-2193 Oct 14 j 18:15	3° Ω 31'28	1°03'47	retrograde	-2187 Aug 26 j 21:39	20° ℃ 01'11	
morning rise	-2193 Oct 27 j 06:39	6° 2 20'55		min. Earth dist.	-2187 Oct 24 j 04:57	15° Y ′06′27	
retrograde	-2192 Feb 27 j 23:42	24° £ 14'32		opposition	-2187 Oct 25 j 10:08	14°Υ56'30	-1°18'43
opposition	-2192 Apr 29 j 00:04	19° ≙ 21'57		direct	-2187 Dec 23 j 04:17	9° Y 56'35	
min. Earth dist.	-2192 Apr 30 j 05:23	19° Ω 12'36	4.24619 AU	evening set	-2186 Apr 28 j 20:32	28° Y 45'42	
direct	-2192 Jun 29 j 15:52	14° £ 24'53			-2186 May 04 j 08:14	0°B	
	-2192 Oct 20 j 13:44	0°M,					
evening set	-2192 Nov 01 j 22:06	2°M48'34		conjunction	-2186 May 12 j 15:05	1° 8 52'37	
max. Earth dist.	-2192 Nov 13 j 04:02	5° ™ 24'43	6.18435 AU	minimum elong	-2186 May 12 j 15:08	1° 8 52'39	
	210237 14:12.02	50 W 40151	0000150	max. Earth dist.	-2186 May 14 j 03:38	2° 8 13'20	6.18920 AU
conjunction	-2192 Nov 14 j 13:02	5°M43'51	0°29'58	max. Earth dist. morning rise	-2186 May 26 j 09:39	4° 8 59'17	6.18920 AU
minimum elong	-2192 Nov 14 j 13:04	5° ™ 43'53		morning rise	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44	4° と 59'17 15° と	6.18920 AU
	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31	5°M43'53 8°M39'38		morning rise	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35	4°859'17 15°8 23°825'40	
minimum elong morning rise	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14	5°M43'53 8°M39'38 15°M		morning rise retrograde opposition	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45	4°859'17 15°8 23°825'40 18°823'53	-0°19'49
minimum elong morning rise	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38	5°M43'53 8°M39'38 15°M 27°M31'41	0°29'55	morning rise	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46	4°\delta59'17 15°\delta 23°\delta25'40 18°\delta23'53 18°\delta29'17	
minimum elong morning rise retrograde opposition	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50	5°M.43'53 8°M.39'38 15°M. 27°M.31'41 22°M.36'26	0°29'55 0°11'36	morning rise retrograde opposition min. Earth dist.	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34	4°\delta59'17 15°\delta 23°\delta25'40 18°\delta23'53 18°\delta29'17 15°\rd	-0°19'49
minimum elong morning rise retrograde opposition min. Earth dist.	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18	5°M43'53 8°M39'38 15°M 27°M31'41 22°M36'26 22°M31'27	0°29'55	morning rise retrograde opposition	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30	-0°19'49
minimum elong morning rise retrograde opposition min. Earth dist. direct	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29	5°M43'53 8°M39'38 15°M 27°M31'41 22°M36'26 22°M31'27 17°M41'59	0°29'55 0°11'36	retrograde opposition min. Earth dist.	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8	-0°19'49
minimum elong morning rise retrograde opposition min. Earth dist.	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57	5°M43'53 8°M39'38 15°M 27°M31'41 22°M36'26 22°M31'27 17°M41'59 17°M47'12	0°29'55 0°11'36	morning rise retrograde opposition min. Earth dist.	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 Mar 30 j 13:42	4°\delta59'17 15°\delta 23°\delta25'40 18°\delta23'53 18°\delta29'17 15°\delta\delta 13°\delta21'30 15°\delta 18°\delta59'57	-0°19'49
minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52	5°M43'53 8°M39'38 15°M 27°M31'41 22°M36'26 22°M31'27 17°M41'59 17°M47'12 0° ✓	0°29'55 0°11'36	retrograde opposition min. Earth dist. direct asc. node	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 Mar 30 j 13:42 -2185 May 25 j 23:42	4°\delta59'17 15°\delta 23°\delta25'40 18°\delta23'53 18°\delta29'17 15°\delta\delta 13°\delta21'30 15°\delta 18°\delta59'57 0°\delta	-0°19'49
minimum elong morning rise retrograde opposition min. Earth dist. direct	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57	5°M43'53 8°M39'38 15°M 27°M31'41 22°M36'26 22°M31'27 17°M41'59 17°M47'12	0°29'55 0°11'36	retrograde opposition min. Earth dist.	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 Mar 30 j 13:42	4°\delta59'17 15°\delta 23°\delta25'40 18°\delta23'53 18°\delta29'17 15°\delta\delta 13°\delta21'30 15°\delta 18°\delta59'57	-0°19'49
minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 05 j 05:00	5°M43'53 8°M39'38 15°M 27°M31'41 22°M36'26 22°M31'27 17°M41'59 17°M47'12 0° 🗷 6° 🗷 34'56	0°29'55 0°11'36 4.12264 AU	retrograde opposition min. Earth dist. direct asc. node evening set	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 Mar 30 j 13:42 -2185 May 25 j 23:42 -2185 Jun 02 j 16:40	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0°Ⅲ 1°Ⅲ41'03	-0°19'49 4.24988 AU
minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set conjunction	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 05 j 05:00	5°M43'53 8°M39'38 15°M 27°M31'41 22°M36'26 22°M31'27 17°M41'59 17°M47'12 0° \$\mathref{x}\$ 6° \$\mathref{x}\$34'56	0°29'55 0°11'36 4.12264 AU	retrograde opposition min. Earth dist. direct asc. node evening set conjunction	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 May 25 j 23:42 -2185 Jun 02 j 16:40 -2185 Jun 16 j 07:52	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0°Ⅲ 1°Ⅲ41'03	-0°19'49 4.24988 AU 0°08'30
minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set conjunction minimum elong	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 05 j 05:00 -2191 Dec 18 j 00:41 -2191 Dec 18 j 00:40	5°M43'53 8°M39'38 15°M 27°M31'41 22°M36'26 22°M31'27 17°M41'59 17°M47'12 0°\$\mathref{x}\$ 6°\$\mathref{x}\$'34'56 9°\$\mathref{x}\$'37'13 9°\$\mathref{x}\$'37'12	0°29'55 0°11'36 4.12264 AU	retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 May 25 j 23:42 -2185 Jun 02 j 16:40 -2185 Jun 16 j 07:52 -2185 Jun 16 j 07:51	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0°Ⅱ 1°Ⅱ41'03 4°Ⅲ41'35 4°Ⅲ41'34	-0°19'49 4.24988 AU
minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 05 j 05:00 -2191 Dec 18 j 00:41 -2191 Dec 18 j 00:40 -2191 Dec 17 j 21:39	5°M.43'53 8°M.39'38 15°M. 27°M.31'41 22°M.36'26 22°M.31'27 17°M.41'59 17°M.47'12 0° \$\textit{x}\$ 6° \$\textit{x}\$'34'56 9° \$\textit{x}\$'37'13 9° \$\textit{x}\$'37'12 9° \$\textit{x}\$'35'25	0°29'55 0°11'36 4.12264 AU	retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 May 25 j 23:42 -2185 Jun 02 j 16:40 -2185 Jun 16 j 07:52 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:40	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0°Ⅱ 1°Ⅱ41'03 4°Ⅲ41'35 4°Ⅲ41'34 4°Ⅲ37'37	-0°19'49 4.24988 AU 0°08'30
minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 05 j 05:00 -2191 Dec 18 j 00:41 -2191 Dec 18 j 00:40 -2191 Dec 17 j 21:39 -2191 Dec 18 j 03:41	5°M.43'53 8°M.39'38 15°M. 27°M.31'41 22°M.36'26 22°M.31'27 17°M.41'59 17°M.47'12 0°\$\textit{\$\sigma\$}\) 6°\$\textit{\$\sigma\$}\] 9°\$\textit{\$\sigma\$}\]	0°29'55 0°11'36 4.12264 AU -0°15'06 0°15'09	retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 Mar 30 j 13:42 -2185 Jun 02 j 16:40 -2185 Jun 16 j 07:52 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:40 -2185 Jun 16 j 07:40	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0°Π 1°Π41'03 4°Π41'35 4°Π41'34 4°Π37'37 4°Π45'31	-0°19'49 4.24988 AU 0°08'30 0°08'33
minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist.	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 05 j 05:00 -2191 Dec 18 j 00:41 -2191 Dec 18 j 00:40 -2191 Dec 17 j 21:39 -2191 Dec 18 j 03:41 -2191 Dec 18 j 03:41 -2191 Dec 17 j 16:45	5°M.43'53 8°M.39'38 15°M. 27°M.31'41 22°M.36'26 22°M.31'27 17°M.41'59 17°M.47'12 0° 🖈 6° 🖈 334'56 9° 🖈 35'25 9° 🗷 35'25 9° 🗷 39'00 9° 🗷 32'31	0°29'55 0°11'36 4.12264 AU	retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist.	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 May 25 j 23:42 -2185 Jun 02 j 16:40 -2185 Jun 16 j 07:52 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:51 -2185 Jun 16 j 00:40 -2185 Jun 16 j 15:02 -2185 Jun 16 j 20:57	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0°11 1°1141'03 4°1141'35 4°1141'34 4°137'37 4°1145'31 4°1148'48	-0°19'49 4.24988 AU 0°08'30
minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 05 j 05:00 -2191 Dec 18 j 00:41 -2191 Dec 18 j 00:40 -2191 Dec 18 j 00:40 -2191 Dec 18 j 03:41 -2191 Dec 18 j 03:41 -2191 Dec 17 j 21:39 -2191 Dec 17 j 16:45 -2191 Dec 30 j 22:14	5°M.43'53 8°M.39'38 15°M. 27°M.31'41 22°M.36'26 22°M.31'27 17°M.41'59 17°M.47'12 0° 🖈 6° 🖈 334'56 9° 🖈 37'13 9° 🖈 35'25 9° 🔻 39'00 9° 🔻 32'31 12° 🛣 40'45	0°29'55 0°11'36 4.12264 AU -0°15'06 0°15'09	retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 Mar 30 j 13:42 -2185 Jun 02 j 16:40 -2185 Jun 16 j 07:52 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:51 -2185 Jun 16 j 00:40 -2185 Jun 16 j 00:40 -2185 Jun 16 j 20:57 -2185 Jun 29 j 20:57	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0°II 1°II41'03 4°II41'35 4°II41'34 4°II37'37 4°II45'31 4°II48'48 7°II40'56	-0°19'49 4.24988 AU 0°08'30 0°08'33
minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 05 j 05:00 -2191 Dec 18 j 00:41 -2191 Dec 18 j 00:40 -2191 Dec 18 j 03:41 -2191 Dec 17 j 21:39 -2191 Dec 17 j 16:45 -2191 Dec 30 j 22:14 -2190 Mar 30 j 12:04	5°M.43'53 8°M.39'38 15°M. 27°M.31'41 22°M.36'26 22°M.31'27 17°M.41'59 17°M.47'12 0° 🗷 6° 🗷 34'56 9° 🗷 37'13 9° 🗷 35'25 9° 🗷 39'00 9° 🗷 32'31 12° 🗷 40'45 0° 💍	0°29'55 0°11'36 4.12264 AU -0°15'06 0°15'09	retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 Mar 30 j 13:42 -2185 Jun 02 j 16:40 -2185 Jun 16 j 07:52 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:51 -2185 Jun 16 j 00:40 -2185 Jun 16 j 00:40 -2185 Jun 16 j 20:57 -2185 Jun 29 j 20:57 -2185 Oct 30 j 05:12	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0°Π 1°Π41'03 4°Π41'35 4°Π41'34 4°Π37'37 4°Π45'31 4°Π48'48 7°Π40'56 25°Π13'17	-0°19'49 4.24988 AU 0°08'30 0°08'33 6.30668 AU
minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist.	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 05 j 05:00 -2191 Dec 18 j 00:41 -2191 Dec 18 j 00:40 -2191 Dec 18 j 03:41 -2191 Dec 18 j 03:41 -2191 Dec 17 j 16:45 -2191 Dec 30 j 22:14 -2190 Mar 30 j 12:04 -2190 May 10 j 07:51	5°M.43'53 8°M.39'38 15°M. 27°M.31'41 22°M.36'26 22°M.31'27 17°M.41'59 17°M.47'12 0° ¾ 6° ¾34'56 9° ¾37'12 9° ¾35'25 9° ¾39'00 9° ¾32'31 12° ¾40'45 0° ♂ 2° ♂31'45	0°29'55 0°11'36 4.12264 AU -0°15'06 0°15'09	retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 Mar 30 j 13:42 -2185 Jun 02 j 16:40 -2185 Jun 16 j 07:52 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:57 -2185 Jun 16 j 07:57 -2185 Jun 16 j 07:57 -2185 Jun 29 j 20:57 -2185 Jun 29 j 20:57 -2185 Oct 30 j 05:12 -2185 Dec 28 j 23:55	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0°Π 1°Π41'03 4°Π41'35 4°Π41'34 4°Π37'37 4°Π45'31 4°Π48'48 7°Π40'56 25°Π13'17 20°Π15'27	-0°19'49 4.24988 AU 0°08'30 0°08'33 6.30668 AU 0°42'09
minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 05 j 05:00 -2191 Dec 18 j 00:41 -2191 Dec 18 j 00:40 -2191 Dec 18 j 03:41 -2191 Dec 18 j 03:41 -2191 Dec 17 j 16:45 -2191 Dec 30 j 22:14 -2190 Mar 30 j 12:04 -2190 May 10 j 07:51 -2190 Jun 20 j 08:17	5°M43'53 8°M39'38 15°M 27°M31'41 22°M36'26 22°M31'27 17°M41'59 17°M47'12 0° 🖈 6° 🖈 34'56 9° 🖈 37'13 9° 🖈 35'25 9° 🗷 39'00 9° 🗷 32'31 12° 🛣 40'45 0° 🛪 2° 📆 31'45 30° R 🔻	0°29'55 0°11'36 4.12264 AU -0°15'06 0°15'09 6.06808 AU	retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist.	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 Mar 30 j 13:42 -2185 Jun 02 j 16:40 -2185 Jun 16 j 07:52 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:51 -2185 Jun 16 j 02:57 -2185 Jun 16 j 20:57 -2185 Jun 29 j 20:57 -2185 Oct 30 j 05:12 -2185 Dec 28 j 23:35 -2185 Dec 28 j 23:32	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0° Π 1° Π41'35 4° Π41'35 4° Π41'34 4° Π37'37 4° Π45'31 4° Π48'48 7° Π40'56 25° Π13'17 20° Π15'35	-0°19'49 4.24988 AU 0°08'30 0°08'33 6.30668 AU
minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 05 j 05:00 -2191 Dec 18 j 00:41 -2191 Dec 18 j 00:40 -2191 Dec 18 j 03:41 -2191 Dec 17 j 16:45 -2191 Dec 30 j 22:14 -2190 Mar 30 j 12:04 -2190 May 10 j 07:51 -2190 Jun 20 j 08:17 -2190 Jul 09 j 21:34	5°M.43'53 8°M.39'38 15°M. 27°M.31'41 22°M.36'26 22°M.31'27 17°M.41'59 17°M.47'12 0° 🖈 6° 🖈 34'56 9° 🖈 37'13 9° 🖈 35'25 9° 🖈 39'00 9° 🖈 32'31 12° 🗗 40'45 0° 🕏 2° 🕏 31'45 30° R. 🔻 27° 🗷 32'48	0°29'55 0°11'36 4.12264 AU -0°15'06 0°15'09 6.06808 AU -0°56'20	retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 May 25 j 23:42 -2185 Jun 02 j 16:40 -2185 Jun 16 j 07:52 -2185 Jun 16 j 07:51 -2185 Jun 16 j 05:75 -2185 Jun 29 j 20:57 -2185 Dec 28 j 23:55 -2185 Dec 28 j 23:32 -2184 Feb 28 j 06:44	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0°II 1°II41'03 4°II41'35 4°II41'34 4°II37'37 4°II45'31 4°II48'48 7°II40'56 25°II3'17 20°II5'35 15°II1'58	-0°19'49 4.24988 AU 0°08'30 0°08'33 6.30668 AU 0°42'09
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minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 18 j 00:41 -2191 Dec 18 j 00:40 -2191 Dec 18 j 00:40 -2191 Dec 18 j 03:41 -2191 Dec 18 j 03:41 -2191 Dec 17 j 16:45 -2191 Dec 30 j 22:14 -2190 Mar 30 j 12:04 -2190 Jun 20 j 08:17 -2190 Jul 09 j 21:34 -2190 Jul 09 j 21:34 -2190 Sep 06 j 21:16	5°M.43'53 8°M.39'38 15°M. 27°M.31'41 22°M.36'26 22°M.31'27 17°M.41'59 17°M.47'12 0° \$\mathred{\sigma}\) 6° \$\mathred{\sigma}\] 33'13 9° \$\mathred{\sigma}\] 9° \$\mathred{\sigma}\] 9° \$\mathred{\sigma}\] 12° \$\mathred{\sigma}\] 12° \$\mathred{\sigma}\] 12° \$\mathred{\sigma}\] 12° \$\mathred{\sigma}\] 20° \$\mathred{\sigma}\] 21° \$\mathred{\sigma}\] 22° \$\mathred{\sigma}\] 22° \$\mathred{\sigma}\] 23' \$\mathred{\sigma}\] 22° \$\mathred{\sigma}\] 23' \$\mathred{\sigma}\] 22° \$\mathred{\sigma}\] 23' \$\mathred{\sigma}\]	0°29'55 0°11'36 4.12264 AU -0°15'06 0°15'09 6.06808 AU -0°56'20	retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist.	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 May 25 j 23:42 -2185 Jun 02 j 16:40 -2185 Jun 16 j 07:52 -2185 Jun 16 j 07:51 -2185 Jun 16 j 05:75 -2185 Jun 29 j 20:57 -2185 Dec 28 j 23:55 -2185 Dec 28 j 23:32 -2184 Feb 28 j 06:44	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0°II 1°II41'03 4°II41'35 4°II41'34 4°II37'37 4°II45'31 4°II48'48 7°II40'56 25°II3'17 20°II5'35 15°II1'58	-0°19'49 4.24988 AU 0°08'30 0°08'33 6.30668 AU 0°42'09
minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 05 j 05:00 -2191 Dec 18 j 00:41 -2191 Dec 18 j 00:40 -2191 Dec 17 j 21:39 -2191 Dec 18 j 03:41 -2191 Dec 17 j 16:45 -2191 Dec 30 j 22:14 -2190 Mar 30 j 12:04 -2190 Jun 20 j 08:17 -2190 Jul 09 j 21:34 -2190 Jul 09 j 16:59 -2190 Sep 06 j 21:16 -2190 Nov 15 j 23:08	5°M43'53 8°M39'38 15°M 27°M31'41 22°M36'26 22°M31'27 17°M41'59 17°M47'12 0°\$\mathred{\mathred{A}} 6°\$\mathred{\mathred{A}}34'56 9°\$\mathred{\mathred{A}}37'13 9°\$\mathred{\mathred{A}}37'12 9°\$\mathred{\mathred{A}}35'25 9°\$\mathred{\mathred{A}}39'00 9°\$\mathred{\mathred{A}}32'31 12°\$\mathred{\mathred{A}}40'45 0°\$\mathred{\mathred{\mathred{A}}30'8}\mathred{\mathred{\mathred{A}}} 27°\$\mathred{\mathred{A}}32'48 27°\$\mathred{\mathred{A}}39'42 0°\$\mathred{\mathred{\mathred{A}}39'42 0°\$\mathred{\mathred{\mathred{A}}39'42	0°29'55 0°11'36 4.12264 AU -0°15'06 0°15'09 6.06808 AU -0°56'20	retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 May 25 j 23:42 -2185 Jun 02 j 16:40 -2185 Jun 16 j 07:52 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:51 -2185 Jun 16 j 00:40 -2185 Jun 16 j 05:75 -2185 Jun 29 j 20:57 -2185 Jun 29 j 20:57 -2185 Dec 28 j 23:35 -2185 Dec 28 j 23:32 -2184 Feb 28 j 06:44 -2184 Jun 20 j 02:30 -2184 Jul 04 j 19:49	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0° II 1° II 41'03 4° II 41'35 4° II 41'34 4° II 37'37 4° II 45'31 4° II 48'48 7° II 40'56 25° II 13'17 20° II 15'35 15° II 11'58 0° II 3° II 11'58 0° II 3° II 11'58	-0°19'49 4.24988 AU 0°08'30 0°08'33 6.30668 AU 0°42'09 4.35377 AU
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minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 05 j 05:00 -2191 Dec 18 j 00:41 -2191 Dec 18 j 00:40 -2191 Dec 18 j 00:41 -2191 Dec 18 j 03:41 -2191 Dec 18 j 03:41 -2191 Dec 17 j 21:39 -2191 Dec 30 j 22:14 -2190 Mar 30 j 12:04 -2190 May 10 j 07:51 -2190 Jun 20 j 08:17 -2190 Jul 09 j 16:59 -2190 Sep 06 j 21:16 -2190 Nov 15 j 23:08 -2189 Jan 09 j 10:45	5°M.43'53 8°M.39'38 15°M. 27°M.31'41 22°M.36'26 22°M.31'27 17°M.41'59 17°M.47'12 0° ¾ 6° ¾34'56 9° ¾37'13 9° ¾35'25 9° ¾39'00 9° ¾32'31 12° ¾40'45 0°♂ 2°♂31'45 30°R.¾ 27° ¾39'42 0°♂ 11°♂57'45	0°29'55 0°11'36 4.12264 AU -0°15'06 0°15'09 6.06808 AU -0°56'20 4.02430 AU	retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 Mar 30 j 13:42 -2185 May 25 j 23:42 -2185 Jun 16 j 07:52 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:51 -2185 Jun 16 j 00:40 -2185 Jun 16 j 00:40 -2185 Jun 16 j 20:57 -2185 Jun 29 j 20:57 -2185 Jun 29 j 20:57 -2185 Dec 28 j 23:55 -2185 Dec 28 j 23:55 -2185 Dec 28 j 23:32 -2184 Feb 28 j 06:44 -2184 Jun 20 j 02:30 -2184 Jul 04 j 19:49 -2184 Jul 18 j 03:06 -2184 Jul 18 j 03:03 -2184 Jul 17 j 13:09	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0°11 1°141'03 4°141'35 4°141'34 4°137'37 4°148'48 7°140'56 25°113'17 20°115'27 20°115'35 15°111'58 0°9 3°908'57	-0°19'49 4.24988 AU 0°08'30 0°08'33 6.30668 AU 0°42'09 4.35377 AU
minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction min bearth dist.	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 05 j 05:00 -2191 Dec 18 j 00:41 -2191 Dec 18 j 00:40 -2191 Dec 18 j 03:41 -2191 Dec 17 j 21:39 -2191 Dec 17 j 16:45 -2191 Dec 30 j 22:14 -2190 Mar 30 j 12:04 -2190 May 10 j 07:51 -2190 Jun 20 j 08:17 -2190 Jul 09 j 16:59 -2190 Sep 06 j 21:16 -2190 Nov 15 j 23:08 -2189 Jan 09 j 10:45	5°M.43'53 8°M.39'38 15°M. 27°M.31'41 22°M.36'26 22°M.31'27 17°M.41'59 17°M.47'12 0° 🖈 6° 🖈 34'56 9° 🖈 35'25 9° 🖈 35'25 9° 🖈 39'00 9° 🕏 32'31 12° 🕏 40'45 0° 🕏 2° 🕏 31'45 30°R. 🔻 27° 🕏 32'48 27° 🕏 34'19 22° 🕏 34'19 22° 🕏 35'45 15° 🕏 06'03 15° 🕏 06'03 15° 🕏 06'01	0°29'55 0°11'36 4.12264 AU -0°15'06 0°15'09 6.06808 AU -0°56'20 4.02430 AU -0°56'07 0°56'09	retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. direct	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 Mar 30 j 13:42 -2185 May 25 j 23:42 -2185 Jun 16 j 07:52 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:57 -2185 Jun 16 j 07:57 -2185 Jun 29 j 20:57 -2185 Jun 29 j 20:57 -2185 Dec 28 j 23:35 -2185 Dec 28 j 23:32 -2184 Feb 28 j 06:44 -2184 Jul 20 j 02:30 -2184 Jul 04 j 19:49 -2184 Jul 18 j 03:06 -2184 Jul 18 j 03:03 -2184 Jul 17 j 13:09 -2184 Jul 31 j 07:24	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0°11 1°11'03 4°11'35 4°1141'34 4°137'37 4°1145'31 4°1148'48 7°1140'56 25°113'17 20°115'27 20°115'27 20°115'35 15°111'58 0°9 3°908'57	-0°19'49 4.24988 AU 0°08'30 0°08'33 6.30668 AU 0°42'09 4.35377 AU 0°47'30 0°47'33
minimum elong morning rise retrograde opposition min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction	-2192 Nov 14 j 13:04 -2192 Nov 27 j 04:31 -2192 Dec 25 j 12:14 -2191 Apr 03 j 06:38 -2191 Jun 03 j 04:50 -2191 Jun 03 j 20:18 -2191 Aug 02 j 13:29 -2191 Aug 09 j 20:57 -2191 Nov 06 j 08:52 -2191 Dec 05 j 05:00 -2191 Dec 18 j 00:41 -2191 Dec 18 j 00:40 -2191 Dec 18 j 00:41 -2191 Dec 18 j 03:41 -2191 Dec 18 j 03:41 -2191 Dec 17 j 21:39 -2191 Dec 30 j 22:14 -2190 Mar 30 j 12:04 -2190 May 10 j 07:51 -2190 Jun 20 j 08:17 -2190 Jul 09 j 16:59 -2190 Sep 06 j 21:16 -2190 Nov 15 j 23:08 -2189 Jan 09 j 10:45	5°M.43'53 8°M.39'38 15°M. 27°M.31'41 22°M.36'26 22°M.31'27 17°M.41'59 17°M.47'12 0° ¾ 6° ¾34'56 9° ¾37'13 9° ¾35'25 9° ¾39'00 9° ¾32'31 12° ¾40'45 0°♂ 2°♂31'45 30°R.¾ 27° ¾39'42 0°♂ 11°♂57'45	0°29'55 0°11'36 4.12264 AU -0°15'06 0°15'09 6.06808 AU -0°56'20 4.02430 AU	retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-2186 May 26 j 09:39 -2186 Jul 12 j 23:44 -2186 Sep 28 j 21:35 -2186 Nov 27 j 09:45 -2186 Nov 26 j 17:46 -2186 Dec 25 j 05:34 -2185 Jan 26 j 10:51 -2185 Feb 28 j 01:36 -2185 Mar 30 j 13:42 -2185 May 25 j 23:42 -2185 Jun 16 j 07:52 -2185 Jun 16 j 07:51 -2185 Jun 16 j 07:51 -2185 Jun 16 j 00:40 -2185 Jun 16 j 00:40 -2185 Jun 16 j 20:57 -2185 Jun 29 j 20:57 -2185 Jun 29 j 20:57 -2185 Dec 28 j 23:55 -2185 Dec 28 j 23:55 -2185 Dec 28 j 23:32 -2184 Feb 28 j 06:44 -2184 Jun 20 j 02:30 -2184 Jul 04 j 19:49 -2184 Jul 18 j 03:06 -2184 Jul 18 j 03:03 -2184 Jul 17 j 13:09	4°859'17 15°8 23°825'40 18°823'53 18°829'17 15°88 13°821'30 15°8 18°859'57 0°11 1°141'03 4°141'35 4°141'34 4°137'37 4°148'48 7°140'56 25°113'17 20°115'27 20°115'35 15°111'58 0°9 3°908'57	-0°19'49 4.24988 AU 0°08'30 0°08'33 6.30668 AU 0°42'09 4.35377 AU 0°47'30 0°47'33 6.38904 AU

		a rraam 2102 is		mtima atrila ia tha riaan	2184 BCE in historical c	auntina atula	
min. Earth dist.			4.41014 AU		-2177 Jan 27 j 17:40	20° ♂ 21'47	1900125
	-2183 Jan 28 j 15:59		4.41014 AU	conjunction	-		
direct	-2183 Mar 31 j 06:19	15° © 58'35		minimum elong	-2177 Jan 27 j 17:37	20°る21'45	
. ,	-2183 Jul 18 j 23:55	0°N		max. Earth dist.	-2177 Jan 28 j 19:15	20°る37'08	5.99464 AU
evening set	-2183 Aug 05 j 14:06	3° Ω 44'56	C 41 410 AXX	morning rise	-2177 Feb 09 j 23:57	23° る 32'18	
max. Earth dist.	-2183 Aug 17 j 02:05	6° 31 15'17	6.41412 AU	_	-2177 Mar 09 j 21:59	0° ≈	
		_		retrograde	-2177 Jun 22 j 07:29	13° ≈ 58'44	
conjunction	-2183 Aug 18 j 12:42		1°12'24	min. Earth dist.	-2177 Aug 20 j 08:09	9° ≈ 03'39	3.99231 AU
minimum elong	-2183 Aug 18 j 12:40	6° Ω 34'11	1°12'27	opposition	-2177 Aug 21 j 08:34	8° ≈ 55'25	-1°48'47
morning rise	-2183 Aug 31 j 08:10	9° Ω 21'58		direct	-2177 Oct 18 j 09:44	4° ≈ 01'09	
	-2183 Sep 27 j 00:24	15° Ω			-2176 Jan 14 j 05:26	15° ≈	
retrograde	-2183 Dec 29 j 14:20	26° Ω 18′03		evening set	-2176 Feb 20 j 11:23	23° ≈ 27′09	
opposition	-2182 Feb 28 j 02:41	21° Ω 25'59	1°52'39				
min. Earth dist.	-2182 Mar 01 j 07:12	21° Ω 16'50	4.40404 AU	conjunction	-2176 Mar 04 j 22:02	26° ≈ 38'38	-1°16'51
direct	-2182 May 01 j 18:58	16° Ω 24'10		minimum elong	-2176 Mar 04 j 22:02	26° ≈ 38'38	1°16'52
	-2182 Aug 17 j 00:17	0° m)		max. Earth dist.	-2176 Mar 06 j 20:12	27° ≈ 06′04	6.00719 AU
evening set	-2182 Sep 05 j 14:24	4° ₪ 13'05		morning rise	-2176 Mar 18 j 11:51	29°≈51'39	
max. Earth dist.	-2182 Sep 16 j 10:10	6° M 36′29	6.37630 AU	C	-2176 Mar 19 j 02:02	0° ∀	
	1 ,	•		retrograde	-2176 Jul 27 j 22:06	20° ¥ 03'27	
conjunction	-2182 Sep 18 j 06:33	7° Mp 01'06	1°17'12	min. Earth dist.	-2176 Sep 24 j 06:13		4.04201 AU
minimum elong	-2182 Sep 18 j 06:34	7° Mp 01'06	1°17'13	opposition	-2176 Sep 25 j 14:33	14°) 58'14	
morning rise	-2182 Sep 30 j 20:14	9° m) 48'04	1 17 13	direct	-2176 Nov 22 j 16:15	10° X 01'06	-1 30 13
-		27° m 05'40				29° H 13'02	
retrograde	-2181 Jan 30 j 09:45	~	1044120	evening set	-2175 Mar 28 j 14:40	29° π 1302	
opposition	-2181 Apr 01 j 05:54	22° m 14'07	1°44'20		-2175 Mar 31 j 23:57	Osy	
min. Earth dist.	-2181 Apr 02 j 15:18	22° m 03'29	4.33716 AU		2177 1 11:07.24	20002222	1002155
direct	-2181 Jun 02 j 15:51	17° m) 14'42		conjunction	-2175 Apr 11 j 07:26	2° Y 23'33	
	-2181 Sep 12 j 09:33	0∘ ত		minimum elong	-2175 Apr 11 j 07:30	2° Y 23'35	
evening set	-2181 Oct 06 j 15:31	5° ≏ 18'22		max. Earth dist.	-2175 Apr 13 j 08:01	2° Y 51'45	6.08876 AU
max. Earth dist.	-2181 Oct 17 j 08:59	7° ≏ 43'55	6.28528 AU	morning rise	-2175 Apr 25 j 02:01	5° Ƴ 34'45	
				retrograde	-2175 Aug 31 j 15:47	24° Ƴ 55′23	
conjunction	-2181 Oct 19 j 05:12	8° 亞 09'00	1°00'00	min. Earth dist.	-2175 Oct 29 j 00:37	20° Ƴ 00'06	4.14592 AU
minimum elong	-2181 Oct 19 j 05:14	8° ഫ 09'01	1°00'00	opposition	-2175 Oct 30 j 03:24	19° Ƴ 50'58	-1°11'26
morning rise	-2181 Oct 31 j 18:02	10° ≙ 59'21		direct	-2175 Dec 28 j 02:16	14° Ƴ 50'37	
retrograde	-2180 Mar 03 j 22:33	29° ♀ 01'24			-2174 Apr 17 j 15:02	8° 0	
opposition	-2180 May 03 j 22:25	24° ≏ 08'31	1°04'42	evening set	-2174 May 03 j 19:39	3° 8 35'13	
min. Earth dist.	-2180 May 05 j 01:54	23° ≏ 59'44	4.22704 AU	C	, ,		
direct	-2180 Jul 04 j 10:08	19° ≙ 11'53		conjunction	-2174 May 17 j 14:12	6° 8 41'21	-0°28'45
	-2180 Oct 02 j 21:03	0°M		-		·	
				minimum elong	-2174 May 17 i 14:14	6° 8 41'23	0°28'44
evening set	-2180 Nov 06 i 13:59			minimum elong	-2174 May 17 j 14:14	6° 8 41'23	
evening set	-2180 Nov 06 j 13:59	7° M 40'07	6 16601 AU	max. Earth dist.	-2174 May 19 j 00:48	7° 8 00'52	0°28'44 6.20681 AU
evening set max. Earth dist.	-2180 Nov 06 j 13:59 -2180 Nov 18 j 01:10	7° M 40'07	6.16601 AU	C	-2174 May 19 j 00:48 -2174 May 31 j 08:14	7° 8 00'52 9° 8 47'03	
max. Earth dist.	-2180 Nov 18 j 01:10	7°M40'07 10°M19'53		max. Earth dist. morning rise	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01	7° 8 00'52 9° 8 47'03 15° 8	
max. Earth dist.	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35	7°M40'07 10°M19'53 10°M36'26	0°23'53	max. Earth dist. morning rise retrograde	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46	7°800'52 9°847'03 15°8 28°804'55	6.20681 AU
max. Earth dist. conjunction minimum elong	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36	7°M40'07 10°M19'53 10°M36'26 10°M36'27		max. Earth dist. morning rise retrograde opposition	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20	7°800'52 9°847'03 15°8 28°804'55 23°803'41	6.20681 AU -0°10'52
max. Earth dist.	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38	7°M40'07 10°M19'53 10°M36'26 10°M36'27 13°M33'18	0°23'53	max. Earth dist. morning rise retrograde opposition min. Earth dist.	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33	6.20681 AU
max. Earth dist. conjunction minimum elong	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05	7°M40'07 10°M19'53 10°M36'26 10°M36'27 13°M33'18 15°M	0°23'53	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jan 31 j 01:37	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33 18°801'05	6.20681 AU -0°10'52
max. Earth dist. conjunction minimum elong morning rise	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38	7°M40'07 10°M19'53 10°M36'26 10°M36'27 13°M33'18	0°23'53	max. Earth dist. morning rise retrograde opposition min. Earth dist.	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jan 31 j 01:37 -2173 Feb 07 j 08:52	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33 18°801'05 18°806'11	6.20681 AU -0°10'52
max. Earth dist. conjunction minimum elong	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48	7°M40'07 10°M19'53 10°M36'26 10°M36'27 13°M33'18 15°M 0° 🗷 2° 🗷 34'15	0°23'53	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jan 31 j 01:37 -2173 Feb 07 j 08:52 -2173 May 08 j 20:24	7°႘00'52 9°႘47'03 15°႘ 28°႘04'55 23°႘03'41 23°႘08'33 18°႘01'05 18°႘06'11 0°Щ	6.20681 AU -0°10'52
max. Earth dist. conjunction minimum elong morning rise	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48 -2179 May 20 j 07:44	7°M40'07 10°M36'26 10°M36'27 13°M33'18 15°M 0°×7 2°×734'15 30°RM	0°23'53 0°23'50	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jan 31 j 01:37 -2173 Feb 07 j 08:52	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33 18°801'05 18°806'11	6.20681 AU -0°10'52
max. Earth dist. conjunction minimum elong morning rise	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48	7°M40'07 10°M19'53 10°M36'26 10°M36'27 13°M33'18 15°M 0° 🗷 2° 🗷 34'15	0°23'53	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct asc. node	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jan 31 j 01:37 -2173 Feb 07 j 08:52 -2173 May 08 j 20:24	7°႘00'52 9°႘47'03 15°႘ 28°႘04'55 23°႘03'41 23°႘08'33 18°႘01'05 18°႘06'11 0°Щ	6.20681 AU -0°10'52
max. Earth dist. conjunction minimum elong morning rise retrograde	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48 -2179 May 20 j 07:44	7°M40'07 10°M36'26 10°M36'27 13°M33'18 15°M 0°×7 2°×734'15 30°RM	0°23'53 0°23'50	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct asc. node	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jan 31 j 01:37 -2173 Feb 07 j 08:52 -2173 May 08 j 20:24	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33 18°801'05 18°806'11 0°Ⅲ 6°Ⅲ17'02	6.20681 AU -0°10'52 4.26596 AU
max. Earth dist. conjunction minimum elong morning rise retrograde opposition	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48 -2179 May 20 j 07:44 -2179 Jun 08 j 09:16	7°M40'07 10°M36'26 10°M36'27 13°M33'18 15°M 0°×7 2°×734'15 30°RM 27°M38'35	0°23'53 0°23'50 0°01'43	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct asc. node evening set	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jun 31 j 01:37 -2173 Feb 07 j 08:52 -2173 May 08 j 20:24 -2173 Jun 07 j 10:07	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33 18°801'05 18°806'11 0°Ⅲ 6°Ⅲ17'02	6.20681 AU -0°10'52 4.26596 AU
max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist.	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48 -2179 May 20 j 07:44 -2179 Jun 08 j 09:16 -2179 Jun 08 j 21:51	7°M40'07 10°M36'26 10°M36'27 13°M33'18 15°M 0° ×7 2° ×734'15 30°RM 27°M38'35 27°M34'31	0°23'53 0°23'50 0°01'43	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct asc. node evening set conjunction	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jun 31 j 01:37 -2173 Feb 07 j 08:52 -2173 May 08 j 20:24 -2173 Jun 07 j 10:07 -2173 Jun 21 j 00:17	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33 18°801'05 18°806'11 0°Ⅲ 6°Ⅲ17'02	6.20681 AU -0°10'52 4.26596 AU 0°14'28
max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. desc. node	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48 -2179 May 20 j 07:44 -2179 Jun 08 j 09:16 -2179 Jun 08 j 21:51 -2179 Jun 18 j 08:53	7°M40'07 10°M36'26 10°M36'27 13°M33'18 15°M 0° \$7 2° \$734'15 30°RM 27°M38'35 27°M34'31 26°M22'02	0°23'53 0°23'50 0°01'43	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jun 31 j 01:37 -2173 Feb 07 j 08:52 -2173 May 08 j 20:24 -2173 Jun 07 j 10:07 -2173 Jun 21 j 00:17 -2173 Jun 21 j 00:16	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33 18°801'05 18°806'11 0°Ⅲ 6°Ⅲ17'02 9°Ⅲ16'37 9°Ⅲ16'36	6.20681 AU -0°10'52 4.26596 AU 0°14'28
max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. desc. node	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48 -2179 May 20 j 07:44 -2179 Jun 08 j 09:16 -2179 Jun 08 j 21:51 -2179 Jun 18 j 08:53 -2179 Aug 07 j 13:12 -2179 Oct 17 j 05:48	7°M.40'07 10°M.19'53 10°M.36'26 10°M.36'27 13°M.33'18 15°M. 0° 🛪 2° 🛪 34'15 30°RM. 27°M.38'35 27°M.34'31 26°M.22'02 22°M.44'30 0° 🛪	0°23'53 0°23'50 0°01'43	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jun 31 j 01:37 -2173 Feb 07 j 08:52 -2173 May 08 j 20:24 -2173 Jun 07 j 10:07 -2173 Jun 21 j 00:16 -2173 Jun 20 j 20:55 -2173 Jun 21 j 03:37	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33 18°801'05 18°806'11 0°Ⅲ 6°Ⅲ17'02 9°Ⅲ16'37 9°Ⅲ16'36 9°Ⅲ14'46	6.20681 AU -0°10'52 4.26596 AU 0°14'28
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max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. desc. node direct evening set	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48 -2179 May 20 j 07:44 -2179 Jun 08 j 09:16 -2179 Jun 08 j 21:51 -2179 Jun 18 j 08:53 -2179 Aug 07 j 13:12 -2179 Oct 17 j 05:48 -2179 Dec 10 j 03:26	7°M.40'07 10°M.36'26 10°M.36'27 13°M.33'18 15°M. 0° × 2° × 34'15 30°RM. 27°M.38'35 27°M.34'31 26°M.22'02 22°M.44'30 0° × 11° × 41'11	0°23'53 0°23'50 0°01'43 4.10670 AU	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jun 31 j 01:37 -2173 Feb 07 j 08:52 -2173 May 08 j 20:24 -2173 Jun 07 j 10:07 -2173 Jun 21 j 00:16 -2173 Jun 21 j 00:16 -2173 Jun 21 j 03:37 -2173 Jun 21 j 08:08 -2173 Jul 04 j 12:26	7°800'52 9°847'03 15°8 28°804'55 23°808'33 18°801'05 18°806'11 0°Ⅲ 6°Ⅲ17'02 9°Ⅲ16'37 9°Ⅲ16'36 9°Ⅲ14'46 9°Ⅲ18'27 9°Ⅲ20'56 12°Ⅲ14'59	6.20681 AU -0°10'52 4.26596 AU 0°14'28 0°14'31
max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. desc. node direct evening set conjunction	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48 -2179 May 20 j 07:44 -2179 Jun 08 j 09:16 -2179 Jun 08 j 21:51 -2179 Jun 18 j 08:53 -2179 Aug 07 j 13:12 -2179 Oct 17 j 05:48 -2179 Dec 10 j 03:26	7°M.40'07 10°M.36'26 10°M.36'27 13°M.33'18 15°M. 0° 🛪 2° 🛪 34'15 30°RM. 27°M.38'35 27°M.34'31 26°M.22'02 22°M.44'30 0° 🛪 11° 🛪 44'19	0°23'53 0°23'50 0°01'43 4.10670 AU	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jun 31 j 01:37 -2173 Feb 07 j 08:52 -2173 May 08 j 20:24 -2173 Jun 07 j 10:07 -2173 Jun 21 j 00:16 -2173 Jun 21 j 00:16 -2173 Jun 21 j 03:37 -2173 Jun 21 j 08:08 -2173 Jul 04 j 12:26 -2173 Nov 03 j 13:59	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33 18°801'05 18°806'11 0°Π 6°Π17'02 9°Π16'37 9°Π16'36 9°Π14'46 9°Π18'27 9°Π20'56 12°Π14'59 29°Π41'53	6.20681 AU -0°10'52 4.26596 AU 0°14'28 0°14'31 6.32001 AU
max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. desc. node direct evening set conjunction minimum elong	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48 -2179 May 20 j 07:44 -2179 Jun 08 j 09:16 -2179 Jun 08 j 21:51 -2179 Jun 18 j 08:53 -2179 Aug 07 j 13:12 -2179 Oct 17 j 05:48 -2179 Dec 10 j 03:26 -2179 Dec 22 j 23:44 -2179 Dec 22 j 23:43	7°M.40'07 10°M.36'26 10°M.36'27 13°M.33'18 15°M. 0° 🛪 2° 🛪 34'15 30°RM. 27°M.38'35 27°M.34'31 26°M.22'02 22°M.44'30 0° 🛪 11° 🛪 44'11	0°23'53 0°23'50 0°01'43 4.10670 AU -0°21'39 0°21'42	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jun 31 j 01:37 -2173 Feb 07 j 08:52 -2173 May 08 j 20:24 -2173 Jun 07 j 10:07 -2173 Jun 21 j 00:17 -2173 Jun 21 j 00:16 -2173 Jun 21 j 03:37 -2173 Jun 21 j 08:08 -2173 Jun 04 j 12:26 -2173 Nov 03 j 13:59 -2172 Jan 02 j 08:41	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33 18°801'05 18°806'11 0°Π 6°Π17'02 9°Π16'37 9°Π16'36 9°Π14'46 9°Π18'27 9°Π20'56 12°Π14'59 29°Π41'53 24°Π44'35	6.20681 AU -0°10'52 4.26596 AU 0°14'28 0°14'31 6.32001 AU 0°50'01
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max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. desc. node direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48 -2179 May 20 j 07:44 -2179 Jun 08 j 09:16 -2179 Jun 08 j 21:51 -2179 Jun 18 j 08:53 -2179 Aug 07 j 13:12 -2179 Oct 17 j 05:48 -2179 Dec 10 j 03:26 -2179 Dec 22 j 23:44 -2179 Dec 22 j 23:43 -2179 Dec 22 j 19:03 -2178 Jan 04 j 22:26 -2178 May 15 j 15:38 -2178 Jul 15 j 04:47	7° M.40'07 10° M.19'53 10° M.36'26 10° M.36'27 13° M.33'18 15° M. 0° 🛪 2° 🛪 34'15 30° R.M. 27° M.38'35 27° M.34'31 26° M.22'02 22° M.44'30 0° 🛪 11° 🛪 44'19 14° 🛪 44'11 14° 🛪 44'18 14° 🛪 44'18 17° 🛪 48'50 0° 🛪 7° 🛪 46'03 2° 🛪 46'28	0°23'53 0°23'50 0°01'43 4.10670 AU -0°21'39 0°21'42 6.05585 AU	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jan 31 j 01:37 -2173 Feb 07 j 08:52 -2173 May 08 j 20:24 -2173 Jun 21 j 00:17 -2173 Jun 21 j 00:16 -2173 Jun 21 j 00:16 -2173 Jun 21 j 03:37 -2173 Jun 21 j 08:08 -2173 Jun 21 j 08:08 -2173 Jul 04 j 12:26 -2173 Nov 03 j 13:59 -2172 Jan 02 j 08:41 -2172 Jan 02 j 11:50 -2172 Mar 03 j 20:22 -2172 Jul 09 j 08:26	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33 18°806'11 0°Π 6°Π17'02 9°Π16'37 9°Π16'37 9°Π16'36 9°Π14'46 9°Π18'27 9°Π20'56 12°Π14'59 29°Π41'53 24°Π43'33 19°Π41'02 0°\$ 7°\$36'15	6.20681 AU -0°10'52 4.26596 AU 0°14'28 0°14'31 6.32001 AU 0°50'01 4.36350 AU
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max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. desc. node direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist.	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48 -2179 May 20 j 07:44 -2179 Jun 08 j 09:16 -2179 Jun 08 j 21:51 -2179 Jun 18 j 08:53 -2179 Aug 07 j 13:12 -2179 Oct 17 j 05:48 -2179 Dec 10 j 03:26 -2179 Dec 22 j 23:44 -2179 Dec 22 j 23:43 -2179 Dec 22 j 19:03 -2178 Mar 02 j 01:29 -2178 May 15 j 15:38 -2178 Jul 15 j 04:47 -2178 Jul 14 j 20:24 -2178 Aug 06 j 14:58	7° M.40'07 10° M.19'53 10° M.36'26 10° M.36'27 13° M.33'18 15° M. 0° 🛪 2° 🛪 34'15 30° R.M. 27° M.38'35 27° M.34'31 26° M.22'02 22° M.44'30 0° 🛪 11° 🛪 44'19 14° 🛪 44'19 14° 🛪 44'18 14° 🛪 44'18 17° 🛪 48'50 0° 🛪 7° 🛪 46'03 2° 🛪 46'28 2° 🛪 49'14 30° R.🛪	0°23'53 0°23'50 0°01'43 4.10670 AU -0°21'39 0°21'42 6.05585 AU	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jan 31 j 01:37 -2173 Feb 07 j 08:52 -2173 May 08 j 20:24 -2173 Jun 07 j 10:07 -2173 Jun 21 j 00:16 -2173 Jun 21 j 00:16 -2173 Jun 21 j 03:37 -2173 Jun 21 j 08:08 -2173 Jun 21 j 08:08 -2173 Jul 04 j 12:26 -2173 Nov 03 j 13:59 -2172 Jun 02 j 08:41 -2172 Jun 02 j 15:15 -2172 Jun 09 j 08:26 -2172 Jul 09 j 08:26 -2172 Jul 22 j 14:39 -2172 Jul 22 j 14:39 -2172 Jul 22 j 14:36	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33 18°801'05 18°806'11 0°II 6°II17'02 9°II16'36 9°II16'36 9°II14'46 9°II18'27 9°II20'56 12°II4'59 29°II41'53 24°II4'35 24°II43'33 19°II41'02 0°97 7°936'15	6.20681 AU -0°10'52 4.26596 AU 0°14'28 0°14'31 6.32001 AU 0°50'01 4.36350 AU 0°52'02 0°52'04
max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. desc. node direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48 -2179 May 20 j 07:44 -2179 Jun 08 j 09:16 -2179 Jun 08 j 21:51 -2179 Jun 18 j 08:53 -2179 Aug 07 j 13:12 -2179 Oct 17 j 05:48 -2179 Dec 10 j 03:26 -2179 Dec 22 j 23:44 -2179 Dec 22 j 23:43 -2179 Dec 22 j 19:03 -2178 Mar 02 j 01:29 -2178 May 15 j 15:38 -2178 Jul 15 j 04:47 -2178 Aug 06 j 14:58 -2178 Sep 12 j 00:28	7° M.40'07 10° M.36'26 10° M.36'27 13° M.33'18 15° M. 0° 🛪 2° 🛪 34'15 30° R.M. 27° M.38'35 27° M.34'31 26° M.22'02 22° M.44'30 0° 🛪 11° 🛪 44'19 14° 🛪 44'19 14° 🛪 44'18 14° 🛪 44'18 17° 🛪 48'50 0° ጜ 7° ጜ 46'03 2° ጜ 46'28 2° ጜ 49'14 30° R.ጃ 27° ጃ 53'21	0°23'53 0°23'50 0°01'43 4.10670 AU -0°21'39 0°21'42 6.05585 AU	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction min. Earth dist. direct	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jan 31 j 01:37 -2173 Feb 07 j 08:52 -2173 May 08 j 20:24 -2173 Jun 21 j 00:16 -2173 Jun 21 j 00:16 -2173 Jun 21 j 00:16 -2173 Jun 21 j 03:37 -2173 Jun 21 j 08:08 -2173 Jun 21 j 08:08 -2173 Jun 21 j 08:08 -2173 Jun 04 j 12:26 -2173 Nov 03 j 13:59 -2172 Jun 02 j 08:41 -2172 Jun 02 j 15:15 -2172 Jul 09 j 08:26 -2172 Jul 09 j 08:26 -2172 Jul 22 j 14:39 -2172 Jul 22 j 14:39 -2172 Jul 22 j 14:36 -2172 Jul 21 j 22:03	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33 18°801'05 18°806'11 0°II 6°II17'02 9°II16'36 9°II16'36 9°II14'46 9°II18'27 9°II20'56 12°II4'59 29°II41'53 24°II43'33 19°II41'02 0°97 7°936'15 10°\$29'28 10°\$29'28 10°\$29'24	6.20681 AU -0°10'52 4.26596 AU 0°14'28 0°14'31 6.32001 AU 0°50'01 4.36350 AU
max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. desc. node direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48 -2179 May 20 j 07:44 -2179 Jun 08 j 09:16 -2179 Jun 08 j 21:51 -2179 Jun 18 j 08:53 -2179 Aug 07 j 13:12 -2179 Oct 17 j 05:48 -2179 Dec 10 j 03:26 -2179 Dec 22 j 23:44 -2179 Dec 22 j 23:43 -2179 Dec 22 j 19:03 -2178 Jan 04 j 22:26 -2178 May 15 j 15:38 -2178 Jul 15 j 04:47 -2178 Jul 15 j 04:47 -2178 Aug 06 j 14:58 -2178 Sep 12 j 00:28 -2178 Oct 17 j 23:10	7° M.40'07 10° M.19'53 10° M.36'26 10° M.36'27 13° M.33'18 15° M. 0° 🛪 2° 🛪 34'15 30° R.M. 27° M.38'35 27° M.34'31 26° M.22'02 22° M.44'30 0° 🛪 11° 🛪 44'19 14° 🛪 44'19 14° 🛪 44'18 14° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'19 11° 🛪 44'19 11° 🛪 44'19 11° 🛪 44'19 11° 🛪 44'19 11° 🛪 44'18 11° 🛪 44'18 11° 🛪 44'19 11° 🛪 44'19 11° 🛪 48'50 11° 🛪 48'50 11° 🛪 48'50 11° 🛪 48'50 11° 🛪 48'50 11° 🛪 48'50 11° 🛪 48'50	0°23'53 0°23'50 0°01'43 4.10670 AU -0°21'39 0°21'42 6.05585 AU	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jan 31 j 01:37 -2173 Feb 07 j 08:52 -2173 May 08 j 20:24 -2173 Jun 21 j 00:16 -2173 Jun 21 j 00:16 -2173 Jun 21 j 00:337 -2173 Jun 21 j 03:37 -2173 Jun 21 j 08:08 -2173 Jun 21 j 08:08 -2173 Jun 21 j 08:08 -2173 Jun 04 j 12:26 -2173 Nov 03 j 13:59 -2172 Jun 02 j 08:41 -2172 Jun 02 j 15:15 -2172 Jun 02 j 15:15 -2172 Jul 22 j 14:39 -2172 Jul 22 j 14:36 -2172 Jul 21 j 22:03 -2172 Aug 04 j 17:35	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33 18°801'05 18°806'11 0°II 6°II17'02 9°II16'36 9°II16'36 9°II14'46 9°II18'27 9°II20'56 12°II4'59 29°II41'53 24°II4'35 24°II43'33 19°II41'02 0°97 7°936'15 10°929'28 10°929'28 10°929'24 13°921'03	6.20681 AU -0°10'52 4.26596 AU 0°14'28 0°14'31 6.32001 AU 0°50'01 4.36350 AU 0°52'02 0°52'04
max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. desc. node direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist.	-2180 Nov 18 j 01:10 -2180 Nov 19 j 05:35 -2180 Nov 19 j 05:36 -2180 Dec 01 j 21:38 -2180 Dec 08 j 04:05 -2179 Feb 26 j 02:43 -2179 Apr 08 j 11:48 -2179 May 20 j 07:44 -2179 Jun 08 j 09:16 -2179 Jun 08 j 21:51 -2179 Jun 18 j 08:53 -2179 Aug 07 j 13:12 -2179 Oct 17 j 05:48 -2179 Dec 10 j 03:26 -2179 Dec 22 j 23:44 -2179 Dec 22 j 23:43 -2179 Dec 22 j 19:03 -2178 Mar 02 j 01:29 -2178 May 15 j 15:38 -2178 Jul 15 j 04:47 -2178 Aug 06 j 14:58 -2178 Sep 12 j 00:28	7° M.40'07 10° M.36'26 10° M.36'27 13° M.33'18 15° M. 0° 🛪 2° 🛪 34'15 30° R.M. 27° M.38'35 27° M.34'31 26° M.22'02 22° M.44'30 0° 🛪 11° 🛪 44'19 14° 🛪 44'19 14° 🛪 44'18 14° 🛪 44'18 17° 🛪 48'50 0° ጜ 7° ጜ 46'03 2° ጜ 46'28 2° ጜ 49'14 30° R.ጃ 27° ጃ 53'21	0°23'53 0°23'50 0°01'43 4.10670 AU -0°21'39 0°21'42 6.05585 AU	max. Earth dist. morning rise retrograde opposition min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction min Earth dist. direct evening set	-2174 May 19 j 00:48 -2174 May 31 j 08:14 -2174 Jun 24 j 05:01 -2174 Oct 03 j 07:46 -2174 Dec 01 j 21:20 -2174 Dec 01 j 21:20 -2174 Dec 01 j 06:52 -2173 Jan 31 j 01:37 -2173 Feb 07 j 08:52 -2173 May 08 j 20:24 -2173 Jun 07 j 10:07 -2173 Jun 21 j 00:16 -2173 Jun 21 j 00:16 -2173 Jun 21 j 03:37 -2173 Jun 21 j 08:08 -2173 Jun 21 j 08:08 -2173 Jun 04 j 12:26 -2173 Nov 03 j 13:59 -2172 Jun 02 j 08:41 -2172 Jan 02 j 08:41 -2172 Jun 02 j 15:15 -2172 Jul 09 j 08:26 -2172 Jul 22 j 14:39 -2172 Jul 22 j 14:36 -2172 Jul 21 j 22:03 -2172 Aug 04 j 17:35 -2172 Nov 18 j 14:23	7°800'52 9°847'03 15°8 28°804'55 23°803'41 23°808'33 18°806'11 0° Π 6° Π17'02 9° Π16'37 9° Π16'36 9° Π14'46 9° Π18'27 9° Π20'56 12° Π14'59 29° Π41'53 24° Π44'35 24° Π44'35 24° Π43'33 19° Π41'02 0°\$7 7°\$36'15 10°\$29'28 10°\$29'28 10°\$29'24 13°\$21'03 0°Ω	6.20681 AU -0°10'52 4.26596 AU 0°14'28 0°14'31 6.32001 AU 0°50'01 4.36350 AU 0°52'02 0°52'04
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-	ical year style is used: Th				2173 BCE in historical c	_	50 21
•	-2172 Dec 17 j 16:06	30° ₹ 5		retrograde	-2166 May 20 j 22:14	12° ろ 53'11	
opposition	-2171 Feb 01 j 07:29	25°526'23	1°34'52	opposition	-2166 Jul 20 j 09:25	7° る 53'03	-1°13'06
min. Earth dist.	-2171 Feb 02 j 01:39	25°\$20'29	4.41104 AU	min. Earth dist.	-2166 Jul 19 j 23:17	7° る 56'24	4.01307 AU
direct	-2171 Apr 04 j 15:52	20°523'16		direct	-2166 Sep 17 j 02:32	2° る 59'54	
	-2171 Jul 01 j 08:11	0 $^{\circ}\Omega$		evening set	-2165 Jan 19 j 15:40	22° る 20'04	
evening set	-2171 Aug 10 j 00:03	8° Ω 09'56					
max. Earth dist.	-2171 Aug 21 j 08:59	10° Ω 38'52	6.41049 AU	conjunction	-2165 Feb 01 j 19:44	25° る 29'14	
				minimum elong	-2165 Feb 01 j 19:42	25° る 29'12	
conjunction	-2171 Aug 22 j 21:32	10° Ω 58'53	1°14'22	max. Earth dist.	-2165 Feb 02 j 23:45	25° ⋜ 46'01	5.99508 AU
minimum elong	-2171 Aug 22 j 21:30	10° Ω 58'52	1°14'24	morning rise	-2165 Feb 15 j 03:10	28° ප් 40'11	
morning rise	-2171 Sep 04 j 16:00	13° Ω 46′24			-2165 Feb 20 j 17:53	0°≈	
	-2171 Sep 10 j 07:50 -2171 Dec 12 j 04:56	15° Ω 0° m)		retrograde	-2165 May 06 j 04:06 -2165 Jun 27 j 09:31	15° ≈ 19° ≈ 05'59	
retrograde	-2171 Dec 12 j 04:30 -2170 Jan 03 j 01:27	0°Mp44'36		renograde	-2165 Aug 19 j 06:22	19 ≈03 39 15°R≈	
retrograde	-2170 Jan 24 j 20:57	0 11/44 30 30°RΩ		min. Earth dist.	-2165 Aug 25 j 07:41		3.99748 AU
opposition	-2170 Mar 04 j 14:20	25° Ω 52'44	1°53'25	opposition	-2165 Aug 26 j 10:20	14°≈02'20	
min. Earth dist.	-2170 Mar 05 j 20:33	25° Ω 43'04		direct	-2165 Oct 23 j 09:55	9° ≈ 07'44	1 31 30
direct	-2170 May 06 j 07:17	20° Ω 51'15			-2165 Dec 24 j 00:21	15° ≈	
	-2170 Jul 30 j 01:55	0° m		evening set	-2164 Feb 25 j 14:19	28° ≈ 32'11	
evening set	-2170 Sep 09 j 23:45	8° m 42'04		C	-2164 Mar 02 j 19:00	0° ∀	
max. Earth dist.	-2170 Sep 20 j 17:40	11° m 04'55	6.36497 AU		v		
				conjunction	-2164 Mar 10 j 01:54	1°) 43′40	-1°16'45
conjunction	-2170 Sep 22 j 15:19	11°M 30'17	1°16'04	minimum elong	-2164 Mar 10 j 01:55	1°) 43′40	1°16'46
minimum elong	-2170 Sep 22 j 15:20	11° m 30'18	1°16'05	max. Earth dist.	-2164 Mar 12 j 00:25	2° ₩ 11'14	6.01638 AU
morning rise	-2170 Oct 05 j 04:42	14° m 17'35		morning rise	-2164 Mar 23 j 16:30	4°) ₹56'35	
	-2169 Jan 01 j 20:34	0∘ ⊽		retrograde	-2164 Aug 01 j 19:51	25° 米 02'48	
retrograde	-2169 Feb 04 j 01:20	1° ≏ 40'33		min. Earth dist.	-2164 Sep 29 j 03:51		4.05411 AU
	-2169 Mar 09 j 12:10	30° ₽, M)		opposition	-2164 Sep 30 j 11:02	19° ¥ 57'34	-1°46'58
opposition	-2169 Apr 05 j 22:35	26° Mp 48'52		direct	-2164 Nov 27 j 15:38	14° ¥ 59'58	
min. Earth dist.	-2169 Apr 07 j 06:50	26° M 38'36	4.32318 AU		-2163 Mar 15 j 08:44	0°Υ	
direct	-2169 Jun 07 j 05:47	21° m/49'51		evening set	-2163 Apr 02 j 15:38	4° Ƴ 08'49	
	-2169 Aug 24 j 17:21	0° ∵			21/2 A 1/ : 00:07	7° Ƴ 19'00	1000107
evening set	-2169 Oct 11 j 03:00	9° £ 56'30	(27000 AII	conjunction	-2163 Apr 16 j 09:07	7° Υ 19'00	
max. Earth dist.	-2169 Oct 21 j 23:53	12° ≏ 24'28	6.27009 AU	minimum elong max. Earth dist.	-2163 Apr 16 j 09:10 -2163 Apr 18 j 09:23	7° Y 1902	6.10287 AU
conjunction	-2169 Oct 23 j 16:48	12° ≏ 47'46	0°55'52	morning rise	-2163 Apr 18 j 09:23 -2163 Apr 30 j 03:55	10° Υ 29'41	0.10287 AU
minimum elong	-2169 Oct 23 j 16:51	12° - 47'40	0°55'51	retrograde	-2163 Sep 05 j 06:40	29° Υ '42'26	
morning rise	-2169 Nov 05 j 05:42	15° ⊆ 38'49	0 0001	opposition	-2163 Nov 03 j 18:04	24° Υ '38'26	-1°03'53
morning rise	-2168 Jan 17 j 21:01	0°M		min. Earth dist.	-2163 Nov 02 j 16:24	24° Υ 47'11	4.16059 AU
retrograde	-2168 Mar 08 j 20:41	3°M48'06		direct	-2162 Jan 01 j 19:27	19° Ƴ 37'48	
C	-2168 Apr 30 j 07:10	30° ₹ Ω			-2162 Mar 30 j 19:32	0°B	
opposition	-2168 May 08 j 20:49	28° £ 54'57	0°56'50	evening set	-2162 May 08 j 16:48	8° 8 19'11	
min. Earth dist.	-2168 May 09 j 22:46	28° ≏ 46'40	4.21164 AU				
direct	-2168 Jul 09 j 05:08	23° ≏ 58'47		conjunction	-2162 May 22 j 10:58	11° 8 24'36	-0°22'57
	-2168 Sep 12 j 04:21	0°M		minimum elong	-2162 May 22 j 11:00	11° 8 24'37	0°22'55
evening set	-2168 Nov 11 j 05:42	12°M30'06		max. Earth dist.	-2162 May 23 j 16:40	11° 8 41'19	6.22095 AU
	-2168 Nov 21 j 23:05	15°M		morning rise	-2162 Jun 05 j 04:42	14° 8 29'32	
					-2162 Jun 07 j 11:25	15° 8	
conjunction	-2168 Nov 23 j 21:38	15°M27'12			-2162 Aug 27 j 05:04	0°Щ	
minimum elong	-2168 Nov 23 j 21:39	15°M27'12	0°17'41	retrograde	-2162 Oct 07 j 18:08	2° Ⅱ 40'31	
max. Earth dist.	-2168 Nov 22 j 19:19	15°M11'50	6.15183 AU	:	-2162 Nov 18 j 04:46	30°R ႘	0002102
morning rise	-2168 Dec 06 j 14:35	18° M ₊25'01 0° ⊼ ′		opposition min. Earth dist.	-2162 Dec 06 j 07:45	27° 8 39'49 27° 8 43'42	-0°02'02 4.27845 AU
retrograde	-2167 Jan 29 j 19:46 -2167 Apr 13 j 14:32	0 x . 7° x 33'16		asc. node	-2162 Dec 05 j 20:10 -2162 Dec 18 j 21:31	26° 8 00'28	4.27843 AU
desc. node	-2167 Apr 28 j 01:53	7°×13'34		direct	-2161 Feb 04 j 16:41	20° 8 37'01	
opposition	-2167 Jun 13 j 12:15	2°×737'03	-0°08'01	direct	-2161 Apr 19 j 12:21	0°Ⅱ	
min. Earth dist.	-2167 Jun 13 j 21:06	2° × 34'11	4.09486 AU	evening set	-2161 Jun 12 j 02:32	10° I I50'43	
	-2167 Jul 04 j 20:35	30°RM₊	-	S	J · · · · · ·		
direct	-2167 Aug 12 j 11:22	27°M43'11		conjunction	-2161 Jun 25 j 16:00	13° Ⅱ 49'34	0°20'16
	-2167 Sep 19 j 11:38	0° ∡ ¹		minimum elong	-2161 Jun 25 j 15:58	13° Ⅱ 49'33	0°20'19
evening set	-2167 Dec 15 j 00:07	16° ∡ ¹42'13		max. Earth dist.	-2161 Jun 25 j 21:44	13° Ⅱ 52'43	6.33014 AU
				morning rise	-2161 Jul 09 j 02:53	16° Ⅱ 47′03	
conjunction	-2167 Dec 27 j 21:20	19° ∡ ¹46′04			-2161 Sep 15 j 23:31	0 \circ \odot	
minimum elong	-2167 Dec 27 j 21:18	19° х 46′03	0°27'56	retrograde	-2161 Nov 07 j 20:41	4°509'40	
max. Earth dist.	-2167 Dec 27 j 22:12	19° ∡ 46′35	6.04748 AU		-2161 Dec 31 j 17:35	30°RⅡ	00.55
morning rise	-2166 Jan 09 j 20:49	22° ₹ 51'21		opposition	-2160 Jan 06 j 17:03	29° Ⅱ 12'55	
	-2166 Feb 10 j 02:11	0°₹		min. Earth dist.	-2160 Jan 06 j 21:30	29° Щ 11'27	4.37081 AU

	iical year style is used: Th						.ge 22
direct	-2160 Mar 08 j 07:16	•	ii astronomicai co	opposition	-2155 Jun 18 j 14:22	7° 7 34'34	0°17'42
direct	-2160 May 13 j 01:59	24 п 0920		min. Earth dist.	-2155 Jun 18 j 21:47		4.08094 AU
	, ,				,	2° x ¹ 40'52	4.08094 AU
evening set	-2160 Jul 13 j 20:55	12°503'37	(20010 ATT	direct	-2155 Aug 17 j 09:48		
max. Earth dist.	-2160 Jul 26 j 05:09	14°9544'54	6.39819 AU	evening set	-2155 Dec 19 j 20:54	21° ∡ ⁴43'22	
conjunction	-2160 Jul 27 j 01:46	14°956'09	0°56'13	conjunction	-2154 Jan 01 j 18:55	24° ∡ ¹48'05	-0°33'56
minimum elong	-2160 Jul 27 j 01:43	14° © 56'08	0°56'17	minimum elong	-2154 Jan 01 j 18:53	24° ∡ ¹48'04	0°33'58
morning rise	-2160 Aug 09 j 03:37	17° © 47'07		max. Earth dist.	-2154 Jan 01 j 22:27	24° ∡ 50′12	6.03610 AU
Ü	-2160 Oct 11 j 07:51	$0^{\circ}\Omega$		morning rise	-2154 Jan 14 j 19:35	27° ∡ 54′20	
retrograde	-2160 Dec 07 j 12:00	4° Ω 45'15		C	-2154 Jan 23 j 16:55	ರ°0	
C	-2159 Feb 04 j 15:08	30° №		retrograde	-2154 May 26 j 02:56	18° る 01'50	
opposition	-2159 Feb 05 j 16:43	29° © 51'43	1°39'12	opposition	-2154 Jul 25 j 13:39	13° る 01'08	-1°20'38
min. Earth dist.	-2159 Feb 06 j 13:24	29° © 45'01	4.41144 AU	min. Earth dist.	-2154 Jul 25 j 00:14		4.00566 AU
direct	-2159 Apr 09 j 04:05	24°9548'47		direct	-2154 Sep 22 j 02:11	8° る 07'52	
	-2159 Jun 10 j 03:25	0°N		evening set	-2153 Jan 24 j 18:13	27° පි 30'15	
evening set	-2159 Aug 14 j 09:35	12° Ω 35'33		- · · · · · · · · · · · · · · · · · · ·	-2153 Feb 04 j 04:39	0° ≈	
evening sec	-2159 Aug 25 j 09:59	15° Ω			2100100 01,101.59		
max. Earth dist.	-2159 Aug 25 j 16:37	15° Ω 03'38	6.40721 AU	conjunction	-2153 Feb 06 j 23:23	0° ≈ 40'01	-1°07'52
max. Earth dist.	210) 114g 20 j 10.57	15 000550	0.10721710	minimum elong	-2153 Feb 06 j 23:21	0°≈40'00	1°07'55
conjunction	-2159 Aug 27 j 06:10	15° Ω 24'13	1°15'54	max. Earth dist.	-2153 Feb 08 j 06:26	0°≈58'39	5.99210 AU
minimum elong	-2159 Aug 27 j 06:09	15°Ω24'13	1°15'55	morning rise	-2153 Feb 20 j 07:51	3°≈51'33	3.77210710
morning rise	-2159 Sep 08 j 23:37	18°Ω11'28	1 13 33	morning rise	-2153 Apr 11 j 12:07	15° ≈	
morning risc	-2159 Nov 08 j 06:28	0° m)		retrograde	-2153 Apr 11 j 12.07	13 ∞ 24° ≈ 17'59	
retrograde	-2158 Jan 07 j 10:40	5° Mg 11'39		min. Earth dist.	-2153 Jul 02 j 14:34 -2153 Aug 30 j 10:15	19°≈23'09	3.99927 AU
opposition	-2158 Mar 09 j 02:00	0° m) 19'52	1°53'30	opposition	-2153 Aug 30 j 10:13	19°≈13'55	
min. Earth dist.	-2158 Mar 10 j 07:54	0° m/1932	4.38964 AU	opposition	-2153 Aug 31 j 13:33	15°R≈	-1 33 41
iiiii. Eartii dist.	-2158 Mar 11 j 16:11	0 11/10 18 30°RΩ	4.36904 AU	direct	-2153 Oct 08 j 13:20 -2153 Oct 28 j 13:18	13 k∞ 14°≈18'54	
direct	-2158 May 10 j 17:56	30 κδι 25°Ω18'40		direct	-2153 Oct 28 j 13.18 -2153 Nov 17 j 12:48	14 ≈16 34 15°≈	
direct	-2158 Jul 08 j 05:47	0° m)			-2152 Feb 14 j 19:45	0° ∀	
evening set	-2158 Sep 14 j 08:40	13° Mp 10'46		evening set	-2152 Mar 01 j 19:39	3°) 43′04	
max. Earth dist.	-2158 Sep 25 j 02:39	15° M) 34'02	6.35535 AU	evening set	-2132 Mai 01 J 19.39	3 T(43 U4	
max. Earm dist.	-2136 Sep 23 J 02.39	13 11/34 02	0.55555 AU	conjunction	-2152 Mar 15 j 08:23	6°) 54'45	1016'04
conjunction	-2158 Sep 26 j 23:39	15° m 59'08	1°14'29	minimum elong	-2152 Mar 15 j 08:24	6°) 54'45	
minimum elong		15° m 59'09	1°14'30	max. Earth dist.	-2152 Mar 17 j 09:17	7° ¥ 23'39	6.02275 AU
-	-2158 Sep 26 j 23:41 -2158 Oct 09 j 12:39	13 11/39 09 18° Mp 46'40	1 14 30	morning rise	·	10° X 07'43	6.022/3 AU
morning rise	-2158 Dec 04 j 00:24	18 110,40,40 0° ⊽		morning rise	-2152 Mar 28 j 23:48 -2152 Jul 28 j 07:54	10 χ 0/43 0° Υ	
ratragrada	-2157 Feb 08 j 16:52	0 <u>⊶</u> 6° ≏ 14'23		ratrograda	·	0° Υ 08'58	
retrograde	3		1927/04	retrograde	-2152 Aug 06 j 20:16	0 10838 30°R ∺	
opposition	-2157 Apr 10 j 14:38	1° £ 22'35		i. Fauth diat	-2152 Aug 16 j 06:44	** -	4.06440.411
min. Earth dist.	-2157 Apr 11 j 23:21		4.31079 AU	min. Earth dist.	-2152 Oct 04 j 02:40	25° H 03'45	4.06440 AU
Ji	-2157 Apr 21 j 13:30	30°R, M)		opposition	-2152 Oct 05 j 09:58		-1-4251
direct	-2157 Jun 11 j 20:47	26° m 23'55		direct	-2152 Dec 02 j 15:22	20°) €05'44 0° Υ	
. ,	-2157 Jul 31 j 23:09 -2157 Oct 15 j 13:22	0° ჲ 14° ჲ 32'57		. ,	-2151 Feb 24 j 16:23	9° Υ 12'06	
evening set max. Earth dist.	3		(25577 AII	evening set	-2151 Apr 07 j 20:13	9 1 1200	
max. Earth dist.	-2157 Oct 26 j 10:40	17° ≏ 01'40	6.25577 AU	agniumation	-2151 Apr 21 j 14:02	12° Y °21'54	0055146
:	2157 0-4 20:02.12	179 0 24140	0°51'24	conjunction	-2151 Apr 21 j 14:06	12° Y 21'56	0°55'45
conjunction	-2157 Oct 28 j 03:13 -2157 Oct 28 j 03:15	17° Ω 24'49 17° Ω 24'51	0°51'22	minimum elong max. Earth dist.	-2151 Apr 21 j 14.06 -2151 Apr 23 j 11:36	12 γ 21 36 12° γ 48'09	6.11621 AU
minimum elong morning rise	•	20° £ 16'38	0 31 22			12 γ 48 09 15° γ 32'07	0.11021 AU
morning 1150	-2157 Nov 09 j 16:32 -2157 Dec 25 j 08:22	20° ≥≥ 16′38		morning rise	-2151 May 05 j 09:15 -2151 Jul 16 j 12:48	0° 8	
ratragrada	-2156 Mar 13 j 16:54	8°M33'05		ratrograda	-2151 Sep 09 j 23:41	4° 8 36'53	
retrograde opposition	-2156 May 13 j 18:04	3°M39'30	0°48'38	retrograde	-2151 Sep 09 j 23:41 -2151 Nov 05 j 04:48	4° ⊘ 30°33	
min. Earth dist.		3°M32'00	4.19614 AU	min. Earth dist.	·	30 K I 29° Υ 41'30	4.17568 AU
min. Earm dist.	-2156 May 14 j 17:28		4.19014 AU		-2151 Nov 07 j 11:16	29 Υ 41 30 29° Υ 33'14	
Ji	-2156 Jun 15 j 01:38	30° ₹ Ω		opposition	-2151 Nov 08 j 11:34	29 \ \ \ 33 \ \ \ 24^\circ \ \ \ \ \ \ 32' \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	-0 3342
direct	-2156 Jul 13 j 21:40	28° ≏ 43'38		direct	-2150 Jan 06 j 17:07	0° 8	
	-2156 Aug 11 j 14:09	0°M 150 m			-2150 Mar 08 j 22:22	13° 8 10'01	
avanina aat	-2156 Nov 05 j 20:13	15°M		evening set	-2150 May 13 j 16:58		
evening set	-2156 Nov 15 j 20:14	17° M .18'19			-2150 May 21 j 21:49	15° 8	
conjunction	-2156 Nov 28 j 12:48	20°M16'19	0°11'27	conjunction	-2150 May 27 j 10:59	16° 8 14'40	-0°16'49
minimum elong	-2156 Nov 28 j 12:49	20°M16'20	0°11'25	minimum elong	-2150 May 27 j 10:39	16° 8 14'41	
behind sun begin	-2156 Nov 28 j 06:55	20°M12'53	J 112J	max. Earth dist.	-2150 May 28 j 15:28	16° 8 30'38	6.23716 AU
behind sun end	-2156 Nov 28 j 18:42	20°M19'46		morning rise	-2150 Jun 10 j 03:55	19° 8 18'35	0.23 / 10 AU
max. Earth dist.	-2156 Nov 27 j 14:39	20°M03'20	6.13655 AU	morning risc	-2150 Aug 01 j 01:19	0°Ⅱ	
morning rise	-2156 Dec 11 j 06:22	23°M15'06	J.15055 110	retrograde	-2150 Aug 01 j 01:19 -2150 Oct 12 j 06:29	7° П 21'36	
	-2155 Jan 10 j 04:39	25 IIC15 00 0° ⊼ ¹		asc. node	-2150 Oct 12 j 00:29	6° П 57'00	
desc. node	-2155 Mar 08 j 00:25	9° ∡ 754'08		opposition	-2150 Dec 10 j 20:41	2° П 21'30	0°07'01
retrograde	-2155 Apr 18 j 19:03	12° × ³⁴ 08		min. Earth dist.	-2150 Dec 10 j 10:32	2° ∏ 24'54	4.29456 AU
- 211 0 Braue	2100 11p1 10 j 17.00	12 % 51 10		Zarar dist.	2100 200 10 j 10.32		, 150 /10

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 23 Attention, astronomical year style is used: The year -2150 in astronomical counting style is the year 2151 BCE in historical counting style.

Attention, astronom	nical year style is used: Th		n astronomical co		2151 BCE in historical c	ounting style.	
	-2150 Dec 29 j 05:30	30° ₹ 8		max. Earth dist.	-2144 Dec 02 j 03:43	24°M43'56	6.11886 AU
direct	-2149 Feb 09 j 10:06	27° 8 18'38					
	-2149 Mar 24 j 01:37	Π °0		conjunction	-2144 Dec 03 j 00:43	24°M56'17	
evening set	-2149 Jun 16 j 20:50	15° Ⅱ 28'23		minimum elong	-2144 Dec 03 j 00:43	24°M56'17	0°05'18
				behind sun begin	-2144 Dec 02 j 16:58	24°M51'44	
conjunction	-2149 Jun 30 j 09:02	18° ∐ 26′08	0°26'03	behind sun end	-2144 Dec 03 j 08:29	25°M00'50	
minimum elong	-2149 Jun 30 j 09:00	18° Ⅱ 26'07	0°26'05	morning rise	-2144 Dec 15 j 19:15	27° M 56'14	
max. Earth dist.	-2149 Jun 30 j 10:38	18° Ⅲ 27'01	6.34508 AU		-2144 Dec 24 j 16:22	0° ∡ 7	
morning rise	-2149 Jul 13 j 18:49	21° Ⅱ 22'30		desc. node	-2143 Jan 17 j 23:34	5° ₹ 24'25	
_	-2149 Aug 24 j 13:50	0°9		retrograde	-2143 Apr 23 j 18:12	17° ₹ 21'32	
retrograde	-2149 Nov 12 j 05:04	8°539'09		opposition	-2143 Jun 23 j 13:01	12° ₹ 24'21	
opposition	-2148 Jan 11 j 02:50	3°542'53	1°04'42	min. Earth dist.	-2143 Jun 23 j 17:33		4.06364 AU
min. Earth dist.	-2148 Jan 11 j 09:36	3°5540'39	4.38380 AU	direct	-2143 Aug 22 j 02:08	7° ∡ 30′50	
	-2148 Feb 12 j 02:04	30°RⅡ		evening set	-2143 Dec 24 j 15:38	26° ∡ ³38'42	
direct	-2148 Mar 12 j 21:42	28° Ⅱ 39'23			21.12.1	200 74422	0000100
	-2148 Apr 12 j 01:25	0°95		conjunction	-2142 Jan 06 j 14:40	29° 🖈 44'32	
evening set	-2148 Jul 18 j 09:03	16° © 30'14		minimum elong	-2142 Jan 06 j 14:37	29° х 44'30	
. ,.	2140 7 1 21 12 44	100601150	1000104	max. Earth dist.	-2142 Jan 06 j 21:36	29° ₹ 48'41	6.02077 AU
conjunction	-2148 Jul 31 j 12:44	19°521'50	1°00'04		-2142 Jan 07 j 16:29	0°る	
minimum elong	-2148 Jul 31 j 12:41	19°521'48	1°00'07	morning rise	-2142 Jan 19 j 16:25	2°る51'58	
max. Earth dist.	-2148 Jul 30 j 15:05	19°5510'02	6.40828 AU	retrograde	-2142 May 31 j 08:40	23°る07'02	
morning rise	-2148 Aug 13 j 13:01	22°5511'48		opposition	-2142 Jul 30 j 16:25	18° る 05'51	
_	-2148 Sep 20 j 08:16	0°Ω		min. Earth dist.	-2142 Jul 30 j 01:26		3.99393 AU
retrograde	-2148 Dec 11 j 17:07	9° Ω 06'48		direct	-2142 Sep 27 j 02:26	13° る 12'29	
opposition	-2147 Feb 10 j 00:54		1°42'51		-2141 Jan 18 j 15:38	0° ≈	
min. Earth dist.	-2147 Feb 10 j 22:21	4° Ω 06'41	4.41811 AU	evening set	-2141 Jan 29 j 20:28	2° ≈ 39'02	
	-2147 Mar 21 j 04:27	30° ₹ 5					
direct	-2147 Apr 13 j 13:59	29° © 10'53		conjunction	-2141 Feb 12 j 02:54	5° ≈ 49'41	
	-2147 May 07 j 04:31	0 $^{\circ}\Omega$		minimum elong	-2141 Feb 12 j 02:52	5° ≈ 49'40	1°10'42
	-2147 Aug 09 j 18:55	15° Ω		max. Earth dist.	-2141 Feb 13 j 14:09	6° ≈ 10'49	5.98510 AU
evening set	-2147 Aug 18 j 17:10	16° Ω 55'34		morning rise	-2141 Feb 25 j 12:32	9° ≈ 02'02	
max. Earth dist.	-2147 Aug 29 j 20:18	19° Ω 21'37	6.40977 AU		-2141 Mar 23 j 05:50	15° ≈	
				retrograde	-2141 Jul 07 j 20:38	29° ≈ 30′22	
conjunction	-2147 Aug 31 j 12:30	19° Ω 43'39	1°16'56	min. Earth dist.	-2141 Sep 04 j 11:30	24° ≈ 35'50	3.99811 AU
minimum elong	-2147 Aug 31 j 12:29	19° Ω 43'39	1°16'58	opposition	-2141 Sep 05 j 16:26	24° ≈ 26′02	-1°54'46
morning rise	-2147 Sep 13 j 05:06	22° Ω 30′26		direct	-2141 Nov 02 j 14:16	19° ≈ 30'43	
	-2147 Oct 19 j 03:28	0° m y			-2140 Jan 27 j 07:23	0°) €	
retrograde	-2146 Jan 11 j 19:01	9° m 30'56		evening set	-2140 Mar 07 j 02:13	8° ¥ 55'51	
opposition	-2146 Mar 13 j 11:15	4° m 39'16	1°52'51				
min. Earth dist.	-2146 Mar 14 j 19:12	4° ™ 29'04	4.38777 AU	conjunction	-2140 Mar 20 j 15:50	12°) €07'46	-1°14'42
	-2146 Apr 29 j 15:46	30°R Ω		minimum elong	-2140 Mar 20 j 15:52	12°) €07'47	1°14'43
direct	-2146 May 15 j 04:40	29° Ω 38′20		max. Earth dist.	-2140 Mar 22 j 16:52	12°) 36′42	6.02734 AU
	-2146 May 30 j 17:03	0° m)		morning rise	-2140 Apr 03 j 08:20	15° ∺ 20'57	
evening set	-2146 Sep 18 j 13:44	17° m 30'10			-2140 Jun 13 j 03:31	0° Y	
max. Earth dist.	-2146 Sep 29 j 06:43	19° m 53'08	6.34908 AU	retrograde	-2140 Aug 11 j 19:22	5° Ƴ 17'26	
				min. Earth dist.	-2140 Oct 09 j 01:24	0° Y 23'03	4.07409 AU
conjunction	-2146 Oct 01 j 04:20	20° Mp 18'36	1°12'30	opposition	-2140 Oct 10 j 09:10	0° Υ 12'11	-1°37'50
minimum elong	-2146 Oct 01 j 04:22	20° m 18'37	1°12'30		-2140 Oct 11 j 20:52	30°₽)	
morning rise	-2146 Oct 13 j 16:59	23°M)06'16		direct	-2140 Dec 07 j 16:41	25° ¥ 13'42	
	-2146 Nov 14 j 22:38	0∘ 亚			-2139 Feb 01 j 11:39	0° Y	
retrograde	-2145 Feb 13 j 02:48	10° ≏ 38'01		evening set	-2139 Apr 13 j 01:24	14° Ƴ 17'34	
opposition	-2145 Apr 15 j 02:50	5° ≙ 46'05	1°31'10				
min. Earth dist.	-2145 Apr 16 j 10:40	5° ≙ 35'57	4.30032 AU	conjunction	-2139 Apr 26 j 19:49	17° Y 26'58	-0°50'56
direct	-2145 Jun 16 j 05:45	0° ₽ 47'45		minimum elong	-2139 Apr 26 j 19:53	17° Y 27'00	0°50'55
evening set	-2145 Oct 19 j 19:50	18° ≏ 58'54		max. Earth dist.	-2139 Apr 28 j 17:35	17° Y 53'15	6.13027 AU
max. Earth dist.	-2145 Oct 30 j 18:27	21° ≏ 28'50	6.24199 AU	morning rise	-2139 May 10 j 14:59	20° Y 36'33	
	•			-	-2139 Jun 23 j 06:17	0°8	
conjunction	-2145 Nov 01 j 09:46	21° ≏ 51'22	0°46'47	retrograde	-2139 Sep 14 j 18:20	9° 8 32'45	
minimum elong	-2145 Nov 01 j 09:48	21° ≏ 51'23	0°46'45	min. Earth dist.	-2139 Nov 12 j 06:34		4.19217 AU
morning rise	-2145 Nov 13 j 23:22	24° ≏ 43'54		opposition	-2139 Nov 13 j 05:25	4° 8 29'27	
Ü	-2145 Dec 07 j 15:28	0° M ,		**	-2139 Dec 24 j 16:12	30°RY	
retrograde	-2144 Mar 18 j 11:44	13°ML07'41		direct	-2138 Jan 11 j 15:42	29° Y ′28′04	
opposition	-2144 May 18 j 11:17	8°M13'50	0°40'24		-2138 Jan 29 j 18:35	0°8	
min. Earth dist.	-2144 May 19 j 10:46	8°M.06'19	4.17963 AU		-2138 May 04 j 22:40	15° 8	
direct	-2144 Jul 18 j 11:49	3° M ₁8'16	-	evening set	-2138 May 18 j 17:04	18° 8 01'26	
	-2144 Oct 20 j 09:20	15° M ₊		<i>5</i>	, » j = 1		
evening set	-2144 Nov 20 j 07:31	21°M.57'15		conjunction	-2138 Jun 01 j 10:28	21° 8 05'06	-0°10'34
<i>3</i>				y			

•	omena of Jupiter fro		-				ige 24
	nical year style is used: Th	-					4.1.60.55
minimum elong	-2138 Jun 01 j 10:28	21° 8 05'07	0°10'31	min. Earth dist.	-2132 May 24 j 08:18	12°M58'39	4.16057 AU
behind sun begin	-2138 Jun 01 j 04:04	21° 8 01'33		direct	-2132 Jul 23 j 06:11	8°M10'04	
behind sun end	-2138 Jun 01 j 16:53	21° 8 08'40	C 25442 ATT		-2132 Sep 30 j 07:21	15°M 26°M53'54	
max. Earth dist.	-2138 Jun 02 j 11:23	21° 8 19'01	6.25443 AU	evening set	-2132 Nov 25 j 01:51		
morning rise	-2138 Jun 15 j 02:43	24° ႘ 07'58 0° Ⅱ		desc. node	-2132 Nov 26 j 21:56	27° ™ 19'44	
	-2138 Jul 12 j 08:31 -2138 Sep 05 j 13:03	0°Щ 9°Щ25'12		:	-2132 Dec 07 j 19:41	29°M53'59	0001110
asc. node	1 3	9 П 23 12 12° П 02'42		conjunction minimum elong	,	29 IL33 39 29°IL53'59	
retrograde	-2138 Oct 16 j 17:21		0017103	behind sun begin	-2132 Dec 07 j 19:42		0.01.71
opposition min. Earth dist.	-2138 Dec 15 j 09:14 -2138 Dec 15 j 00:55	7° П 03'02 7° П 05'49	0°16'02	behind sun begin	-2132 Dec 07 j 11:39	29°M49'16	
	-2137 Feb 14 j 03:17	1° П 59'52	4.31085 AU		-2132 Dec 08 j 03:45	29°M58'43	C 10102 ATT
direct	3	1°Щ39'32 20°Щ05'41		max. Earth dist.	-2132 Dec 07 j 02:19	29°M43'44 0°⊀	6.10102 AU
evening set	-2137 Jun 21 j 14:27	20°Щ05′41			-2132 Dec 08 j 05:55		
. ,.	2127 1 1 05:01 25	220H02122	0021142	morning rise	-2132 Dec 20 j 15:10	2° \$\sqrt{7}55'08	
conjunction	-2137 Jul 05 j 01:35	23° Ⅲ 02'23 23° Ⅲ 02'21	0°31'42 0°31'45	retrograde	-2131 Apr 29 j 02:15	22° х 29′26 17° х 31′42	0927142
minimum elong	-2137 Jul 05 j 01:33			opposition	-2131 Jun 28 j 19:07		
max. Earth dist.	-2137 Jul 05 j 00:28	23° Ⅱ 01'46	6.35896 AU	min. Earth dist.	-2131 Jun 28 j 21:12	17° 🗷 31'01	4.04874 AU
morning rise	-2137 Jul 18 j 09:55	25° Ⅱ 57'36		direct	-2131 Aug 27 j 04:25	12° ∡ 38′22	
	-2137 Aug 06 j 07:11	0.22			-2131 Dec 21 j 23:06	0°る	
retrograde	-2137 Nov 16 j 13:23	13°508'51	1011125	evening set	-2131 Dec 29 j 17:15	1°る50'17	
opposition	-2136 Jan 15 j 12:26	8°9513'05	1°11'35		2120 1 11:17.21	40757100	0045114
min. Earth dist.	-2136 Jan 15 j 21:27	8°9510'08	4.39416 AU	conjunction	-2130 Jan 11 j 17:21	4°る57'02	
direct	-2136 Mar 17 j 10:59	3°509'36		minimum elong	-2130 Jan 11 j 17:18	4°る57'01	
evening set	-2136 Jul 22 j 21:15	20° © 58'05		max. Earth dist.	-2130 Jan 12 j 05:31	5°る04'20	6.01043 AU
	01061 01:0001	2220121	1002120	morning rise	-2130 Jan 24 j 20:11	8°る05'25	
conjunction	-2136 Aug 04 j 23:31	23°548'54	1°03'38	retrograde	-2130 Jun 05 j 18:49	28°る25'11	2 00000 111
minimum elong	-2136 Aug 04 j 23:28	23°5548'52	1°03'41	min. Earth dist.	-2130 Aug 04 j 06:17	23°る29'29	3.98988 AU
max. Earth dist.	-2136 Aug 03 j 21:19	23° © 34'37	6.41396 AU	opposition	-2130 Aug 05 j 00:12	23° る 23'30	-1°33'49
morning rise	-2136 Aug 17 j 22:41	26° © 38'09		direct	-2130 Oct 02 j 06:49	18°る30'03	
	-2136 Sep 02 j 16:34	0° Ω		_	-2130 Dec 31 j 10:26	0° ≈	
retrograde	-2136 Dec 16 j 02:01	13° Ω 31'46		evening set	-2129 Feb 04 j 03:24	7° ≈ 57'34	
opposition	-2135 Feb 14 j 10:40	8° Ω 38'51	1°46'05				
min. Earth dist.	-2135 Feb 15 j 10:38	8° Ω 31′08	4.41896 AU	conjunction	-2129 Feb 17 j 10:44	11°≈08'32	
direct	-2135 Apr 18 j 01:50	3° Ω 36'13		minimum elong	-2129 Feb 17 j 10:42	11° ≈ 08'31	1°13'05
	-2135 Jul 23 j 21:14	15° Ω		max. Earth dist.	-2129 Feb 19 j 00:20	11° ≈ 31′03	5.98751 AU
evening set	-2135 Aug 23 j 02:06	21° Ω 20'44		morning rise	-2129 Mar 02 j 21:32	14° ≈ 21'14	
max. Earth dist.	-2135 Sep 03 j 03:57	23° Ω 46′15	6.40555 AU		-2129 Mar 05 j 14:58	15° ≈	
					-2129 May 17 j 10:45	0° ∀	
conjunction	-2135 Sep 04 j 20:40	24° Ω 08'37	1°17'38	retrograde	-2129 Jul 13 j 01:02	4°) 47′01	
minimum elong	-2135 Sep 04 j 20:40	24°Ω08'37	1°17'40		-2129 Sep 08 j 16:55	30°R≈	
morning rise	-2135 Sep 17 j 12:17	26° Ω 55'12		opposition	-2129 Sep 10 j 20:56	29° ≈ 42′20	
_	-2135 Oct 01 j 18:47	0° m		min. Earth dist.	-2129 Sep 09 j 14:09	29° ≈ 52'47	4.00692 AU
retrograde	-2134 Jan 16 j 05:18	13° m 58'22		direct	-2129 Nov 07 j 18:46	24°≈46'36	
opposition	-2134 Mar 17 j 23:44	9° Mp 06'45	1°51'42	_	-2128 Jan 04 j 16:22	0° ∀	
min. Earth dist.	-2134 Mar 19 j 07:52	8° m 56'31	4.37883 AU	evening set	-2128 Mar 12 j 09:08	14°) (08′46	
direct	-2134 May 19 j 15:26	4° Mp 06'08					
evening set	-2134 Sep 22 j 22:54	21° m 59'59		conjunction	-2128 Mar 25 j 23:45	17°) €20′26	
max. Earth dist.	-2134 Oct 03 j 14:36	24° m 22'45	6.33603 AU	minimum elong	-2128 Mar 25 j 23:47	17°) € 20′27	1°12'50
	0104.0 : 071.77	0.40 m . 4 a	1010104	max. Earth dist.	-2128 Mar 28 j 02:53	17°) € 50'30	6.04171 AU
conjunction	-2134 Oct 05 j 13:01	24° m/48'45	1°10'04	morning rise	-2128 Apr 08 j 16:41	20°) €33'09	
minimum elong	-2134 Oct 05 j 13:03	24° Mp 48'46	1°10'04		-2128 May 21 j 11:21	0°Υ 10° Ω 21105	
morning rise	-2134 Oct 18 j 01:37	27° m/36'54		retrograde	-2128 Aug 16 j 18:25	10° Υ 21'05	4.00000 : **
	-2134 Oct 28 j 20:35	0∘ ⊽		min. Earth dist.	-2128 Oct 14 j 00:23	5°Υ26'23	4.09220 AU
retrograde	-2133 Feb 17 j 21:35	15° ≏ 14'58		opposition	-2128 Oct 15 j 06:57	5°Υ15'57	-1°32'12
opposition	-2133 Apr 19 j 20:44	10° £ 22'52	1°25'33	direct	-2128 Dec 12 j 18:21	0°Υ17'02	
min. Earth dist.	-2133 Apr 21 j 05:03	10° £ 12'35	4.28380 AU	evening set	-2127 Apr 18 j 04:04	19° Ƴ 15'33	
direct	-2133 Jun 20 j 21:27	5° Ω 24'52			010734 01:00 00	222002 4125	0045153
evening set	-2133 Oct 24 j 08:01	23° Ω 39'54	600000 : **	conjunction	-2127 May 01 j 22:33	22° Y 24'07	
max. Earth dist.	-2133 Nov 04 j 08:38	26° £ 11'34	6.22350 AU	minimum elong	-2127 May 01 j 22:37	22° Y 24'09	0°45'52
: "	212231 07:22.22	260 0 2211 6	0041127	max. Earth dist.	-2127 May 03 j 17:54	22°\dagger48'52	6.15046 AU
conjunction	-2133 Nov 05 j 22:20	26° £ 33'16	0°41'37	morning rise	-2127 May 15 j 17:42	25° Ƴ 32'45	
minimum elong	-2133 Nov 05 j 22:23	26° £ 33'17	0°41'36		-2127 Jun 04 j 18:20	0°8	
morning rise	-2133 Nov 18 j 12:26	29° Ω 26'48		retrograde	-2127 Sep 19 j 06:59	14° 8 18'45	0020127
	-2133 Nov 20 j 22:34	0°M⊾		opposition	-2127 Nov 17 j 19:35	9° 8 15'53	
, ,	-2132 Feb 07 j 15:10	15°M		min. Earth dist.	-2127 Nov 16 j 21:59	9° 8 23'12	4.21239 AU
retrograde	-2132 Mar 23 j 11:53	17°M59'30		direct	-2126 Jan 16 j 09:53	4° 8 14'09	
,	-2132 May 08 j 03:50	15°RM 130 m 05115	0021124		-2126 Apr 17 j 06:04	15° 8	
opposition	-2132 May 23 j 11:41	13°M05'15	0~31′24	evening set	-2126 May 23 j 13:03	22° 8 42'24	

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -2126 in astronomical counting style is the year 2127 BCE in historical counting style. 25°**8**45'01 -0°04'28 -2126 Jun 06 j 05:50 retrograde -2120 Mar 28 j 15:40 22°M57'40 conjunction -2126 Jun 06 j 05:50 25°845'01 0°04'26 -2120 May 28 j 14:26 18°**™**02'58 0°21'58 minimum elong opposition -2126 Jun 05 j 21:41 25°840'30 min. Earth dist. -2120 May 29 j 08:39 4.14214 AU behind sun begin 17°M57'06 -2126 Jun 06 j 13:59 -2120 Jun 23 j 05:19 behind sun end 25°**8**49'32 15°RM -2126 Jun 07 j 02:39 25°**8**56'36 -2120 Jul 28 j 04:44 13°ML08'08 max. Earth dist. 6.27316 AU direct -2120 Aug 31 j 17:57 morning rise -2126 Jun 19 j 21:08 28°**8**46'41 15°M 20° Mc02'00 -2126 Jun 25 j 10:30 Π $^{\circ}$ 0 desc. node -2120 Oct 05 j 08:38 4°**Ⅲ**30′10 asc. node -2126 Jul 16 j 12:49 -2120 Nov 21 j 14:55 0°**∡**7 16°**Ⅲ**33'31 retrograde -2126 Oct 21 j 02:49 evening set -2120 Nov 29 j 22:15 1°**х** 56′22 opposition -2126 Dec 19 j 18:26 11°**Ⅲ**34'28 0°24'36 min. Earth dist. -2126 Dec 19 j 13:27 11°**Ⅲ**36′08 4.32647 AU conjunction -2120 Dec 12 j 16:59 4°**х** 57′29 -0°07'57 -2120 Dec 12 j 16:58 direct -2125 Feb 18 j 17:34 6°**Ⅲ**31'13 minimum elong 4°**∡**°57′28 $0^{\circ}08'00$ -2120 Dec 12 j 09:45 evening set -2125 Jun 26 j 04:02 24°**Ⅲ**33'37 behind sun begin 4°**∡**°53′13 behind sun end -2120 Dec 13 j 00:12 5°**х** 01'44 conjunction -2125 Jul 09 j 14:01 27°**Ⅲ**29′23 0°36'58 max. Earth dist. -2120 Dec 12 j 04:38 4°**х** 50′11 6.08556 AU minimum elong -2125 Jul 09 j 13:58 27°**Ⅲ**29'22 0°37'02 morning rise -2120 Dec 25 j 13:20 7°**х** 59'42 max. Earth dist. -2125 Jul 09 j 08:20 27°**Ⅲ**26′17 6.37011 AU retrograde -2119 May 04 j 10:35 27°**х** 41'35 -2125 Jul 21 j 01:39 opposition -2119 Jul 04 j 02:18 22°**∡**′43'18 -0°46'13 morning rise -2125 Jul 22 j 21:09 0°523'40 min. Earth dist. -2119 Jul 04 j 00:59 22°**∡**¹43'44 4.03788 AU retrograde -2125 Nov 20 j 19:04 17°531'08 direct -2119 Sep 01 j 07:09 17°**∡** 50′06 opposition -2124 Jan 19 j 19:37 12°**©**35'51 1°17'52 -2119 Dec 04 j 03:32 0°정 min. Earth dist. -2124 Jan 20 i 06:58 12°932'08 4.40041 AU -2118 Jan 03 j 19:56 7°る04'26 evening set direct -2124 Mar 21 i 20:15 7°532'24 evening set -2124 Jul 27 i 06:43 25°9520'05 conjunction -2118 Jan 16 i 20:48 10°る11'48 -0°50'35 max. Earth dist. -2124 Aug 08 j 03:32 27°954'56 6.41478 AU minimum elong -2118 Jan 16 i 20:45 10°る11'46 0°50'38 max. Earth dist. -2118 Jan 17 j 12:15 10°る21'04 6.00481 AU -2124 Aug 09 j 07:52 28°910'23 1°06'47 -2118 Jan 30 j 00:50 13°る20'53 conjunction morning rise -2124 Aug 09 j 07:49 -2118 Apr 22 j 09:23 minimum elong 28°910'22 1°06'48 0°≈≈ -2124 Aug 17 j 16:53 -2118 Jun 11 j 02:03 0 $^{\circ}\Omega$ retrograde 3°≈43'12 -2124 Aug 22 j 05:45 0°**Ω**59'07 -2118 Jul 31 j 08:19 30°Rる morning rise -2124 Nov 06 j 12:30 -2118 Aug 09 j 10:25 15°€ min. Earth dist. 28°る47'55 3.99021 AU -2124 Dec 20 j 09:39 -2118 Aug 10 j 07:19 17°**£**53′17 28°る40'55 -1°39'25 retrograde opposition -2118 Oct 07 j 11:40 -2123 Feb 02 j 20:30 15°RΩ 23°**る**47'11 direct -2123 Feb 18 j 19:13 13°**Ω**00'45 1°48'43 -2118 Dec 09 j 23:28 opposition 0°≈ -2123 Feb 19 j 21:00 12°**Ω**52'27 4.41449 AU -2117 Feb 09 j 09:26 min. Earth dist. evening set 13°≈14'06 -2117 Feb 16 j 19:14 direct -2123 Apr 22 j 11:00 7°**£**58′24 15°≈ -2123 Jul 04 j 18:17 15°**Ω** evening set -2123 Aug 27 j 10:15 25°**Ω**44'32 conjunction -2117 Feb 22 j 17:56 16°≈25'15 -1°14'51 max. Earth dist. -2123 Sep 07 j 08:11 $28^{\circ}\Omega 08'21$ 6.39596 AU minimum elong -2117 Feb 22 j 17:54 16°≈25'14 1°14'53 max. Earth dist. -2117 Feb 24 j 11:44 16°≈50'13 5.99353 AU conjunction -2123 Sep 09 j 03:55 28° Ω32'27 1°17'53 morning rise -2117 Mar 08 j 05:30 19°≈38'00 -2123 Sep 09 j 03:55 28° Ω32'27 1°17'54 -2117 Apr 23 j 17:07 0°) minimum elong -2123 Sep 15 j 18:52 -2117 Jul 18 j 05:18 9°**)** 59'41 retrograde -2123 Sep 21 j 19:03 -2117 Sep 15 j 23:26 4°**)** 54'45 -1°54'17 morning rise 1°Mp19'11 opposition -2122 Jan 20 j 18:55 18° m 27'00 min. Earth dist. -2117 Sep 14 j 16:49 5°¥05'10 4.01804 AU retrograde opposition -2122 Mar 22 j 13:00 13° m 35'27 1°49'54 -2117 Nov 09 i 06:59 30°R≈ min. Earth dist. -2122 Mar 23 j 22:03 13° m 24'55 4.36484 AU direct -2117 Nov 12 j 23:10 29°≈58'36 direct -2122 May 24 i 03:05 8° m 35'09 -2117 Nov 16 j 15:22 0°) evening set -2122 Sep 27 j 08:24 26° m 32'37 evening set -2116 Mar 17 j 14:36 19° **H** 17'16 max. Earth dist. -2122 Oct 08 j 01:40 28° m 56'48 6.31884 AU conjunction -2116 Mar 31 j 05:53 22°\ 28'34 -1°10'27 -2122 Oct 09 j 22:31 29° m 22'02 1°07'11 -2116 Mar 31 j 05:55 22°\ 28'35 1°10'27 conjunction minimum elong -2122 Oct 09 j 22:33 29°m/22'03 1°07'10 -2116 Apr 02 j 08:34 22°**)** 58'13 6.05673 AU minimum elong max. Earth dist. -2122 Oct 12 j 17:58 0∘**⊽** morning rise -2116 Apr 13 j 23:29 25°**)** 40′50 $0^{\circ}\Upsilon$ morning rise -2122 Oct 22 j 10:59 2°**2**10′53 -2116 May 02 j 21:58 -2121 Feb 22 j 16:47 19°**£**56'48 retrograde -2116 Aug 21 j 13:11 15°Y20'01 retrograde -2121 Apr 24 j 16:34 15°**≏**04'31 1°19'18 min. Earth dist. -2116 Oct 18 j 19:51 10°**Υ**25'27 4.10962 AU opposition -2121 Apr 25 j 23:04 -2116 Oct 20 j 02:17 10°**Y**15′04 -1°26′01 min. Earth dist. 14°**£**54'49 4.26457 AU opposition -2121 Jun 25 j 12:21 10°**≏**07'02 -2116 Dec 17 j 16:19 5°Y15'41 direct direct 28°**≏**26'42 -2115 Apr 23 j 05:04 24°\bar{Y}09'29 evening set -2121 Oct 28 j 22:11 evening set -2121 Nov 04 j 16:28 0° M max. Earth dist. -2121 Nov 09 j 01:03 1°ML00'24 6.20398 AU conjunction -2115 May 06 j 23:38 27°**Y**17'17 -0°40'36 minimum elong -2115 May 06 j 23:41 27°**Y**17′19 0°40'33 conjunction -2121 Nov 10 j 12:42 1°M21'00 0°36'07 max. Earth dist. -2115 May 08 j 15:31 27°**Y**39'59 6.16894 AU minimum elong -2121 Nov 10 j 12:45 1°M21'02 0°36'04 -2115 May 18 j 22:16 0°8 -2121 Nov 23 j 03:29 4°M15'38 -2115 May 20 j 18:34 0°825'00 morning rise morning rise

-2115 Aug 03 j 04:51

15°8

-2120 Jan 12 j 12:33

15°M₁

•	omena of Jupiter fro		_	` //			ge 26
Attention, astronom retrograde	-2115 Sep 23 j 21:00	19° 8 01'49	n astronomical co	unting style is the year	· 2116 BCE in historical c -2109 Oct 19 j 08:14	ounting style. 0°M	
retrograde	-2115 Sep 25 j 21.00 -2115 Nov 14 j 20:25	19 801 49 15°R 8		evening set	-2109 Oct 19 j 08.14 -2109 Nov 02 j 12:19	3°M₁2'57	
opposition	-2115 Nov 14 j 20:25 -2115 Nov 22 j 08:49	13° K 59'26	0.50.38	max. Earth dist.	-2109 Nov 13 j 19:59	5°M49'55	6.18832 AU
min. Earth dist.	-2115 Nov 22 j 08:49	_	4.23005 AU	max. Earth dist.	-2109 NOV 13 J 19.39	3 IIU 4 933	0.18832 AU
direct	-2114 Jan 21 j 04:32	8° 8 57'22	4.23003 AO	conjunction	-2109 Nov 15 j 03:23	6°ML08'07	0°30'24
direct	-2114 Mar 27 j 13:00	15° 8		minimum elong	-2109 Nov 15 j 03:25	6°M08'08	0°30'21
asc. node	-2114 May 26 j 10:02	26° 8 56'05		morning rise	-2109 Nov 27 j 18:38	9° ™ 03'40	0 3021
evening set	-2114 May 28 j 08:04	27° 8 21'25		morning 115¢	-2109 Dec 24 j 06:11	15° M	
	-2114 Jun 09 j 06:35	0°II		retrograde	-2108 Apr 02 j 17:47	27°M53'29	
				opposition	-2108 Jun 02 j 16:24	22°M58'23	0°12'29
conjunction	-2114 Jun 11 j 00:13	0° Ⅲ 23'06	0°01'45	min. Earth dist.	-2108 Jun 03 j 07:56	22°M53'22	4.12822 AU
minimum elong	-2114 Jun 11 j 00:12	0° Ⅲ 23′05	0°01'47	direct	-2108 Aug 02 j 02:12	18° M 03'57	
behind sun begin	-2114 Jun 10 j 15:53	0° Ⅱ 18'30		desc. node	-2108 Aug 14 j 21:52	18° M ₁9'50	
behind sun end	-2114 Jun 11 j 08:31	0°Ⅲ27'41			-2108 Nov 04 j 07:16	0° ∡ ¹	
max. Earth dist.	-2114 Jun 11 j 17:46	0° Ⅲ 32'50	6.28871 AU	evening set	-2108 Dec 04 j 17:38	6° х 55′04	
morning rise	-2114 Jun 24 j 14:32	3° Ⅲ 23'42					
retrograde	-2114 Oct 25 j 09:45	21° Ⅲ 03′50		conjunction	-2108 Dec 17 j 12:54	9° ∡ ¹56'56	-0°14'24
opposition	-2114 Dec 24 j 03:22	16° Ⅱ 05'19	0°33'00	minimum elong	-2108 Dec 17 j 12:53	9° х 56′55	0°14'26
min. Earth dist.	-2114 Dec 24 j 00:08	16° Ⅱ 06′23	4.33894 AU	behind sun begin	-2108 Dec 17 j 09:03	9° х 54′40	
direct	-2113 Feb 23 j 05:23	11° Ⅱ 01'56		behind sun end	-2108 Dec 17 j 16:42	9° ∡ ¹59'10	
evening set	-2113 Jun 30 j 17:56	29° Ⅱ 01'56		max. Earth dist.	-2108 Dec 17 j 03:29	9° ∡ ′51′21	6.07454 AU
	-2113 Jul 05 j 04:45	0 \circ 60		morning rise	-2108 Dec 30 j 10:18	13° ∡ °00'04	
					-2107 Mar 27 j 14:54	0°ප	
conjunction	-2113 Jul 14 j 02:40	1° 9 56'52	0°42'03	retrograde	-2107 May 09 j 15:41	2° る 47'55	
minimum elong	-2113 Jul 14 j 02:37	1° 9 56'50	0°42'06		-2107 Jun 22 j 01:22	30°₽ ⋌	
max. Earth dist.	-2113 Jul 13 j 16:50	1° 9 51'29	6.37856 AU	opposition	-2107 Jul 09 j 06:56	27° х 49′02	-0°55'09
morning rise	-2113 Jul 27 j 08:32	4° 9 50'16		min. Earth dist.	-2107 Jul 09 j 02:06		4.03087 AU
retrograde	-2113 Nov 25 j 03:05	21° 9 54'45		direct	-2107 Sep 06 j 07:56	22° ∡ 55'52	
opposition	-2112 Jan 24 j 03:37	16° © 59'57	1°23'47		-2107 Nov 14 j 00:41	0°ಕ	
min. Earth dist.	-2112 Jan 24 j 18:05	16° © 55'14	4.40448 AU	evening set	-2106 Jan 08 j 20:14	12° る 11'35	
direct	-2112 Mar 26 j 07:48	11° © 56'35				_	
evening set	-2112 Jul 31 j 16:55	29° © 43'54		conjunction	-2106 Jan 21 j 22:10	15° る 19'29	
	-2112 Aug 01 j 22:37	0° Ω		minimum elong	-2106 Jan 21 j 22:07	15° る 19'27	
max. Earth dist.	-2112 Aug 12 j 09:18	2° Ω 16′30	6.41392 AU	max. Earth dist.	-2106 Jan 22 j 18:51	15°る31'53	6.00238 AU
	2112 1 12:16 55	20 022147	100012.4	morning rise	-2106 Feb 04 j 03:01	18° る 29'03	
conjunction	-2112 Aug 13 j 16:57	2° Ω 33'47		. 1	-2106 Mar 28 j 04:32	0°≈	
minimum elong	-2112 Aug 13 j 16:55	2° Ω 33'45	1°09'37	retrograde	-2106 Jun 16 j 07:34	8°≈52'32	1044102
morning rise	-2112 Aug 26 j 13:47	5° Ω 22'07 15° Ω		opposition	-2106 Aug 15 j 10:36 -2106 Aug 14 j 12:46	3°≈49'49 3°≈57'09	3.99280 AU
ratragrada	-2112 Oct 13 j 04:58	13 δι 22° Ω 17'19		min. Earth dist.	-2106 Aug 14 j 12.46 -2106 Sep 17 j 09:39	30°Rる	3.99280 AU
retrograde opposition	-2112 Dec 24 j 18:35 -2111 Feb 23 j 05:19	$17^{\circ}\Omega 24'59$	1°50'47	direct	-2106 Sep 17 j 09.39 -2106 Oct 12 j 13:49	30 KO 28° ろ 55'53	
min. Earth dist.	-2111 Feb 24 j 08:11	17° Ω 16'21	4.40913 AU	uncci	-2106 Nov 06 j 16:32	28 ⊙ 33 33	
mm. Lattii dist.	-2111 Mar 14 j 21:10	17 8 Ω10 21	4.40913 AU		-2105 Jan 31 j 04:17	0 ∞ 15°≈	
direct	-2111 Apr 26 j 20:55	12° Ω 22'52		evening set	-2105 Feb 14 j 12:29	18° ≈ 21'48	
direct	-2111 Jun 08 j 21:24	15° Ω		evening set	-2103100 14 112.2)	10 ~21 40	
	-2111 Aug 30 j 23:49	0° m)		conjunction	-2105 Feb 27 j 21:50	21° ≈ 33'02	-1°15'59
evening set	-2111 Aug 31 j 19:14	0° mp 10'37		minimum elong	-2105 Feb 27 j 21:49	21°≈33'02	
max. Earth dist.	-2111 Sep 11 j 16:56	2° m/34'40	6.38653 AU	max. Earth dist.	-2105 Mar 01 j 16:45	21°≈58'36	6.00056 AU
	r 11 10.00	-42110		morning rise	-2105 Mar 13 j 10:29	24° ≈ 45'53	
conjunction	-2111 Sep 13 j 12:15	2° m 58'37	1°17'41		-2105 Apr 05 j 01:41	0° ∀	
minimum elong	-2111 Sep 13 j 12:16	2° m 58'37	1°17'42	retrograde	-2105 Jul 23 j 04:01	15°) €03'03	
morning rise	-2111 Sep 26 j 02:39	5° m/45'28		opposition	-2105 Sep 20 j 21:48	9° ¥ 58′02	-1°52'43
retrograde	-2110 Jan 25 j 08:38	22° m 57'50		min. Earth dist.	-2105 Sep 19 j 14:08		4.02891 AU
opposition	-2110 Mar 27 j 03:38	18° m) 06'21	1°47'27	direct	-2105 Nov 17 j 21:47	5°) €01'28	
min. Earth dist.	-2110 Mar 28 j 12:47	17° m 55'48	4.35207 AU	evening set	-2104 Mar 22 j 16:36	24°) 17'12	
direct	-2110 May 28 j 15:48	13° m 06'31		Č	J		
	-2110 Sep 26 j 18:57	0∘ <u>⊽</u>		conjunction	-2104 Apr 05 j 08:35	27° ¥ 28′12	-1°07'36
evening set	-2110 Oct 01 j 19:02	1° ≏ 06'56		minimum elong	-2104 Apr 05 j 08:38	27° ¥ 28'13	
max. Earth dist.	-2110 Oct 12 j 11:47	3° ₽ 31'25	6.30387 AU	max. Earth dist.	-2104 Apr 07 j 09:46		6.07044 AU
	,				-2104 Apr 16 j 05:27	0° Υ	
conjunction	-2110 Oct 14 j 08:50	3° ჲ 56'52	1°03'53	morning rise	-2104 Apr 19 j 02:41	0° Υ 40'03	
minimum elong	-2110 Oct 14 j 08:52	ვ° ჲ 56'53	1°03'54	retrograde	-2104 Aug 26 j 07:04	20° Y °11'32	
morning rise	-2110 Oct 26 j 21:32	6° ≏ 46'23		opposition	-2104 Oct 24 j 18:45	15° Y '06'50	-1°19'27
retrograde	-2109 Feb 27 j 13:32	24° ≏ 39'24		min. Earth dist.	-2104 Oct 23 j 14:38	15° Y 16'26	4.12451 AU
opposition	-2109 Apr 29 j 13:04	19° ≙ 46'51	1°12'32	direct	-2104 Dec 22 j 12:58	10° Y ′07′02	
min. Earth dist.	-2109 Apr 30 j 18:01	19° ≏ 37'38	4.24843 AU	evening set	-2103 Apr 28 j 03:24	28° Y 57'19	
direct	-2109 Jun 30 j 05:28	14° ≏ 49'47			-2103 May 02 j 18:22	0° ႘	

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -2103 in astronomical counting style is the year 2104 BCE in historical counting style. opposition -2103 May 11 j 22:09 2°**8**04'32 -0°35'10 -2097 May 04 i 08:46 24°**£**27'19 1°05'18 conjunction -2103 May 11 j 22:11 2°804'34 0°35'08 min. Earth dist. -2097 May 05 j 12:50 24°**2**18'22 4.23345 AU minimum elong 2°**8**26'08 -2103 May 13 j 12:14 -2097 Jul 04 j 22:10 19°**£**30'37 max. Earth dist. 6.18405 AU direct 5°**8**11'29 -2103 May 25 j 16:46 -2097 Oct 01 j 22:22 0°M morning rise -2103 Jul 11 j 03:28 15°8 -2097 Nov 07 j 01:26 evening set 7°M56'50 23°**8**40'35 max. Earth dist. -2097 Nov 18 j 10:27 retrograde -2103 Sep 28 j 07:21 10°M35'10 6.17286 AU opposition -2103 Nov 26 j 20:00 18°**8**38'44 -0°20'55 min. Earth dist. conjunction -2097 Nov 19 j 16:45 -2103 Nov 26 j 02:54 18°**8**44'30 4.24408 AU 10°M52'47 0°24'31 -2097 Nov 19 j 16:47 -2103 Dec 27 j 06:18 15°R minimum elong 10° M $_{5}2'48$ 0°24'28 direct -2102 Jan 25 j 18:27 13°**8**36'28 morning rise -2097 Dec 02 j 08:48 13°M49'18 -2102 Feb 24 j 17:34 15°8 -2097 Dec 07 j 11:32 15°M 20°**8**25'58 -2096 Feb 24 j 15:38 0°**∡**7 asc. node -2102 Apr 05 j 23:32 -2096 Apr 07 j 18:21 -2102 May 24 j 02:14 $0^{\circ}\Pi$ retrograde 2°**х** 46′59 evening set -2102 Jun 02 j 01:52 1°**I**57'46 -2096 May 21 j 11:58 30°RML opposition -2096 Jun 07 j 17:02 27°M51'21 0°02'56 conjunction -2102 Jun 15 j 17:09 4°П58'37 0°07'44 min. Earth dist. -2096 Jun 08 j 05:34 27°ML47'18 4.11333 AU minimum elong -2102 Jun 15 j 17:09 4°**Ⅱ**58'37 0°07'47 desc. node -2096 Jun 24 j 19:06 25°M43'28 behind sun begin -2102 Jun 15 j 09:44 4°**I**I54'32 direct -2096 Aug 06 j 22:06 22°M57'06 behind sun end -2102 Jun 16 j 00:34 5°**Ⅱ**02'42 -2096 Oct 15 j 13:21 0°×7 max. Earth dist. -2102 Jun 16 j 05:43 5°**Ⅱ**05'34 6.30074 AU evening set -2096 Dec 09 j 12:21 11°**∡** 51'47 morning rise -2102 Jun 29 j 06:42 7°**I**I58'23 retrograde -2102 Oct 29 i 18:50 25°**Ⅲ**33'13 conjunction -2096 Dec 22 i 08:34 14° ₹ 54'34 -0°20'44 opposition -2102 Dec 28 j 12:04 20°**II**35'15 0°41'05 minimum elong -2096 Dec 22 i 08:32 14° **1**54'33 0°20'48 min. Earth dist. -2102 Dec 28 j 12:06 20°**Ⅲ**35'15 4.34821 AU max. Earth dist. -2096 Dec 22 i 04:03 14°**х** 51′54 6.06166 AU direct -2101 Feb 27 j 18:39 15°**Ⅱ**31'49 morning rise -2095 Jan 04 j 06:46 17°**х** 58'39 -2101 Jun 18 j 21:33 0ಂತಾ -2095 Feb 28 j 14:45 0°궁 -2101 Jul 05 j 07:04 3°930'17 -2095 May 14 j 22:14 7°る53'10 retrograde evening set -2095 Jul 14 j 10:57 2°**ප**53'43 -1°03'43 opposition -2101 Jul 18 j 14:49 6°524'32 0°46'50 min. Earth dist. -2095 Jul 14 j 04:30 2°る55'51 4.02128 AU conjunction -2101 Jul 18 j 14:46 -2095 Aug 07 j 00:41 30°R.✓ minimum elong 6°924'31 0°46'52 -2101 Jul 18 j 02:46 direct -2095 Sep 11 j 08:37 28°**х** 00′33 max. Earth dist. 6°9517'58 6.38440 AU -2101 Jul 31 j 19:22 -2095 Oct 16 j 05:35 9°9517'11 0°궁 morning rise -2094 Jan 13 j 21:06 -2101 Nov 29 j 09:14 26°9519'37 evening set 17°る18'53 retrograde -2100 Jan 28 j 12:03 21°525'12 1°29'09 opposition -2100 Jan 29 j 03:22 -2094 Jan 26 j 23:55 20°る27'26 -0°59'48 min. Earth dist. 21°920'13 4.40688 AU conjunction -2100 Mar 30 j 17:28 -2094 Jan 26 j 23:52 20°る27'24 0°59'50 direct 16°**©**21'58 minimum elong 20°る41'16 5.99671 AU -2094 Jan 27 j 22:58 -2100 Jul 16 j 14:29 0 $^{\circ}\Omega$ max. Earth dist. evening set -2100 Aug 05 j 03:06 $4^{\circ}\Omega 09'06$ morning rise -2094 Feb 09 j 06:03 23°る37'46 max. Earth dist. -2100 Aug 16 j 16:25 6°**Ω**40'13 6.41263 AU -2094 Mar 08 j 18:24 0°≈ retrograde -2094 Jun 21 j 11:51 14°≈03'30 conjunction -2100 Aug 18 j 01:56 6°Ω58'32 1°11'57 opposition -2094 Aug 20 j 14:21 9°≈00'19 -1°47'56 -2100 Aug 18 j 01:54 6°**£**58'31 1°11'59 min. Earth dist. -2094 Aug 19 j 13:50 9°≈08'34 3.99197 AU minimum elong -2100 Aug 30 j 21:42 9°**Ω**46′29 direct -2094 Oct 17 j 14:58 4°≈06'05 morning rise -2100 Sep 24 j 13:37 15°**Ω** -2093 Jan 13 j 01:54 15°**≈** -2100 Dec 29 j 04:25 26°**Ω**42'44 -2093 Feb 19 j 17:13 23°≈32'27 retrograde evening set -2099 Feb 27 i 15:53 21°Ω50'37 1°52'10 opposition -2099 Feb 28 i 20:28 -2093 Mar 05 i 03:39 26°≈43'58 -1°16'34 min. Earth dist. 21°**Ω**41'27 4.40433 AU conjunction -2093 Mar 05 i 03:39 direct -2099 May 01 i 08:53 16°**Ω**48'45 minimum elong 26°≈43'58 1°16'35 -2099 Aug 14 j 14:49 0° m max. Earth dist. -2093 Mar 07 i 00:07 27°≈10'26 6.00442 AU -2099 Sep 05 i 03:59 -2093 Mar 18 i 17:12 29°≈57'01 evening set 4° m 37'27 morning rise max. Earth dist. 7° **m** 00'40 -2099 Sep 15 j 23:31 6.37836 AU -2093 Mar 18 j 22:15 0°\ -2093 Jul 28 j 05:57 20°¥10'47 retrograde -2099 Sep 17 j 20:18 -2093 Sep 25 j 21:59 15°**)** €05'36 -1°50'19 conjunction 7° m/25'28 1°17'02 opposition 1°17'02 -2093 Sep 24 j 14:51 15°**¥**16'14 4.03693 AU minimum elong -2099 Sep 17 j 20:19 7° m 25'28 min. Earth dist. -2093 Nov 23 j 00:14 -2099 Sep 30 j 10:15 10° Mp 12'26 direct 10°**)**€08'34 morning rise -2098 Jan 29 j 21:40 27° m 28'48 evening set -2092 Mar 27 j 21:26 29°\ 22'25 retrograde $0^{\circ}\Upsilon$ -2098 Mar 31 j 18:07 22° Mp 37'10 1°44'20 -2092 Mar 30 j 14:23 opposition

-2098 Apr 02 j 02:32

-2098 Jun 02 j 04:16

-2098 Sep 10 j 04:18

-2098 Oct 06 j 04:30

-2098 Oct 16 j 23:45

-2098 Oct 18 j 18:20

-2098 Oct 18 j 18:22

-2098 Oct 31 j 06:59

-2097 Mar 04 j 08:34

min. Earth dist.

evening set

conjunction

morning rise

retrograde

max. Earth dist.

minimum elong

direct

22° Mp 26'51

17° m 37'38

5°**≏**40'07

8°**₽**06'26

8°**£**30'35

11°**≏**20'39

29°**₽**20′09

8°**2**30'33 1°00'13

0∘**⊽**

4.34093 AU

6.29057 AU

1°00'13

conjunction

minimum elong

max. Earth dist.

min. Earth dist.

morning rise

retrograde

opposition

direct

-2092 Apr 10 j 14:16

-2092 Apr 10 j 14:19

-2092 Apr 12 j 16:06

-2092 Apr 24 j 08:45

-2092 Aug 31 j 02:15

-2092 Oct 28 j 09:51

-2092 Oct 29 j 13:32

-2092 Dec 27 j 09:58

-2091 Apr 15 j 19:15

2°**Y**33'15 -1°04'12

2°**Y**33'17 1°04'12

5°**Υ**44'46 25°**Υ**08'51

15°**Y**′04'21

0°8

3°**Y**02'12 6.08202 AU

20°**Υ**13'54 4.13846 AU

20°**Y**′04'28 -1°12'10

Attention, astronom	ical year style is used: Th		_	(//	AG 18-Feb-2025 14 r 2092 BCE in historical c	, 1	ge 28
evening set	-2091 May 03 j 04:57	3° 8 51'25			-2086 Aug 23 j 04:36	0∘ 亚	
				evening set	-2086 Oct 10 j 10:28	10° ≏ 04'19	
conjunction	-2091 May 16 j 23:27	6° 8 57'55		max. Earth dist.	-2086 Oct 21 j 04:47	12° ≏ 30'32	6.27961 AU
minimum elong	-2091 May 16 j 23:30	6° 8 57'56	0°29°20 6.19939 AU	:	2006 0-4 22:00-10	120 0 55100	005(110
max. Earth dist. morning rise	-2091 May 18 j 09:38 -2091 May 30 j 17:52	10° 8 04'04	6.19939 AU	conjunction minimum elong	-2086 Oct 23 j 00:10 -2086 Oct 23 j 00:12	12° £ 55'09 12° £ 55'11	0°56'18 0°56'17
morning risc	-2091 Jun 22 j 05:31	15° 8		morning rise	-2086 Nov 04 j 13:03	12 ⊆ 35 11 15° ⊆ 45'48	0 30 17
retrograde	-2091 Oct 02 j 21:10	28° 8 25'16		morning rise	-2085 Jan 16 j 14:28	0°M	
opposition	-2091 Dec 01 j 10:07	23° 8 23'56	-0°11'49	retrograde	-2085 Mar 08 j 22:51	3° M 51′21	
min. Earth dist.	-2091 Nov 30 j 19:17	23° 8 28'56	4.25960 AU		-2085 Apr 30 j 21:15	30° Ŗ Ω	
direct	-2090 Jan 30 j 13:30	18° 8 21'29		opposition	-2085 May 09 j 00:12	28° ≏ 58'14	0°57'54
asc. node	-2090 Feb 12 j 23:02	18° 8 38'42		min. Earth dist.	-2085 May 10 j 02:46	28° ≏ 49'45	4.21936 AU
	-2090 May 06 j 13:08	Π °0		direct	-2085 Jul 09 j 09:33	24° ≏ 01'49	
evening set	-2090 Jun 06 j 21:49	6° Ⅱ 39'13			-2085 Sep 12 j 03:40	0° M	
				evening set	-2085 Nov 11 j 10:43	12°M31'22	
conjunction	-2090 Jun 20 j 12:23	9° Ⅱ 39'07		n d.E.	-2085 Nov 22 j 02:18	15°M	C 1500C ATT
minimum elong	-2090 Jun 20 j 12:22	9° ∏ 39'07	0°13′50	max. Earth dist.	-2085 Nov 22 j 23:14	15°M12'13	6.15696 AU
behind sun begin behind sun end	-2090 Jun 20 j 08:15 -2090 Jun 20 j 16:28	9° Ⅲ 36'51 9° Ⅲ 41'22		agnismation	2005 Nav. 24: 02:27	150M 20112	0°18'41
max. Earth dist.	-2090 Jun 20 j 23:38	9 ∏ 41 22 9° ∏ 45'19	6.31570 AU	conjunction minimum elong	-2085 Nov 24 j 02:37 -2085 Nov 24 j 02:39	15°M28'12 15°M28'13	0°18'40
morning rise	-2090 Jul 04 j 00:36	12° ∏ 37'45	0.51570 AC	morning rise	-2085 Dec 06 j 19:13	18°M25'41	0 10 40
morning rise	-2090 Oct 26 j 04:03	0°95		morning rise	-2084 Jan 30 j 00:30	0° ₹	
retrograde	-2090 Nov 03 j 03:06	0°506'12		retrograde	-2084 Apr 12 j 17:54	7° х 31'48	
Č	-2090 Nov 11 j 02:14	30°R Ⅱ		desc. node	-2084 May 06 j 19:56	6° ∡ ³37'39	
opposition	-2089 Jan 01 j 22:33	25° Ⅱ 08'50	0°49'03	opposition	-2084 Jun 12 j 13:53	2° ∡ ³35'47	-0°06'19
min. Earth dist.	-2089 Jan 01 j 23:30	25° Ⅱ 08'31	4.36182 AU	min. Earth dist.	-2084 Jun 13 j 01:44	2° ∡ ³31'56	4.09668 AU
direct	-2089 Mar 04 j 08:34	20° Ⅱ 05'27			-2084 Jul 03 j 17:29	30°RM	
	-2089 Jun 01 j 01:02	0		direct	-2084 Aug 11 j 15:02	27° M 41'44	
evening set	-2089 Jul 09 j 21:25	8° 5 00'40			-2084 Sep 18 j 20:03	0° ∡ 7	
max. Earth dist.	-2089 Jul 22 j 11:46	10°9345'14	6.39568 AU	evening set	-2084 Dec 14 j 04:06	16° ⊀ 41′09	
conjunction	-2089 Jul 23 j 03:39	10°©53'53	0°51'23	conjunction	-2084 Dec 27 j 01:05	19° ∡ ¹45'00	-0°26'44
minimum elong	-2089 Jul 23 j 03:36	10° © 53'52	0°51'25	minimum elong	-2084 Dec 27 j 01:03	19° ∡ ⁴44'59	
morning rise	-2089 Aug 05 j 06:56	13° © 45'33		max. Earth dist.	-2084 Dec 26 j 22:17	19° х 43′21	6.04576 AU
	-2089 Nov 12 j 02:46	0°Ω		morning rise	-2083 Jan 09 j 00:30	22° х 50'18	
retrograde	-2089 Dec 03 j 17:01	0° Ω 44'08			-2083 Feb 09 j 07:11	0°る	
	-2089 Dec 25 j 05:07	30°₹©	1922150	retrograde	-2083 May 20 j 00:11	12° る 52'52	1011124
opposition min. Earth dist.	-2088 Feb 01 j 20:53 -2088 Feb 02 j 14:47	25°\$50'09 25°\$44'20		opposition min. Earth dist.	-2083 Jul 19 j 11:58 -2083 Jul 19 j 02:23	7°る52'55 7°る56'05	4.00791 AU
direct	-2088 Apr 04 j 06:26	20°547'03	4.41330 AO	direct	-2083 Sep 16 j 04:00	7 3 5003 2° る 59'44	4.00791 AU
uncer	-2088 Jun 28 j 20:04	0°Ω		evening set	-2082 Jan 18 j 20:29	22° る 22'36	
evening set	-2088 Aug 09 j 12:08	8° Ω 31'50		evening sec	2002 0 0 10 1 20.25	22 02250	
max. Earth dist.	-2088 Aug 20 j 23:06	11° Ω 01'36	6.41740 AU	conjunction	-2082 Feb 01 j 00:29	25° る 32'06	-1°03'38
	5 3			minimum elong	-2082 Feb 01 j 00:26	25° る 32'05	1°03'40
conjunction	-2088 Aug 22 j 09:55	11° Ω 20′37	1°13'53	max. Earth dist.	-2082 Feb 02 j 03:02	25° る 48'03	5.98712 AU
minimum elong	-2088 Aug 22 j 09:53	11° Ω 20′36	1°13'55	morning rise	-2082 Feb 14 j 07:43	28° る 43'22	
morning rise	-2088 Sep 04 j 04:27	14° Ω 07'54			-2082 Feb 19 j 16:51	0° ≈	
	-2088 Sep 08 j 04:37	15° Ω			-2082 May 04 j 17:28	15° ≈	
	-2088 Dec 07 j 07:43	0° m		retrograde	-2082 Jun 26 j 17:20	19° ≈ 12'55	
retrograde	-2087 Jan 02 j 10:22	1° mp 03'29			-2082 Aug 19 j 09:56	15°R≈	
•.•	-2087 Jan 28 j 15:21	30°R€	1050151	opposition	-2082 Aug 25 j 16:43	14°≈09'20	
opposition	-2087 Mar 04 j 00:55	26° Ω 11'31	1°52'51	min. Earth dist.	-2082 Aug 24 j 15:15		3.98730 AU
min. Earth dist.	-2087 Mar 05 j 05:39	$20^{\circ} 002^{\circ} 19$ $21^{\circ} \Omega 09'57$	4.40524 AU	direct	-2082 Oct 22 j 16:34	9°≈14'46 15°≈	
direct	-2087 May 05 j 17:55 -2087 Jul 27 j 23:49	0° mp		evening set	-2082 Dec 22 j 11:57 -2081 Feb 24 j 21:57	13 ≈ 28°≈43'12	
evening set	-2087 Sep 09 j 09:58	8° Mp 57'45		evening set	-2081 Mar 02 j 07:38	0°) €	
max. Earth dist.	-2087 Sep 20 j 04:28	11° m/20'36	6.37521 AU		2001 11141 02 3 07.50	۰۸	
		4		conjunction	-2081 Mar 10 j 09:39	1° ¥ 55'14	-1°16'29
conjunction	-2087 Sep 22 j 01:31	11°Mp45'36	1°15'56	minimum elong	-2081 Mar 10 j 09:39	1° ¥ 55'14	
minimum elong	-2087 Sep 22 j 01:32	11° m 45'36	1°15'57	max. Earth dist.	-2081 Mar 12 j 09:18		6.00519 AU
morning rise	-2087 Oct 04 j 14:53	14° m 32'29		morning rise	-2081 Mar 24 j 00:13	5° ∺ 08'42	
	-2087 Dec 30 j 06:26	0∘ ⊽		retrograde	-2081 Aug 02 j 07:55	25°) 19′42	
retrograde	-2086 Feb 03 j 08:11	1° ≙ 51'34		opposition	-2081 Sep 30 j 21:59	20°) 14′26	
	-2086 Mar 10 j 16:33	30°R, Mp		min. Earth dist.	-2081 Sep 29 j 13:56	20°) €25′23	4.04312 AU
						4 = 0 \$ 4 :	
opposition	-2086 Apr 05 j 05:35	26° m 59'55		direct	-2081 Nov 28 j 00:06	15° ¥ 16′59	
opposition min. Earth dist. direct		26° M 59'55 26° M 49'13 22° M 00'44	1°40'38 4.33361 AU	direct evening set	-2081 Nov 28 j 00:06 -2080 Mar 13 j 08:01 -2080 Apr 02 j 02:53	15°) 16'59 0° Υ 4° Υ 29'24	

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 29 Attention, astronomical year style is used: The year -2080 in astronomical counting style is the year 2081 BCE in historical counting style.

Attention, astronomic	cal year style is used: Th	e year -2080 i	n astronomical cou	nting style is the year	2081 BCE in historical co	ounting style.	6 s
conjunction	-2080 Apr 15 j 20:14	7° Ƴ 40'01	-1°00'15	max. Earth dist.	-2075 Sep 24 j 11:42	15° Mp 46'46	6.36480 AU
minimum elong	-2080 Apr 15 j 20:18	7° Ƴ 40′03	1°00'14				
max. Earth dist.	-2080 Apr 17 j 20:31	8° Y 08'00	6.09297 AU	conjunction	-2075 Sep 26 j 09:25	16°M)12'11	1°14'26
morning rise	-2080 Apr 29 j 15:19	10° Y 51'14		minimum elong	-2075 Sep 26 j 09:27	16°M)12'12	1°14'27
	-2080 Aug 27 j 01:26	0°8		morning rise	-2075 Oct 08 j 22:23	18° m 59'21	
retrograde	-2080 Sep 04 j 20:47	0° 8 07'48			-2075 Dec 02 j 07:59	0∘ ⊽	
	-2080 Sep 13 j 16:00	30° ₹Ƴ		retrograde	-2074 Feb 07 j 21:52	6° £ 23'40	
min. Earth dist.	-2080 Nov 02 j 05:49	25° Y 12'45	4.15269 AU	opposition	-2074 Apr 09 j 21:11	1° ≏ 31'54	1°36'20
opposition	-2080 Nov 03 j 08:39	25° Y 03'36	-1°04'18	min. Earth dist.	-2074 Apr 11 j 05:52	1° ≏ 21'30	4.31925 AU
direct	-2079 Jan 01 j 09:09	20° Y 02'59			-2074 Apr 22 j 02:59	30°R, Mp	
	-2079 Mar 28 j 03:59	9° 8		direct	-2074 Jun 11 j 03:36	26° m 33'04	
evening set	-2079 May 08 j 06:26	8° 8 46'15			-2074 Jul 30 j 05:05	0∘ ত	
				evening set	-2074 Oct 14 j 20:55	14° £ 39'59	
conjunction	-2079 May 22 j 00:54	11° 8 51'58	-0°23'18	max. Earth dist.	-2074 Oct 25 j 17:01	17° ≏ 07'46	6.26253 AU
minimum elong	-2079 May 22 j 00:56	11° 8 51'59	0°23'16				
max. Earth dist.	-2079 May 23 j 10:13	12° 8 10'44	6.21583 AU	conjunction	-2074 Oct 27 j 10:41	17° ≏ 31'32	0°51'54
morning rise	-2079 Jun 04 j 18:36	14° 8 57'08		minimum elong	-2074 Oct 27 j 10:44	17° ≏ 31'34	0°51'52
C	-2079 Jun 04 j 23:45	15° 8		morning rise	-2074 Nov 08 j 23:51	20° £ 23'02	
	-2079 Aug 23 j 00:23	$\Pi^{\circ}0$		Ü	-2074 Dec 24 j 04:02	0°M	
retrograde	-2079 Oct 07 j 10:17	3° Ⅱ 09'42		retrograde	-2073 Mar 13 j 22:27	8°M36'56	
Z .	-2079 Nov 21 j 20:46	30° ₹ 8		opposition	-2073 May 13 j 22:21	3°M43'32	0°49'45
opposition	-2079 Dec 05 j 23:52	28° 8 08'50	-0°02'39	min. Earth dist.	-2073 May 15 j 00:25	3°M35'12	4.20049 AU
min. Earth dist.	-2079 Dec 05 j 10:35		4.27628 AU	min. Burur dige.	-2073 Jun 16 j 01:08	30°R ≏	200 19 110
asc. node	-2079 Dec 22 j 11:54	26° 8 00'18	27020110	direct	-2073 Jul 14 j 04:16	28° ♀ 47'30	
direct	-2078 Feb 04 j 08:04	23° 8 06'07		uncet	-2073 Aug 11 j 01:59	0°M	
direct	-2078 Apr 16 j 08:34	0°II			-2073 Nov 05 j 20:26	15°M	
evening set	-2078 Jun 11 j 17:18	11° Ⅱ 19'35		evening set	-2073 Nov 16 j 02:28	17° M 21'44	
evening set	-20/0 Juli 11 j 17.10	11 11/33		evening set	-2075 NOV 10 J 02.20	1/ 621 77	
conjunction	-2078 Jun 25 j 06:42	14° Ⅱ 18′24	0°19'47	conjunction	-2073 Nov 28 j 18:56	20°M19'37	0°12'24
minimum elong	-2078 Jun 25 j 06:40	14° Ⅱ 18'23	0°19'49	minimum elong	-2073 Nov 28 j 18:57	20°M19'38	0°12'21
max. Earth dist.	-2078 Jun 25 j 13:13	14° Ⅱ 21'59	6.33094 AU	behind sun begin	-2073 Nov 28 j 13:34	20°M16'30	0 1221
morning rise	-2078 Jul 08 j 17:54	17° Ⅱ 15'55	0.55071710	behind sun end	-2073 Nov 29 j 00:21	20°M22'47	
morning rise	-2078 Sep 12 j 09:46	0°9		max. Earth dist.	-2073 Nov 27 j 17:33	20°ML04'46	6.13808 AU
retrograde	-2078 Nov 07 j 12:01	4°938'00		morning rise	-2073 Dec 11 j 12:28	23°ML18'19	0.13000 110
retrograde	-2077 Jan 03 j 23:15	30°R∏		morning risc	-2072 Jan 10 j 04:50	0° x ⁷	
opposition	-2077 Jan 06 j 08:45	29° ∏ 41′03	0°56'44	desc. node	-2072 Mar 16 j 00:09	10° × 754'16	
min. Earth dist.	-2077 Jan 06 j 12:27		4.37432 AU	retrograde	-2072 Apr 17 j 22:05	12° × 33'50	
direct	-2077 Mar 08 j 23:32	24° I 37'31	4.37432 AU	opposition	-2072 Apr 17 j 22:03	7° × 33'30'	0°16'00
direct	-2077 May 10 j 18:48	24 ப 3/31		min. Earth dist.	-2072 Jun 17 j 17.38 -2072 Jun 18 j 02:05		4.07958 AU
evening set	-2077 Jul 14 j 10:40	0 3 12° 9 29'46		direct	-2072 Juli 18 j 02:03	2° × ⁷ 43'36	4.07936 AU
evening set	-20// Jul 14 J 10.40	12 302940		evening set	-2072 Aug 10 j 12.43 -2072 Dec 19 j 03:14	21° х 47'44	
conjunction	-2077 Jul 27 j 15:47	15°522'07	0°55'40	evening set	-2072 Dec 17 J 03.14	21 7 7/77	
minimum elong	-2077 Jul 27 j 15:44	15°922'06	0°55'43	conjunction	-2071 Jan 01 j 01:09	24° х 52'36	-0°32'55
max. Earth dist.	-2077 Jul 26 j 22:03	15°912'28	6.40425 AU	minimum elong	-2071 Jan 01 j 01:07	24° × 52'34	0°32'57
morning rise	-2077 Aug 09 j 17:34	18°912'51	0.40423 AO	max. Earth dist.	-2071 Jan 01 j 03:07	24° × 53'46	6.03215 AU
morning rise	-2077 Oct 09 j 06:43	0°Ω		morning rise	-2071 Jan 14 j 01:35	27° 🖈 58'57	0.03213710
retrograde	-2077 Dec 07 j 23:36	5° Ω 08'47		morning risc	-2071 Jan 22 j 14:51	27 x 3837	
opposition	-2076 Feb 06 j 06:03	0° Ω 15'08	1°38'23	retrograde	-2071 May 25 j 10:09	0 5 18° ろ 08'19	
min. Earth dist.	-2076 Feb 07 j 01:12	0° Ω 08'56	4.41942 AU	opposition	-2071 Jul 24 j 19:35	18 30819 13° 3 07'51	1010121
iiiii. Eartii tist.	-2076 Feb 08 j 04:51	30° ₹ 5	4.41942 AU	min. Earth dist.	-2071 Jul 24 j 07:42	13°る0731	3.99952 AU
direct	-2076 Apr 08 j 17:14	30 kജ 25°ഇ12'11		direct	-2071 Sep 21 j 09:10	13 31147 8° る 14'40	3.99932 AU
direct	-2076 Jun 07 j 04:22	23 3 12 11 0° Ω		evening set	-2071 Sep 21 j 09:10 -2070 Jan 24 j 01:53	8 31440 27° 3 9'53	
avanina aat		12° Ω 56′00		evening set		27 ⊙ 3933	
evening set	-2076 Aug 13 j 21:38				-2070 Feb 02 j 19:47	0 🌤	
Earth diet	-2076 Aug 23 j 09:08	15° Ω 15° Ω 23'27	6.41650 AU	conjunction	2070 E-L 07:07:02	0° ≈ 50'00	1007!11
max. Earth dist.	-2076 Aug 25 j 04:00	13 662321	0.41030 AU		-2070 Feb 06 j 07:02		1°07'14
:	2076 A 26: 19:00	150 0 44110	1015120	minimum elong	-2070 Feb 06 j 07:00	0°≈49'58	
conjunction	-2076 Aug 26 j 18:09	15° Ω 44'19	1°15'28	max. Earth dist.	-2070 Feb 07 j 14:33	1°≈08'55	5.98482 AU
minimum elong	-2076 Aug 26 j 18:07	15° Ω 44'18	1°15'29	morning rise	-2070 Feb 19 j 15:23	4°≈01'50	
morning rise	-2076 Sep 08 j 11:50	18° Ω 31'16		ratra ar- J-	-2070 Apr 09 j 20:16	15° ≈	
	-2076 Nov 05 j 21:21	0° Т р		retrograde	-2070 Jul 02 j 01:19	24°≈31'27	1052105
retrograde	-2075 Jan 06 j 21:09	5° Mp 28'13	1052102	opposition	-2070 Aug 30 j 22:51	19°≈27'31	
opposition	-2075 Mar 08 j 12:07	0° Mp 36'24	1°53'02	min. Earth dist.	-2070 Aug 29 j 19:08	19° ≈ 36'54	3.99189 AU
min. Earth dist.	-2075 Mar 09 j 19:09	0° m/26'29	4.39940 AU	1.	-2070 Oct 11 j 15:33	15°R≈	
T'	-2075 Mar 13 j 06:16	30°R Ω		direct	-2070 Oct 27 j 21:08	14° ≈ 32'42	
direct	-2075 May 10 j 06:24	25° Ω 35'03			-2070 Nov 13 j 03:45	15° ≈	
	-2075 Jul 05 j 21:39	0°M)		•	-2069 Feb 13 j 01:38	0°)	
evening set	-2075 Sep 13 j 18:16	13° m 24'09		evening set	-2069 Mar 02 j 05:34	3°) 59′28	

•	omena of Jupiter fro		•	/ /			ge 30
	nical year style is used: Th	-					
conjunction	-2069 Mar 15 j 18:02	7°) 11′24		max. Earth dist.	-2064 Aug 29 j 10:01	19° 8 (44'15	6.41014 AU
minimum elong	-2069 Mar 15 j 18:03	7°) 11′24					
max. Earth dist.	-2069 Mar 17 j 18:16		6.01594 AU	conjunction	-2064 Aug 31 j 01:03	20° Ω 05'40	1°16'37
morning rise	-2069 Mar 29 j 09:33	10°) 24'42		minimum elong	-2064 Aug 31 j 01:02	20° Ω 05'39	1°16'38
	-2069 Jul 21 j 06:10	0° Y		morning rise	-2064 Sep 12 j 17:44	22° Ω 52′29	
retrograde	-2069 Aug 07 j 07:02	0° Y 28'46			-2064 Oct 16 j 19:04	0° m)	
	-2069 Aug 24 j 06:24	30° Ŗ ₩		retrograde	-2063 Jan 11 j 06:16	9° m 52'46	
opposition	-2069 Oct 05 j 21:59	25° ∺ 23′27	-1°42'53	opposition	-2063 Mar 12 j 22:58	5° m 01'05	1°52'36
min. Earth dist.	-2069 Oct 04 j 13:34	25°) 34'32	4.05880 AU	min. Earth dist.	-2063 Mar 14 j 06:21	4° m 51'04	4.38812 AU
direct	-2069 Dec 03 j 02:41	20° ∺ 25'31		direct	-2063 May 14 j 15:22	0° Mp 00'05	
	-2068 Feb 23 j 10:42	0° Y		evening set	-2063 Sep 18 j 02:40	17° m 52'12	
evening set	-2068 Apr 07 j 07:19	9° Y 33'11		max. Earth dist.	-2063 Sep 28 j 18:40	20° m 14'37	6.34941 AU
conjunction	-2068 Apr 21 j 01:13	12° Y ′43'09	-0°55'57	conjunction	-2063 Sep 30 j 17:18	20° m 40'39	1°12'29
minimum elong	-2068 Apr 21 j 01:17	12° Ƴ 43'11	0°55'56	minimum elong	-2063 Sep 30 j 17:19	20° m/40'40	1°12'29
max. Earth dist.	-2068 Apr 23 j 01:24	13° Y 10'57	6.11228 AU	morning rise	-2063 Oct 13 j 06:11	23° m) 28'23	
morning rise	-2068 May 04 j 20:14	15° Y ′53'29			-2063 Nov 12 j 16:19	0∘ <u>⊽</u>	
morning 1150	-2068 Jul 13 j 14:46	0°8		retrograde	-2062 Feb 12 j 16:12	ა — 10° ჲ 59'42	
retrograde	-2068 Sep 09 j 13:43	4° 8 59'47		opposition	-2062 Apr 14 j 14:25	6° ⊆ 07'49	1°31'24
min. Earth dist.	-2068 Nov 07 j 00:09	0° 8 04'28	4.17338 AU	min. Earth dist.	-2062 Apr 15 j 23:29	5° ≏ 57'18	4.30066 AU
iiiii. Eartii tiist.	3	30°RΥ	4.1/336 AU			1° ⊆ 09'22	4.30000 AU
• . •	-2068 Nov 07 j 13:17	•	0056113	direct	-2062 Jun 15 j 18:32		
opposition	-2068 Nov 08 j 01:05	29° Y 55'59	-0°56'13	evening set	-2062 Oct 19 j 08:59	19° ≏ 20'51	6 0 10 1 6 1 XX
direct	-2067 Jan 06 j 06:24	24° Y ′55'02		max. Earth dist.	-2062 Oct 30 j 07:20	21° 11 50'35	6.24246 AU
	-2067 Mar 06 j 01:17	0°8					
evening set	-2067 May 13 j 04:31	13° 8 32'41		conjunction	-2062 Oct 31 j 23:05	22° ≏ 13'21	0°47'06
	-2067 May 19 j 16:46	15° 8		minimum elong	-2062 Oct 31 j 23:08	22° ≏ 13'23	0°47'05
				morning rise	-2062 Nov 13 j 12:41	25° ഫ 05'52	
conjunction	-2067 May 26 j 22:26	16° 8 37'21	-0°17'18		-2062 Dec 05 j 12:12	0° M	
minimum elong	-2067 May 26 j 22:28	16° 8 37'22	0°17'16	retrograde	-2061 Mar 18 j 22:22	13° M 28'57	
max. Earth dist.	-2067 May 28 j 03:26	16° 8 53'36	6.23607 AU	opposition	-2061 May 18 j 22:31	8° M 35'11	0°41'06
morning rise	-2067 Jun 09 j 15:36	19° 8 41'22		min. Earth dist.	-2061 May 19 j 21:24	8° M 27'51	4.18050 AU
	-2067 Jul 29 j 10:38	Π° 0		direct	-2061 Jul 18 j 22:23	3° M ₊39'34	
retrograde	-2067 Oct 11 j 18:54	7° Ⅱ 44'55			-2061 Oct 19 j 05:48	15° ™	
asc. node	-2067 Nov 01 j 13:53	7° Ⅱ 02'24		evening set	-2061 Nov 20 j 20:45	22° M 18'42	
opposition	-2067 Dec 10 j 10:07	2° Ⅱ 44'35	0°06'12	Ü	J		
min. Earth dist.	-2067 Dec 09 j 23:05	2° Ⅱ 48'16	4.29436 AU	conjunction	-2061 Dec 03 j 13:50	25° ™ 17'38	0°05'56
	-2066 Jan 01 j 03:33	30°R₩		minimum elong	-2061 Dec 03 j 13:51	25° ™ 17'39	0°05'53
direct	-2066 Feb 08 j 22:56	27° 8 41'38		behind sun begin	-2061 Dec 03 j 06:11	25°M13'09	0 00 00
direct	-2066 Mar 20 j 06:13	0°Ⅱ		behind sun end	-2061 Dec 03 j 21:31	25°M22'08	
evening set	-2066 Jun 16 j 08:24	15° Ⅱ 50'52		max. Earth dist.	-2061 Dec 03 j 21:31 -2061 Dec 02 j 16:33	25°M05'08	6.12006 AU
evening set	-2000 Juli 10 J 08.24	13 1130 32			-	28°M17'29	0.12000 AU
. ,.	20((1 20:20.50	100 T 40140	0005106	morning rise	-2061 Dec 16 j 08:15		
conjunction	-2066 Jun 29 j 20:50	18° Ⅱ 48'40	0°25'26		-2061 Dec 23 j 16:38	0° 🗷	
minimum elong	-2066 Jun 29 j 20:49	18° Ⅱ 48'39	0°25'29	desc. node	-2060 Jan 23 j 15:35	6° ∡ ¹49'59	
max. Earth dist.	-2066 Jun 29 j 23:57	18° Ⅲ 50′22	6.34548 AU	retrograde	-2060 Apr 23 j 05:55	17° ∡ 741'48	
morning rise	-2066 Jul 13 j 06:41	21° Ⅱ 45′03		opposition	-2060 Jun 23 j 00:10	12° ∡ ⁴44'41	
	-2066 Aug 22 j 02:24	0 \circ		min. Earth dist.	-2060 Jun 23 j 05:36	12° ∡ ′42'55	4.06506 AU
retrograde	-2066 Nov 11 j 18:09	9° © 01'45		direct	-2060 Aug 21 j 15:09	7° ∡ ′51′08	
opposition	-2065 Jan 10 j 15:46	4° © 05'23	1°03'50	evening set	-2060 Dec 24 j 04:02	26° ₹ 58'41	
min. Earth dist.	-2065 Jan 10 j 22:11	4° © 03'17	4.38439 AU		-2059 Jan 05 j 19:37	8°0	
	-2065 Feb 16 j 05:16	30° Ŗ Ⅱ					
direct	-2065 Mar 13 j 10:13	29° Ⅲ 01′53		conjunction	-2059 Jan 06 j 02:56	0° る 04'23	-0°38'54
	-2065 Apr 07 j 21:35	0 \circ \odot		minimum elong	-2059 Jan 06 j 02:54	0° පි 04'21	0°38'57
evening set	-2065 Jul 18 j 20:52	16° 9 52'16		max. Earth dist.	-2059 Jan 06 j 10:11	0° る 08'43	6.02246 AU
max. Earth dist.	-2065 Jul 31 j 01:46	19° © 31'27	6.40882 AU	morning rise	-2059 Jan 19 j 04:26	3° る 11'37	
	,			retrograde	-2059 May 30 j 19:34	23° る 25'29	
conjunction	-2065 Aug 01 j 00:38	19° © 43'55	0°59'31	opposition	-2059 Jul 30 j 03:21	18° る 24'26	-1°26'30
minimum elong	-2065 Aug 01 j 00:35	19° 5 43'53	0°59'33	min. Earth dist.	-2059 Jul 29 j 12:18		3.99593 AU
morning rise	-2065 Aug 14 j 01:20	22°534'00		direct	-2059 Sep 26 j 13:29	13° ප 31'08	2.2.2.2.2.2.110
morning rise	-2065 Sep 18 j 22:28	0°Ω		direct	-2058 Jan 16 j 20:13	0°≈	
retrograde	-2065 Dec 12 j 06:26	9° Ω 28'57		evening set	-2058 Jan 29 j 07:40	0 ∞ 2°≈56'49	
retrograde			10/2/11	evening set	-2000 Jan 29 J 07:40	∠ ≈>>0.49	
opposition	-2064 Feb 10 j 13:19	4° Ω 35'40			2050 F 1 11 112 12	(007112	1910112
min. Earth dist.	-2064 Feb 11 j 11:18	4° Ω 28'33	4.41855 AU	conjunction	-2058 Feb 11 j 13:40	6°≈07'13	
t' .	-2064 Mar 26 j 18:08	30°₹©		minimum elong	-2058 Feb 11 j 13:38		1°10'13
direct	-2064 Apr 13 j 02:26	29°532'48		max. Earth dist.	-2058 Feb 12 j 23:30	6°≈27'30	5.98716 AU
	-2064 Apr 30 j 13:11	0 ° Ω		morning rise	-2058 Feb 24 j 23:08	9° ≈ 19'22	
	-2064 Aug 07 j 14:03	15° Ω			-2058 Mar 21 j 09:41	15° ≈	
evening set	-2064 Aug 18 j 05:16	17° Ω 17'27		retrograde	-2058 Jul 07 j 05:32	29° ≈ 46′50	

Attention, astronom	ical vear style is lised. Th	e vear -2058 i	in astronomical co	ounting style is the year	2059 BCE in historical c	ounting style	
min. Earth dist.	-2058 Sep 03 j 21:43	-	3.99997 AU	dutting style is the year	-2052 Jul 21 j 15:53	$15^{\circ}\Omega$	
opposition	-2058 Sep 05 j 03:05	24° ≈ 42'29		evening set	-2052 Aug 22 j 14:04	21° Ω 41'26	
direct	-2058 Nov 02 j 01:14	19° ≈ 47'13	1 5 . 20	max. Earth dist.	-2052 Sep 02 j 14:46	24°Ω06'25	6.40316 AU
	-2057 Jan 25 j 10:59	0°) €				•••	
evening set	-2057 Mar 07 j 11:48	9° ∺ 11'19		conjunction	-2052 Sep 04 j 08:49	24° Ω 29'32	1°17'21
				minimum elong	-2052 Sep 04 j 08:49	24° Ω 29'31	1°17'22
conjunction	-2057 Mar 21 j 01:20	12° ¥ 23′05	-1°14'39	morning rise	-2052 Sep 17 j 00:54	27° Ω 16′22	
minimum elong	-2057 Mar 21 j 01:22	12°) €23'06	1°14'39		-2052 Sep 29 j 15:25	0° ™	
max. Earth dist.	-2057 Mar 23 j 03:43	12° ¥ 52'49	6.02897 AU	retrograde	-2051 Jan 15 j 18:59	14° m 20'15	
morning rise	-2057 Apr 03 j 17:24	15° ¥ 36′02		opposition	-2051 Mar 17 j 11:39	9° m ,28'41	1°51'31
	-2057 Jun 12 j 00:18	0° Υ		min. Earth dist.	-2051 Mar 18 j 20:01	9° m) 18'21	4.37707 AU
retrograde	-2057 Aug 12 j 06:30	5° Υ 32'18	1020105	direct	-2051 May 19 j 03:05	4° Mp 28'01	
opposition	-2057 Oct 10 j 19:51	0° Υ 27'03		evening set	-2051 Sep 22 j 12:04	22° m/22'55	C 22522 AXX
min. Earth dist.	-2057 Oct 09 j 12:37	0°γ'3/'43 30° R ₩	4.07524 AU	max. Earth dist.	-2051 Oct 03 j 05:24	24° Mp 46'33	6.33533 AU
direct	-2057 Oct 14 j 03:11 -2057 Dec 08 j 03:51	30°Kπ 25° ∺ 28'41		conjunction	-2051 Oct 05 j 02:33	25° mp 11'51	1°10'06
direct	-2056 Jan 31 j 07:21	25 γ (2641		minimum elong	-2051 Oct 05 j 02:35	25° m) 11'52	1°10'06
evening set	-2056 Apr 12 j 10:00	14° Υ 31'38		morning rise	-2051 Oct 05 j 02:35	28° m) 00'04	1 1000
evening set	-2030 Apr 12 J 10:00	14 31 30		morning risc	-2051 Oct 17 j 15:08	ე∘ 亞	
conjunction	-2056 Apr 26 j 04:09	17° Y ′40′56	-0°51'19	retrograde	-2050 Feb 17 j 09:26	o — 15° ≏ 37'59	
minimum elong	-2056 Apr 26 j 04:12	17° Y ′40'58	0°51'19	opposition	-2050 Apr 19 j 08:41	10° ≏ 46'00	1°25'51
max. Earth dist.	-2056 Apr 28 j 01:51	18° Ƴ 07'10	6.13070 AU	min. Earth dist.	-2050 Apr 20 j 16:04	10° ≏ 36′01	4.28461 AU
morning rise	-2056 May 09 j 23:21	20° Y ′50′29		direct	-2050 Jun 20 j 08:26	5° ≙ 48'04	
-	-2056 Jun 21 j 10:19	9° 8		evening set	-2050 Oct 23 j 21:40	24° ≏ 03'11	
retrograde	-2056 Sep 14 j 03:22	9° 8 47'12		max. Earth dist.	-2050 Nov 03 j 21:53	26° ≙ 34'37	6.22595 AU
opposition	-2056 Nov 12 j 15:57	4° 8 43'48					
min. Earth dist.	-2056 Nov 11 j 16:09	4° 8 51'53	4.19198 AU	conjunction	-2050 Nov 05 j 11:50	26° ≙ 56'27	0°42'00
	-2056 Dec 28 j 19:17	30° ŖƳ		minimum elong	-2050 Nov 05 j 11:53	26° ≏ 56'28	0°41'59
direct	-2055 Jan 11 j 01:00	29° Y '42'30		morning rise	-2050 Nov 18 j 02:00	29° ≏ 49'53	
	-2055 Jan 24 j 09:51	0°8			-2050 Nov 18 j 19:43	0°M	
	-2055 May 03 j 05:03	15° 8			-2049 Feb 04 j 07:56	15°M	
evening set	-2055 May 18 j 01:27	18° 8 15'33		retrograde	-2049 Mar 23 j 23:42	18°M21'07	
agnismation	2055 May 21 : 19:55	21° 8 19'17	0011115	annagition	-2049 May 11 j 15:22	15°RM	0922!11
conjunction minimum elong	-2055 May 31 j 18:55 -2055 May 31 j 18:57	21° 8 19'17		opposition min. Earth dist.	-2049 May 23 j 23:00 -2049 May 24 j 19:48	13°M26'57 13°M20'16	4.16463 AU
behind sun begin	-2055 May 31 j 12:54	21° 8 15'56	0 11 12	direct	-2049 Jul 23 j 19:05	8°MJ31'43	4.10403 AU
behind sun end	-2055 Jun 01 j 00:59	21° 8 22'39		direct	-2049 Sep 28 j 19:56	15°M	
max. Earth dist.	-2055 Jun 01 j 20:03		6.25364 AU	evening set	-2049 Nov 25 j 14:18	27°M14'17	
morning rise	·			desc. node	-2049 Dec 03 j 05:45	29°M01'58	
	-2055 Jun 14 j 11:16	24 022 13					
	-2055 Jun 14 j 11:16 -2055 Jul 10 j 13:24	24° ႘ 22'13 0° Ⅱ		desc. Hode	-	0° √	
asc. node	-2055 Jun 14 j 11:16 -2055 Jul 10 j 13:24 -2055 Sep 11 j 14:27			desc. Hode	-2049 Dec 07 j 08:12		
	-2055 Jul 10 j 13:24	$\Pi^{\circ}0$		conjunction	-		-0°00'37
asc. node	-2055 Jul 10 j 13:24 -2055 Sep 11 j 14:27	0° П 10° П 25′09	0°14'57		-2049 Dec 07 j 08:12	0° ∡ 7	-0°00'37 0°00'40
asc. node retrograde	-2055 Jul 10 j 13:24 -2055 Sep 11 j 14:27 -2055 Oct 16 j 05:23	0°Ⅲ 10°Ⅲ25'09 12°Ⅲ17'57	0°14'57 4.30940 AU	conjunction	-2049 Dec 07 j 08:12 -2049 Dec 08 j 08:08	0° 尽 0° 尽 14'07	
asc. node retrograde opposition	-2055 Jul 10 j 13:24 -2055 Sep 11 j 14:27 -2055 Oct 16 j 05:23 -2055 Dec 14 j 20:01 -2055 Dec 14 j 12:14 -2054 Feb 13 j 13:55	0°П 10°П25'09 12°П17'57 7°П18'13 7°П20'49 2°П15'07		conjunction minimum elong	-2049 Dec 07 j 08:12 -2049 Dec 08 j 08:08 -2049 Dec 08 j 08:08	0° 🗷 14'07 0° 🗷 14'06	
asc. node retrograde opposition min. Earth dist.	-2055 Jul 10 j 13:24 -2055 Sep 11 j 14:27 -2055 Oct 16 j 05:23 -2055 Dec 14 j 20:01 -2055 Dec 14 j 12:14	0°П 10°П25'09 12°П17'57 7°П18'13 7°П20'49		conjunction minimum elong behind sun begin behind sun end max. Earth dist.	-2049 Dec 07 j 08:12 -2049 Dec 08 j 08:08 -2049 Dec 08 j 08:08 -2049 Dec 08 j 00:05 -2049 Dec 08 j 16:10 -2049 Dec 07 j 15:26	0° ₹ 14'07 0° ₹ 14'06 0° ₹ 09'23 0° ₹ 18'49 0° ₹ 04'16	
asc. node retrograde opposition min. Earth dist. direct evening set	-2055 Jul 10 j 13:24 -2055 Sep 11 j 14:27 -2055 Oct 16 j 05:23 -2055 Dec 14 j 20:01 -2055 Dec 14 j 12:14 -2054 Feb 13 j 13:55 -2054 Jun 20 j 23:36	0°Π 10°Π25'09 12°Π17'57 7°Π18'13 7°Π20'49 2°Π15'07 20°Π21'13	4.30940 AU	conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise	-2049 Dec 07 j 08:12 -2049 Dec 08 j 08:08 -2049 Dec 08 j 08:08 -2049 Dec 08 j 00:05 -2049 Dec 08 j 16:10 -2049 Dec 07 j 15:26 -2049 Dec 21 j 03:17	0° 🖈 0° 🖈 14'07 0° 🖈 14'06 0° 🖈 09'23 0° 🖈 18'49 0° 🖈 04'16 3° 🖈 14'54	0°00'40
asc. node retrograde opposition min. Earth dist. direct evening set conjunction	-2055 Jul 10 j 13:24 -2055 Sep 11 j 14:27 -2055 Oct 16 j 05:23 -2055 Dec 14 j 20:01 -2055 Dec 14 j 12:14 -2054 Feb 13 j 13:55 -2054 Jun 20 j 23:36 -2054 Jul 04 j 10:58	0°П 10°П25'09 12°П17'57 7°П18'13 7°П20'49 2°П15'07 20°П21'13	4.30940 AU 0°30'57	conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde	-2049 Dec 07 j 08:12 -2049 Dec 08 j 08:08 -2049 Dec 08 j 08:08 -2049 Dec 08 j 00:05 -2049 Dec 08 j 16:10 -2049 Dec 07 j 15:26 -2049 Dec 21 j 03:17 -2048 Apr 28 j 10:39	0° 🖈 0° 🖈 14'07 0° 🖈 14'06 0° 🖈 09'23 0° 🖈 18'49 0° 🖈 04'16 3° 🖈 14'54 22° 🔻 46'13	0°00'40 6.10645 AU
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asc. node retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist.	-2055 Jul 10 j 13:24 -2055 Sep 11 j 14:27 -2055 Oct 16 j 05:23 -2055 Dec 14 j 20:01 -2055 Dec 14 j 12:14 -2054 Feb 13 j 13:55 -2054 Jul 20 j 23:36 -2054 Jul 04 j 10:58 -2054 Jul 04 j 10:56 -2054 Jul 04 j 10:56 -2054 Jul 17 j 19:39 -2054 Aug 04 j 10:18 -2054 Nov 16 j 00:29 -2053 Jan 14 j 23:32 -2053 Jan 15 j 08:07 -2053 Mar 17 j 20:21 -2053 Aug 04 j 09:17	0° II 10° II 25'09 12° II 17'57 7° II 18'13 7° II 20'49 2° II 15'07 20° II 21'13 23° II 18'07 23° II 18'05 23° II 17'24 26° II 13'34 0° S 13° S26'01 8° S30'08 8° S27'19 3° S26'38 21° S16'00 23° S53'27	4.30940 AU 0°30'57 0°31'00 6.35682 AU 1°10'36 4.39158 AU 6.41127 AU	conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde	-2049 Dec 07 j 08:12 -2049 Dec 08 j 08:08 -2049 Dec 08 j 00:05 -2049 Dec 08 j 16:10 -2049 Dec 07 j 15:26 -2049 Dec 21 j 03:17 -2048 Apr 28 j 10:39 -2048 Jun 28 j 04:29 -2048 Jun 28 j 06:38 -2048 Dec 20 j 07:55 -2048 Dec 29 j 03:17 -2047 Jan 11 j 02:52 -2047 Jan 11 j 02:49 -2047 Jan 11 j 13:08 -2047 Jan 24 j 05:27 -2047 Jun 05 j 00:15	0° ₹ 14'07 0° ₹ 14'06 0° ₹ 09'23 0° ₹ 18'49 0° ₹ 04'16 3° ₹ 14'54 22° ₹ 46'13 17° ₹ 48'38 17° ₹ 47'55 12° ₹ 55'17 0° ₹ 2° ₹ 04'53 5° ₹ 11'10 5° ₹ 11'18 8° ₹ 19'05 28° ₹ 35'53 23° ₹ 34'15	0°00'40 6.10645 AU -0°35'31 4.05514 AU -0°44'27 0°44'30 6.01687 AU
asc. node retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist.	-2055 Jul 10 j 13:24 -2055 Sep 11 j 14:27 -2055 Oct 16 j 05:23 -2055 Dec 14 j 20:01 -2055 Dec 14 j 12:14 -2054 Feb 13 j 13:55 -2054 Jun 20 j 23:36 -2054 Jul 04 j 10:58 -2054 Jul 04 j 10:56 -2054 Jul 04 j 09:40 -2054 Jul 17 j 19:39 -2054 Aug 04 j 10:18 -2054 Nov 16 j 00:29 -2053 Jan 14 j 23:32 -2053 Jan 15 j 08:07 -2053 Mar 17 j 20:21 -2053 Aug 04 j 09:17 -2053 Aug 05 j 10:15 -2053 Aug 05 j 10:15 -2053 Aug 05 j 10:13 -2053 Aug 18 j 09:38	0° II 10° II 25'09 12° II 17'57 7° II 18'13 7° II 20'49 2° II 15'07 20° II 21'13 23° II 18'05 23° II 17'24 26° II 13'34 0° II 3'34 0° II 3' II 3' 34 0° II 3' 32' 32' 31' 32' 32' 32' 32' 32' 32' 32' 32' 32' 32	4.30940 AU 0°30'57 0°31'00 6.35682 AU 1°10'36 4.39158 AU 6.41127 AU 1°03'04	conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition	-2049 Dec 07 j 08:12 -2049 Dec 08 j 08:08 -2049 Dec 08 j 08:08 -2049 Dec 08 j 00:05 -2049 Dec 08 j 16:10 -2049 Dec 07 j 15:26 -2049 Dec 21 j 03:17 -2048 Apr 28 j 10:39 -2048 Jun 28 j 04:29 -2048 Jun 28 j 06:38 -2048 Aug 26 j 15:03 -2048 Dec 20 j 07:55 -2048 Dec 29 j 03:17 -2047 Jan 11 j 02:52 -2047 Jan 11 j 02:49 -2047 Jan 11 j 13:08 -2047 Jan 24 j 05:27 -2047 Jun 05 j 00:15 -2047 Aug 04 j 07:38 -2047 Aug 03 j 13:50 -2047 Oct 01 j 15:32	0° ₹ 14'07 0° ₹ 14'06 0° ₹ 09'23 0° ₹ 18'49 0° ₹ 04'16 3° ₹ 14'54 22° ₹ 46'13 17° ₹ 48'38 17° ₹ 47'55 12° ₹ 55'17 0° ₹ 2° ₹ 04'53 5° ₹ 11'10 5° ₹ 11'18 8° ₹ 19'05 28° ₹ 35'53 23° ₹ 34'15	0°00'40 6.10645 AU -0°35'31 4.05514 AU -0°44'27 0°44'30 6.01687 AU
asc. node retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise	-2055 Jul 10 j 13:24 -2055 Sep 11 j 14:27 -2055 Oct 16 j 05:23 -2055 Dec 14 j 20:01 -2055 Dec 14 j 12:14 -2054 Feb 13 j 13:55 -2054 Jun 20 j 23:36 -2054 Jul 04 j 10:58 -2054 Jul 04 j 10:56 -2054 Jul 04 j 09:40 -2054 Jul 17 j 19:39 -2054 Aug 04 j 10:18 -2054 Nov 16 j 00:29 -2053 Jan 14 j 23:32 -2053 Jan 15 j 08:07 -2053 Mar 17 j 20:21 -2053 Aug 04 j 09:17 -2053 Aug 05 j 10:15 -2053 Aug 05 j 10:15 -2053 Aug 05 j 10:13 -2053 Aug 18 j 09:38 -2053 Sep 01 j 16:26	0° II 10° II 25'09 12° II 17'57 7° II 18'13 7° II 20'49 2° II 15'07 20° II 21'13 23° II 18'05 23° II 17'24 26° II 13'34 0° II 3'34 0	4.30940 AU 0°30'57 0°31'00 6.35682 AU 1°10'36 4.39158 AU 6.41127 AU 1°03'04	conjunction minimum elong behind sun begin behind sun end 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.	-2049 Dec 07 j 08:12 -2049 Dec 08 j 08:08 -2049 Dec 08 j 08:08 -2049 Dec 08 j 00:05 -2049 Dec 08 j 16:10 -2049 Dec 07 j 15:26 -2049 Dec 21 j 03:17 -2048 Apr 28 j 10:39 -2048 Jun 28 j 04:29 -2048 Jun 28 j 06:38 -2048 Aug 26 j 15:03 -2048 Dec 20 j 07:55 -2048 Dec 29 j 03:17 -2047 Jan 11 j 02:52 -2047 Jan 11 j 02:49 -2047 Jan 11 j 13:08 -2047 Jan 24 j 05:27 -2047 Jun 05 j 00:15 -2047 Aug 04 j 07:38 -2047 Aug 03 j 13:50 -2047 Oct 01 j 15:32 -2047 Dec 30 j 00:33	0° 🖈 0° 🖈 14'07 0° 🖈 14'06 0° 🖈 09'23 0° 🖈 18'49 0° 🖈 04'16 3° 🖈 14'54 22° 🗷 46'13 17° 🗷 48'38 17° 🗷 47'55 12° 🗷 55'17 0° ♂ 2° ♂ 04'53 5° ♂ 11'10 5° ♂ 11'08 5° ♂ 17'18 8° ♂ 19'05 28° ♂ 35'53 23° ♂ 34'15 23° ♂ 40'12 18° ♂ 40'46 0° ≈	0°00'40 6.10645 AU -0°35'31 4.05514 AU -0°44'27 0°44'30 6.01687 AU
asc. node retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise	-2055 Jul 10 j 13:24 -2055 Sep 11 j 14:27 -2055 Oct 16 j 05:23 -2055 Dec 14 j 20:01 -2055 Dec 14 j 12:14 -2054 Feb 13 j 13:55 -2054 Jun 20 j 23:36 -2054 Jul 04 j 10:56 -2054 Jul 04 j 09:40 -2054 Jul 17 j 19:39 -2054 Aug 04 j 10:18 -2054 Nov 16 j 00:29 -2053 Jan 14 j 23:32 -2053 Jan 15 j 08:07 -2053 Mar 17 j 20:21 -2053 Aug 04 j 09:17 -2053 Aug 05 j 10:15 -2053 Aug 05 j 10:13 -2053 Aug 05 j 10:13 -2053 Aug 18 j 09:38 -2053 Sep 01 j 16:26 -2053 Dec 16 j 14:18	0° II 10° II 25'09 12° II 17'57 7° II 18'13 7° II 20'49 2° II 15'07 20° II 21'13 23° II 18'05 23° II 18'05 23° II 17'24 26° II 13'34 0° II 3'34 0° II 3' II 3' II 3'34 0° II 3' II 3' II 3' 3' 3' 3' 3' 3' 3' 3' 3' 3' 3' 3' 3'	4.30940 AU 0°30'57 0°31'00 6.35682 AU 1°10'36 4.39158 AU 6.41127 AU 1°03'04 1°03'06	conjunction minimum elong behind sun begin behind sun end 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.	-2049 Dec 07 j 08:12 -2049 Dec 08 j 08:08 -2049 Dec 08 j 08:08 -2049 Dec 08 j 00:05 -2049 Dec 08 j 16:10 -2049 Dec 07 j 15:26 -2049 Dec 21 j 03:17 -2048 Apr 28 j 10:39 -2048 Jun 28 j 04:29 -2048 Jun 28 j 06:38 -2048 Aug 26 j 15:03 -2048 Dec 20 j 07:55 -2048 Dec 29 j 03:17 -2047 Jan 11 j 02:52 -2047 Jan 11 j 02:49 -2047 Jan 11 j 13:08 -2047 Jan 24 j 05:27 -2047 Jun 05 j 00:15 -2047 Aug 04 j 07:38 -2047 Aug 03 j 13:50 -2047 Oct 01 j 15:32	0° 🖈 0° 🖈 14'07 0° 🖈 14'06 0° 🖈 09'23 0° 🖈 18'49 0° 🖈 04'16 3° 🖈 14'54 22° 🖈 46'13 17° 🔻 48'38 17° 🔻 47'55 12° 🔻 55'17 0° 🖰 2° 🕏 04'53 5° 💍 11'10 5° 💍 11'08 5° 💍 17'18 8° 💍 19'05 28° 💍 35'53 23° 💍 34'15 23° 💍 40'12 18° 💍 40'46	0°00'40 6.10645 AU -0°35'31 4.05514 AU -0°44'27 0°44'30 6.01687 AU
asc. node retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise	-2055 Jul 10 j 13:24 -2055 Sep 11 j 14:27 -2055 Oct 16 j 05:23 -2055 Dec 14 j 20:01 -2055 Dec 14 j 12:14 -2054 Feb 13 j 13:55 -2054 Jul 20 j 23:36 -2054 Jul 04 j 10:56 -2054 Jul 04 j 10:56 -2054 Jul 17 j 19:39 -2054 Aug 04 j 10:18 -2054 Nov 16 j 00:29 -2053 Jan 14 j 23:32 -2053 Jan 15 j 08:07 -2053 Mar 17 j 20:21 -2053 Aug 04 j 09:17 -2053 Aug 05 j 10:15 -2053 Aug 05 j 10:13 -2053 Aug 18 j 09:38 -2053 Sep 01 j 16:26 -2053 Dec 16 j 14:18 -2052 Feb 14 j 22:10	0° II 10° II 25'09 12° II 17'57 7° II 18'13 7° II 20'49 2° II 15'07 20° II 21'13 23° II 18'05 23° II 18'05 23° II 17'24 26° II 13'34 0° 9 13° 926'01 8° 930'08 8° 927'19 3° 926'38 21° 916'00 23° 953'27 24° 907'04 24° 907'03 26° 956'33 0° \$\textstyle{O}\$ 13° \$\textstyle{O}\$56'33 0° \$\textstyle{O}\$ 13° \$\textstyle{O}\$56'33 0° \$\textstyle{O}\$ 13° \$\textstyle{O}\$51'16 8° \$\textstyle{O}\$58'23	4.30940 AU 0°30'57 0°31'00 6.35682 AU 1°10'36 4.39158 AU 6.41127 AU 1°03'04 1°03'06	conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set	-2049 Dec 07 j 08:12 -2049 Dec 08 j 08:08 -2049 Dec 08 j 08:08 -2049 Dec 08 j 00:05 -2049 Dec 08 j 16:10 -2049 Dec 07 j 15:26 -2049 Dec 21 j 03:17 -2048 Apr 28 j 10:39 -2048 Jun 28 j 04:29 -2048 Jun 28 j 06:38 -2048 Aug 26 j 15:03 -2048 Dec 20 j 07:55 -2048 Dec 29 j 03:17 -2047 Jan 11 j 02:52 -2047 Jan 11 j 13:08 -2047 Jan 24 j 05:27 -2047 Jan 05 j 00:15 -2047 Aug 04 j 07:38 -2047 Aug 03 j 13:50 -2047 Oct 01 j 15:32 -2047 Dec 30 j 00:33 -2046 Feb 03 j 10:15	0° ₹ 14'07 0° ₹ 14'06 0° ₹ 09'23 0° ₹ 18'49 0° ₹ 04'16 3° ₹ 14'54 22° ₹ 46'13 17° ₹ 48'38 17° ₹ 47'55 12° ₹ 55'17 0° ♂ 2° ♂ 04'53 5° ♂ 11'10 5° ♂ 11'08 5° ♂ 17'18 8° ♂ 19'05 28° ♂ 35'53 23° ♂ 34'15 23° ♂ 40'46 0° ≈ 8° ≈ 06'10	0°00'40 6.10645 AU -0°35'31 4.05514 AU -0°44'27 0°44'30 6.01687 AU -1°32'44 3.99542 AU
asc. node retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise	-2055 Jul 10 j 13:24 -2055 Sep 11 j 14:27 -2055 Oct 16 j 05:23 -2055 Dec 14 j 20:01 -2055 Dec 14 j 12:14 -2054 Feb 13 j 13:55 -2054 Jun 20 j 23:36 -2054 Jul 04 j 10:56 -2054 Jul 04 j 09:40 -2054 Jul 17 j 19:39 -2054 Aug 04 j 10:18 -2054 Nov 16 j 00:29 -2053 Jan 14 j 23:32 -2053 Jan 15 j 08:07 -2053 Mar 17 j 20:21 -2053 Aug 04 j 09:17 -2053 Aug 05 j 10:15 -2053 Aug 05 j 10:13 -2053 Aug 05 j 10:13 -2053 Aug 18 j 09:38 -2053 Sep 01 j 16:26 -2053 Dec 16 j 14:18	0° II 10° II 25'09 12° II 17'57 7° II 18'13 7° II 20'49 2° II 15'07 20° II 21'13 23° II 18'05 23° II 18'05 23° II 17'24 26° II 13'34 0° II 3'34 0° II 3' II 3' II 3'34 0° II 3' II 3' II 3' 3' 3' 3' 3' 3' 3' 3' 3' 3' 3' 3' 3'	4.30940 AU 0°30'57 0°31'00 6.35682 AU 1°10'36 4.39158 AU 6.41127 AU 1°03'04 1°03'06	conjunction minimum elong behind sun begin behind sun end 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.	-2049 Dec 07 j 08:12 -2049 Dec 08 j 08:08 -2049 Dec 08 j 08:08 -2049 Dec 08 j 00:05 -2049 Dec 08 j 16:10 -2049 Dec 07 j 15:26 -2049 Dec 21 j 03:17 -2048 Apr 28 j 10:39 -2048 Jun 28 j 04:29 -2048 Jun 28 j 06:38 -2048 Aug 26 j 15:03 -2048 Dec 20 j 07:55 -2048 Dec 29 j 03:17 -2047 Jan 11 j 02:52 -2047 Jan 11 j 02:49 -2047 Jan 11 j 13:08 -2047 Jan 24 j 05:27 -2047 Jun 05 j 00:15 -2047 Aug 04 j 07:38 -2047 Aug 03 j 13:50 -2047 Oct 01 j 15:32 -2047 Dec 30 j 00:33	0° 🖈 0° 🖈 14'07 0° 🖈 14'06 0° 🖈 09'23 0° 🖈 18'49 0° 🖈 04'16 3° 🖈 14'54 22° 🗷 46'13 17° 🗷 48'38 17° 🗷 47'55 12° 🗷 55'17 0° ♂ 2° ♂ 04'53 5° ♂ 11'10 5° ♂ 11'08 5° ♂ 17'18 8° ♂ 19'05 28° ♂ 35'53 23° ♂ 34'15 23° ♂ 40'12 18° ♂ 40'46 0° ≈	0°00'40 6.10645 AU -0°35'31 4.05514 AU -0°44'27 0°44'30 6.01687 AU -1°32'44 3.99542 AU

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 32 Attention, astronomical year style is used: The year -2046 in astronomical counting style is the year 2047 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	e year -2046	in astronomical co	ounting style is the year	2047 BCE in historical c	ounting style.	
max. Earth dist.	-2046 Feb 18 j 07:25	11° ≈ 39'33	5.99161 AU		-2040 Feb 06 j 08:59	15°R Ω	
morning rise	-2046 Mar 02 j 03:40	14° ≈ 29′07		opposition	-2040 Feb 19 j 07:27	13° Q 22'09	1°48'06
	-2046 Mar 04 j 07:48	15° ≈		min. Earth dist.	-2040 Feb 20 j 08:09	13° Ω 14'11	4.41332 AU
	-2046 May 15 j 22:45	0° ∀		direct	-2040 Apr 21 j 22:07	8° Ω 19'43	
retrograde	-2046 Jul 12 j 07:52	4°) 53′38			-2040 Jul 02 j 03:43	15° Ω	
	-2046 Sep 08 j 19:17	30°R ≈		evening set	-2040 Aug 26 j 22:50	26° Ω 06′09	
min. Earth dist.	-2046 Sep 08 j 22:17	29° ≈ 58'59	4.00897 AU	max. Earth dist.	-2040 Sep 06 j 23:09	28° Ω 31'11	6.39674 AU
opposition	-2046 Sep 10 j 03:35	29° ≈ 49′02	-1°54'37				
direct	-2046 Nov 07 j 02:44	24° ≈ 53′24		conjunction	-2040 Sep 08 j 16:50	28° Q 54′09	1°17'37
	-2045 Jan 03 j 06:58	0°) €		minimum elong	-2040 Sep 08 j 16:49	28° Q 54′09	1°17'38
evening set	-2045 Mar 12 j 14:31	14°)(14'44			-2040 Sep 13 j 16:20	0° m)	
				morning rise	-2040 Sep 21 j 08:02	1° m 40'55	
conjunction	-2045 Mar 26 j 04:45	17°) €26'16	-1°12'55	retrograde	-2039 Jan 20 j 06:35	18° m 47'58	
minimum elong	-2045 Mar 26 j 04:47	17°) €26'17	1°12'54	opposition	-2039 Mar 22 j 00:35	13° m 56'25	1°49'45
max. Earth dist.	-2045 Mar 28 j 06:35	17° ¥ 55'33	6.04143 AU	min. Earth dist.	-2039 Mar 23 j 09:14	13°M)46'02	4.36751 AU
morning rise	-2045 Apr 08 j 21:36	20°) 38′57		direct	-2039 May 23 j 14:56	8° m 56'07	
	-2045 May 21 j 04:25	0° Y		evening set	-2039 Sep 26 j 21:02	26° Mp 52^\prime 48	
retrograde	-2045 Aug 17 j 00:16	10° Ƴ 27'48		max. Earth dist.	-2039 Oct 07 j 13:14	29° m) 16'17	6.32316 AU
min. Earth dist.	-2045 Oct 14 j 06:46	5° Ƴ 33'20	4.08990 AU				
opposition	-2045 Oct 15 j 13:55	5° Y 22'42	-1°32'45	conjunction	-2039 Oct 09 j 11:05	29° m 42'03	1°07'18
direct	-2045 Dec 13 j 00:04	0° Y 23'53		minimum elong	-2039 Oct 09 j 11:07	29° m 42'04	1°07'18
evening set	-2044 Apr 17 j 09:36	19° Y 23′06			-2039 Oct 10 j 19:01	0∘ ⊽	
•				morning rise	-2039 Oct 21 j 23:45	2° ₽ 30'46	
conjunction	-2044 May 01 j 04:00	22° Y 31'49	-0°46'29	retrograde	-2038 Feb 22 j 03:15	20° ≙ 14'34	
minimum elong	-2044 May 01 j 04:04	22° Y 31'51	0°46'28	opposition	-2038 Apr 24 j 02:37	15° ≙ 22'17	1°19'45
max. Earth dist.	-2044 May 02 j 22:38	22° Y 56'13	6.14646 AU	min. Earth dist.	-2038 Apr 25 j 09:04	15° ≙ 12'35	4.27027 AU
morning rise	-2044 May 14 j 23:08	25° Y 40'38		direct	-2038 Jun 24 j 23:43	10° ≏ 24'40	
C	-2044 Jun 03 j 08:41	0°8		evening set	-2038 Oct 28 j 09:17	28° ≏ 42'40	
retrograde	-2044 Sep 18 j 17:10	14° 8 29'07			-2038 Nov 03 j 00:08	0°M	
min. Earth dist.	-2044 Nov 16 j 07:38	9° 8 33'12	4.20718 AU		·		
opposition	-2044 Nov 17 j 04:22	9° 8 26'10		conjunction	-2038 Nov 09 j 23:53	1°M36'41	0°36'39
direct	-2043 Jan 15 j 18:22	4° 8 24'31		minimum elong	-2038 Nov 09 j 23:56	1°M36'43	0°36'38
	-2043 Apr 15 j 14:41	15° 8		max. Earth dist.	-2038 Nov 08 j 13:14	1°M16'42	6.21067 AU
evening set	-2043 May 22 j 20:13	22° 8 54'16		morning rise	-2038 Nov 22 j 14:23	4°M30'57	
C	, ,			Č	-2037 Jan 10 j 17:03	15°M	
conjunction	-2043 Jun 05 j 13:16	25° 8 57'14	-0°05'17	retrograde	-2037 Mar 28 j 22:37	23°M09'46	
minimum elong	-2043 Jun 05 j 13:16			opposition	-2037 May 28 j 22:01	18°M15'12	0°23'05
behind sun begin	-2043 Jun 05 j 05:14			min. Earth dist.	-2037 May 29 j 16:47	18° M 09'10	4.14935 AU
behind sun end	-2043 Jun 05 j 21:19				-2037 Jun 25 j 15:12	15°RM	
max. Earth dist.	-2043 Jun 06 j 11:21		6.26726 AU	direct	-2037 Jul 28 j 13:39	13°M20'19	
morning rise	-2043 Jun 19 j 04:49	28° 8 59'16			-2037 Aug 30 j 04:14	15° M ₊	
	-2043 Jun 23 j 19:02	$\Pi^{\circ}0$		desc. node	-2037 Oct 13 j 03:37	21°M36'09	
asc. node	-2043 Jul 23 j 09:34	6° Ⅱ 15'12			-2037 Nov 21 j 06:06	0° ∡ ¹	
retrograde	-2043 Oct 20 j 12:30	16° ∐ 48'42		evening set	-2037 Nov 30 j 07:11	2° х ¹06′24	
opposition	-2043 Dec 19 j 04:46	11° Ⅱ 49'30	0°23'25	max. Earth dist.	-2037 Dec 12 j 10:56	4° ∡ ′58′28	6.09241 AU
min. Earth dist.	-2043 Dec 18 j 22:30	11° Ⅱ 51'35	4.32059 AU				
direct	-2042 Feb 18 j 01:17	6° Ⅱ 46'16		conjunction	-2037 Dec 13 j 01:32	5° √ 07'05	-0°07'04
evening set	-2042 Jun 25 j 13:42	24° ∏ 50′22		minimum elong	-2037 Dec 13 j 01:31	5° ∡ ¹07'04	0°07'06
				behind sun begin	-2037 Dec 12 j 18:04	5° ∡ ¹02'42	
conjunction	-2042 Jul 08 j 23:55	27° Ⅱ 46′28	0°36'13	behind sun end	-2037 Dec 13 j 08:57	5° ∡ 11'27	
minimum elong	-2042 Jul 08 j 23:53	27° Ⅱ 46′27	0°36'16	morning rise	-2037 Dec 25 j 21:44	8° ₰ 08'54	
max. Earth dist.	-2042 Jul 08 j 18:47	27° Ⅱ 43'40	6.36486 AU	retrograde	-2036 May 03 j 14:38	27° ∡ ¹47'35	
	-2042 Jul 19 j 03:58	0 \circ \odot		opposition	-2036 Jul 03 j 07:32	22° х 49′25	-0°44'44
morning rise	-2042 Jul 22 j 07:25	0°541'06		min. Earth dist.	-2036 Jul 03 j 06:39	22° х 49′42	4.04356 AU
retrograde	-2042 Nov 20 j 08:29	17° © 50'25		direct	-2036 Aug 31 j 13:54	17° ∡ 56′07	
opposition	-2041 Jan 19 j 07:27	12° © 55'03	1°16'55		-2036 Dec 03 j 00:57	ರ°0	
min. Earth dist.	-2041 Jan 19 j 18:53	12° © 51'18	4.39615 AU	evening set	-2035 Jan 03 j 02:00	7° る 08'47	
direct	-2041 Mar 22 j 07:56	7° © 51'36					
evening set	-2041 Jul 27 j 18:14	25°5540'24		conjunction	-2035 Jan 16 j 02:43	10° ප 15'51	-0°49'41
	-			minimum elong	-2035 Jan 16 j 02:40	10° る 15'49	0°49'43
conjunction	-2041 Aug 09 j 19:43	28°530'57	1°06'13	max. Earth dist.	-2035 Jan 16 j 18:03	10° ට 25'03	6.00884 AU
minimum elong	-2041 Aug 09 j 19:40	28°930'56	1°06'15	morning rise	-2035 Jan 29 j 06:13	13° る 24'34	
max. Earth dist.	-2041 Aug 08 j 15:51	28° © 15'45	6.41189 AU		-2035 Apr 21 j 06:42	0° ≈	
	-2041 Aug 16 j 14:58	$0^{\circ}\Omega$		retrograde	-2035 Jun 10 j 07:05	3° ≈ 45′16	
morning rise	-2041 Aug 22 j 17:58	1° Ω 19'56			-2035 Jul 30 j 19:13	30°Ŗ₹	
	-2041 Nov 04 j 06:28	15° Ω		opposition	-2035 Aug 09 j 11:43	28° පි 43'10	-1°38'18
retrograde	-2041 Dec 20 j 22:11	18° Ω 14'50		min. Earth dist.	-2035 Aug 08 j 16:41	28° る 49'32	3.99194 AU

	ical year style is used: Th						ge 33
direct	-2035 Oct 06 j 17:17	16 year -2033 1 23° る 49'30	iii astronomicai co	conjunction	-2029 Aug 14 j 05:04	$2^{\circ}\Omega$ 55'50	1°09'01
direct	-2035 Dec 08 j 23:50	0°≈		minimum elong	-2029 Aug 14 j 05:02	2° Ω 55'48	1°09'03
evening set	-2034 Feb 08 j 13:56	0 ∞ 13°≈16'02		morning rise	-2029 Aug 14 j 03:02 -2029 Aug 27 j 02:07	5° Ω 44'04	1 09 03
evening set	-2034 Feb 15 j 20:20	15° ≈		morning rise	-2029 Oct 11 j 17:58	15° Ω	
	2031100 13 j 20.20	15 / • ·		retrograde	-2029 Dec 25 j 06:02	22° Ω 37'25	
conjunction	-2034 Feb 21 j 22:00	16° ≈ 27'04	-1°14'23	opposition	-2028 Feb 23 j 16:41	17° Ω 45'00	1°50'05
minimum elong	-2034 Feb 21 j 21:59	16°≈27'03		min. Earth dist.	-2028 Feb 24 j 19:17	17° Ω 36'28	4.41643 AU
max. Earth dist.	-2034 Feb 23 j 13:25	16° ≈ 50'38	5.99271 AU		-2028 Mar 17 j 09:37	15°RΩ	
morning rise	-2034 Mar 07 j 09:29	19° ≈ 39'48		direct	-2028 Apr 26 j 09:45	12° Ω 42'52	
S	-2034 Apr 22 j 16:49	0°) €			-2028 Jun 05 j 11:07	15° Ω	
retrograde	-2034 Jul 17 j 09:33	10°) €02'26			-2028 Aug 29 j 02:41	0° m)	
min. Earth dist.	-2034 Sep 13 j 21:40	5°) €08'09	4.01470 AU	evening set	-2028 Aug 31 j 05:44	0° m/27'51	
opposition	-2034 Sep 15 j 04:34	4°) 57'38	-1°54'05	max. Earth dist.	-2028 Sep 11 j 03:15	2° m 51'30	6.39599 AU
direct	-2034 Nov 12 j 03:06	0° ∺ 01'36					
evening set	-2033 Mar 17 j 19:23	19°) €21'42		conjunction	-2028 Sep 12 j 22:50	3° m 15'31	1°17'26
				minimum elong	-2028 Sep 12 j 22:50	3° Mp 15'31	1°17'27
conjunction	-2033 Mar 31 j 10:31	22°) 33′12	-1°10'36	morning rise	-2028 Sep 25 j 13:23	6° Mg 02′02	
minimum elong	-2033 Mar 31 j 10:34	22°) 33′13	1°10'36	retrograde	-2027 Jan 24 j 15:22	23° m 10'44	
max. Earth dist.	-2033 Apr 02 j 12:04	23°) €02'14	6.05123 AU	opposition	-2027 Mar 26 j 11:23	18° m 19'08	1°47'21
morning rise	-2033 Apr 14 j 04:00	25°) 45′42		min. Earth dist.	-2027 Mar 27 j 19:56	18° m 08'46	4.36289 AU
	-2033 May 02 j 17:01	0° Y		direct	-2027 May 28 j 00:42	13° m 19'07	
retrograde	-2033 Aug 21 j 22:17	15° Y 28′06			-2027 Sep 25 j 09:53	0∘ ⊽	
min. Earth dist.	-2033 Oct 19 j 04:38	10° Ƴ 33'14		evening set	-2027 Oct 01 j 02:50	1° ≏ 16′04	
opposition	-2033 Oct 20 j 10:05	10° Y 23'11	-1°26'40	max. Earth dist.	-2027 Oct 11 j 20:20	3° ჲ 40'33	6.31507 AU
direct	-2033 Dec 17 j 24:00	5° Y 23'57					
evening set	-2032 Apr 22 j 11:47	24° Y 20'13		conjunction	-2027 Oct 13 j 16:42	4° ჲ 05'33	1°04'10
				minimum elong	-2027 Oct 13 j 16:44	4° ഫ 05'34	1°04'10
conjunction	-2032 May 06 j 06:32	27° Y ′28′27		morning rise	-2027 Oct 26 j 05:07	6° £ 54'32	
minimum elong	-2032 May 06 j 06:35	27° Y ′28'29	0°41'09	retrograde	-2026 Feb 26 j 16:28	24° ≏ 43'07	
max. Earth dist.	-2032 May 08 j 00:17	27° Y ′52'15	6.16095 AU	opposition	-2026 Apr 28 j 16:54	19° ჲ 50'38	1°13'20
	-2032 May 17 j 08:53	0°8		min. Earth dist.	-2026 Apr 29 j 23:19	19° ≏ 40'57	4.25891 AU
morning rise	-2032 May 20 j 01:32	0° 8 36'36		direct	-2026 Jun 29 j 11:43	14° ≏ 53'22	
	-2032 Jul 31 j 22:51	15° 8			-2026 Oct 18 j 11:12	0° M	
retrograde	-2032 Sep 23 j 07:23	19° 8 17'08		evening set	-2026 Nov 01 j 17:10	3°M₁3'32	
	-2032 Nov 16 j 05:05	15°₹ 8		max. Earth dist.	-2026 Nov 12 j 21:10	5° ™ 48'07	6.19693 AU
opposition	-2032 Nov 21 j 19:22	14° 8 14'43			202637 14:07.55	60 W 0011 0	0001116
min. Earth dist.	-2032 Nov 20 j 23:21		4.22230 AU	conjunction	-2026 Nov 14 j 07:55	6°M08'13	0°31'16
direct	-2031 Jan 20 j 12:06	9° 8 12'53		minimum elong	-2026 Nov 14 j 07:57	6°M08'15	0°31'14
	-2031 Mar 25 j 06:23	15° 8		morning rise	-2026 Nov 26 j 23:07	9°M03'21	
evening set	-2031 May 27 j 17:48	27° 8 39'19		. 1	-2026 Dec 23 j 12:31	15°M	
asc. node	-2031 Jun 01 j 11:47	28° 8 42'20		retrograde	-2025 Apr 02 j 17:36	27°M49'38	001.4100
	-2031 Jun 07 j 07:39	$\Pi^{\circ}0$		opposition	-2025 Jun 02 j 17:03	22°M54'36	0°14'08
· · · · · · · · · · · · ·	2021 I 10:10:02	00T41121	0901100	min. Earth dist.	-2025 Jun 03 j 09:46	22°M49'13	4.13403 AU
conjunction	-2031 Jun 10 j 10:03	0° Π 41'21	0°01'00	direct	-2025 Aug 02 j 04:19	17°M59'54	
minimum elong	-2031 Jun 10 j 10:02	0° П 41'21 0° П 36'45	0°01'03	desc. node	-2025 Aug 25 j 03:31	18° ™ 50'21 0° <i>⊀</i> 7	
behind sun begin	-2031 Jun 10 j 01:44 -2031 Jun 10 j 18:21	0° Д 3645		avanina aat	-2025 Nov 04 j 18:49 -2025 Dec 04 j 20:10	6° х ¹49'54	
behind sun end max. Earth dist.	-2031 Jun 10 j 18:21 -2031 Jun 11 j 03:58	0°Щ45'57 0°Щ51'18	6.28216 AU	evening set	-2023 Dec 04 J 20:10	U X.49.34	
max. Earth dist.	-2031 Jun 24 j 00:48	3° П 42'25	0.20210 AU	conjunction	-2025 Dec 17 j 15:24	9° ∡ '51'35	-0°13'11
retrograde	-2031 Oct 24 j 23:55	21° П 25'08		minimum elong	-2025 Dec 17 j 15:24	9° x ⁷ 51'35	
opposition	-2031 Oct 24 j 25.35 -2031 Dec 23 j 16:06	16° ∏ 26'32	0°31'58	behind sun begin	-2025 Dec 17 j 10:32	9° x '3133	V 1.J 17
min. Earth dist.	-2031 Dec 23 j 10:00	16° Ⅲ 20′32	4.33437 AU	behind sun end	-2025 Dec 17 j 20:13	9° × ⁷ 54'26	
direct	-2030 Feb 22 j 17:41	10 II 27 42 11° II 23'17	4.55457 110	max. Earth dist.	-2025 Dec 17 j 04:43	9° × ⁷ 45'16	6.07704 AU
evening set	-2030 Jun 30 j 05:37	29° Ⅲ 24'17		morning rise	-2025 Dec 30 j 12:21	12° ₹ '54'28	0.07704710
510ming 50t	-2030 Jul 02 j 23:21	0°95		111011111112 1130	-2024 Mar 27 j 12:44	12 × 34 28	
	2030 341 02 j 23.21	٠٠		retrograde	-2024 May 08 j 17:08	° ♂ 2°♂41'16	
conjunction	-2030 Jul 13 j 14:45	2° © 19'26	0°41'21		-2024 Jun 20 j 03:02	30°R. ₹	
minimum elong	-2030 Jul 13 j 14:42	2°519'25	0°41'24	opposition	-2024 Jul 08 j 07:03	27° х 42′36	-0°53'21
max. Earth dist.	-2030 Jul 13 j 07:57	2°515'43	6.37674 AU	min. Earth dist.	-2024 Jul 08 j 04:59	27° × 43'16	4.02958 AU
morning rise	-2030 Jul 26 j 20:48	5° © 13'01		direct	-2024 Sep 05 j 09:25	22° ✓ 49'21	
retrograde	-2030 Nov 24 j 14:52	22° © 17'57			-2024 Nov 13 j 15:45	0°る	
opposition	-2029 Jan 23 j 16:37	17°523'01	1°22'50	evening set	-2023 Jan 07 j 22:26	12° る 06'23	
min. Earth dist.	-2029 Jan 24 j 04:42	17°9519'05	4.40572 AU	<i>5</i>	, <u>,</u>		
direct	-2029 Mar 26 j 19:14	12° © 19'44		conjunction	-2023 Jan 21 j 00:03	15° る 14'24	-0°54'22
	-2029 Jul 31 j 17:42	0°N		minimum elong	-2023 Jan 20 j 24:00	15° る 14'22	
evening set	-2029 Aug 01 j 04:56	0° Ω 06'04		max. Earth dist.	-2023 Jan 21 j 17:14	15° る 24'43	5.99745 AU
max. Earth dist.	-2029 Aug 12 j 23:12	2° Ω 39'32	6.41843 AU	morning rise	-2023 Feb 03 j 04:53	18° る 24'10	
	2 3			Č	,		

•	ical vear style is used: Th		-	· / ·	r 2024 BCE in historical c		ige 54
7 ttention, astronom	-2023 Mar 27 j 14:14	0°≈	in astronomical co	min. Earth dist.	-2017 Jan 28 j 16:48		4.41271 AU
retrograde	-2023 Jun 15 j 09:34	8°≈50'00		direct	-2017 Mar 31 j 08:23	16°9545'24	1.112/1110
opposition	-2023 Aug 14 j 13:09	3°≈47'26	-1°42'50	direct	-2017 Jul 15 j 08:41	0°Ω	
min. Earth dist.	-2023 Aug 13 j 15:19		3.98472 AU	evening set	-2017 Aug 05 j 14:56	4° Ω 30'07	
mm. Latin dist.	-2023 Rug 13 j 13:17 -2023 Sep 16 j 00:51	30°Ŗる	3.70472 AU	max. Earth dist.	-2017 Aug 03 j 14:30	7° Ω 01'56	6.42061 AU
direct	-2023 Oct 11 j 15:00	28°る53'32		max. Earth dist.	-2017 Aug 17 J 00.10	7 8 201 30	0.42001 AU
direct	-2023 Nov 06 j 05:34	28 ⊙ 33 32		conjunction	-2017 Aug 18 j 14:02	7° Ω 19'19	1°11'27
	-2022 Jan 30 j 07:16	0 ∞ 15°≈		minimum elong	-2017 Aug 18 j 14:00	7° Ω 19'18	1°11'30
evening set	-2022 Feb 13 j 16:26	13 ∞ 18° ≈ 22'54		morning rise	-2017 Aug 31 j 09:50	10° Ω 06'59	1 11 50
evening set	-2022 100 13 j 10.20	10 22 34		morning risc	-2017 Aug 31 j 09:50	10° Ω 0039	
conjunction	-2022 Feb 27 i 01:46	21° ≈ 34'35	1015122	retrograde	-2017 Sep 23 j 10.34 -2017 Dec 29 j 13:11	27°Ω00'27	
minimum elong	-2022 Feb 27 j 01:46	21°≈34'35		opposition	-2017 Bec 29 j 13:11 -2016 Feb 28 j 02:23	22°Ω08'14	1°51'34
max. Earth dist.	-2022 Feb 28 j 19:46	21°≈59'41	5.99030 AU	min. Earth dist.	-2016 Feb 29 j 05:38	$21^{\circ}\Omega 59'30$	4.41381 AU
morning rise	-2022 Mar 12 j 14:18	24°≈47'54	3.77030 AO	direct	-2016 Apr 30 j 19:14	17°Ω06'20	4.41301 AC
morning risc	-2022 Apr 04 j 00:24	0°) €		direct	-2016 Aug 12 j 19:21	0° m)	
retrograde	-2022 Apr 04 j 00:24 -2022 Jul 22 j 12:27	15° ¥ 09'56		evening set	-2016 Sep 04 j 13:48	ارات 4° ا% 51' 57	
min. Earth dist.	-2022 Sep 18 j 22:01		4.01735 AU	max. Earth dist.	-2016 Sep 15 j 09:41	-	6.38866 AU
opposition	-2022 Sep 20 j 04:57	10°) €04'54		max. Earth dist.	2010 Sep 13 j 07.41	7 110 13 02	0.30000710
direct	-2022 Sep 20 j 04:37 -2022 Nov 17 j 04:44	5° H 08'24	-1 3237	conjunction	-2016 Sep 17 j 06:08	7° m 39'36	1°16'52
evening set	-2021 Mar 23 j 00:06	24°) 28'13		minimum elong	-2016 Sep 17 j 06:09	7°m)39'36	1°16'52
evening set	-2021 Wai 25 j 00.00	24 /(2013		morning rise	-2016 Sep 29 j 20:06	10° m) 26'11	1 1032
conjunction	-2021 Apr 05 j 16:13	27° ¥ 39'48	1007/42	retrograde	-2015 Jan 29 j 04:41	27° m) 38'54	
minimum elong	-2021 Apr 05 j 16:16	27° H 39'49		opposition	-2015 Mar 31 j 01:03	27 m/38 34 22° m/47'20	1°44'22
max. Earth dist.	-2021 Apr 07 j 19:33	28° H 09'48	6.05882 AU	min. Earth dist.	-2015 Apr 01 j 10:59	22° m/36'33	4.35112 AU
max. Lattii dist.	-2021 Apr 07 j 15:35	20 γ (0) 40	0.03002 AU	direct	-2015 Apr 01 j 10:59	17° Mp 47'41	4.33112 AO
morning rise	-2021 Apr 19 j 10:20	0° Υ ′52'13		uncet	-2015 Sep 08 j 20:19	0° <u>م</u>	
retrograde	-2021 Apr 19 j 10:20	20° Υ 28'30		evening set	-2015 Oct 05 j 11:49	o _ 5° Ω 47'19	
min. Earth dist.	-2021 Aug 20 j 10:33	15° Υ 33'52	4.11408 AU	max. Earth dist.	-2015 Oct 16 j 04:35	8° ≏ 11'57	6.29977 AU
opposition	-2021 Oct 25 j 06:10	15° Υ 23'42		max. Earth dist.	2013 000 10 10 1.33	0 =1137	0.2))///110
direct	-2021 Dec 22 j 21:45	10° Υ 24'03	1 1755	conjunction	-2015 Oct 18 j 01:33	8° م 37'22	1°00'35
evening set	-2020 Apr 27 j 14:23	29° Y 17'21		minimum elong	-2015 Oct 18 j 01:36	8° م 37'23	1°00'35
evening sec	-2020 Apr 30 j 17:47	0°8		morning rise	-2015 Oct 30 j 14:14	11° ≏ 27'05	1 0030
	r j	. •		retrograde	-2014 Mar 03 j 11:00	29° ჲ 23'08	
conjunction	-2020 May 11 j 09:03	2° 8 24'57	-0°35'34	opposition	-2014 May 03 j 12:18	24° ≏ 30'24	1°06'14
minimum elong	-2020 May 11 j 09:05	2° 8 24'58	0°35'32	min. Earth dist.	-2014 May 04 j 16:55	24° ≏ 21'16	4.24096 AU
max. Earth dist.	-2020 May 12 j 23:46		6.17558 AU	direct	-2014 Jul 04 j 02:36	19° ഫ 33'31	
morning rise	-2020 May 25 j 03:59	5° 8 32'22			-2014 Sep 30 j 23:44	0°M	
	-2020 Jul 08 j 16:41	15° ∀		evening set	-2014 Nov 06 j 06:34	7°M58'07	
retrograde	-2020 Sep 27 j 21:50	24° 8 04'35		-	-		
opposition	-2020 Nov 26 j 10:17	19° 8 02'30	-0°21'36	conjunction	-2014 Nov 18 j 21:54	10°M53'49	0°25'25
min. Earth dist.	-2020 Nov 25 j 16:20	19° 8 08'34	4.23820 AU	minimum elong	-2014 Nov 18 j 21:55	10°M53'50	0°25'23
	-2020 Dec 31 j 11:58	15° ₹ 8		max. Earth dist.	-2014 Nov 17 j 14:45	10°M35'43	6.17807 AU
direct	-2019 Jan 25 j 08:12	14° 8 00'17		morning rise	-2014 Dec 01 j 13:37	13°M50'01	
	-2019 Feb 19 j 11:55	15° 8			-2014 Dec 06 j 15:16	15° ™	
asc. node	-2019 Apr 10 j 03:43	21° 8 39'16			-2013 Feb 23 j 21:52	0° ∡ ¹	
	-2019 May 21 j 17:20	$\Pi^{\circ}0$		retrograde	-2013 Apr 07 j 21:51	2° ∡ ¹45'38	
evening set	-2019 Jun 01 j 14:41	2° Ⅲ 22'39			-2013 May 21 j 09:36	30°RM	
				opposition	-2013 Jun 07 j 18:52	27°M50'16	0°04'33
conjunction	-2019 Jun 15 j 06:20	5° Ⅲ 23'44	0°07'12	min. Earth dist.	-2013 Jun 08 j 10:12	27°M45'19	4.11564 AU
minimum elong	-2019 Jun 15 j 06:19	5° Ⅱ 23'43	0°07'15	desc. node	-2013 Jul 04 j 10:27	24°M40'39	
behind sun begin	-2019 Jun 14 j 22:44	5° Ⅱ 19'33		direct	-2013 Aug 07 j 01:54	22°M55'54	
behind sun end	-2019 Jun 15 j 13:53	5° Ⅱ 27'54			-2013 Oct 15 j 19:40	0° ⊀ ¹	
max. Earth dist.	-2019 Jun 15 j 22:47	5° Ⅲ 32'50	6.29795 AU	evening set	-2013 Dec 09 j 16:33	11° ₰ 750'54	
morning rise	-2019 Jun 28 j 19:52	8° Ⅲ 23'38					
retrograde	-2019 Oct 29 j 08:28	25° Ⅱ 59'13		conjunction	-2013 Dec 22 j 12:31	14° ₹ 53'39	-0°19'37
opposition	-2019 Dec 28 j 02:49	21° Ⅱ 01′06	0°40'16	minimum elong	-2013 Dec 22 j 12:30	14° ₹ ′53'38	0°19'40
min. Earth dist.	-2019 Dec 28 j 00:34	21° Ⅲ 01'50	4.34850 AU	max. Earth dist.	-2013 Dec 22 j 04:29	14° ∡ °48′53	6.06088 AU
direct	-2018 Feb 27 j 08:06	15° Ⅲ 57'44		morning rise	-2012 Jan 04 j 10:42	17° ∡ ′57'44	
	-2018 Jun 16 j 10:35	0∘ ௐ			-2012 Feb 28 j 19:50	0°ප	
evening set	-2018 Jul 04 j 20:23	3° 9 55'18		retrograde	-2012 May 14 j 00:04	7° ろ 52'37	
				opposition	-2012 Jul 13 j 13:22	2° る 53'26	
conjunction	-2018 Jul 18 j 04:05	6° 5 49'26	0°46'16	min. Earth dist.	-2012 Jul 13 j 07:16		4.01759 AU
minimum elong	-2018 Jul 18 j 04:02	6° © 49'25	0°46'17		-2012 Aug 06 j 02:17	30°₽ ✓	
max. Earth dist.	-2018 Jul 17 j 16:38	6°5543'12	6.38769 AU	direct	-2012 Sep 10 j 09:55	28° ∡ 00′19	
morning rise	-2018 Jul 31 j 08:56	9° © 42'03			-2012 Oct 15 j 08:57	0° る	
retrograde	-2018 Nov 28 j 23:01	26°543'10	1000110	evening set	-2011 Jan 13 j 01:46	17° る 20'53	
opposition	-2017 Jan 28 j 01:37	21° 5 548'38	1-28/19				

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -2011 in astronomical counting style is the year 2012 BCE in historical counting style. -2011 Jan 26 j 04:31 20°る29'40 -0°58'56 -2006 Nov 07 j 11:16 $0^{\circ}\Omega$ conjunction -2011 Jan 26 j 04:28 20°**る**29'38 -2006 Dec 03 j 03:10 1°Ω02'07 minimum elong 0°58'57 retrograde 30°Rூ -2011 Jan 27 j 02:43 20°**ප්**43'01 -2006 Dec 28 j 19:08 max. Earth dist. 5.99087 AU 23°る40'12 -2011 Feb 08 j 10:23 -2005 Feb 01 j 07:49 26°9508'00 1°33'10 morning rise opposition -2011 Mar 07 j 17:08 0°≈ min. Earth dist. -2005 Feb 02 j 00:46 26°902'30 4.41592 AU 14°≈08'44 retrograde -2011 Jun 20 j 18:48 direct -2005 Apr 04 j 16:15 21°904'52 opposition -2011 Aug 19 j 19:57 9°≈05'43 -1°47'05 -2005 Jun 27 j 16:18 $0^{\circ}\Omega$ min. Earth dist. -2011 Aug 18 j 20:29 9°≈13'37 3.98463 AU evening set -2005 Aug 09 j 22:36 8°**Ω**49'21 direct -2011 Oct 16 j 21:15 4°≈11'35 max. Earth dist. -2005 Aug 21 j 08:34 11°**Ω**18'33 6.41803 AU -2010 Jan 11 j 18:41 15°≈ evening set -2010 Feb 18 j 23:43 23°**≈**40'48 conjunction -2005 Aug 22 j 20:29 11°**Ω**38'11 1°13'27 -2005 Aug 22 j 20:27 minimum elong 11°**Ω**38'10 1°13'29 -2005 Sep 04 j 15:27 conjunction -2010 Mar 04 j 10:08 26°≈52'41 -1°16'14 morning rise 14°**Ω**25'35 minimum elong -2010 Mar 04 j 10:08 26°**≈**52'41 1°16'14 -2005 Sep 07 j 06:58 15°€ max. Earth dist. -2010 Mar 06 j 07:51 27°≈19'55 5.99673 AU -2005 Dec 04 j 07:39 0° m morning rise -2010 Mar 17 j 23:36 0°\ 06'04 retrograde -2004 Jan 02 j 22:12 1° m 20'55 -2010 Mar 17 j 13:20 0°**)**€ -2004 Feb 01 j 14:02 30°RΩ retrograde -2010 Jul 27 j 15:31 20°**)**€23'07 opposition -2004 Mar 03 j 11:21 26°**Ω**28'54 1°52'27 min. Earth dist. -2010 Sep 23 j 22:43 15°**)** €28'56 4.02985 AU min. Earth dist. -2004 Mar 04 j 17:13 26°**Ω**19'20 4.40578 AU opposition -2010 Sep 25 j 06:53 15°**升**17′58 -1°50′16 direct -2004 May 05 j 05:25 21°Ω27'11 direct -2010 Nov 22 j 07:05 10°**)**€21'04 -2004 Jul 25 j 21:01 0° m evening set -2009 Mar 28 i 06:06 29°\ 36'58 evening set -2004 Sep 08 i 20:53 9° m 15'05 -2009 Mar 29 j 21:50 $0^{\circ}\Upsilon$ max. Earth dist. -2004 Sep 19 j 15:30 11° m 37'55 6.37566 AU -2009 Apr 10 j 22:41 2° Y 48'01 -1° 04'21 conjunction -2004 Sep 21 i 12:48 12° m 03'01 1°15'52 conjunction -2009 Apr 10 j 22:44 2°Υ48'03 1°04'21 -2004 Sep 21 j 12:49 12° m 03'02 minimum elong minimum elong 1°15'53 -2009 Apr 13 j 00:18 3°Y16'54 -2004 Oct 04 j 02:18 14° m/49'58 max. Earth dist. 6.07604 AU morning rise -2009 Apr 24 j 17:18 5°**Y**59'49 -2004 Dec 27 j 00:41 0∘**⊽** morning rise -2009 Aug 31 j 12:25 25°**Y**26'18 -2003 Feb 02 j 17:15 2°**£**08'36 retrograde retrograde -2009 Oct 28 j 20:12 20°**Υ**31'27 4.13397 AU -2003 Mar 12 j 21:19 min. Earth dist. 30°R M -2009 Oct 30 j 00:45 opposition -2003 Apr 04 j 15:15 20°**Y**21'42 -1°12'42 27° Mp 16'57 1°40'48 opposition -2003 Apr 06 j 00:16 -2009 Dec 27 j 20:50 15°**Y**21'35 min. Earth dist. 27° Mp 06'27 4.33412 AU direct -2003 Jun 06 j 00:19 -2008 Apr 13 j 20:15 direct 22° m 17'40 0°8 -2008 May 02 j 14:25 4°809'14 -2003 Aug 21 j 01:57 evening set 0∘ଫ evening set -2003 Oct 09 j 21:57 10°**£**21'37 -2008 May 16 j 09:06 7°**8**15'53 -0°29'51 conjunction max. Earth dist. -2003 Oct 20 j 16:27 12°**2**47'54 6.28022 AU -2008 May 16 j 09:08 minimum elong 7°**8**15'54 0°29'50 max. Earth dist. -2008 May 17 j 22:17 7°**8**36'54 6.19660 AU conjunction -2003 Oct 22 j 11:43 13°**≏**12'28 0°56'36 -2008 May 30 j 03:24 10°**8**22'08 minimum elong -2003 Oct 22 j 11:45 13°**♀**12'30 0°56'35 morning rise -2008 Jun 20 j 05:01 15°8 -2003 Nov 04 j 00:36 16°**♀**03'06 morning rise retrograde -2008 Oct 02 j 08:51 28°**8**44'21 -2002 Jan 14 j 02:09 0°M -2008 Nov 30 j 22:02 23°842'49 -0°12'42 -2002 Mar 08 j 10:05 4°ML08'01 opposition retrograde min. Earth dist. -2008 Nov 30 j 06:06 23°848'11 4.25823 AU -2002 May 02 j 12:14 30°R <u>Ω</u> -2007 Jan 30 j 00:50 18°**8**40'22 -2002 May 08 j 09:51 direct opposition 29° **2**15'01 0°58'36 19°815'24 -2002 May 09 j 13:48 29°**₽**06'06 asc. node -2007 Feb 18 j 06:26 min. Earth dist. 4.22011 AU -2007 May 04 j 10:23 $\mathbb{I}^{\circ 0}$ direct -2002 Jul 08 i 20:44 24° **△**18'31 evening set -2007 Jun 06 i 07:49 6°**I**57'39 -2002 Sep 09 i 22:26 0°M evening set -2002 Nov 10 j 22:13 12°M48'19 conjunction -2007 Jun 19 j 22:22 9°II57'36 0°13'07 -2002 Nov 20 j 08:43 15°M -2007 Jun 19 i 22:21 9°II57'35 0°13'10 max. Earth dist. -2002 Nov 22 j 09:17 15°M28'20 6.15786 AU minimum elong -2007 Jun 19 j 17:38 9°II55'00 behind sun begin -2007 Jun 20 j 03:04 10°**Ⅱ**00′10 -2002 Nov 23 j 14:05 15°ML45'07 0°19'17 behind sun end conjunction -2007 Jun 20 j 09:15 10°**Ⅱ**03'35 -2002 Nov 23 j 14:06 0°19'16 max. Earth dist. 6.31526 AU minimum elong 15°M,45'08 morning rise -2007 Jul 03 j 10:58 12°**Ⅲ**56′20 morning rise -2002 Dec 06 j 06:43 18°M42'34 -2007 Oct 17 j 13:38 0.00 -2001 Jan 27 j 23:44 0° **₹** -2007 Nov 02 j 14:39 0°925'02 retrograde -2001 Apr 13 j 02:06 7°**х** 47'46 retrograde -2007 Nov 18 j 14:06 30°R II -2001 May 13 j 05:41 6°**х** 24'27 desc. node -2006 Jan 01 j 10:10 25°**II**27'25 0°48'03 -2001 Jun 12 j 23:09 opposition opposition 2°**₹**'51'51 -0°05'16 -2006 Jan 01 j 11:10 -2001 Jun 13 j 10:20 min. Earth dist. 25°**Ⅲ**27′05 4.36195 AU min. Earth dist. 2°**∡**48'14 4.09792 AU -2001 Jul 06 j 15:13 direct -2006 Mar 03 j 20:23 20°**Ⅲ**23'54 30°RM 27°M57'48 -2006 May 29 j 21:04 0ಂತಾ direct -2001 Aug 11 j 23:48 evening set -2006 Jul 09 j 07:28 8°9518'37 -2001 Sep 16 j 21:27 0°**∡**7 evening set -2001 Dec 14 j 15:12 16° ₹ 57'13 conjunction -2006 Jul 22 j 14:07 11°9511'56 0°50'44 minimum elong -2006 Jul 22 j 14:04 11°9911'55 0°50'47 conjunction -2001 Dec 27 j 12:03 20°**₹**00'56 -0°26'00 -2006 Jul 21 j 24:00 11°9504'14 minimum elong -2001 Dec 27 j 12:01 max. Earth dist. 6.39617 AU 20°**₹**'00'55 0°26'03

max. Earth dist.

morning rise

-2006 Aug 04 j 17:30

14°503'38

-2001 Dec 27 j 09:26

19°**✗**59'23 6.04726 AU

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 36 Attention, astronomical year style is used: The year -2000 in astronomical counting style is the year 2001 BCE in historical counting style.

morning rise -2000 Jan 09 j 11:10 23° \$\times 06'03\$ retrograde -1995 Nov 06 j 21:54 4°\$\times 51'00\$

Attention, astronom	nical year style is used: Th	e year -2000 i	in astronomical c	ounting style is the year	2001 BCE in historical c	ounting style.	
morning rise	-2000 Jan 09 j 11:10	23° ∡ ¹06′03		retrograde	-1995 Nov 06 j 21:54	4° © 51'00	
	-2000 Feb 08 j 13:07	5°0			-1994 Jan 04 j 23:51	30° Ŗ Ⅱ	
retrograde	-2000 May 19 j 09:54	13° る 07'36		opposition	-1994 Jan 05 j 18:01	29° Ⅲ 54′01	0°55'35
opposition	-2000 Jul 18 j 21:14	8° る 07'47	-1°10'31	min. Earth dist.	-1994 Jan 05 j 21:35	29° Ⅱ 52'50	4.37238 AU
min. Earth dist.	-2000 Jul 18 j 12:39	8° る 10'37	4.00953 AU	direct	-1994 Mar 08 j 07:58	24° Ⅲ 50′33	
direct	-2000 Sep 15 j 15:19	3° る 14'38			-1994 May 08 j 16:42	0 \circ \odot	
evening set	-1999 Jan 18 j 06:23	22° る 36'57		evening set	-1994 Jul 13 j 18:59	12° © 43'22	
				max. Earth dist.	-1994 Jul 26 j 05:16	15° © 25'34	6.40186 AU
conjunction	-1999 Jan 31 j 10:10	25° පි 46'17	-1°03'02				
minimum elong	-1999 Jan 31 j 10:07	25° る 46'15	1°03'05	conjunction	-1994 Jul 27 j 00:18	15° © 35'56	0°54'58
max. Earth dist.	-1999 Feb 01 j 13:12	26° පි 02'31	5.98885 AU	minimum elong	-1994 Jul 27 j 00:15	15° © 35'54	0°55'01
morning rise	-1999 Feb 13 j 17:07	28° る 57'21		morning rise	-1994 Aug 09 j 02:35	18° © 26'56	
	-1999 Feb 18 j 02:35	0° ≈			-1994 Oct 07 j 03:18	$0^{\circ}\Omega$	
	-1999 May 02 j 14:34	15° ≈		retrograde	-1994 Dec 07 j 10:27	5° Ω 23'55	
retrograde	-1999 Jun 26 j 02:14	19° ≈ 25'59		opposition	-1993 Feb 05 j 15:43	0° Ω 30′13	1°37'35
	-1999 Aug 20 j 10:27	15° R ≈		min. Earth dist.	-1993 Feb 06 j 11:20	0° Ω 23'52	4.41682 AU
min. Earth dist.	-1999 Aug 24 j 00:07	14° ≈ 31'14	3.98915 AU		-1993 Feb 09 j 13:06	30° Ŗ ூ	
opposition	-1999 Aug 25 j 01:55	14° ≈ 22'32	-1°50'16	direct	-1993 Apr 09 j 02:27	25° © 27'12	
direct	-1999 Oct 22 j 01:29	9° ≈ 28′07			-1993 Jun 05 j 19:38	$0^{\circ}\Omega$	
	-1999 Dec 20 j 14:39	15° ≈		evening set	-1993 Aug 14 j 07:14	13° Ω 12′02	
evening set	-1998 Feb 24 j 06:30	28° ≈ 55'36			-1993 Aug 22 j 13:26	15° Ω	
	-1998 Feb 28 j 19:17	0° ∀		max. Earth dist.	-1993 Aug 25 j 15:34	15° Ω 40′33	6.41402 AU
conjunction	-1998 Mar 09 j 17:45	2°) €07'24	-1°16'17	conjunction	-1993 Aug 27 j 04:16	16° Ω 00'38	1°15'05
minimum elong	-1998 Mar 09 j 17:45	2°) €07'24	1°16'18	minimum elong	-1993 Aug 27 j 04:15	16° Ω 00'37	1°15'05
max. Earth dist.	-1998 Mar 11 j 16:02	2°) (34′54	6.00685 AU	morning rise	-1993 Sep 08 j 22:07	18° Ω 47'47	
morning rise	-1998 Mar 23 j 08:11	5°) €20'42			-1993 Nov 04 j 14:07	o° my	
retrograde	-1998 Aug 01 j 15:07	25°) €31′25		retrograde	-1992 Jan 07 j 06:49	5° m 45'30	
min. Earth dist.	-1998 Sep 28 j 22:40	20°) 37′12	4.04438 AU	opposition	-1992 Mar 07 j 21:56	0° m 53'43	1°52'44
opposition	-1998 Sep 30 j 07:02	20°) €26′08	-1°47'06	min. Earth dist.	-1992 Mar 09 j 04:10	0° ₩ 44'04	4.39731 AU
direct	-1998 Nov 27 j 09:24	15°) €28'47			-1992 Mar 14 j 22:56	30° R Ω	
	-1997 Mar 12 j 19:34	0° Y		direct	-1992 May 09 j 14:46	25° Ω 52'22	
evening set	-1997 Apr 02 j 10:07	4° Υ 40′21			-1992 Jul 03 j 06:18	0° ™	
				evening set	-1992 Sep 13 j 05:32	13° m 42'34	
conjunction	-1997 Apr 16 j 03:25	7° Y 50'52	-1°00'34	max. Earth dist.	-1992 Sep 23 j 22:24	16° m 04'57	6.36338 AU
minimum elong	-1997 Apr 16 j 03:28	7° Y ′50'54	1°00'33				
max. Earth dist.	-1997 Apr 18 j 05:10	8° Y 19'42	6.09383 AU	conjunction	-1992 Sep 25 j 20:47	16° m 30'45	1°14'25
morning rise	-1997 Apr 29 j 22:08	11° Y 01'56		minimum elong	-1992 Sep 25 j 20:48	16° m 30'46	1°14'25
	-1997 Aug 22 j 10:38	9° 8		morning rise	-1992 Oct 08 j 10:04	19° m 18'04	
retrograde	-1997 Sep 05 j 06:13	0° 8 18'53			-1992 Nov 29 j 23:52	0∘ ರ	
	-1997 Sep 18 j 22:49	30° ₹ Υ		retrograde	-1991 Feb 07 j 10:07	6° ≏ 42'32	
opposition	-1997 Nov 03 j 17:47	25° Y 14'41	-1°05'06	opposition	-1991 Apr 09 j 07:23	1° ≏ 50'52	1°36'34
min. Earth dist.	-1997 Nov 02 j 15:01	25° Y 23'47	4.15304 AU	min. Earth dist.	-1991 Apr 10 j 16:53	1° ≏ 40'13	4.31880 AU
direct	-1996 Jan 01 j 18:01	20° Y 14'14			-1991 Apr 24 j 04:24	30°R.Mp	
	-1996 Mar 26 j 13:06	9° 8		direct	-1991 Jun 10 j 14:48	26° Mp 52'00	
evening set	-1996 May 07 j 13:13	8° 8 56'54			-1991 Jul 27 j 05:11	0∘ ত	
				evening set	-1991 Oct 14 j 08:51	14° ≏ 59'29	
conjunction	-1996 May 21 j 07:32	12° 8 02'37	-0°24'01	max. Earth dist.	-1991 Oct 25 j 05:21	17° ≏ 27'27	6.26339 AU
minimum elong	-1996 May 21 j 07:33	12° 8 02'38	0°23'59				
max. Earth dist.	-1996 May 22 j 16:24	12° 8 21'07	6.21544 AU	conjunction	-1991 Oct 26 j 22:48	17° ≙ 51'05	0°52'15
	-1996 Jun 03 j 11:22	15° 8		minimum elong	-1991 Oct 26 j 22:51	17° ≙ 51'06	0°52'13
morning rise	-1996 Jun 04 j 01:26	15° 8 07'52		morning rise	-1991 Nov 08 j 11:57	20° ≏ 42'32	
	-1996 Aug 20 j 22:05	Π $^{\circ}0$			-1991 Dec 21 j 23:48	0° M	
retrograde	-1996 Oct 06 j 18:29	3° Ⅱ 21′21		retrograde	-1990 Mar 13 j 07:34	8° M 55'27	
	-1996 Nov 22 j 18:46	30°R₩		opposition	-1990 May 13 j 08:08	4° M L02'08	0°50'31
opposition	-1996 Dec 05 j 08:58	28° 8 20'22	-0°03'49	min. Earth dist.	-1990 May 14 j 09:01	3° ጤ 54'11	4.20307 AU
min. Earth dist.	-1996 Dec 04 j 19:12	28° 8 24'59	4.27531 AU		-1990 Jun 19 j 11:08	30° Ŗ Ω	
asc. node	-1996 Dec 29 j 06:48	25° 8 21'05		direct	-1990 Jul 13 j 13:25	29° ჲ 06'07	
direct	-1995 Feb 03 j 16:16	23° 8 17'41			-1990 Aug 06 j 14:55	0° M	
	-1995 Apr 14 j 12:53	0°Щ			-1990 Nov 04 j 00:10	15° ™	
evening set	-1995 Jun 11 j 00:23	11° Ⅱ 31'13		evening set	-1990 Nov 15 j 14:07	17° M 39'42	
Z .	J 			max. Earth dist.	-1990 Nov 27 j 05:28		6.14228 AU
conjunction	-1995 Jun 24 j 14:06	14° Ⅲ 30′12	0°18'57		. ,		
minimum elong	-1995 Jun 24 j 14:04	14° Ⅲ 30′11		conjunction	-1990 Nov 28 j 06:26	20°M37'22	0°13'04
max. Earth dist.	-1995 Jun 24 j 21:42		6.32949 AU	minimum elong	-1990 Nov 28 j 06:26	20°M37'23	
morning rise	-1995 Jul 08 j 01:25	17° Ⅲ 27'52	, ., 110	behind sun begin	-1990 Nov 28 j 01:29	20°M34'29	
	-1995 Sep 10 i 09:21	0°95		behind sun end	-1990 Nov 28 i 11:24		

behind sun end

-1990 Nov 28 j 11:24 20°M40'16

-1995 Sep 10 j 09:21

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Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -1990 in astronomical counting style is the year 1991 BCE in historical counting style. -1990 Dec 10 j 23:46 23°MJ35'47 retrograde -1984 Oct 11 i 04:52 7°**I**53'45 morning rise -1989 Jan 08 j 08:23 0°×7 -1984 Nov 09 j 05:08 6°**Ⅲ**31'51 asc. node -1989 Mar 22 j 22:12 11°**₹**44'27 -1984 Dec 09 j 18:24 2°**I**53′19 0°04'52 desc. node opposition 4.28852 AU -1989 Apr 18 j 06:47 12°**х** 48′53 min. Earth dist. -1984 Dec 09 j 07:41 2°**Ⅱ**56'55 retrograde -1989 Jun 18 j 02:32 7°**₹**52'26 -0°14'57 -1983 Jan 01 j 19:08 opposition 30°R₩ 27°850'28 min. Earth dist. -1989 Jun 18 j 11:24 7°**х** 49′33 4.08504 AU direct -1983 Feb 08 j 06:25 direct -1989 Aug 16 j 23:41 2°**х** 58'37 -1983 Mar 18 j 04:11 $0^{\circ}\Pi$ 22°**∡**00'47 evening set -1989 Dec 19 j 12:44 evening set -1983 Jun 15 j 15:26 16°**Ⅲ**01'23 18°**Ⅲ**59'33 0°24'33 conjunction -1988 Jan 01 j 10:26 25°**₹**05'16 -0°32'04 conjunction -1983 Jun 29 j 04:11 minimum elong -1988 Jan 01 j 10:24 25°**х** 05′14 0°32′06 minimum elong -1983 Jun 29 j 04:09 18°**Ⅲ**59'32 0°24'36 -1988 Jan 01 j 12:24 -1983 Jun 29 j 07:43 max. Earth dist. 25°**х** 06′26 6.03831 AU max. Earth dist. 19°**Ⅲ**01′29 6.33965 AU -1983 Jul 12 j 14:27 morning rise -1988 Jan 14 j 10:31 28°**₹**11'11 morning rise 21°**II**56'21 -1988 Jan 22 j 03:07 0°궁 -1983 Aug 20 j 09:13 0ಂತಾ retrograde -1988 May 24 j 15:46 18°る17'14 retrograde -1983 Nov 11 j 03:59 9°9515'20 opposition -1988 Jul 24 j 02:06 13°る16'52 -1°18'05 opposition -1982 Jan 10 j 01:27 4°9518'50 1°02'41 min. Earth dist. -1988 Jul 23 j 14:21 13°る20'46 4.00572 AU min. Earth dist. -1982 Jan 10 j 06:57 4°9517'01 4.37918 AU 8°**ප**23'41 direct -1988 Sep 20 j 16:36 -1982 Feb 18 j 17:59 30°RⅡ evening set -1987 Jan 23 j 08:25 27°る46'28 direct -1982 Mar 12 j 17:54 29°**Ⅱ**15'20 -1987 Feb 01 j 15:32 0°≈ -1982 Apr 04 j 00:33 0ಂತಾ evening set -1982 Jul 18 j 06:10 17°907'15 conjunction -1987 Feb 05 i 13:01 0°≈56'06 -1°06'32 minimum elong -1987 Feb 05 i 12:58 0°≈56'04 1°06'34 conjunction -1982 Jul 31 i 10:21 19°959'13 0°58'50 max. Earth dist. -1987 Feb 06 i 18:21 1°≈13'42 5.99013 AU minimum elong -1982 Jul 31 i 10:18 19°959'11 0°58'52 morning rise -1987 Feb 18 i 21:02 4°≈07'31 max. Earth dist. -1982 Jul 30 j 13:28 19°9547'50 6.40486 AU -1987 Apr 08 j 15:53 -1982 Aug 13 j 11:17 22°949'34 15°≈ morning rise -1987 Jul 01 j 04:27 -1982 Sep 16 j 23:42 retrograde 24°≈35'00 $0^{\circ}\Omega$ -1987 Aug 29 j 00:36 -1982 Dec 11 j 17:44 min. Earth dist. 19°≈40'21 3.99547 AU retrograde 9°Ω45'46 -1987 Aug 30 j 03:59 -1981 Feb 09 j 23:57 19°≈31'06 -1°52'27 4°**Ω**52'27 1°41'25 opposition opposition -1987 Oct 12 j 00:44 min. Earth dist. -1981 Feb 10 j 21:10 15°R≈ 4°**Ω**45'36 4.41611 AU -1987 Oct 27 j 03:09 -1981 Apr 02 j 19:13 direct 14°≈36'17 30°R95 -1981 Apr 13 j 12:13 -1987 Nov 11 j 06:33 direct 29°9549'38 15°≈ -1986 Feb 12 j 01:56 0°**)**€ -1981 Apr 24 j 06:03 0 $^{\circ}\Omega$ -1986 Mar 01 j 09:34 4° **H** 01'35 -1981 Aug 06 j 15:51 15°€ evening set -1981 Aug 18 j 16:03 evening set 17°**Ω**34'57 -1986 Mar 14 j 21:53 7°**升**13'19 -1°15'45 -1981 Aug 29 j 20:30 conjunction max. Earth dist. 20°**Ω**01'39 6.40944 AU minimum elong -1986 Mar 14 j 21:54 7° **★**13'20 1°15'46 max. Earth dist. -1986 Mar 16 j 22:35 7°**升**42'10 6.01755 AU conjunction -1981 Aug 31 j 12:00 20°**Ω**23'18 1°16'15 -1986 Mar 28 j 12:55 10°**¥**26′23 minimum elong -1981 Aug 31 j 11:58 20°**Ω**23'18 1°16'16 morning rise -1986 Jul 19 j 21:28 $0^{\circ}\Upsilon$ morning rise -1981 Sep 13 j 05:08 23°Ω10'18 retrograde -1986 Aug 06 j 12:54 0°Y30'33 -1981 Oct 15 j 18:14 0° m -1986 Aug 23 j 23:35 30°**₹** -1980 Jan 11 j 18:00 10° m 10'30 retrograde min. Earth dist. -1986 Oct 03 j 19:52 25°**)** 35'59 4.05824 AU -1980 Mar 12 j 09:27 5° m 18'47 1°52'19 opposition 4.38929 AU -1986 Oct 05 j 03:11 25°**¥**25'18 -1°43'15 min. Earth dist. -1980 Mar 13 j 16:37 5°m/08'50 opposition -1986 Dec 02 j 08:13 20°**¥**27'30 -1980 May 14 j 02:02 0° m 17'42 direct direct -1985 Feb 22 i 10:52 $0^{\circ}\Upsilon$ evening set -1980 Sep 17 i 13:47 18° m 09'34 evening set -1985 Apr 07 j 10:55 9°Y35'12 max. Earth dist. -1980 Sep 28 j 07:45 20° m 32'54 6.35248 AU -1980 Sep 30 i 04:44 conjunction -1985 Apr 21 i 04:33 12°\bar{45}'12 -0°56'29 conjunction 20° m 58'00 1°12'31 minimum elong -1985 Apr 21 i 04:37 12°Υ45'14 0°56'28 -1980 Sep 30 i 04:46 20° m 58'01 1°12'31 minimum elong -1985 Apr 23 j 03:45 13°**Υ**12'26 6.10955 AU -1980 Oct 12 i 17:34 23° m 45'37 max. Earth dist. morning rise -1985 May 04 j 23:38 15°**Y**55'41 -1980 Nov 10 j 18:29 0∘**⊽** morning rise -1985 Jul 13 j 10:28 0°8 -1979 Feb 12 j 00:28 retrograde 11°**Ω**15'19 retrograde -1985 Sep 09 j 19:05 5°804'00 opposition -1979 Apr 13 j 23:24 6°**£**23'30 1°31'44 0°**8**08'51 4.16906 AU min. Earth dist. -1985 Nov 07 j 05:50 min. Earth dist. -1979 Apr 15 j 07:34 6°**£**13'17 4.30556 AU -1985 Nov 08 j 07:28 0°800'08 -0°57'19 direct -1979 Jun 15 j 03:14 1° 25′03 opposition -1985 Nov 08 j 07:50 30°RY evening set -1979 Oct 18 j 19:23 19°**£**35'11 24°**Y**59'16 -1984 Jan 06 j 11:07 -1979 Oct 29 j 16:52 22°**2**04'16 6.24873 AU direct max. Earth dist. 0°8 -1984 Mar 04 j 18:33 13°**8**38'12 -1979 Oct 31 j 09:16 0°47'34 evening set -1984 May 12 j 09:13 conjunction 22°**≏**27'24 -1984 May 18 j 11:31 15°**8** minimum elong -1979 Oct 31 j 09:19 22°**£**27'25 0°47'34 morning rise -1979 Nov 12 j 22:51 25° **△**19'37 conjunction -1984 May 26 j 03:18 16°**8**43'09 -0°18'10 -1979 Dec 03 j 21:38 0°M minimum elong -1984 May 26 j 03:19 16°**8**43'10 0°18'08 retrograde -1978 Mar 18 j 05:52 13°M39'51 max. Earth dist. -1984 May 27 j 08:38 16°**8**59'37 6.23073 AU opposition -1978 May 18 j 05:31 8°M46'09 0°42'08 -1984 Jun 08 j 20:34 19°847'29 min. Earth dist. -1978 May 19 j 05:08 4.18763 AU morning rise 8°MJ38'35

-1978 Jul 18 j 07:29

direct

3°M50'26

-1984 Jul 28 j 00:26

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Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 38 Attention, astronomical year style is used: The year -1978 in astronomical counting style is the year 1979 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	ne year -1978 i	in astronomical co	unting style is the year	1979 BCE in historical c	counting style.	
	-1978 Oct 17 j 19:50	15°M		conjunction	-1972 May 31 j 01:35	21° 8 30'27	-0°12'04
evening set	-1978 Nov 20 j 04:46	22° M $_2$ 7'27		minimum elong	-1972 May 31 j 01:36	21° 8 30'28	0°12'02
				behind sun begin	-1972 May 30 j 20:02	21° 8 27'22	
conjunction	-1978 Dec 02 j 21:47	25°M26'01	0°06'49	behind sun end	-1972 May 31 j 07:09	21° 8 33'34	
minimum elong	-1978 Dec 02 j 21:48	25°M26'01	0°06'46	max. Earth dist.	-1972 Jun 01 j 04:40	21° 8 45'37	6.24540 AU
behind sun begin	-1978 Dec 02 j 14:18	25°M21'39		morning rise	-1972 Jun 13 j 18:11	24° 8 33'53	
behind sun end	-1978 Dec 03 j 05:17	25°M30'24			-1972 Jul 08 j 20:49	$\Pi^{\circ}0$	
max. Earth dist.	-1978 Dec 02 j 00:22	25° ™ 13'27	6.12744 AU	asc. node	-1972 Sep 18 j 12:00	11° Ⅲ 22′20	
morning rise	-1978 Dec 15 j 15:52	28°M25'26		retrograde	-1972 Oct 15 j 15:02	12° Ⅲ 33′01	
C	-1978 Dec 22 j 10:45	0°∡7		opposition	-1972 Dec 14 j 06:10	7° Ⅲ 33'10	0°13'45
desc. node	-1977 Jan 31 j 00:40	8° х 34′28		min. Earth dist.	-1972 Dec 13 j 20:29	7° Ⅱ 36'24	4.30238 AU
retrograde	-1977 Apr 23 j 09:08	17° ∡ ¹46'13		direct	-1971 Feb 12 j 21:06	2° П 30'12	
opposition	-1977 Jun 23 j 04:29	12° ₹ 49'18	-0°24'29	evening set	-1971 Jun 20 j 08:53	20° Ⅲ 38'11	
min. Earth dist.	-1977 Jun 23 j 10:28	12° × 47'22		evening sec	15/10411 20 1 00.00	20 20011	
direct	-1977 Aug 21 j 20:38	7° х 755'44	4.07210710	conjunction	-1971 Jul 03 j 20:30	23° ∏ 35'23	0°30'10
evening set	-1977 Dec 24 j 09:26	27° × 01'08		minimum elong	-1971 Jul 03 j 20:27	23° П 35'22	0°30'13
evening set	-1976 Jan 05 j 21:09	0°る		max. Earth dist.	-1971 Jul 03 j 20:46	23° П 35'33	6.35203 AU
	-1770 Jan 05 j 21.07	٥ ن		morning rise	-1971 Jul 17 j 05:33	26° ∏ 31'11	0.55205 AC
conjunction	-1976 Jan 06 j 07:51	0° る 06'23	0027152	morning rise	-1971 Aug 02 j 10:18	0°95	
	-	0° ろ 06'22		ratra ara da		13° © 45'13	
minimum elong	-1976 Jan 06 j 07:48	0 30622 0° る 09'11		retrograde	-1971 Nov 15 j 13:26		1°09'33
max. Earth dist.	-1976 Jan 06 j 12:31		0.02820 AU	opposition	-1970 Jan 14 j 11:08	8°549'15	
morning rise	-1976 Jan 19 j 09:03	3° ට 13'13		min. Earth dist.	-1970 Jan 14 j 19:06	8°5546'39	4.38950 AU
retrograde	-1976 May 29 j 20:48	23° る 24'35		direct	-1970 Mar 17 j 07:49	3° © 45'51	
opposition	-1976 Jul 29 j 05:56	18° ろ 23'39		evening set	-1970 Jul 22 j 18:15	21° © 35'14	
min. Earth dist.	-1976 Jul 28 j 15:37		3.99966 AU				
direct	-1976 Sep 25 j 17:34	13° る 30'20		conjunction	-1970 Aug 04 j 21:10	24° © 26'23	1°02'26
	-1975 Jan 16 j 02:18	0° ≈		minimum elong	-1970 Aug 04 j 21:07	24° © 26'22	1°02'27
evening set	-1975 Jan 28 j 10:23	2° ≈ 54'54		max. Earth dist.	-1970 Aug 03 j 21:49	24° © 13'40	6.41236 AU
				morning rise	-1970 Aug 17 j 20:51	27° © 15'56	
conjunction	-1975 Feb 10 j 16:12	6° ≈ 05'06	-1°09'32		-1970 Aug 30 j 15:05	$0 {\circ} \Omega$	
minimum elong	-1975 Feb 10 j 16:10	6° ≈ 05'05	1°09'33	retrograde	-1970 Dec 16 j 00:43	14° Ω 09'54	
max. Earth dist.	-1975 Feb 12 j 01:59	6° ≈ 25'22	5.98858 AU	opposition	-1969 Feb 14 j 09:05	9° Ω 16'50	1°44'40
morning rise	-1975 Feb 24 j 01:09	9° ≈ 17'01		min. Earth dist.	-1969 Feb 15 j 07:08	9° Ω 09'43	4.42063 AU
	-1975 Mar 20 j 15:54	15° ≈		direct	-1969 Apr 17 j 22:44	4° Ω 14'12	
retrograde	-1975 Jul 06 j 08:59	29° ≈ 44'26			-1969 Jul 20 j 14:58	15° Ω	
min. Earth dist.	-1975 Sep 03 j 02:14	24° ≈ 49'38	3.99874 AU	evening set	-1969 Aug 23 j 00:10	21° Ω 57'55	
opposition	-1975 Sep 04 j 05:59	24°≈40'14	-1°53'49	max. Earth dist.	-1969 Sep 03 j 03:42	24° Ω 24'09	6.41064 AU
direct	-1975 Nov 01 j 04:43	19° ≈ 45'05			1 3		
	-1974 Jan 24 j 17:12	0°) €		conjunction	-1969 Sep 04 j 19:09	24°Ω45'47	1°16'59
evening set	-1974 Mar 06 j 14:00	9°) (09'44		minimum elong	-1969 Sep 04 j 19:08	24° Ω 45'47	
evening sec	157.11141 00 1 1.00	, ,(0,,		morning rise	-1969 Sep 17 j 11:13	27° Ω 32'21	1 1, 01
conjunction	-1974 Mar 20 j 03:11	12°) €21'33	-1°14'30	morning rise	-1969 Sep 28 j 20:29	0° m)	
minimum elong	-1974 Mar 20 j 03:11	12° H 21'34		retrograde	-1968 Jan 16 j 02:14	14° m 33'09	
max. Earth dist.	-1974 Mar 20 j 03:12 -1974 Mar 22 j 03:53	12° X 50'18	6.02507 AU	opposition	-1968 Mar 16 j 19:44	9° Mp 41'31	1°51'14
morning rise	-1974 Mar 22 j 03:33	15°) 34'40	0.02307 AU	min. Earth dist.	-1968 Mar 18 j 03:33	9° Mg 31'23	4.38700 AU
morning rise	-1974 Apr 02 j 19.14 -1974 Jun 11 j 02:32	13 γ (34 40			3	4° Mg 40'46	4.36700 AU
		5° Υ 33'25		direct	-1968 May 18 j 12:21		
retrograde	-1974 Aug 11 j 10:21		4.00017.411	evening set	-1968 Sep 21 j 20:02	22° Mp 32'16	(24(75 AII
min. Earth dist.	-1974 Oct 08 j 16:40		4.06917 AU	max. Earth dist.	-1968 Oct 02 j 11:53	24° Mp 54'44	6.34675 AU
opposition	-1974 Oct 10 j 00:28	0°Υ28'12	-1-383/		10000 . 04:10.22	250m 20142	1010114
	-1974 Oct 13 j 11:14	30° ₹		conjunction	-1968 Oct 04 j 10:22	25° Tp 20'42	1°10'14
direct	-1974 Dec 07 j 06:50	25°) €29'58		minimum elong	-1968 Oct 04 j 10:24	25° m/20'43	1°10'13
	-1973 Jan 30 j 06:29	0° Υ		morning rise	-1968 Oct 16 j 23:05	28° m, 08'29	
evening set	-1973 Apr 12 j 13:38	14° Y 35'04			-1968 Oct 25 j 09:00	0∘ ⊽	
				retrograde	-1967 Feb 16 j 13:16	15° ≏ 41'51	
conjunction	-1973 Apr 26 j 07:47	17° Ƴ 44'42		opposition	-1967 Apr 18 j 12:45	10° ≏ 49'48	1°26'25
minimum elong	-1973 Apr 26 j 07:50	17° Ƴ 44'44		min. Earth dist.	-1967 Apr 19 j 20:45	10° ≏ 39'37	4.29645 AU
max. Earth dist.	-1973 Apr 28 j 05:12	18° Ƴ 10'49	6.12307 AU	direct	-1967 Jun 19 j 14:52	5° ≙ 51'37	
morning rise	-1973 May 10 j 02:59	20° Y 54'37		evening set	-1967 Oct 23 j 02:15	24° ≏ 03'06	
	-1973 Jun 21 j 03:25	9° 8		max. Earth dist.	-1967 Nov 03 j 02:16	26° ჲ 33'58	6.23714 AU
retrograde	-1973 Sep 14 j 12:56	9° 8 55'14					
opposition	-1973 Nov 12 j 23:39	4° 8 51'47	-0°49'00	conjunction	-1967 Nov 04 j 16:27	26° ≏ 55'51	0°42'45
min. Earth dist.	-1973 Nov 12 j 00:26	4° 8 59'40	4.18360 AU	minimum elong	-1967 Nov 04 j 16:29	26° ≏ 55'53	0°42'44
	-1972 Jan 01 j 14:46	30° ₹Ƴ		morning rise	-1967 Nov 17 j 06:13	29° ≏ 48'42	
direct	-1972 Jan 11 j 07:58	29° Y 50'37			-1967 Nov 18 j 02:03	0° M	
	-1972 Jan 21 j 01:31	9° 8			-1966 Feb 04 j 00:01	15° ™	
	-1972 May 01 j 16:22	15° 8		retrograde	-1966 Mar 22 j 22:39	18°M15'18	
evening set	-1972 May 17 j 07:50	18° 8 26'15			-1966 May 09 j 20:20	15°RM	
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•	ical year style is used: Th		•	* *			ge 39
opposition	-1966 May 22 j 23:02	13°M21'14		evening set	-1960 May 22 j 06:15		
min. Earth dist.	-1966 May 23 j 21:19	13°M14'06		evening set	-1900 May 22 J 00.13	23 01237	
			4.17412 AU		10(0 I 04:22:20	260015154	0905152
direct	-1966 Jul 22 j 20:53	8°M25'50		conjunction	-1960 Jun 04 j 23:20	26° 8 15'54	
. ,	-1966 Sep 28 j 13:35	15°M		minimum elong	-1960 Jun 04 j 23:21	26° 8 15'54	0.05.2
evening set	-1966 Nov 24 j 15:58	27°M05'53		behind sun begin	-1960 Jun 04 j 15:25	26° 8 11'30	
	10((D 07:00 24	00.705116	0000141	behind sun end	-1960 Jun 05 j 07:17	26° 8 20'18	(2(002 AII
conjunction	-1966 Dec 07 j 09:24	0° ₹ 05'16	0°00'41	max. Earth dist.	-1960 Jun 05 j 22:36	26° 8 28'52	6.26083 AU
minimum elong	-1966 Dec 07 j 09:23	0° ₹ 05'16	0°00'38	morning rise	-1960 Jun 18 j 15:16	29° 8 18'20	
behind sun begin	-1966 Dec 07 j 01:22	0° ₹ 00'34		,	-1960 Jun 21 j 18:44	0°П	
behind sun end	-1966 Dec 07 j 17:25	0° √ 09'58	C 11210 ATT	asc. node	-1960 Jul 28 j 12:40	7° Ⅱ 42'07	
max. Earth dist.	-1966 Dec 06 j 13:02	29°M53'17	6.11319 AU	retrograde	-1960 Oct 20 j 02:30	17° Ⅱ 10′00	0022121
	-1966 Dec 07 j 00:25	0° ₹ ¹		opposition	-1960 Dec 18 j 17:42	12° Ⅱ 10'37	
desc. node	-1966 Dec 13 j 02:13	1° 1 ° 2 5'49		min. Earth dist.	-1960 Dec 18 j 10:51	12° Ⅱ 12'54	4.31712 AU
morning rise	-1966 Dec 20 j 04:24	3° ∡ 105'40		direct	-1959 Feb 17 j 13:58	7° Ⅱ 07'27	
retrograde	-1965 Apr 28 j 07:50	22° ⋌ 34'11	0000100	evening set	-1959 Jun 25 j 01:05	25° Ⅱ 11'52	
opposition	-1965 Jun 28 j 02:11	17° ∡ 36'44			1050 1 1 00:11 20	200 H 0010 F	0005104
min. Earth dist.	-1965 Jun 28 j 05:59	17° ∡ 35'30	4.05820 AU	conjunction	-1959 Jul 08 j 11:39	28° Ⅱ 08'07	0°35'34
direct	-1965 Aug 26 j 14:20	12° ∡ ′43′12		minimum elong	-1959 Jul 08 j 11:37	28° ∏ 08'05	0°35'37
	-1965 Dec 21 j 04:30	0°る		max. Earth dist.	-1959 Jul 08 j 09:47	28° Ⅱ 07'05	6.36458 AU
evening set	-1965 Dec 29 j 02:57	1° る 52'41			-1959 Jul 17 j 00:04	0°€	
				morning rise	-1959 Jul 21 j 19:17	1° © 02'49	
conjunction	-1964 Jan 11 j 02:29	4° る 58'55		retrograde	-1959 Nov 19 j 19:30	18°9512'00	
minimum elong	-1964 Jan 11 j 02:26	4° る 58'53		opposition	-1958 Jan 18 j 19:51	13° © 16'27	
max. Earth dist.	-1964 Jan 11 j 11:25	5° る 04'16	6.01615 AU	min. Earth dist.	-1958 Jan 19 j 04:59	13° © 13'28	4.39893 AU
morning rise	-1964 Jan 24 j 04:37	8° る 06'44		direct	-1958 Mar 21 j 18:56	8° © 13'05	
retrograde	-1964 Jun 04 j 00:30	28° る 24'06		evening set	-1958 Jul 27 j 05:25	26°500'23	
opposition	-1964 Aug 03 j 06:24	23° る 22'44		max. Earth dist.	-1958 Aug 08 j 04:31	28° © 36'21	6.41760 AU
min. Earth dist.	-1964 Aug 02 j 14:55		3.99081 AU				
direct	-1964 Sep 30 j 14:46	18° る 29'17		conjunction	-1958 Aug 09 j 06:58	28° © 50'46	1°05'40
	-1964 Dec 29 j 19:25	0° ≈		minimum elong	-1958 Aug 09 j 06:55	28° © 50'44	1°05'42
evening set	-1963 Feb 02 j 10:29	7° ≈ 57'04			-1958 Aug 14 j 14:02	$0^{\circ}\Omega$	
				morning rise	-1958 Aug 22 j 05:25	1° Ω 39'36	
conjunction	-1963 Feb 15 j 17:19	11° ≈ 07'59			-1958 Nov 01 j 10:58	15° Ω	
minimum elong	-1963 Feb 15 j 17:17	11° ≈ 07'58	1°11'55	retrograde	-1958 Dec 20 j 08:49	18° Ω 32′23	
max. Earth dist.	-1963 Feb 17 j 04:24	11° ≈ 29′01	5.98363 AU		-1957 Feb 08 j 04:30	15° R Ω	
morning rise	-1963 Mar 01 j 03:37	14° ≈ 20'40		opposition	-1957 Feb 18 j 17:56	13° Ω 39'38	
	-1963 Mar 03 j 21:53	15° ≈		min. Earth dist.	-1957 Feb 19 j 18:33	13° Ω 31'43	4.42131 AU
	-1963 May 15 j 14:19	0° ∀		direct	-1957 Apr 22 j 09:56	8° Ω 37'13	
retrograde	-1963 Jul 11 j 09:59	4° ∺ 49'10			-1957 Jun 30 j 22:15	15° Ω	
	-1963 Sep 07 j 08:50	30° R ≈		evening set	-1957 Aug 27 j 08:08	26° Ω 20'47	
min. Earth dist.	-1963 Sep 08 j 00:09	29° ≈ 54'48	3.99852 AU	max. Earth dist.	-1957 Sep 07 j 08:12	28° Ω 45′22	6.40638 AU
opposition	-1963 Sep 09 j 05:57	29° ≈ 44'42	-1°54'17				
direct	-1963 Nov 06 j 03:04	24° ≈ 49′11		conjunction	-1957 Sep 09 j 02:15	29° Ω 08′28	1°17'21
	-1962 Jan 02 j 16:49	0° ∀		minimum elong	-1957 Sep 09 j 02:15	29° Ω 08′28	1°17'22
evening set	-1962 Mar 11 j 17:38	14°) 1 4′37			-1957 Sep 13 j 00:02	0° ™	
				morning rise	-1957 Sep 21 j 17:38	1° m 54'56	
conjunction	-1962 Mar 25 j 07:54	17°) €26'42	-1°12'56	retrograde	-1956 Jan 20 j 12:42	18° m 58'31	
minimum elong	-1962 Mar 25 j 07:56	17°) €26'43	1°12'56	opposition	-1956 Mar 21 j 07:28	14° Mp 06'54	1°49'36
max. Earth dist.	-1962 Mar 27 j 09:35	17° ¥ 56′00	6.02968 AU	min. Earth dist.	-1956 Mar 22 j 15:37	13° m 56'40	4.37810 AU
morning rise	-1962 Apr 08 j 00:43	20°) 39′56		direct	-1956 May 22 j 22:34	9° ™ 06′28	
	-1962 May 20 j 02:17	0° Y		evening set	-1956 Sep 26 j 03:53	26° ₩ 59'58	
retrograde	-1962 Aug 16 j 09:15	10° Ƴ 34'13		max. Earth dist.	-1956 Oct 06 j 20:49	29° m 23'28	6.33391 AU
opposition	-1962 Oct 14 j 21:08	5° Y 29'04	-1°33'16				
min. Earth dist.	-1962 Oct 13 j 14:24	5° Ƴ 39'34	4.07792 AU	conjunction	-1956 Oct 08 j 18:02	29° Mp 48'49	1°07'32
direct	-1962 Dec 12 j 06:44	0° Y '30'22		minimum elong	-1956 Oct 08 j 18:04	29° Mp 48'50	1°07'32
evening set	-1961 Apr 17 j 16:30	19° Ƴ 33'31			-1956 Oct 09 j 13:58	0∘ ত	
				morning rise	-1956 Oct 21 j 06:30	2° △ 37'03	
conjunction	-1961 May 01 j 11:07	22° Y '42'49	-0°46'56	retrograde	-1955 Feb 21 j 05:38	20° ≏ 16'47	
minimum elong	-1961 May 01 j 11:11	22° Y '42'51	0°46'55	opposition	-1955 Apr 23 j 05:39	15° ≏ 24'37	1°20'30
max. Earth dist.	-1961 May 03 j 08:33	23° Y ′08'52	6.13539 AU	min. Earth dist.	-1955 Apr 24 j 13:32	15° ≏ 14'29	4.28030 AU
morning rise	-1961 May 15 j 06:23	25° Y ′52'13		direct	-1955 Jun 24 j 04:55	10° ≏ 26'52	
	-1961 Jun 02 j 17:38	$0^{\circ}B$		evening set	-1955 Oct 27 j 13:35	28° ≏ 42'12	
retrograde	-1961 Sep 19 j 03:55	14° 8 45'04			-1955 Nov 02 j 05:25	0° M	
opposition	-1961 Nov 17 j 15:18	9° 8 41'59	-0°40'21	max. Earth dist.	-1955 Nov 07 j 14:01	1°M13'59	6.21902 AU
min. Earth dist.	-1961 Nov 16 j 16:22	9° 8 49'45	4.19810 AU				
direct	-1960 Jan 16 j 02:23	4° 8 40'29		conjunction	-1955 Nov 09 j 03:55	1°M35'48	0°37'29
	-1960 Apr 13 j 13:09	15° 8		minimum elong	-1955 Nov 09 j 03:57	1°M35'50	0°37'28

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 40 Attention, astronomical year style is used: The year -1955 in astronomical counting style is the year 1956 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	e year -1955	in astronomical co	unting style is the year	1956 BCE in historical c	ounting style.	
morning rise	-1955 Nov 21 j 18:23	4°M29'41		retrograde	-1949 Sep 23 j 16:35	19° 8 29'36	
	-1954 Jan 10 j 02:12	15°M			-1949 Nov 18 j 03:00	15° ₹ 8	
retrograde	-1954 Mar 27 j 22:07	23°M05'10		min. Earth dist.	-1949 Nov 21 j 08:30	14° 8 33'48	4.21900 AU
opposition	-1954 May 27 j 22:09	18° ™ 10'43	0°24'41	opposition	-1949 Nov 22 j 04:57	14° 8 26'53	-0°31'40
min. Earth dist.	-1954 May 28 j 18:05	18° M 04'19	4.15526 AU	direct	-1948 Jan 20 j 21:40	9° 8 25'00	
	-1954 Jun 23 j 20:58	15°RM			-1948 Mar 23 j 08:20	15° 8	
direct	-1954 Jul 27 j 15:22	13°M15'37		evening set	-1948 May 27 j 01:08	27° 8 51'30	
	-1954 Aug 30 j 01:15	15° ™			-1948 Jun 05 j 17:04	$\Pi^{\circ}0$	
desc. node	-1954 Oct 22 j 14:29	23°M34'48		asc. node	-1948 Jun 07 j 20:41	0° Ⅲ 28'41	
	-1954 Nov 20 j 18:03	0° ∡ ¹			-		
evening set	-1954 Nov 29 j 09:15	2° ∡ ′00′38		conjunction	-1948 Jun 09 j 17:40	0° Ⅱ 53'41	0°00'13
max. Earth dist.	-1954 Dec 11 j 12:00		6.09546 AU	minimum elong	-1948 Jun 09 j 17:40	0° Ⅱ 53'41	0°00'15
	3			behind sun begin	-1948 Jun 09 j 09:25	0° Ⅱ 49'07	
conjunction	-1954 Dec 12 j 03:36	5° ∡ '01'09	-0°05'51	behind sun end	-1948 Jun 10 j 01:56	0° Ⅱ 58'15	
minimum elong	-1954 Dec 12 j 03:35	5° ∡ '01'08		max. Earth dist.	-1948 Jun 10 j 14:35	1° Ⅱ 05'18	6.28037 AU
behind sun begin	-1954 Dec 11 j 19:54	4° ∡ ¹56'37		morning rise	-1948 Jun 23 j 08:26	3° Ⅱ 54'50	
behind sun end	-1954 Dec 12 j 11:16	5° ₹ 05'39		retrograde	-1948 Oct 24 j 08:20	21° Ⅲ 38′12	
morning rise	-1954 Dec 24 j 23:23	8° ∡ 02'42		opposition	-1948 Dec 23 j 01:39	16° Ⅱ 39'22	0°30'48
retrograde	-1953 May 03 j 15:37	27° ∡ ¹40'07		min. Earth dist.	-1948 Dec 22 j 20:37	16° I I41'03	4.33371 AU
opposition	-1953 Jul 03 j 06:58	22° × ⁷ 42'12	-0°42'54	direct	-1947 Feb 22 j 01:55	11° I I36'05	
min. Earth dist.	-1953 Jul 03 j 08:39		4.04339 AU	evening set	-1947 Jun 29 j 13:32	29° II 36'38	
direct	-1953 Aug 31 j 14:36	17° ∡ 48'53	1.01557110	evening sec	-1947 Jul 01 j 08:35	0°9	
direct	-1953 Aug 31 j 14:39	0°る			-1747 Jul 01 j 00.55	0 3	
evening set	-1952 Jan 03 j 03:40	7° る 02'34		conjunction	-1947 Jul 12 j 22:44	2° © 31'49	0°40'35
evening set	-1932 Jan 03 J 03.40	7 002 34		minimum elong	-1947 Jul 12 j 22:41	2°931'48	0°40'37
	1052 I 16:04.02	100=00141	0040125	=			
conjunction	-1952 Jan 16 j 04:03	10° ろ 09'41		max. Earth dist.	-1947 Jul 12 j 15:14	2°927'44	6.37680 AU
minimum elong	-1952 Jan 16 j 04:00	10° ろ 09'39		morning rise	-1947 Jul 26 j 05:13	5°525'32	
max. Earth dist.	-1952 Jan 16 j 16:02	10°る16'52	6.00560 AU	retrograde	-1947 Nov 24 j 00:51	22°530'31	1021150
morning rise	-1952 Jan 29 j 07:30	13° る 18'30		opposition	-1946 Jan 23 j 01:47	17°535'25	1°21'50
	-1952 Apr 20 j 21:58	0° ≈		min. Earth dist.	-1946 Jan 23 j 14:32	17°531'16	4.40610 AU
retrograde	-1952 Jun 09 j 07:30	3°≈40'45		direct	-1946 Mar 26 j 05:07	12° © 32'02	
	-1952 Jul 29 j 07:16	30°Rる			-1946 Jul 30 j 03:40	0 \circ Ω	
opposition	-1952 Aug 08 j 12:59	28° පි 38'51		evening set	-1946 Jul 31 j 13:01	0° Ω 18′00	
min. Earth dist.	-1952 Aug 07 j 17:48		3.98620 AU	max. Earth dist.	-1946 Aug 12 j 08:28	2° Ω 52'01	6.41896 AU
direct	-1952 Oct 05 j 17:26	23° る 45'18				_	
	-1952 Dec 08 j 09:37	0° ≈		conjunction	-1946 Aug 13 j 13:35		1°08'28
evening set	-1951 Feb 07 j 16:37	13° ≈ 14′24		minimum elong	-1946 Aug 13 j 13:32	3° Ω 07'52	1°08'30
	-1951 Feb 15 j 01:31	15° ≈		morning rise	-1946 Aug 26 j 10:48	5° Ω 56'11	
					-1946 Oct 10 j 00:26		
conjunction	-1951 Feb 21 j 00:37	16° ≈ 25'44		retrograde	-1946 Dec 24 j 13:36	22° Ω 49'22	
minimum elong	-1951 Feb 21 j 00:36	16° ≈ 25'43	1°13'53	opposition	-1945 Feb 23 j 00:59	17° Ω 56'51	1°49'32
max. Earth dist.	-1951 Feb 22 j 15:50	16° ≈ 49′13	5.98550 AU	min. Earth dist.	-1945 Feb 24 j 02:39	17° Ω 48'36	4.41705 AU
morning rise	-1951 Mar 06 j 11:51	19° ≈ 38'43			-1945 Mar 19 j 14:49	15° ₹Ω	
	-1951 Apr 21 j 18:51	0° ∀		direct	-1945 Apr 26 j 16:44	12° Ω 54'37	
retrograde	-1951 Jul 16 j 15:33	10°) (04'47			-1945 Jun 03 j 23:08	15° Ω	
min. Earth dist.	-1951 Sep 13 j 03:15	5° ₩ 10'19	4.00687 AU		-1945 Aug 28 j 13:41	0° m ∕	
opposition	-1951 Sep 14 j 09:32	5° ∺ 00'01	-1°53'52	evening set	-1945 Aug 31 j 14:27	0° m ,39′38	
direct	-1951 Nov 11 j 08:26	0°) €04'05		max. Earth dist.	-1945 Sep 11 j 12:14	3° ™ 03'23	6.39670 AU
evening set	-1950 Mar 17 j 00:11	19° ¥ 26'43					
				conjunction	-1945 Sep 13 j 07:45	3° m 27'22	1°17'16
conjunction	-1950 Mar 30 j 15:20	22°) 38'32	-1°10'42	minimum elong	-1945 Sep 13 j 07:46	3° m 27'22	1°17'16
minimum elong	-1950 Mar 30 j 15:22	22°) 38'33	1°10'42	morning rise	-1945 Sep 25 j 22:32	6° Mp 13′57	
max. Earth dist.	-1950 Apr 01 j 18:56	23°) €08'50	6.04375 AU	retrograde	-1944 Jan 25 j 00:20	23° m 22'13	
morning rise	-1950 Apr 13 j 08:45	25° ¥ 51′22		opposition	-1944 Mar 25 j 19:03	18° m 30'41	1°47'24
C	-1950 May 01 j 10:55	0° Y		min. Earth dist.	-1944 Mar 27 j 04:50	18° m 19'56	4.36357 AU
retrograde	-1950 Aug 21 j 05:58	15° Ƴ 36'53		direct	-1944 May 27 j 09:36	13° m) 30'34	
min. Earth dist.	-1950 Oct 18 j 10:55		4.09614 AU		-1944 Sep 23 j 21:44	0∘ ⊽	
opposition	-1950 Oct 19 j 17:59	10° Υ 31'51		evening set	-1944 Sep 30 j 12:00	1° £ 27'51	
direct	-1950 Dec 17 j 05:43	5° Υ 32'43	-	max. Earth dist.	-1944 Oct 11 j 03:59	3° £ 51'28	6.31566 AU
evening set	-1949 Apr 22 j 18:29	24° Υ '30'22				= -	
				conjunction	-1944 Oct 13 j 02:00	4° ₽ 17'23	1°04'26
conjunction	-1949 May 06 j 13:03	27° Ƴ 38'45	-0°41'44	minimum elong	-1944 Oct 13 j 02:02	4° ⊆ 17′24	1°04'26
minimum elong	-1949 May 06 j 13:06	27° Υ 38'47		morning rise	-1944 Oct 25 j 14:38	7° £ 06'25	. 0.20
max. Earth dist.	-1949 May 08 j 07:01	28° Υ '02'42	6.15608 AU	retrograde	-1943 Feb 25 j 23:27	24° ♀ 54'24	
man. Lui ui uist.	-1949 May 16 j 21:02	0°8	0.12000 210	opposition	-1943 Pc0 23 j 23.27 -1943 Apr 28 j 00:02	24° ⊆ 3424 20° ⊆ 01'59	1°14'02
morning rise	-1949 May 20 j 08:14	0° 8 47'09		min. Earth dist.	-1943 Apr 29 j 06:07	19° £ 52′24	4.25955 AU
morning 1150	-1949 Jul 30 j 22:46	15° 8		direct	-1943 Apr 29 j 00:07 -1943 Jun 28 j 18:36	19 = 32 24 15° ⊆ 04'38	1.23/33 AU
	1777 Jul 30 J 22.40	.5 0		uncet	17-5 Jun 20 J 10.30	15 -0430	

•	nical year style is used: Th		_	· //			ige 41
Attention, astronom	-1943 Oct 16 j 23:28	0°M	in astronomical co	conjunction	-1937 May 11 j 13:50	2° 8 31'10	-0°36'17
evening set	-1943 Nov 01 j 02:32	3°M25'16		minimum elong	-1937 May 11 j 13:52	2° 8 31'12	
max. Earth dist.	-1943 Nov 12 j 07:25	6°ML00'18	6.19773 AU	max. Earth dist.	-1937 May 13 j 06:22	2° 8 54'13	
	,			morning rise	-1937 May 25 j 08:32	5° 8 38'32	
conjunction	-1943 Nov 13 j 17:24	6° M 19'58	0°31'55	C	-1937 Jul 08 j 08:31	15° ∀	
minimum elong	-1943 Nov 13 j 17:26	6° M 19'59	0°31'53	retrograde	-1937 Sep 28 j 04:44	24° 8 11'27	
morning rise	-1943 Nov 26 j 08:22	9°M15'00		opposition	-1937 Nov 26 j 17:24	19° 8 09'19	-0°22'52
	-1943 Dec 22 j 00:09	15° M ₊		min. Earth dist.	-1937 Nov 25 j 22:54	19° 8 15'34	4.23784 AU
retrograde	-1942 Apr 02 j 02:08	28°M00'30			-1936 Jan 02 j 07:01	15° ₹ 8	
opposition	-1942 Jun 02 j 00:09	23°M05'41	0°15'17	direct	-1936 Jan 25 j 14:25	14° 8 07'14	
min. Earth dist.	-1942 Jun 02 j 18:14	22°M59'52	4.13502 AU		-1936 Feb 18 j 05:05	15° 8	
direct	-1942 Aug 01 j 12:55	18° M ₊10'59		asc. node	-1936 Apr 17 j 22:03	23° 8 20'43	
desc. node	-1942 Aug 31 j 13:35	19°M36'28		_	-1936 May 20 j 09:53	0°Щ	
	-1942 Nov 03 j 06:58	0° ∡ 7		evening set	-1936 May 31 j 19:32	2° Ⅱ 29'15	
evening set	-1942 Dec 04 j 05:23	7° ₹ 01'11	C 0701 C ATT	. ,.	1026 1 14:11.00	50T20124	0007117
max. Earth dist.	-1942 Dec 16 j 11:55	9° ₹ 55'24	6.07816 AU	conjunction	-1936 Jun 14 j 11:08	5° Ⅱ 30′24	0°06'16 0°06'19
aaniumatian	1042 Dec. 17 : 00:22	10° ∡ 702'46	0012121	minimum elong behind sun begin	-1936 Jun 14 j 11:07 -1936 Jun 14 j 03:19	5° Ⅱ 30'24 5° Ⅱ 26'05	0-0619
conjunction minimum elong	-1942 Dec 17 j 00:22 -1942 Dec 17 j 00:21	10 × 02 46 10° × 02'46		behind sun begin	-1936 Jun 14 j 03.19	5° П 34'42	
behind sun begin	-1942 Dec 16 j 18:58	9° 🖈 59'35	0 12 24	max. Earth dist.	-1936 Jun 15 j 02:34	5° Ⅱ 38'57	6.29696 AU
behind sun end	-1942 Dec 17 j 05:45	10° ₹ 05'57		morning rise	-1936 Jun 28 j 01:05	8° П 30'29	0.27070 AC
morning rise	-1942 Dec 29 j 21:19	13° х 05'34		retrograde	-1936 Oct 28 j 15:45	26° Ⅱ 07'02	
morning rise	-1941 Mar 26 j 10:56	0° ප		opposition	-1936 Dec 27 j 10:01	21° I I08'46	0°38'56
retrograde	-1941 May 08 j 22:41	2° ප 51'21		min. Earth dist.	-1936 Dec 27 j 08:04	21° Ⅱ 09'24	4.34700 AU
C	-1941 Jun 21 j 20:49	30°R. ✓		direct	-1935 Feb 26 j 15:08	16° Ⅲ 05′21	
opposition	-1941 Jul 08 j 13:48	27° ₹ 52'51	-0°52'06		-1935 Jun 15 j 01:12	0ಂತಾ	
min. Earth dist.	-1941 Jul 08 j 11:02	27° ∡ 753'45	4.03091 AU	evening set	-1935 Jul 04 j 02:01	4° 5 03'13	
direct	-1941 Sep 05 j 15:46	22° х 59′39					
	-1941 Nov 13 j 01:50	0°ප		conjunction	-1935 Jul 17 j 10:12	6°957'35	0°45'24
evening set	-1940 Jan 08 j 06:41	12° る 16'32		minimum elong	-1935 Jul 17 j 10:09	6°957'34	0°45'26
				max. Earth dist.	-1935 Jul 17 j 00:17	6° © 52'11	6.38581 AU
conjunction	-1940 Jan 21 j 08:07	15° る 24'23		morning rise	-1935 Jul 30 j 15:12	9° 9 50'22	
minimum elong	-1940 Jan 21 j 08:04	15° පි 24'21		retrograde	-1935 Nov 28 j 05:50	26° © 52'24	
max. Earth dist.	-1940 Jan 22 j 01:46	15° る 34'59	5.99897 AU	opposition	-1934 Jan 27 j 08:49	21° © 57'47	
morning rise	-1940 Feb 03 j 12:31	18° පි 33'56		min. Earth dist.	-1934 Jan 27 j 23:12	21°953'07	4.41054 AU
	-1940 Mar 26 j 02:03	0° ≈		direct	-1934 Mar 30 j 14:07	16°954'32	
retrograde	-1940 Jun 14 j 16:49 -1940 Aug 13 j 20:12	8°≈58'57	1942107		-1934 Jul 13 j 20:40	0° Ω 4° Ω 40'01	
opposition min. Earth dist.	-1940 Aug 13 j 20:12 -1940 Aug 12 j 23:16	3°≈56'31 4°≈03'32	3.98621 AU	evening set	-1934 Aug 04 j 22:05	4-864001	
iiiii. Eartii dist.	-1940 Aug 12 j 23.16 -1940 Sep 17 j 05:16	4 ≈03 32 30°Rる	3.98021 AU	conjunction	-1934 Aug 17 j 21:21	7° Ω 29'25	1°10'55
direct	-1940 Oct 10 j 23:56	29° පි 02'43		minimum elong	-1934 Aug 17 j 21:21	7° Ω 29'24	1°10'57
uncer	-1940 Nov 03 j 16:25	0°≈		max. Earth dist.	-1934 Aug 16 j 12:18	7° Ω 11'23	6.41830 AU
	-1939 Jan 28 j 23:26	15° ≈		morning rise	-1934 Aug 30 j 17:39	10°Ω17'20	0.11030110
evening set	-1939 Feb 12 j 23:13	18° ≈ 31'21			-1934 Sep 21 j 22:19	15° Ω	
C	J			retrograde	-1934 Dec 28 j 22:35	27° Ω 11'33	
conjunction	-1939 Feb 26 j 08:16	21° ≈ 42'51	-1°15'13	opposition	-1933 Feb 27 j 10:04	22° ∂ 19'19	1°51'06
minimum elong	-1939 Feb 26 j 08:15	21° ≈ 42'51	1°15'14	min. Earth dist.	-1933 Feb 28 j 14:19	22° Ω 10′15	4.41156 AU
max. Earth dist.	-1939 Feb 28 j 03:01	22° ≈ 08′23	5.99173 AU	direct	-1933 May 01 j 03:37	17° Ω 17'18	
morning rise	-1939 Mar 11 j 20:29	24° ≈ 55'58			-1933 Aug 12 j 04:37	0° m	
	-1939 Apr 02 j 16:23	0° ∀		evening set	-1933 Sep 04 j 22:12	5° Mp 03'56	
retrograde	-1939 Jul 21 j 19:00	15°) 17'33		max. Earth dist.	-1933 Sep 15 j 18:43	7° m 27'21	6.38669 AU
min. Earth dist.	-1939 Sep 18 j 04:20	10° ₩ 23'23	4.01873 AU				
opposition	-1939 Sep 19 j 11:59	10° 光 12'36	-1°52'32	conjunction	-1933 Sep 17 j 14:59	7° m 51'48	1°16'45
direct	-1939 Nov 16 j 10:56	5° ₩ 16'17		minimum elong	-1933 Sep 17 j 14:59	7° m 51'49	1°16'46
evening set	-1938 Mar 22 j 05:46	24°) € 35′12		morning rise	-1933 Sep 30 j 05:09	10° Mp 38'34	
conjunction	-1938 Apr 04 j 21:27	27° ∺ 46'35	-1°07'56	retrograde opposition	-1932 Jan 29 j 11:59 -1932 Mar 30 j 08:45	27° m 51'38 23° m 00'04	1°44'32
minimum elong	-1938 Apr 04 j 21:27	27° X 46'37		min. Earth dist.	-1932 Mar 31 j 17:39	23 11/00 04 22° 11/00 04	4.34987 AU
max. Earth dist.	-1938 Apr 04 j 21:30 -1938 Apr 06 j 23:26	28° H 15'49	6.05984 AU	direct	-1932 May 31 j 20:13	18° My 00'21	7.J70/ AU
max. Durin dist.	-1938 Apr 00 j 23:20 -1938 Apr 14 j 10:02	26 γ (1349)	0.02704 AU	uncot	-1932 Nay 31 j 20:13 -1932 Sep 07 j 03:53	ე∘ ഹ	
morning rise	-1938 Apr 18 j 15:28	0° Υ 58'53		evening set	-1932 Oct 04 j 21:34	ი — 6° ჲ 00'54	
retrograde	-1938 Aug 26 j 00:24	20° Υ 35'23		max. Earth dist.	-1932 Oct 15 j 15:05	8° ≏ 25'57	6.29952 AU
min. Earth dist.	-1938 Oct 23 j 07:24	15° Y 40'42	4.11463 AU		y j		
opposition	-1938 Oct 24 j 13:11	15° Ƴ 30'32		conjunction	-1932 Oct 17 j 11:25	8° ჲ 51'01	1°00'54
direct	-1938 Dec 22 j 05:00	10° Ƴ 30'59		minimum elong	-1932 Oct 17 j 11:28	8° ჲ 51'02	1°00'54
evening set	-1937 Apr 27 j 19:06	29° Y 23'36		morning rise	-1932 Oct 30 j 00:08	11° ≏ 40'46	
	-1937 Apr 30 j 11:29	9° 8		retrograde	-1931 Mar 02 j 20:27	29° ჲ 36′19	

					1932 BCE in historical c		ge 42
opposition	-1931 May 02 j 20:10	e year -1931 1 24° £ 43'42		evening set	-1925 May 02 j 16:24	4° 8 08'05	
min. Earth dist.	-1931 May 04 j 01:41	24° ⊆ 4342 24° ⊆ 34'17		evening set	-1923 May 02 J 10.24	4 00003	
	-1931 May 04 j 01:41 -1931 Jul 03 j 12:02		4.24202 AU	:	1025 Marc 16 : 10.57	7° 8 14'55	0020146
direct	-	19° Ω 46'46		conjunction	-1925 May 16 j 10:57	7° 8 14'56	
. ,	-1931 Sep 29 j 07:05	0°M		minimum elong	-1925 May 16 j 10:59	. •	6.19202 AU
evening set	-1931 Nov 05 j 16:27	8°M11'21	C 10050 ATT	max. Earth dist.	-1925 May 17 j 23:14	7° 8 35'27	6.19202 AU
max. Earth dist.	-1931 Nov 16 j 23:47	10°M48'25	6.18058 AU	morning rise	-1925 May 30 j 05:31	10° 8 21'28	
	1021 N 10:07 41	110 M 0056	0026106	. 1	-1925 Jun 20 j 07:46	15° 8	
conjunction	-1931 Nov 18 j 07:41	11°M06'56	0°26'06	retrograde	-1925 Oct 02 j 13:58	28° 8 46'25	4.25260 ATT
minimum elong	-1931 Nov 18 j 07:43	11°M06'57	0°26'05	min. Earth dist.	-1925 Nov 30 j 11:11	23° 8 50'18	4.25268 AU
morning rise	-1931 Nov 30 j 23:25	14°M03'01		opposition	-1925 Dec 01 j 03:37	23° 8 44'46	-0°14'11
	-1931 Dec 05 j 02:25	15°M		direct	-1924 Jan 30 j 04:50	18° 8 42'25	
. 1	-1930 Feb 21 j 16:53	0° ∡ 7		asc. node	-1924 Feb 27 j 21:11	19° 8 59'04	
retrograde	-1930 Apr 07 j 03:27	2° ∡ 756'49			-1924 May 03 j 07:54	0°II	
***	-1930 May 22 j 07:15	30°RM	0005140	evening set	-1924 Jun 05 j 11:39	7° Ⅱ 01'21	
opposition	-1930 Jun 07 j 01:53	28°M01'29	0°05'48		10241 10:02.26	100 T 01141	0012107
min. Earth dist.	-1930 Jun 07 j 16:04	27°M56'54	4.11978 AU	conjunction	-1924 Jun 19 j 02:36	10° Ⅱ 01'41	0°12'06
desc. node	-1930 Jul 11 j 05:07	24°M11'54		minimum elong	-1924 Jun 19 j 02:35	10° Ⅱ 01'41	0°12'08
direct	-1930 Aug 06 j 08:50	23°M07'06		behind sun begin	-1924 Jun 18 j 21:07	9° Ⅱ 58'40	
	-1930 Oct 14 j 04:43	0° ∡ 7		behind sun end	-1924 Jun 19 j 08:03	10° Ⅱ 04'41	
evening set	-1930 Dec 09 j 01:04	12° ∡ 00'43		max. Earth dist.	-1924 Jun 19 j 15:01	10° Ⅱ 08'32	6.30943 AU
		=		morning rise	-1924 Jul 02 j 15:25	13° Ⅱ 00'48	
conjunction	-1930 Dec 21 j 20:50	15° ∡ 03'08			-1924 Oct 14 j 17:17	0ංම	
minimum elong	-1930 Dec 21 j 20:49	15° ∡ 03'07		retrograde	-1924 Nov 01 j 22:52	0°ഇ32'07	
max. Earth dist.	-1930 Dec 21 j 13:30	14° ∡ 758'47	6.06627 AU		-1924 Nov 20 j 01:44	30°RⅡ	
morning rise	-1929 Jan 03 j 18:37	18° ∡ 06'49		opposition	-1924 Dec 31 j 17:21	25° Ⅱ 34'27	0°46'41
	-1929 Feb 27 j 10:23	0°ප		min. Earth dist.	-1924 Dec 31 j 17:48	25° Ⅱ 34'19	4.35631 AU
retrograde	-1929 May 14 j 05:30	7° る 58'44		direct	-1923 Mar 03 j 02:04	20° Ⅱ 31′04	
opposition	-1929 Jul 13 j 18:51	2° る 59'37			-1923 May 28 j 09:50	0 \circ \odot	
min. Earth dist.	-1929 Jul 13 j 13:54		4.02357 AU	evening set	-1923 Jul 08 j 13:54	8°927'27	
	-1929 Aug 07 j 08:02	30°R ✓					
direct	-1929 Sep 10 j 18:14	28° ∡ ¹06′27		conjunction	-1923 Jul 21 j 20:48	11°921'07	0°49'54
	-1929 Oct 14 j 18:24	0°₹		minimum elong	-1923 Jul 21 j 20:45	11° © 21'05	0°49'56
evening set	-1928 Jan 13 j 07:27	17° る 24'38		max. Earth dist.	-1923 Jul 21 j 06:14	11°©13'10	6.39121 AU
				morning rise	-1923 Aug 04 j 00:46	14° © 13'14	
conjunction	-1928 Jan 26 j 09:49	20°る33'00	-0°58'07		-1923 Nov 04 j 13:08	$0 {\circ} \Omega$	
minimum elong	-1928 Jan 26 j 09:46	20° る 32'58		retrograde	-1923 Dec 02 j 12:49	1° Ω 13'31	
max. Earth dist.	-1928 Jan 27 j 07:42	20° ප් 46'07	5.99668 AU		-1923 Dec 30 j 11:48	30° ₹ 5	
morning rise	-1928 Feb 08 j 15:18	23° ⋜ 43′04		opposition	-1922 Jan 31 j 16:17	26° © 19'20	1°32'12
	-1928 Mar 06 j 17:44	0° ≈		min. Earth dist.	-1922 Feb 01 j 09:03	26° © 13'53	4.41208 AU
retrograde	-1928 Jun 19 j 21:26	14° ≈ 08'49		direct	-1922 Apr 04 j 00:02	21° © 16'11	
opposition	-1928 Aug 18 j 23:41	9° ≈ 05'55	-1°46'09		-1922 Jun 25 j 22:06	$0^{\circ}\Omega$	
min. Earth dist.	-1928 Aug 18 j 00:17	9° ≈ 13'46	3.98956 AU	evening set	-1922 Aug 09 j 06:49	9° Ω 01'50	
direct	-1928 Oct 16 j 01:16	4° ≈ 11'51		max. Earth dist.	-1922 Aug 20 j 19:42	11° £ 32'37	6.41586 AU
	-1927 Jan 11 j 00:05	15° ≈					
evening set	-1927 Feb 18 j 02:32	23° ≈ 39′01		conjunction	-1922 Aug 22 j 05:13	11° Ω 50'56	1°12'57
				minimum elong	-1922 Aug 22 j 05:11	11° Ω 50'55	1°12'58
conjunction	-1927 Mar 03 j 12:25	26° ≈ 50'31	-1°15'56	morning rise	-1922 Sep 04 j 00:20	14° Ω 38'31	
minimum elong	-1927 Mar 03 j 12:24	26° ≈ 50'31	1°15'56		-1922 Sep 05 j 15:56	15° Ω	
max. Earth dist.	-1927 Mar 05 j 07:55	27°≈16′26	6.00000 AU		-1922 Dec 01 j 06:29	0° m y	
	-1927 Mar 16 j 19:28	0° ∀		retrograde	-1921 Jan 02 j 06:16	1° My 34′23	
morning rise	-1927 Mar 17 j 01:36	0°) €03'37			-1921 Feb 03 j 10:36	30° R €	
retrograde	-1927 Jul 26 j 16:56	20°) € 20′00		opposition	-1921 Mar 03 j 19:56	26° Ω 42'21	1°52'01
min. Earth dist.	-1927 Sep 23 j 02:17	15° ∺ 25'40	4.03097 AU	min. Earth dist.	-1921 Mar 05 j 00:20	26° Ω 33'16	4.40548 AU
opposition	-1927 Sep 24 j 10:02	15° ∺ 14'51	-1°50'22	direct	-1921 May 05 j 12:44	21° Ω 40'41	
direct	-1927 Nov 21 j 10:44	10°) 18′02			-1921 Jul 25 j 00:00	0° m y	
evening set	-1926 Mar 27 j 07:21	29°) 33′22		evening set	-1921 Sep 09 j 06:14	9° ™ 28'46	
	-1926 Mar 29 j 05:19	$0^{\circ}\mathbf{\Upsilon}$		max. Earth dist.	-1921 Sep 20 j 00:52	11° m /51'35	6.37734 AU
conjunction	-1926 Apr 09 j 23:54	2° Ƴ 44'23	-1°04'46	conjunction	-1921 Sep 21 j 22:12	12° m 16'43	1°15'47
minimum elong	-1926 Apr 09 j 23:57	2° Ƴ 44'25	1°04'46	minimum elong	-1921 Sep 21 j 22:13	12° Mp 16'43	1°15'48
max. Earth dist.	-1926 Apr 12 j 02:16	3° Ƴ 13'44	6.07507 AU	morning rise	-1921 Oct 04 j 12:01	15° m 03'41	
morning rise	-1926 Apr 23 j 18:10	5° Y 56′08			-1921 Dec 25 j 11:27	0∘ ⊽	
retrograde	-1926 Aug 30 j 17:06	25° Y 24′07		retrograde	-1920 Feb 03 j 02:30	2° ഫ 21'18	
min. Earth dist.	-1926 Oct 28 j 00:38	20° Y 29′09	4.13108 AU		-1920 Mar 14 j 04:56	30°R, Mp	
opposition	-1926 Oct 29 j 04:47	20° Ƴ 19'34	-1°13'45	opposition	-1920 Apr 03 j 23:02	27° m 29'42	1°41'00
direct	-1926 Dec 26 j 23:58	15° Ƴ 19'38		min. Earth dist.	-1920 Apr 05 j 08:35	27° m 19'02	4.33767 AU
	-1925 Apr 14 j 00:46	0° 8		direct	-1920 Jun 05 j 09:42	22° m 30'20	

Planetary Phenomena of Jupiter from -2400 through -1898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 43 Attention, astronomical year style is used: The year -1920 in astronomical counting style is the year 1921 BCE in historical counting style.

Attention, astronomical year style is used: The year -1920 in astronomical counting style is the year 1921 BCE in historical counting style.								
	-1920 Aug 19 j 07:04	0∘ ⊽		conjunction	-1914 Apr 15 j 03:37	7° Y 46'03	-1°01'06	
evening set	-1920 Oct 09 j 06:49	10° ჲ 33'23		minimum elong	-1914 Apr 15 j 03:41	7° Y 46'05		
max. Earth dist.	-1920 Oct 20 j 01:41	12° ≏ 59'40	6.28544 AU	max. Earth dist.	-1914 Apr 17 j 04:11		6.08726 AU	
				morning rise	-1914 Apr 28 j 22:29	10° Y ′57′27		
conjunction	-1920 Oct 21 j 20:43	13° ≏ 24'04	0°57'00		-1914 Aug 22 j 00:05	0° 8		
minimum elong	-1920 Oct 21 j 20:46	13° ≏ 24'06	0°56'59	retrograde	-1914 Sep 04 j 09:38	0° 8 17'54		
morning rise	-1920 Nov 03 j 09:33	16° ≙ 14'28			-1914 Sep 17 j 18:21	30° ŖƳ		
	-1919 Jan 12 j 07:24	0° M		opposition	-1914 Nov 02 j 21:48	25° Y 13'36		
retrograde	-1919 Mar 07 j 14:38	4°M16'50		min. Earth dist.	-1914 Nov 01 j 18:19		4.14496 AU	
	-1919 May 02 j 22:09	30° ₹ Ω		direct	-1914 Dec 31 j 20:10	20° Y 13′15		
opposition	-1919 May 07 j 15:35	29° £ 23'55			-1913 Mar 26 j 15:01	0°8		
min. Earth dist.	-1919 May 08 j 18:33	29° ≙ 15'18	4.22680 AU	evening set	-1913 May 07 j 16:03	8° 8 58'31		
direct	-1919 Jul 08 j 02:22	24° ≏ 27'23						
	-1919 Sep 08 j 09:32	0°M₊		conjunction	-1913 May 21 j 10:34	12° 8 04'41		
evening set	-1919 Nov 10 j 05:24	12°M55'14		minimum elong	-1913 May 21 j 10:36	12° 8 04'42		
	-1919 Nov 19 j 04:26	15°M		max. Earth dist.	-1913 May 22 j 20:17		6.20671 AU	
					-1913 Jun 03 j 10:03	15° 8		
conjunction	-1919 Nov 22 j 21:02	15°M51'38		morning rise	-1913 Jun 04 j 04:36	15° 8 10'23		
minimum elong	-1919 Nov 22 j 21:04	15°M51'39	0°20'08		-1913 Aug 20 j 11:14	0°П		
max. Earth dist.	-1919 Nov 21 j 16:12	15°M34'49	6.16542 AU	retrograde	-1913 Oct 07 j 03:37	3° Ⅱ 27'46		
morning rise	-1919 Dec 05 j 13:24	18°M48'38			-1913 Nov 23 j 21:48	30° ₹ 8		
	-1918 Jan 26 j 19:54	0° ⊼		opposition	-1913 Dec 05 j 16:07	28° 8 26'41		
retrograde	-1918 Apr 12 j 05:38	7° ∡ °50′21		min. Earth dist.	-1913 Dec 05 j 02:17	28° 8 31'20	4.26682 AU	
desc. node	-1918 May 21 j 08:54	5° ₹ 33'41		asc. node	-1912 Jan 07 j 06:52	24° 8 36'51		
opposition	-1918 Jun 12 j 02:32	2° ҂ 754'32	-0°03'42	direct	-1912 Feb 03 j 22:08	23° 8 24'07		
min. Earth dist.	-1918 Jun 12 j 15:05	2° х 50′29	4.10558 AU		-1912 Apr 13 j 01:01	Π °0		
	-1918 Jul 06 j 05:28	30°RM		evening set	-1912 Jun 10 j 06:19	11° Ⅱ 40′03		
direct	-1918 Aug 11 j 05:50	28°M00'23						
	-1918 Sep 15 j 18:06	0° ⊀		conjunction	-1912 Jun 23 j 20:20	14° Ⅱ 39′29	0°18'01	
evening set	-1918 Dec 13 j 19:33	16° ₹ 57'23		minimum elong	-1912 Jun 23 j 20:19	14° Ⅱ 39′29	0°18'03	
				max. Earth dist.	-1912 Jun 24 j 05:19	14° ∏ 44'26	6.32211 AU	
conjunction	-1918 Dec 26 j 16:09	20° ₰ 00'40	-0°24'53	morning rise	-1912 Jul 07 j 08:08	17° Ⅱ 37'39		
minimum elong	-1918 Dec 26 j 16:07	20° ₰ 00'39	0°24'56		-1912 Sep 08 j 11:38	0 \circ \mathfrak{s}		
max. Earth dist.	-1918 Dec 26 j 12:24	19° ₹ 58'26	6.05432 AU	retrograde	-1912 Nov 06 j 07:04	5° 5 03'29		
morning rise	-1917 Jan 08 j 14:54	23° 渘 05′18		opposition	-1911 Jan 05 j 03:07	0° 5 06'19	0°54'21	
	-1917 Feb 07 j 19:19	0°రె		min. Earth dist.	-1911 Jan 05 j 05:06	0° © 05'40	4.36709 AU	
retrograde	-1917 May 19 j 09:34	13° る 03'26			-1911 Jan 05 j 22:16	30°RⅡ		
opposition	-1917 Jul 18 j 22:08	8° る 03'49	-1°08'52	direct	-1911 Mar 07 j 14:54	25° Ⅲ 02'54		
min. Earth dist.	-1917 Jul 18 j 14:07	8° පි 06'28	4.01528 AU		-1911 May 06 j 14:47	0 \circ \odot		
direct	-1917 Sep 15 j 17:11	3° る 10'40		evening set	-1911 Jul 13 j 03:24	12° © 56'58		
evening set	-1916 Jan 18 j 07:54	22° る 31'07						
				conjunction	-1911 Jul 26 j 09:06	15° 5 49'46	0°54'13	
conjunction	-1916 Jan 31 j 11:10	25° る 40'04	-1°02'09	minimum elong	-1911 Jul 26 j 09:03	15° 5 49'45	0°54'15	
minimum elong	-1916 Jan 31 j 11:07	25° る 40'02	1°02'12	max. Earth dist.	-1911 Jul 25 j 17:07	15° 5 41'03	6.39955 AU	
max. Earth dist.	-1916 Feb 01 j 11:26	25° る 54'39	5.99256 AU	morning rise	-1911 Aug 08 j 11:36	18° 5 40'59		
morning rise	-1916 Feb 13 j 17:45	28° る 50'47			-1911 Oct 05 j 01:10	0 $^{\circ}$ Ω		
	-1916 Feb 18 j 14:24	0° ≈		retrograde	-1911 Dec 06 j 20:17	5° Ω 38′25		
	-1916 May 02 j 10:26	15° ≈		opposition	-1910 Feb 05 j 01:16	0° Ω 44'38	1°36'40	
retrograde	-1916 Jun 25 j 01:06	19° ≈ 18′08		min. Earth dist.	-1910 Feb 05 j 19:26	0° Ω 38'45	4.41775 AU	
	-1916 Aug 18 j 11:32	15°R ≈			-1910 Feb 10 j 19:34	30° ₹ 5		
min. Earth dist.	-1916 Aug 23 j 01:12	14° ≈ 23'11	3.99016 AU	direct	-1910 Apr 08 j 11:33	25° 5 41'40		
opposition	-1916 Aug 24 j 02:11	14° ≈ 14'46	-1°49'24		-1910 Jun 03 j 12:41	$0^{\circ}\Omega$		
direct	-1916 Oct 21 j 02:42	9° ≈ 20′21		evening set	-1910 Aug 13 j 16:18	13° Ω 25'41		
	-1916 Dec 20 j 09:51	15° ≈			-1910 Aug 20 j 21:39	15° Ω		
evening set	-1915 Feb 23 j 06:06	28° ≈ 47'31		max. Earth dist.	-1910 Aug 25 j 01:09	15° Ω 54'21	6.41833 AU	
	-1915 Feb 28 j 08:28	0° ∀						
				conjunction	-1910 Aug 26 j 13:25	16° Ω 14'11	1°14'37	
conjunction	-1915 Mar 08 j 17:12	1° ¥ 59'16	-1°16'05	minimum elong	-1910 Aug 26 j 13:23	16° Ω 14'10	1°14'38	
minimum elong	-1915 Mar 08 j 17:13	1° ¥ 59′17	1°16'06	morning rise	-1910 Sep 08 j 07:38	19° Ω 01'16		
max. Earth dist.	-1915 Mar 10 j 15:48	2° ∺ 26′59	6.00521 AU		-1910 Nov 02 j 17:16	0° m		
morning rise	-1915 Mar 22 j 07:11	5° 升 12'30		retrograde	-1909 Jan 06 j 15:09	5° m 57'02		
retrograde	-1915 Jul 31 j 17:36	25°) €24'46		opposition	-1909 Mar 08 j 05:52	1° m 05'07	1°52'17	
min. Earth dist.	-1915 Sep 28 j 01:23	20°) 30′13	4.04017 AU	min. Earth dist.	-1909 Mar 09 j 11:27	0° m 55'39	4.40475 AU	
opposition	-1915 Sep 29 j 08:40	20° ¥ 19'33	-1°47'25		-1909 Mar 16 j 19:00	30°R Ω		
direct	-1915 Nov 26 j 10:49	15° ∺ 22'19		direct	-1909 May 09 j 23:39	26° Ω 03'39		
	-1914 Mar 12 j 05:50	0° Y			-1909 Jul 02 j 07:37	0° m		
evening set	-1914 Apr 01 j 10:35	4° Y 35'18		evening set	-1909 Sep 13 j 13:00	13° m 51'09		

-	_				r 1910 BCE in historical c	_	.gc ++
max. Earth dist.	-1909 Sep 24 j 08:04			conjunction	-1903 Mar 13 j 20:15	7°) €02'34	-1°15'38
man Bartin Gibt.	1505 Sep 2.1 00.0.	10 191121	0.575.6110	minimum elong	-1903 Mar 13 j 20:16	7°) €02'34	
conjunction	-1909 Sep 26 j 04:30	16° Mp 39'00	1°14'24	max. Earth dist.	-1903 Mar 15 j 19:06	7° ¥ 30′23	6.00704 AU
minimum elong	-1909 Sep 26 j 04:31	16°M ₂ 39'01	1°14'25	morning rise	-1903 Mar 27 j 11:25	10° X 16'10	0.00704 AC
morning rise	-1909 Oct 08 j 17:39	19° Mp 25'55	1 1423	morning risc	-1903 Jul 20 j 14:04	0°Υ	
morning rise	-1909 Nov 29 j 17:24	0° ʊ		retrograde	-1903 Jul 20 j 14:04 -1903 Aug 05 j 15:00	0° Υ 25'30	
ratra ara da	•	0 <u>≈</u> 6° ≏ 46'16		renograde	-1903 Aug 03 j 13:00 -1903 Aug 21 j 14:30	0 1 23 30 30°R ∺	
retrograde	-1908 Feb 07 j 12:33		1°36'55	min Earth diat	-1903 Aug 21 j 14.30 -1903 Oct 02 j 21:12	** -	4.04623 AU
opposition	-1908 Apr 08 j 11:30	1° Ω 54'34		min. Earth dist.	,		
min. Earth dist.	-1908 Apr 09 j 20:13	1° Ω 44'10	4.33070 AU	opposition	-1903 Oct 04 j 05:26	25°) € 20'17	-1-43 42
1	-1908 Apr 23 j 21:27	30°R Mp		direct	-1903 Dec 01 j 08:05	20°) €22'38	
direct	-1908 Jun 09 j 19:37	26° m 55'34			-1902 Feb 21 j 17:56	0° Ƴ 9° Ƴ 34'39	
. ,	-1908 Jul 26 j 01:37	0∘ ⊽		evening set	-1902 Apr 06 j 13:10	9*1/34/39	
evening set	-1908 Oct 13 j 13:35	14° £ 59'19	6 27 500 AYY		1000 1 20:06 55	1000045116	005650
max. Earth dist.	-1908 Oct 24 j 08:27	17° ≏ 25'59	6.27590 AU	conjunction	-1902 Apr 20 j 06:57	12° Υ 45'16	
				minimum elong	-1902 Apr 20 j 07:01	12° Υ 45'18	
conjunction	-1908 Oct 26 j 03:16	17° ≏ 50′20	0°52'52	max. Earth dist.	-1902 Apr 22 j 06:59	13° Y 13'04	6.09728 AU
minimum elong	-1908 Oct 26 j 03:18	17° ≏ 50'21	0°52'51	morning rise	-1902 May 04 j 02:06	15° Y 56′21	
morning rise	-1908 Nov 07 j 16:20	20° Ω 41'13			-1902 Jul 12 j 04:23	0°8	
	-1908 Dec 21 j 10:17	0° M		retrograde	-1902 Sep 09 j 04:16	5° 8 10'01	
retrograde	-1907 Mar 12 j 07:35	8°M49'04		opposition	-1902 Nov 07 j 14:26	0° 8 06'03	
opposition	-1907 May 12 j 07:57	3°M55'49	0°51'53	min. Earth dist.	-1902 Nov 06 j 12:46	_	4.15759 AU
min. Earth dist.	-1907 May 13 j 10:32	3°M47'19	4.21492 AU		-1902 Nov 08 j 08:13	30° ₹Ƴ	
	-1907 Jun 17 j 01:01	30° Ŗ亞		direct	-1901 Jan 05 j 17:08	25° Y 05'21	
direct	-1907 Jul 12 j 16:21	28° ♀ 59'33			-1901 Mar 04 j 05:52	9° 8	
	-1907 Aug 07 j 04:27	0° M		evening set	-1901 May 12 j 15:13	13° 8 47'38	
	-1907 Nov 03 j 18:06	15°M			-1901 May 18 j 00:21	15° 8	
evening set	-1907 Nov 14 j 15:00	17° M 29'44					
max. Earth dist.	-1907 Nov 26 j 04:35	20°M11'21	6.15239 AU	conjunction	-1901 May 26 j 09:33	16° 8 53'07	-0°18'55
				minimum elong	-1901 May 26 j 09:34	16° 8 53'08	0°18'53
conjunction	-1907 Nov 27 j 07:12	20°M26'53	0°14'17	max. Earth dist.	-1901 May 27 j 17:40	17° 8 11'11	6.22102 AU
minimum elong	-1907 Nov 27 j 07:12	20°M26'53	0°14'15	morning rise	-1901 Jun 09 j 03:06	19° 8 57'59	
behind sun begin	-1907 Nov 27 j 03:12	20°M24'34		-	-1901 Jul 27 j 05:31	Π $^{\circ}$ 0	
behind sun end	-1907 Nov 27 j 11:13	20°M29'13		retrograde	-1901 Oct 11 j 14:04	8° Ⅱ 07'50	
morning rise	-1907 Dec 10 j 00:09	23°M24'43		asc. node	-1901 Nov 16 j 14:22	6° Ⅱ 04'20	
Ü	-1906 Jan 08 j 06:53	0°∡7		opposition	-1901 Dec 10 j 04:13	3° Ⅱ 07'12	0°03'45
desc. node	-1906 Apr 02 j 11:32	12° ∡ 13′29		min. Earth dist.	-1901 Dec 09 j 15:09	3° Ⅱ 11'36	4.28138 AU
retrograde	-1906 Apr 17 j 01:55	12° ₹ 33'31			-1900 Jan 04 j 08:50	30°R ∀	
opposition	-1906 Jun 16 j 22:44	7° ∡ ³37'18	-0°12'52	direct	-1900 Feb 08 j 13:26	28° 8 04'26	
min. Earth dist.	-1906 Jun 17 j 09:04		4.09243 AU		-1900 Mar 15 j 06:33	0°П	
direct	-1906 Aug 15 j 21:00	2° ∡ ¹43'22	,2.13.110	evening set	-1900 Jun 15 j 00:07	16° Ⅱ 16'57	
evening set	-1906 Dec 18 j 10:47	21°×743'53		evening sec	1500 tun 10 j 00.07	10 21007	
evening see	1500 Bee 10 j 10.17	21 7 13 33		conjunction	-1900 Jun 28 j 13:04	19° Ⅱ 15'22	0°23'48
conjunction	-1906 Dec 31 j 08:04	24° ∡ ¹48'02	-0°30'41	minimum elong	-1900 Jun 28 j 13:02	19° Ⅱ 15′21	0°23'50
minimum elong	-1906 Dec 31 j 08:02	24° 🗷 48'00	0°30'42	max. Earth dist.	-1900 Jun 28 j 18:37	19° Ⅱ 18'25	6.33568 AU
max. Earth dist.	-1906 Dec 31 j 06:14	24° 🖈 46'56	6.04217 AU	morning rise	-1900 Jul 28 j 18:37	22° Ⅱ 12'28	0.55500 AC
morning rise	-1905 Jan 13 j 07:53	27° х 53'39	0.04217 AU	morning risc	-1900 Aug 18 j 08:28	0°95	
morning rise	-	27 メ ・33 39		ratragrada		9° © 32'35	
retrograde	-1905 Jan 22 j 06:36 -1905 May 24 j 10:44	0 8 17° る 58'21		retrograde opposition	-1900 Nov 10 j 15:56 -1899 Jan 09 j 12:14	4°935'55	1°01'39
opposition	-1905 May 24 j 10:44 -1905 Jul 23 j 21:26	17° る 38'21 12° る 58'13	-1°16'15	min. Earth dist.	-1899 Jan 09 j 12:14 -1899 Jan 09 j 16:59	4°933'33	4.37835 AU
min. Earth dist.	•	12°る5813		mm. Earth tist.	-1899 Jan 09 j 16:39 -1899 Feb 22 j 22:12	4°€34°22 30°R∏	4.57035 AU
	-1905 Jul 23 j 11:29		4.00333 AU	diract	•		
direct	-1905 Sep 20 j 13:18 -1904 Jan 23 j 05:13	8°る04'58 27°る28'47		direct	-1899 Mar 12 j 04:35	29° ∏ 32'28 0° ©	
evening set	-				-1899 Mar 29 j 13:50		
	-1904 Feb 02 j 17:33	0° ≈		evening set	-1899 Jul 17 j 15:38	17° © 23'54	
i <i>(</i> *	1004 F 1 07:00 11	0020124	1905127		1000 1 1 20 : 20 05	20001515	0950111
conjunction	-1904 Feb 05 j 09:44	0°≈38'34		conjunction	-1899 Jul 30 j 20:05	20°515'53	0°58'11
minimum elong	-1904 Feb 05 j 09:42	0°≈38'32		minimum elong	-1899 Jul 30 j 20:02	20°515'52	0°58'13
max. Earth dist.	-1904 Feb 06 j 14:06	0°≈55'36	5.98584 AU	max. Earth dist.	-1899 Jul 30 j 00:47	20°505'22	6.40719 AU
morning rise	-1904 Feb 18 j 17:21	3°≈50'03		morning rise	-1899 Aug 12 j 21:19	23°506'15	
	-1904 Apr 08 j 21:19	15° ≈			-1899 Sep 15 j 00:14	0°N	
retrograde	-1904 Jun 30 j 04:01	24°≈20'04	2.00566.433	retrograde	-1899 Dec 11 j 02:47	10° Ω 01′20	
min. Earth dist.	-1904 Aug 28 j 00:14	19° ≈ 25'04					
opposition	-1904 Aug 29 j 01:53	19° ≈ 16′24	-1°51'44				
	-1904 Oct 06 j 18:13	15°R ≈					
direct	-1904 Oct 26 j 00:34	14° ≈ 21'45					
	-1904 Nov 14 j 07:21	15° ≈					
	-1903 Feb 11 j 21:05	0° ∀					
evening set	-1903 Feb 28 j 08:11	3°) € 50′24					