•	ical year style is used: Th		_				ige i
direct	-7900 Mar 02 j 06:57	8° 8 20'55			-7895 Oct 24 j 16:38	0°M	
	-7900 May 12 j 01:33	15° 8		evening set	-7895 Dec 18 j 12:19	11° M 49'54	
evening set	-7900 Jul 07 j 21:29	26° 8 25'40		Č	,		
max. Earth dist.	-7900 Jul 19 j 03:19	28° 8 55'37	6.34685 AU	conjunction	-7895 Dec 31 j 21:22	14°M58'39	-1°03'02
	J			minimum elong	-7895 Dec 31 j 21:17	14°M58'36	1°03'21
conjunction	-7900 Jul 20 j 14:21	29° 8 15'09	1°19'00	S	-7895 Dec 31 j 23:40	15°M	
minimum elong	-7900 Jul 20 j 14:17	29° 8 15'07	1°19'25	max. Earth dist.	-7894 Jan 02 j 08:03	15°M19'05	6.05180 AU
_	-7900 Jul 23 j 22:44	$\Pi^{\circ}0$		morning rise	-7894 Jan 14 j 09:50	18°M09'08	
morning rise	-7900 Aug 02 j 04:13	2° Ⅱ 03'17			-7894 Mar 10 j 07:21	0°⊀	
retrograde	-7900 Dec 01 j 12:35	19° Ⅱ 24'54		retrograde	-7894 May 25 j 22:07	8° ∡ 10'36	
opposition	-7899 Jan 31 j 07:26	14° ∏ 33′24	2°11'26	opposition	-7894 Jul 24 j 20:45	3° ∡ 05'31	-2°01'15
min. Earth dist.	-7899 Feb 01 j 08:23	14° Ⅱ 25′28	4.33095 AU	min. Earth dist.	-7894 Jul 23 j 19:59	3° х 13′57	4.06115 AU
direct	-7899 Apr 03 j 17:23	9° ∏ 34'14			-7894 Aug 18 j 13:11	30°RM₊	
evening set	-7899 Aug 08 j 03:55	27° Ⅱ 39'49		direct	-7894 Sep 20 j 23:53	28° M $08'45$	
	-7899 Aug 18 j 12:34	0 \circ ∞			-7894 Oct 24 j 11:44	0°⊀	
max. Earth dist.	-7899 Aug 19 j 05:51	0° © 09'47	6.30237 AU	evening set	-7893 Jan 24 j 06:47	17° ∡ 15'37	
conjunction	-7899 Aug 20 j 14:39	0° 5 28'21	1°34'11	conjunction	-7893 Feb 06 j 21:33	20° ≯ 25′20	-1°30'58
minimum elong	-7899 Aug 20 j 14:39	0°ള28'20	1°34'42	minimum elong	-7893 Feb 06 j 21:31	20° х 25′19	1°31'28
morning rise	-7899 Sep 02 j 00:08	3° © 16′20		max. Earth dist.	-7893 Feb 08 j 12:08	20° х 47′46	6.08067 AU
retrograde	-7898 Jan 03 j 15:59	21° © 08'11		morning rise	-7893 Feb 20 j 14:15	23° ₹ 35'59	
opposition	-7898 Mar 05 j 20:12	16° © 15'34	2°14'28		-7893 Mar 21 j 03:35	0°ಕ	
min. Earth dist.	-7898 Mar 06 j 16:50	16° © 09'01	4.26803 AU	retrograde	-7893 Jun 30 j 04:15	13° る 11'05	
direct	-7898 May 06 j 15:28	11° © 19'24		opposition	-7893 Aug 28 j 12:59	8° ප 06'36	
evening set	-7898 Sep 08 j 14:08	29° © 32'54		min. Earth dist.	-7893 Aug 27 j 16:06		4.11312 AU
	-7898 Sep 10 j 13:31	$0^{\circ}\Omega$		direct	-7893 Oct 26 j 03:44	3° ප 06'23	
max. Earth dist.	-7898 Sep 20 j 04:48	2° Ω 12'51	6.22622 AU	evening set	-7892 Mar 01 j 00:58	22° る 07'17	
conjunction	-7898 Sep 21 j 01:04	2° Ω 24'31		conjunction	-7892 Mar 14 j 18:23	25° る 15'06	
minimum elong	-7898 Sep 21 j 01:07	2° Ω 24'33	1°21'53	minimum elong	-7892 Mar 14 j 18:26	25° る 15'08	
morning rise	-7898 Oct 03 j 12:30	5° Ω 16'34		max. Earth dist.	-7892 Mar 15 j 19:48	25°₹29'38	6.15067 AU
	-7898 Nov 17 j 19:58	15° Ω		morning rise	-7892 Mar 28 j 12:06	28° පි 22'52	
retrograde	-7897 Feb 07 j 03:29	23° Ω 52'19	1005104		-7892 Apr 04 j 16:25	0° ≈	
opposition	-7897 Apr 09 j 12:43	18° Ω 56'50	1°35'34		-7892 Jun 25 j 20:22	15° ≈	
min. Earth dist.	-7897 Apr 09 j 20:17	18° Ω 54'24	4.18334 AU	retrograde	-7892 Aug 01 j 20:16	17°≈10'22	
J: 4	-7897 May 15 j 12:47	15°RΩ			-7892 Sep 07 j 14:01	15°R≈ 12°≈08'35	1946107
direct	-7897 Jun 09 j 03:38	14° Ω 03'06		opposition	-7892 Sep 30 j 00:09		
	-7897 Jul 03 j 16:36 -7897 Sep 30 j 01:46	15° Ω		min. Earth dist. direct	-7892 Sep 29 j 13:38 -7892 Nov 28 j 16:22	7°≈05'34	4.19375 AU
evening set	-7897 Oct 10 j 22:56	0° т р 2° т р 30'14		direct	-7891 Feb 12 j 11:27	7 ≈03 34 15°≈	
evening set	-7897 Oct 10 j 22.30	2 IIJ 30 14		evening set	-7891 Apr 05 j 17:54	25°≈50'16	
conjunction	-7897 Oct 23 j 15:35	5° ™ 27'59	0°42'24	evening set	-7691 Apr 03 j 17.34	23 ~30 10	
minimum elong	-7897 Oct 23 j 15:39	5° Mg 28'01	0°42'39	conjunction	-7891 Apr 19 j 10:22	28° ≈ 54'10	-0°51'35
max. Earth dist.	-7897 Oct 23 j 14:35	5° m 27'23	6.14118 AU	minimum elong	-7891 Apr 19 j 10:26	28°≈54'12	
morning rise	-7897 Nov 05 j 10:30	8° m 27'03	0.14110710	max. Earth dist.	-7891 Apr 19 j 16:33	28°≈57'38	6.23635 AU
retrograde	-7896 Mar 14 j 01:35	27° m/49'05		man. Bartir dist.	-7891 Apr 24 j 07:39	0° ∀	0.23030110
opposition	-7896 May 14 j 04:08	22° m/49'45	0°23'06	morning rise	-7891 May 03 j 00:47	1° ¥ 56'57	
min. Earth dist.	-7896 May 13 j 21:25	22° m 51'56	4.10378 AU	retrograde	-7891 Sep 03 j 04:52	19° ¥ 55'13	
direct	-7896 Jul 12 j 13:55	17° m 56'53		opposition	-7891 Nov 01 j 11:02	14°) 57'19	-0°41'19
desc. node	-7896 Sep 01 j 02:24	21° m 55'15		min. Earth dist.	-7891 Nov 01 j 14:05	14°) 56'18	
	-7896 Oct 14 j 10:34	0∘ <u>v</u>		direct	-7890 Jan 01 j 08:49	9°) 53′10	
evening set	-7896 Nov 12 j 20:59	6° Ω 41'01		evening set	-7890 May 09 j 22:41	28°) 19′05	
	·			•	-7890 May 17 j 13:13	$0^{\circ}\mathbf{Y}$	
conjunction	-7896 Nov 25 j 22:11	9° Ω 45'25	-0°12'04				
minimum elong	-7896 Nov 25 j 22:10	9° Ω 45'24	0°12'06	conjunction	-7890 May 23 j 09:00	1° Y 17'35	-0°01'53
behind sun begin	-7896 Nov 25 j 16:36	9° ≙ 42'08		minimum elong	-7890 May 23 j 09:00	1° Y 17'35	
behind sun end	-7896 Nov 26 j 03:45	9° ≏ 48'41		behind sun begin	-7890 May 23 j 00:47	1° Y 13'02	
max. Earth dist.	-7896 Nov 26 j 18:12	9° ≏ 57'13	6.07492 AU	behind sun end	-7890 May 23 j 17:12	1° Y 22'07	
morning rise	-7896 Dec 09 j 02:46	12° ≏ 51'40		max. Earth dist.	-7890 May 22 j 17:21	1° Y 08'54	6.30924 AU
	-7895 Mar 07 j 15:08	0° M		morning rise	-7890 Jun 05 j 16:10	4° Ƴ 14'24	
retrograde	-7895 Apr 19 j 14:49	2°M47'09		asc. node	-7890 Jun 06 j 12:07	4° Y 25′23	
	-7895 Jun 01 j 14:00	30° ₹ Ω		retrograde	-7890 Oct 04 j 17:07	21° Y 38'29	
min. Earth dist.	-7895 Jun 18 j 08:50	27° ≏ 50'48	4.05744 AU	opposition	-7890 Dec 03 j 09:26	16° Ƴ 44'06	0°33'58
opposition	-7895 Jun 19 j 04:49	27° ≏ 44'07	-0°59'42	min. Earth dist.	-7890 Dec 04 j 00:52	16° Ƴ 39'02	4.33408 AU
direct	-7895 Aug 16 j 13:58	22° ≏ 50'13		direct	-7889 Feb 03 j 08:24	11° Y 40'30	

5	1				7890 BCE in historical c	, 1	.50 2
evening set	-7889 Jun 11 j 16:35			max. Earth dist.	-7884 Dec 01 j 16:32		6.07069 AU
	-7889 Jun 12 j 07:08	9° 8		morning rise	-7884 Dec 14 j 00:52	17° ≏ 48'08	
					-7883 Feb 08 j 19:11	0° M	
conjunction	-7889 Jun 24 j 17:33	2° 8 44'59	0°47'31	retrograde	-7883 Apr 24 j 15:19	7° M 45'49	
minimum elong	-7889 Jun 24 j 17:30	2° 8 44'56	0°47'44	min. Earth dist.	-7883 Jun 23 j 07:10	2°M49'14	4.05542 AU
max. Earth dist.	-7889 Jun 23 j 12:38	2° 8 28'57	6.34835 AU	opposition	-7883 Jun 24 j 03:43	2°M42'21	-1°10'08
morning rise	-7889 Jul 07 j 14:54	5° 8 36'12			-7883 Jul 15 j 15:10	30°Ŗ <u>Ω</u>	
	-7889 Aug 22 j 03:36	15° 8		direct	-7883 Aug 21 j 11:43	27° ≏ 48'04	
retrograde	-7889 Nov 05 j 02:53	22° 8 48'45			-7883 Sep 27 j 01:51	0°M₊	
opposition	-7888 Jan 04 j 09:29	17° 8 56'41	1°38'12		-7883 Dec 15 j 16:50	15° ™	
min. Earth dist.	-7888 Jan 05 j 08:35	17° 8 49'16	4.35253 AU	evening set	-7883 Dec 23 j 12:45	16° M 49′20	
	-7888 Jan 28 j 22:36	15°R 8					
direct	-7888 Mar 06 j 21:02	12° 8 55'08		conjunction	-7882 Jan 05 j 22:52	19°M58'29	
	-7888 Apr 13 j 21:54	15° 8		minimum elong	-7882 Jan 05 j 22:47	19°M58'26	1°08'57
. ,	-7888 Jul 07 j 21:08	0°II		max. Earth dist.	-7882 Jan 07 j 11:29	20°M20'01	6.05218 AU
evening set max. Earth dist.	-7888 Jul 12 j 09:18	0°Ⅲ59'41 3°Ⅲ28'46	C 24225 ATT	morning rise	-7882 Jan 19 j 12:03	23° ™ .09'14 0° <i>₹</i>	
max. Earth dist.	-7888 Jul 23 j 13:02	3°Щ28'40	6.34335 AU		-7882 Feb 18 j 18:53		
aaniumatian	7000 1.1 25:00.52	3° Ⅱ 48'46	1°22'43	retrograde opposition	-7882 May 30 j 21:54	13° х 09'18 8° х 04'13	2906120
conjunction minimum elong	-7888 Jul 25 j 00:52 -7888 Jul 25 j 00:48	3° П 48'44	1°23'10	min. Earth dist.	-7882 Jul 29 j 17:17 -7882 Jul 28 j 17:05		4.06414 AU
morning rise	-7888 Aug 06 j 13:57	6° П 36'39	1 23 10	direct	-7882 Sep 25 j 20:36	3°×1227	4.00414 AU
retrograde	-7888 Dec 06 j 04:52	24° ∏ 01'07		evening set	-7881 Jan 29 j 09:41	22° ∡ 14'40	
opposition	-7887 Feb 05 j 00:43	19° Ⅱ 09'33	2°14'19	evening set	-7001 Jan 29 J 09.41	22 🗡 1440	
min. Earth dist.	-7887 Feb 06 j 01:47	19° Ⅱ 01'34	4.32557 AU	conjunction	-7881 Feb 12 j 00:55	25° ∡ ¹24'24	-1°32'14
direct	-7887 Apr 08 j 10:40	14° Ⅱ 10'47	4.52557710	minimum elong	-7881 Feb 12 j 00:54		1°32'45
4.1.000	-7887 Aug 02 j 09:52	0°9		max. Earth dist.	-7881 Feb 13 j 12:45		6.08583 AU
evening set	-7887 Aug 12 j 14:37	2°916'22		morning rise	-7881 Feb 25 j 18:12	28° × ^{35'00}	0.000003110
max. Earth dist.	-7887 Aug 23 j 18:48	4°947'50	6.29554 AU		-7881 Mar 03 j 22:28	0°ਰ	
	e ,			retrograde	-7881 Jul 04 j 22:43	18° る 05'33	
conjunction	-7887 Aug 25 j 01:06	5° © 05'00	1°34'05	min. Earth dist.	-7881 Sep 01 j 10:32		4.12001 AU
minimum elong	-7887 Aug 25 j 01:06	5°905'00	1°34'37	opposition	-7881 Sep 02 j 06:35	13° る 01'20	
morning rise	-7887 Sep 06 j 10:20	7°953'12		direct	-7881 Oct 30 j 23:34	8° ප 00'39	
retrograde	-7886 Jan 08 j 09:17	25°5549'30		evening set	-7880 Mar 06 j 02:32	27° る 01'03	
opposition	-7886 Mar 10 j 16:22	20° © 56'32	2°11'22				
min. Earth dist.	-7886 Mar 11 j 10:36	20°950'45	4.26021 AU	conjunction	-7880 Mar 19 j 20:18	0° ≈ 08'39	-1°22'29
direct	-7886 May 11 j 08:01	16°9500'46		minimum elong	-7880 Mar 19 j 20:22	0° ≈ 08'41	1°22'57
	-7886 Aug 25 j 04:40	$0^{\circ}\Omega$			-7880 Mar 19 j 05:08	0° ≈	
evening set	-7886 Sep 13 j 02:09	4° Ω 14'34		max. Earth dist.	-7880 Mar 20 j 20:15		6.15905 AU
				morning rise	-7880 Apr 02 j 13:47	3° ≈ 15'59	
conjunction	-7886 Sep 25 j 13:26	7° Ω 06'41	1°17'18		-7880 May 29 j 01:00	15° ≈	
minimum elong	-7886 Sep 25 j 13:30	7° Ω 06'43	1°17'46	retrograde	-7880 Aug 06 j 12:33	21°≈57'34	
max. Earth dist.	-7886 Sep 24 j 19:29	6° Ω 56'20	6.21805 AU	opposition	-7880 Oct 04 j 15:10	16°≈56'19	
morning rise	-7886 Oct 08 j 01:35	9° Ω 59'23		min. Earth dist.	-7880 Oct 04 j 06:39	16°≈59'12	4.20267 AU
. 1	-7886 Oct 30 j 10:07	15° Ω		ľ. d	-7880 Oct 19 j 07:37	15°R≈	
retrograde	-7885 Feb 12 j 02:49	28° Ω 40'13	102750	direct	-7880 Dec 03 j 11:01	11°≈53'06	
opposition min. Earth dist.	-7885 Apr 14 j 11:20 -7885 Apr 14 j 17:45	23°Ω44'12 23°Ω42'08	1°26'59 4.17511 AU		-7879 Jan 17 j 23:03 -7879 Apr 07 j 22:57	15° ≈ 0°) €	
direct	-7885 Jun 13 j 23:45	18°Ω50'35	4.1/311 AU	evening set	-7879 Apr 07 j 22.37	0° ∺ 36'11	
direct	-7885 Sep 12 j 20:58	0°M)		evening set	-/8/9 Apr 10 J 10.03	0 Д3011	
evening set	-7885 Oct 15 j 13:58	7° Mp 18'33		conjunction	-7879 Apr 24 j 07:59	3° ¥ 39'32	0°45'05
evening set	-7883 Oct 13 j 13.38	/ III 10 33		minimum elong	-7879 Apr 24 j 07:39	3°) (3932	
conjunction	-7885 Oct 28 j 07:44	10° m) 17'06	0°35'21	max. Earth dist.	-7879 Apr 24 j 10:49	3°) 41′07	6.24527 AU
minimum elong	-7885 Oct 28 j 07:47	10° Mp 17'07	0°35'36	morning rise	-7879 May 07 j 21:48	6°) 41'41	0.24327710
max. Earth dist.	-7885 Oct 28 j 09:33	10° m) 18'10	6.13373 AU	retrograde	-7879 Sep 07 j 16:22	24°) 34'48	
morning rise	-7885 Nov 10 j 03:54	13° m) 17'03	0.13373110	opposition	-7879 Nov 06 j 00:09	19°) € 37'22	-0°30'43
	-7884 Feb 05 j 07:05	0∘ ⊽		min. Earth dist.	-7879 Nov 06 j 04:26	19°) ₹35'56	4.28406 AU
retrograde	-7884 Mar 19 j 01:45	2° £ 43'26		direct	-7878 Jan 06 j 01:27	14°) €33'11	
, and the second	-7884 May 01 j 01:55	30°R, Mp		asc. node	-7878 Apr 14 j 23:41	26°) 37′28	
opposition	-7884 May 19 j 03:44	27° m/43'31	0°11'32		-7878 May 01 j 02:34	0° Υ	
min. Earth dist.	-7884 May 18 j 18:50	27° m/46'26	4.09775 AU	evening set	-7878 May 14 j 16:19	2° Y ′57'14	
desc. node	-7884 Jul 12 j 15:14	22° m/ 52'52		max. Earth dist.	-7878 May 27 j 08:43	5° Ƴ 45'40	6.31634 AU
direct	-7884 Jul 17 j 09:01	22° m/50'37			- *		
	-7884 Sep 24 j 22:03	0∘ ⊽		conjunction	-7878 May 28 j 01:32	5° Ƴ 54'59	0°05'38
evening set	-7884 Nov 17 j 16:49	11° ≏ 36′08		minimum elong	-7878 May 28 j 01:31	5° Y ′54'58	0°05'38
				behind sun begin	-7878 May 27 j 17:40	5° Y 50'39	
conjunction	-7884 Nov 30 j 19:05	14° ≏ 41'11		behind sun end	-7878 May 28 j 09:21	5° Ƴ 59'18	
minimum elong	-7884 Nov 30 j 19:03	14° ≙ 41'10	0°19'52	morning rise	-7878 Jun 10 j 07:20	8° Y 50'58	

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7878 in astronomical counting style is the year 7879 BCE in historical counting style. 26°**Y**12′04 -7878 Oct 09 i 04:02 direct -7872 Jul 22 j 06:53 27° m 50'41 retrograde opposition -7878 Dec 07 j 22:11 21°Y18'06 0°44'15 -7872 Aug 27 j 19:17 0∘**⊽** 4.33942 AU -7878 Dec 08 j 14:47 21°**Y**12'41 -7872 Nov 22 j 16:05 16°**♀**39'31 min. Earth dist. evening set -7877 Feb 07 j 23:55 16°**Y**14'46 direct -7872 Dec 05 j 19:43 19°**£**45'29 -0°27'34 -7877 May 26 j 18:41 0°8 conjunction 4°**8**24'33 -7872 Dec 05 j 19:41 19°**≗**45'27 evening set -7877 Jun 16 j 05:49 minimum elong 0°27'41 max. Earth dist. -7872 Dec 06 j 20:45 -7877 Jun 27 j 22:05 6°**8**59'30 6.35114 AU max. Earth dist. 20°**♀**00'15 6.06285 AU morning rise -7872 Dec 19 j 02:40 22°**£**53'18 conjunction -7877 Jun 29 j 05:17 7°**8**16'47 0°53'39 -7871 Jan 19 j 12:30 0°M minimum elong -7877 Jun 29 j 05:13 7°**8**16'45 0°53'55 retrograde -7871 Apr 29 j 20:56 12°M54'11 morning rise -7877 Jul 12 j 01:26 10°**8**07'22 min. Earth dist. -7871 Jun 28 j 08:39 7°ML57'33 4.05122 AU -7877 Aug 03 j 16:28 -7871 Jun 29 j 05:53 15°8 opposition 7°M50'25 -1°20'22 27°**8**19'53 retrograde -7877 Nov 09 j 14:44 direct -7871 Aug 26 j 11:56 2°M55'52 opposition -7876 Jan 08 j 23:23 22°**8**27'56 1°45'20 -7871 Nov 27 j 20:42 15°M min. Earth dist. -7876 Jan 09 j 23:13 22°**8**20'18 4.35260 AU evening set -7871 Dec 28 j 17:53 21°M59'41 direct -7876 Mar 11 j 12:10 17°**8**26'42 -7876 Jun 21 j 06:27 $0^{\circ}II$ conjunction -7870 Jan 11 j 04:45 25°M09'12 -1°13'50 evening set -7876 Jul 16 j 19:33 5°**Ⅲ**30′27 minimum elong -7870 Jan 11 j 04:40 25°M09'09 1°14'14 max. Earth dist. -7876 Jul 27 j 23:49 7°**Ⅱ**59'59 6.34040 AU max. Earth dist. -7870 Jan 12 j 17:08 25°M30'34 6.05174 AU morning rise -7870 Jan 24 j 18:55 28°M20'18 conjunction -7876 Jul 29 j 10:11 8°II19'12 1°25'55 -7870 Jan 31 j 22:49 0°×7 minimum elong -7876 Jul 29 i 10:08 8°**Ⅱ**19'11 1°26'23 retrograde -7870 Jun 04 i 23:38 18°**≯**18'54 morning rise -7876 Aug 10 j 22:12 11°**Ⅱ**06'47 opposition -7870 Aug 03 i 17:32 13°**∡**13'47 -2°10'59 retrograde -7876 Dec 10 j 18:06 28°**Ⅲ**34'09 min. Earth dist. -7870 Aug 02 i 16:34 13°**∡**′22'19 4.06794 AU -7875 Feb 09 j 16:50 23°II42'31 2°16'24 direct -7870 Sep 30 j 21:11 8°**х** 16′07 opposition -7875 Feb 10 j 17:13 23°**Ⅲ**34'47 4.31970 AU -7869 Feb 03 j 16:37 27°**х** 24′08 min. Earth dist. evening set -7875 Apr 13 j 01:11 18°**Ⅲ**44'13 -7869 Feb 14 j 22:16 0°정 direct -7875 Jul 16 j 11:08 000 -7869 Feb 17 j 08:31 0°る33'45 -1°32'53 evening set -7875 Aug 17 j 00:24 6°950'11 conjunction -7875 Aug 28 j 04:04 -7869 Feb 17 j 08:31 0°る33'45 1°33'24 max. Earth dist. 9°921'45 6.28700 AU minimum elong 0°る54'54 6.09381 AU -7869 Feb 18 j 21:01 max. Earth dist. -7875 Aug 29 j 10:27 -7869 Mar 03 j 01:54 3°₹44'03 conjunction 9°939'00 1°33'26 morning rise -7875 Aug 29 j 10:28 -7869 Jul 09 j 21:09 9°939'00 23°**る**08'29 minimum elong 1°33'58 retrograde -7875 Sep 10 j 19:49 12°527'34 -7869 Sep 06 j 08:36 18°る10'56 4.13161 AU morning rise min. Earth dist. -7875 Dec 26 j 09:42 -7869 Sep 07 j 03:11 0° Ω opposition 18°**る**04'35 -2°13'17 -7874 Jan 13 j 04:47 -7869 Nov 04 j 23:52 13°**る**03'33 retrograde 0°**Ω**29'18 direct -7874 Jan 31 j 00:07 30°R∽ -7868 Mar 02 j 06:38 0°≈ opposition -7874 Mar 15 j 12:05 25°535'59 2°07'32 evening set -7868 Mar 11 j 06:46 2°≈01'18 min. Earth dist. -7874 Mar 16 j 05:33 25°530'26 4.24935 AU direct -7874 May 16 j 01:05 20°9540'32 conjunction -7868 Mar 25 j 00:27 5°≈08'16 -1°18'33 -7874 Aug 07 j 07:17 $0^{\circ}\Omega$ minimum elong -7868 Mar 25 j 00:32 5°≈08'19 1°19'00 -7874 Sep 17 j 13:47 8°**Ω**55'58 max. Earth dist. -7868 Mar 25 j 22:32 5°≈20'49 6.17357 AU evening set -7874 Sep 29 j 10:47 11°**Ω**40′12 6.20593 AU -7868 Apr 07 j 17:41 8°≈14'51 max. Earth dist. morning rise -7868 May 08 j 16:32 -7874 Sep 30 j 01:51 11°**Ω**48'54 1°12'44 -7868 Aug 11 j 02:26 conjunction retrograde 26°≈47'50 -7874 Sep 30 i 01:55 -7868 Oct 09 i 06:57 minimum elong 11°Ω48'56 1°13'10 opposition 21°≈47'03 -1°30'08 -7874 Oct 12 i 14:47 morning rise 14°**Ω**42'30 min. Earth dist. -7868 Oct 08 i 23:01 21°≈49'44 4.21885 AU -7874 Oct 13 j 21:17 15°Ω direct -7868 Dec 08 i 06:48 16°≈43'35 -7874 Dec 30 i 02:27 0° m -7867 Mar 21 j 19:10 0°) -7873 Feb 17 j 02:25 3° m 30'05 -7867 Apr 15 j 13:55 5°\ 22'09 retrograde evening set -7873 Apr 08 j 01:40 30°RΩ -7873 Apr 19 j 10:36 28°Ω33'36 1°17'48 -7867 Apr 29 j 05:01 8°\ 24'29 -0°38'22 opposition conjunction 28° **Ω**32'12 4.16250 AU -7867 Apr 29 j 05:05 8°\ 24'31 0°38'37 min. Earth dist. -7873 Apr 19 j 14:55 minimum elong -7867 Apr 29 j 05:19 8°**)** 24'39 6.26207 AU direct -7873 Jun 18 j 17:55 23°**Ω**40'13 max. Earth dist. -7873 Aug 23 j 14:07 0° m morning rise -7867 May 12 j 17:49 11°**)** 25'30 -7867 Sep 12 j 03:07 -7873 Oct 20 j 06:43 12° Mp 10'53retrograde 29°¥10'51 evening set -7867 Nov 10 j 12:05 24° **X** 13'56 -0°20'08 opposition -7873 Nov 02 j 01:31 15° To 10'25 $0^{\circ}27'59$ -7867 Nov 10 j 18:45 24°**₭**11'43 4.29989 AU conjunction min. Earth dist. -7873 Nov 02 j 01:33 -7866 Jan 10 j 19:06 19°**₩**09'45 minimum elong 15° **m** 10'27 0°28'11 direct -7873 Nov 02 j 05:02 -7866 Feb 23 j 01:18 21°**)** 53'17 max. Earth dist. 15° Mp 12'29 6.12174 AU asc. node $0^{\circ}\Upsilon$ morning rise -7873 Nov 14 j 23:05 18° mp 11'31 -7866 Apr 13 j 17:52 -7872 Jan 09 j 03:23 0∘**⊽** evening set -7866 May 19 j 06:49 7°**Y**29′03 retrograde -7872 Mar 24 j 05:05 7°**£**44'10 desc. node -7872 May 22 j 14:21 2°**£**56'32 conjunction -7866 Jun 01 j 14:41 10°**Y**25'40 0°12'45 opposition -7872 May 24 j 05:26 2°**2**43'41 -0°00'21 minimum elong -7866 Jun 01 j 14:40 10°**Y**25′40 0°12'46 min. Earth dist. -7872 May 23 j 18:46 2°**2**47'12 4.08732 AU behind sun begin -7866 Jun 01 j 09:38 10°**Y**22'53

behind sun end

-7866 Jun 01 j 19:42

10°**Y**28′26

-7872 Jun 15 j 07:51

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		-			7867 BCE in historical co		
max. Earth dist.	-7866 May 31 j 19:16		6.32980 AU	max. Earth dist.	-7861 Nov 07 j 03:06	20° Mp 06'37	6.10475 AU
morning rise	-7866 Jun 14 j 19:05	13° Y 20′32		morning rise	-7861 Nov 19 j 18:21	23°Mp04'36	
	-7866 Sep 23 j 20:52	9° 8			-7861 Dec 20 j 10:12	0∘ ⊽	
retrograde	-7866 Oct 13 j 10:04	0° 8 36'56		retrograde	-7860 Mar 29 j 10:13	12° ≏ 45'10	
	-7866 Nov 02 j 00:04	30° ŖƳ		desc. node	-7860 Apr 02 j 00:07	12° ≏ 43'57	
opposition	-7866 Dec 12 j 07:35	25° Ƴ 43'16	0°53'50	opposition	-7860 May 29 j 07:21	7° - 44'13	-0°12'12
min. Earth dist.	-7866 Dec 13 j 01:22	25° Ƴ 37′29	4.34971 AU	min. Earth dist.	-7860 May 28 j 19:08	7° ≏ 48'15	4.07315 AU
direct	-7865 Feb 12 j 12:08	20° Y 40'04		direct	-7860 Jul 27 j 04:50	2° ♀ 51'11	
	-7865 May 09 j 07:08	0°8		evening set	-7860 Nov 27 j 16:51	21° - 44'45	
evening set	-7865 Jun 20 j 14:35	8° 8 46'36		Č	,		
max. Earth dist.	-7865 Jul 02 j 04:28	11° 8 20'08	6.35730 AU	conjunction	-7860 Dec 10 j 21:35	24° ≏ 51'41	-0°35'09
man zarm uiot.	7000 tai 02 j 0 1.20	11 02000	0.50750110	minimum elong	-7860 Dec 10 j 21:32	24° £ 51'39	
conjunction	-7865 Jul 03 j 12:38	11° 8 37'57	0°59'12	max. Earth dist.	-7860 Dec 10 j 21:32	25° ⊆ 07'29	6.05266 AU
minimum elong	-7865 Jul 03 j 12:33	11° 8 37'55	0°59'30		-7860 Dec 24 j 06:00	28° ⊆ 00'33	0.03200 AC
	•		0 3930	morning rise	-		
morning rise	-7865 Jul 16 j 07:18	14° 8 27'41			-7859 Jan 01 j 19:01	0°M,	
	-7865 Jul 18 j 18:05	15° 8			-7859 Mar 20 j 22:29	15°M	
	-7865 Oct 12 j 03:15	0°II		retrograde	-7859 May 05 j 01:48	18°M05'07	
retrograde	-7865 Nov 13 j 21:39	1° Ⅱ 39′23			-7859 Jun 19 j 05:33	15°RM	
	-7865 Dec 16 j 21:30	30° Ŗ ႘		min. Earth dist.	-7859 Jul 03 j 09:21	13° M 08'55	4.04627 AU
opposition	-7864 Jan 13 j 08:38	26° 8 47'38	1°51'31	opposition	-7859 Jul 04 j 08:56	13°M00'58	-1°30'01
min. Earth dist.	-7864 Jan 14 j 09:58	26° 8 39'32	4.35425 AU	direct	-7859 Aug 31 j 12:38	8°M06'03	
direct	-7864 Mar 15 j 22:54	21° 8 46'42			-7859 Nov 07 j 02:54	15° ™	
	-7864 Jun 03 j 12:19	$\Pi^{\circ}0$		evening set	-7858 Jan 03 j 00:33	27°M12'31	
evening set	-7864 Jul 21 j 01:04	9° Ⅱ 49'20		Č	-7858 Jan 14 j 22:22	0° ∡ ¹	
max. Earth dist.	-7864 Aug 01 j 02:03		6.33705 AU		, , , , , , , , , , , , , , , , , , , ,		
man zarm uiot.	7001114g 01 j 02.03	12 21, 1,	0.55700110	conjunction	-7858 Jan 16 j 12:29	0° ∡ ¹22'23	-1918/30
conjunction	-7864 Aug 02 j 14:39	12° Ⅱ 37'47	1°28'30	minimum elong	-7858 Jan 16 j 12:25		1°18'55
	• •			C	-		
minimum elong	-7864 Aug 02 j 14:36	12° Ⅲ 37'45	1°28'58	max. Earth dist.	-7858 Jan 18 j 03:44	0° ₹ 45′26	6.05229 AU
morning rise	-7864 Aug 15 j 02:04	15° Ⅲ 25′12		morning rise	-7858 Jan 30 j 03:12	3° ∡ ³33'42	
	-7864 Oct 31 j 19:15	0ං ව		retrograde	-7858 Jun 10 j 03:26	23° ∡ ¹29'46	
retrograde	-7864 Dec 15 j 04:38	2° © 55'54		opposition	-7858 Aug 08 j 18:18	18° ≯ 24'36	
	-7863 Jan 29 j 12:29	30°Ŗ Ⅱ		min. Earth dist.	-7858 Aug 07 j 18:00	18° ∡ ³32'53	4.07378 AU
opposition	-7863 Feb 14 j 04:41	28° Ⅱ 04'08	2°17'38	direct	-7858 Oct 05 j 23:51	13° ₹ 26'25	
min. Earth dist.	-7863 Feb 15 j 05:19	27° Ⅲ 56′19	4.31164 AU		-7857 Jan 28 j 18:28	8°0	
direct	-7863 Apr 17 j 11:09	23° Ⅱ 06′07		evening set	-7857 Feb 09 j 00:10	2° る 33'42	
	-7863 Jun 27 j 19:18	0°€					
evening set	-7863 Aug 21 j 05:50	11°5913'26		conjunction	-7857 Feb 22 j 16:29	5°₹43'04	-1°32'48
max. Earth dist.	-7863 Sep 01 j 11:17	13° © 46'23	6.27487 AU	minimum elong	-7857 Feb 22 j 16:30	5°る43'05	1°33'20
	, , , , , , , , , , , , , , , , , , ,			max. Earth dist.	-7857 Feb 24 j 04:20	6° ට 03'47	6.10397 AU
conjunction	-7863 Sep 02 j 15:57	14° © 02'43	1°32'15	morning rise	-7857 Mar 08 j 10:09	8° る 52'58	
minimum elong	-7863 Sep 02 j 15:59	14°502'44	1°32'47	retrograde	-7857 Jul 14 j 16:44	28° ට 10'04	
morning rise	-7863 Sep 15 j 01:19	16°951'49	1 32 17	retrograde	7057 Jul 11 j 10.11	20 01001	
morning risc				opposition	7857 San 11 i 22:13	230至06128	2000131
	7962 Nov. 10 ; 14-21			opposition	-7857 Sep 11 j 23:13	23° る 06'28	
retrograde	-7863 Nov 19 j 14:31	$0^{\circ}\Omega$		min. Earth dist.	-7857 Sep 11 j 04:48	23° ⋜ 12'46	-2°09'31 4.14469 AU
	-7862 Jan 17 j 20:56	0° Ω 5° Ω 00'22	2002104		-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25	23° ප 12'46 18° ප 05'00	
opposition	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24	0° N 5° N 00'22 0° N 06'47	2°03'04	min. Earth dist. direct	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39	23°ප12'46 18°ප05'00 0°≈	
opposition min. Earth dist.	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12	0° N 5° N00'22 0° N06'47 0° N01'27	2°03'04 4.23389 AU	min. Earth dist.	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25	23° ප 12'46 18° ප 05'00	
min. Earth dist.	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12 -7862 Mar 21 j 01:46	0°ብ 5°ብ00'22 0°ብ06'47 0°ብ01'27 30°ዪው		min. Earth dist. direct evening set	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39 -7856 Mar 16 j 10:10	23°♂12'46 18°♂05'00 0°≈ 6°≈59'38	4.14469 AU
* *	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12 -7862 Mar 21 j 01:46 -7862 May 20 j 13:16	0°N 5°N00'22 0°N06'47 0°N01'27 30°RS 25°S11'41		min. Earth dist. direct evening set conjunction	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39 -7856 Mar 16 j 10:10 -7856 Mar 30 j 03:41	23°♂12'46 18°♂05'00 0°≈ 6°≈59'38 10°≈05'56	4.14469 AU -1°14'03
min. Earth dist.	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12 -7862 Mar 21 j 01:46 -7862 May 20 j 13:16 -7862 Jul 17 j 03:14	0°Ω 5°Ω00'22 0°Ω06'47 0°Ω01'27 30°RS 25°S11'41 0°Ω		min. Earth dist. direct evening set	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39 -7856 Mar 16 j 10:10 -7856 Mar 30 j 03:41 -7856 Mar 30 j 03:46	23°♂12'46 18°♂05'00 0°≈ 6°≈59'38 10°≈05'56	4.14469 AU
min. Earth dist.	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12 -7862 Mar 21 j 01:46 -7862 May 20 j 13:16 -7862 Jul 17 j 03:14 -7862 Sep 21 j 23:21	0°Ω 5°Ω00'22 0°Ω06'47 0°Ω01'27 30°R© 25°©11'41 0°Ω 13°Ω30'38		min. Earth dist. direct evening set conjunction	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39 -7856 Mar 16 j 10:10 -7856 Mar 30 j 03:41	23°♂12'46 18°♂05'00 0°≈ 6°≈59'38 10°≈05'56 10°≈05'59 10°≈16'34	4.14469 AU -1°14'03
min. Earth dist.	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12 -7862 Mar 21 j 01:46 -7862 May 20 j 13:16 -7862 Jul 17 j 03:14	0°Ω 5°Ω00'22 0°Ω06'47 0°Ω01'27 30°RS 25°S11'41 0°Ω		min. Earth dist. direct evening set conjunction minimum elong	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39 -7856 Mar 16 j 10:10 -7856 Mar 30 j 03:41 -7856 Mar 30 j 03:46	23°♂12'46 18°♂05'00 0°≈ 6°≈59'38 10°≈05'56 10°≈05'59	4.14469 AU -1°14'03 1°14'30
min. Earth dist.	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12 -7862 Mar 21 j 01:46 -7862 May 20 j 13:16 -7862 Jul 17 j 03:14 -7862 Sep 21 j 23:21	0°Ω 5°Ω00'22 0°Ω06'47 0°Ω01'27 30°R© 25°©11'41 0°Ω 13°Ω30'38		min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39 -7856 Mar 16 j 10:10 -7856 Mar 30 j 03:41 -7856 Mar 30 j 03:46 -7856 Mar 30 j 22:28	23°♂12'46 18°♂05'00 0°≈ 6°≈59'38 10°≈05'56 10°≈05'59 10°≈16'34	4.14469 AU -1°14'03 1°14'30
min. Earth dist.	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12 -7862 Mar 21 j 01:46 -7862 May 20 j 13:16 -7862 Jul 17 j 03:14 -7862 Sep 21 j 23:21	0°Ω 5°Ω00'22 0°Ω06'47 0°Ω01'27 30°R© 25°©11'41 0°Ω 13°Ω30'38		min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39 -7856 Mar 16 j 10:10 -7856 Mar 30 j 03:41 -7856 Mar 30 j 03:46 -7856 Mar 30 j 22:28 -7856 Apr 12 j 20:34	23°♂12'46 18°♂05'00 0°≈ 6°≈59'38 10°≈05'56 10°≈05'59 10°≈16'34 13°≈11'43	4.14469 AU -1°14'03 1°14'30
min. Earth dist. direct evening set	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12 -7862 Mar 21 j 01:46 -7862 May 20 j 13:16 -7862 Jul 17 j 03:14 -7862 Sep 21 j 23:21 -7862 Sep 28 j 10:05	0°Ω 5°Ω00'22 0°Ω06'47 0°Ω01'27 30°RS 25°S11'41 0°Ω 13°Ω30'38 15°Ω	4.23389 AU	min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39 -7856 Mar 16 j 10:10 -7856 Mar 30 j 03:41 -7856 Mar 30 j 03:46 -7856 Mar 30 j 22:28 -7856 Apr 12 j 20:34 -7856 Apr 20 j 22:26	23°♂12'46 18°♂05'00 0°≈ 6°≈59'38 10°≈05'56 10°≈05'59 10°≈16'34 13°≈11'43 15°≈	4.14469 AU -1°14'03 1°14'30
min. Earth dist. direct evening set conjunction minimum elong	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12 -7862 Mar 21 j 01:46 -7862 May 20 j 13:16 -7862 Jul 17 j 03:14 -7862 Sep 21 j 23:21 -7862 Sep 28 j 10:05 -7862 Oct 04 j 12:02 -7862 Oct 04 j 12:06	0°Ω 5°Ω00'22 0°Ω06'47 0°Ω01'27 30°RS 25°S11'41 0°Ω 13°Ω30'38 15°Ω 16°Ω24'37	4.23389 AU 1°07'50 1°08'14	min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39 -7856 Mar 16 j 10:10 -7856 Mar 30 j 03:41 -7856 Mar 30 j 03:46 -7856 Mar 30 j 22:28 -7856 Apr 12 j 20:34 -7856 Apr 20 j 22:26 -7856 Jul 15 j 02:01 -7856 Aug 15 j 18:27	23°♂12'46 18°♂05'00 0°≈ 6°≈59'38 10°≈05'56 10°≈05'59 10°≈16'34 13°≈11'43 15°≈ 0°⊁ 1°⊁36'35	4.14469 AU -1°14'03 1°14'30
min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12 -7862 Mar 21 j 01:46 -7862 May 20 j 13:16 -7862 Jul 17 j 03:14 -7862 Sep 21 j 23:21 -7862 Sep 28 j 10:05 -7862 Oct 04 j 12:02 -7862 Oct 04 j 12:06 -7862 Oct 03 j 21:21	0°Ω 5°Ω00'22 0°Ω06'47 0°Ω01'27 30°RS 25°S11'41 0°Ω 13°Ω30'38 15°Ω 16°Ω24'37 16°Ω24'37	4.23389 AU 1°07'50	min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39 -7856 Mar 16 j 10:10 -7856 Mar 30 j 03:41 -7856 Mar 30 j 03:46 -7856 Mar 30 j 22:28 -7856 Apr 12 j 20:34 -7856 Apr 20 j 22:26 -7856 Jul 15 j 02:01 -7856 Aug 15 j 18:27 -7856 Sep 16 j 04:50	23°♂12'46 18°♂05'00 0°≈ 6°≈59'38 10°≈05'56 10°≈05'59 10°≈16'34 13°≈11'43 15°≈ 0°∺	4.14469 AU -1°14'03 1°14'30 6.18829 AU
min. Earth dist. direct evening set conjunction minimum elong	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12 -7862 Mar 21 j 01:46 -7862 May 20 j 13:16 -7862 Jul 17 j 03:14 -7862 Sep 21 j 23:21 -7862 Sep 28 j 10:05 -7862 Oct 04 j 12:02 -7862 Oct 04 j 12:06 -7862 Oct 03 j 21:21 -7862 Oct 17 j 02:09	0°Ω 5°Ω00'22 0°Ω06'47 0°Ω01'27 30°RS 25°S11'41 0°Ω 13°Ω30'38 15°Ω 16°Ω24'37 16°Ω24'37 16°Ω24'39 16°Ω16'06 19°Ω19'27	4.23389 AU 1°07'50 1°08'14	min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39 -7856 Mar 16 j 10:10 -7856 Mar 30 j 03:41 -7856 Mar 30 j 03:46 -7856 Mar 30 j 22:28 -7856 Apr 12 j 20:34 -7856 Apr 20 j 22:26 -7856 Jul 15 j 02:01 -7856 Aug 15 j 18:27 -7856 Sep 16 j 04:50 -7856 Oct 13 j 22:38	23°る12'46 18°る05'00 0°≈ 6°≈59'38 10°≈05'56 10°≈05'59 10°≈16'34 13°≈11'43 15°≈ 0°升 1°升36'35 30°R≈ 26°≈36'21	4.14469 AU -1°14'03 1°14'30 6.18829 AU
min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12 -7862 Mar 21 j 01:46 -7862 May 20 j 13:16 -7862 Jul 17 j 03:14 -7862 Sep 21 j 23:21 -7862 Sep 28 j 10:05 -7862 Oct 04 j 12:02 -7862 Oct 04 j 12:06 -7862 Oct 03 j 21:21 -7862 Oct 17 j 02:09 -7862 Dec 05 j 23:08	0°Ω 5°Ω00'22 0°Ω06'47 0°Ω01'27 30°RS 25°S11'41 0°Ω 13°Ω30'38 15°Ω 16°Ω24'37 16°Ω24'39 16°Ω16'06 19°Ω19'27 0°M	4.23389 AU 1°07'50 1°08'14	min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist.	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39 -7856 Mar 16 j 10:10 -7856 Mar 30 j 03:41 -7856 Mar 30 j 03:46 -7856 Mar 30 j 22:28 -7856 Apr 12 j 20:34 -7856 Apr 20 j 22:26 -7856 Jul 15 j 02:01 -7856 Aug 15 j 18:27 -7856 Sep 16 j 04:50 -7856 Oct 13 j 22:38 -7856 Oct 13 j 17:33	23°る12'46 18°る05'00 0°≈ 6°≈59'38 10°≈05'56 10°≈05'59 10°≈16'34 13°≈11'43 15°≈ 0°升 1°升36'35 30°R≈ 26°≈36'21 26°≈38'04	4.14469 AU -1°14'03 1°14'30 6.18829 AU
min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12 -7862 Mar 21 j 01:46 -7862 May 20 j 13:16 -7862 Jul 17 j 03:14 -7862 Sep 21 j 23:21 -7862 Sep 28 j 10:05 -7862 Oct 04 j 12:02 -7862 Oct 04 j 12:06 -7862 Oct 03 j 21:21 -7862 Oct 17 j 02:09 -7862 Dec 05 j 23:08 -7861 Feb 22 j 01:18	0°Ω 5°Ω00'22 0°Ω06'47 0°Ω01'27 30°R© 25°©11'41 0°Ω 13°Ω30'38 15°Ω 16°Ω24'37 16°Ω24'39 16°Ω16'06 19°Ω19'27 0°M 8°M15'49	4.23389 AU 1°07'50 1°08'14 6.18850 AU	min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39 -7856 Mar 16 j 10:10 -7856 Mar 30 j 03:41 -7856 Mar 30 j 03:46 -7856 Mar 30 j 22:28 -7856 Apr 12 j 20:34 -7856 Apr 20 j 22:26 -7856 Jul 15 j 02:01 -7856 Aug 15 j 18:27 -7856 Sep 16 j 04:50 -7856 Oct 13 j 22:38 -7856 Oct 13 j 17:33 -7856 Dec 13 j 04:28	23°る12'46 18°る05'00 0°≈ 6°≈59'38 10°≈05'56 10°≈05'59 10°≈16'34 13°≈11'43 15°≈ 0°光 1° 升36'35 30°R≈ 26°≈36'21 26°≈38'04 21°≈32'40	4.14469 AU -1°14'03 1°14'30 6.18829 AU
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min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12 -7862 Mar 21 j 01:46 -7862 May 20 j 13:16 -7862 Jul 17 j 03:14 -7862 Sep 21 j 23:21 -7862 Sep 28 j 10:05 -7862 Oct 04 j 12:02 -7862 Oct 04 j 12:06 -7862 Oct 03 j 21:21 -7862 Oct 17 j 02:09 -7862 Dec 05 j 23:08 -7861 Feb 22 j 01:18 -7861 Apr 24 j 08:08 -7861 May 22 j 15:16 -7861 Jun 23 j 10:16	0°Ω 5°Ω00'22 0°Ω06'47 0°Ω01'27 30°№ 25°№11'41 0°Ω 13°Ω30'38 15°Ω 16°Ω24'37 16°Ω24'37 16°Ω24'39 16°Ω16'06 19°Ω19'27 0°№ 8°№15'49 3°№18'48 3°№18'03 30°№Ω 28°Ω25'34	4.23389 AU 1°07'50 1°08'14 6.18850 AU 1°08'17	min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39 -7856 Mar 16 j 10:10 -7856 Mar 30 j 03:41 -7856 Mar 30 j 03:46 -7856 Mar 30 j 22:28 -7856 Apr 12 j 20:34 -7856 Apr 20 j 22:26 -7856 Jul 15 j 02:01 -7856 Aug 15 j 18:27 -7856 Oct 13 j 17:33 -7856 Oct 13 j 17:33 -7856 Dec 13 j 04:28 -7855 Mar 02 j 14:04 -7855 Apr 20 j 11:12	23° を12'46 18° を05'00 0° ※ 6° ※59'38 10° ※05'56 10° ※05'59 10° ※16'34 13° ※11'43 15° ※ 0° 米 1° 升36'35 30° R ※ 26° ※36'21 26° ※38'04 21° ※32'40 0° 升 10° 升07'33	4.14469 AU -1°14'03 1°14'30 6.18829 AU -1°21'13 4.23336 AU -0°31'23
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min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction	-7862 Jan 17 j 20:56 -7862 Mar 20 j 04:24 -7862 Mar 20 j 21:12 -7862 Mar 21 j 01:46 -7862 May 20 j 13:16 -7862 Jul 17 j 03:14 -7862 Sep 21 j 23:21 -7862 Sep 28 j 10:05 -7862 Oct 04 j 12:02 -7862 Oct 04 j 12:06 -7862 Oct 03 j 21:21 -7862 Oct 17 j 02:09 -7862 Dec 05 j 23:08 -7861 Feb 22 j 01:18 -7861 Apr 24 j 08:08 -7861 Jul 24 j 02:03 -7861 Jul 24 j 22:03 -7861 Oct 24 j 23:08	0°Ω 5°Ω00'22 0°Ω06'47 0°Ω01'27 30°RS 25°S11'41 0°Ω 13°Ω30'38 15°Ω 16°Ω24'37 16°Ω24'39 16°Ω16'06 19°Ω19'27 0°M 8°M15'49 3°M18'48 3°M18'03 30°RΩ 28°Ω25'34 0°M 17°M01'13	4.23389 AU 1°07'50 1°08'14 6.18850 AU 1°08'17 4.14433 AU	min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-7857 Sep 11 j 04:48 -7857 Nov 09 j 22:25 -7856 Feb 13 j 07:39 -7856 Mar 16 j 10:10 -7856 Mar 30 j 03:41 -7856 Mar 30 j 03:46 -7856 Mar 30 j 22:28 -7856 Apr 12 j 20:34 -7856 Apr 20 j 22:26 -7856 Jul 15 j 02:01 -7856 Aug 15 j 18:27 -7856 Sep 16 j 04:50 -7856 Oct 13 j 17:33 -7856 Oct 13 j 17:33 -7856 Dec 13 j 04:28 -7855 Mar 02 j 14:04 -7855 Apr 20 j 11:12 -7855 May 04 j 01:38 -7855 May 04 j 01:41 -7855 May 03 j 23:32 -7855 May 17 j 13:20 -7855 Jul 28 j 12:16	23°云12'46 18°云05'00 0°≈ 6°≈59'38 10°≈05'56 10°≈05'59 10°≈16'34 13°≈11'43 15°≈ 0°光 1°⅓36'35 30°R≈ 26°≈36'21 26°≈38'04 21°≈32'40 0°光 10°光07'33 13°光09'03 13°光09'04 13°光09'06 0°℃	4.14469 AU -1°14'03 1°14'30 6.18829 AU -1°21'13 4.23336 AU -0°31'23 0°31'35
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amnagition	-7855 Nov 15 j 00:38	28° H 52'06	0000121	-	-		0°57'49
opposition	•			opposition	-7849 Apr 29 j 10:53	8° Mp 17'06	
min. Earth dist.	-7855 Nov 15 j 08:24		4.31075 AU	min. Earth dist.	-7849 Apr 29 j 11:19	8° Mp 16'58	4.13252 AU
asc. node	-7854 Jan 02 j 10:39	24° ₭ 03'53		direct	-7849 Jun 28 j 09:03	3° ™ 24'04	
direct	-7854 Jan 15 j 10:42	23°) (47′59		evening set	-7849 Oct 29 j 19:47	22°M,02'05	
	-7854 Mar 24 j 03:03	0° Y					
evening set	-7854 May 23 j 22:37	12° Y ′04'37		conjunction	-7849 Nov 11 j 17:05	25° Mp 03'52	0°12'39
max. Earth dist.	-7854 Jun 05 j 06:35	14° Y 47'54	6.33754 AU	minimum elong	-7849 Nov 11 j 17:07	25° Mp 03'53	0°12'44
	v			behind sun begin	-7849 Nov 11 j 11:57	25° m 00'51	
conjunction	-7854 Jun 06 j 05:05	15° Y 00′21	0°19'56	behind sun end	-7849 Nov 11 j 22:16	25° m 06'54	
minimum elong	-7854 Jun 06 j 05:03	15°Υ00'20	0°20'00	max. Earth dist.	-7849 Nov 12 j 03:00	25° m/09'42	6.09576 AU
morning rise	-7854 Jun 19 j 08:10	17° Υ 54'21	0 20 00	morning rise	-7849 Nov 24 j 17:33	28° Mp 07'24	0.07570 AC
morning rise				morning rise	3		
	-7854 Aug 19 j 15:13	0°8			-7849 Dec 02 j 19:23	0∘ ⊽	
retrograde	-7854 Oct 17 j 21:23	5° 8 08'21		desc. node	-7848 Feb 10 j 02:49	13° ≏ 41'19	
opposition	-7854 Dec 16 j 19:52		1°03'24	retrograde	-7848 Apr 03 j 14:21	17° ≏ 52'21	
min. Earth dist.	-7854 Dec 17 j 16:00	0° 8 08'35	4.35384 AU	opposition	-7848 Jun 03 j 11:06	12° ≏ 50'49	-0°24'12
	-7854 Dec 18 j 18:29	30° ŖƳ		min. Earth dist.	-7848 Jun 02 j 19:41	12° ≙ 55'55	4.06807 AU
direct	-7853 Feb 17 j 03:42	25° Ƴ 12′10		direct	-7848 Aug 01 j 04:53	7° ≙ 57'37	
	-7853 Apr 17 j 07:35	9° 8		evening set	-7848 Dec 02 j 18:52	26° ♀ 52'34	
evening set	-7853 Jun 25 j 02:12	13° 8 17'31		C	,		
8 - 11	-7853 Jul 02 j 19:46	15° 8		conjunction	-7848 Dec 16 j 00:48	29° Ω 59'59	-0°42'30
	7005 Jul 02 j 19.10	15 0		minimum elong	-7848 Dec 16 j 00:44	29° ⊆ 59'58	
agniumation	7052 1.1 07:22.50	16° 8 08'19	1904/29	minimum clong	-7848 Dec 16 j 00:48		0 42 43
conjunction	-7853 Jul 07 j 22:58	_		To all the	,	0°M	6 05100 ATT
minimum elong	-7853 Jul 07 j 22:54		1°04'58	max. Earth dist.	-7848 Dec 17 j 07:17	0°M18'00	6.05188 AU
max. Earth dist.	-7853 Jul 06 j 13:07		6.35727 AU	morning rise	-7848 Dec 29 j 10:06	3°M09'16	
morning rise	-7853 Jul 20 j 16:26	18° 8 57'31			-7847 Feb 22 j 03:41	15° M ₊	
	-7853 Sep 13 j 11:24	Π $^{\circ}0$		retrograde	-7847 May 10 j 06:22	23°M13'30	
retrograde	-7853 Nov 18 j 09:26	6° Ⅱ 10'43		min. Earth dist.	-7847 Jul 08 j 11:04	18°M16'57	4.05000 AU
opposition	-7852 Jan 17 j 22:50	1° Ⅱ 19'04	1°57'25	opposition	-7847 Jul 09 j 10:37	18°M09'00	-1°38'51
min. Earth dist.	-7852 Jan 19 j 00:03	1° I I11'00	4.35039 AU		-7847 Aug 03 j 20:47	15°RM₊	
	-7852 Jan 28 j 09:17	30° ₹ 8		direct	-7847 Sep 05 j 14:37	13°ML13'38	
direct	-7852 Mar 20 j 11:59	26° 8 18'30			-7847 Oct 08 j 06:13	15°M	
direct	-7852 May 10 j 20:07	0°II			-7847 Dec 29 j 03:48	0° ∡ 7	
	-7652 Way 10 j 20.07	υщ			-/07/ DCC 2/ 03.70	0 ^	
	7052 I1 25 : 11.10	140TT21120			-	20.71040	
evening set	-7852 Jul 25 j 11:10	14° Ⅱ 21'38		evening set	-7846 Jan 08 j 05:18	2° ∡ 19'40	
	-		1000110		-7846 Jan 08 j 05:18		1000100
conjunction	-7852 Aug 06 j 23:57	17° Ⅱ 10′00	1°30'42	conjunction	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52	5° ∡ ¹29'28	
	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55	17° Ц 10'00 17° Ц 09'58	1°30'42 1°31'11		-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47		-1°22'29 1°22'56
conjunction	-7852 Aug 06 j 23:57	17° Ⅱ 10′00		conjunction	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52	5° ⊀ 29'28 5° ≮ 29'25	
conjunction minimum elong	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55	17° Ц 10'00 17° Ц 09'58	1°31'11	conjunction minimum elong	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47	5° ⊀ 29'28 5° ≮ 29'25	1°22'56
conjunction minimum elong max. Earth dist.	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25	17°П10'00 17°П09'58 16°П50'02	1°31'11	conjunction minimum elong max. Earth dist.	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22	5° ₹29'28 5° ₹29'25 5° ₹52'35	1°22'56
conjunction minimum elong max. Earth dist. morning rise	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13	17°П10'00 17°П09'58 16°П50'02 19°П57'25 0°Ф	1°31'11	conjunction minimum elong max. Earth dist. morning rise retrograde	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41	5° \$\times 29'28 5° \$\times 29'25 5° \$\times 52'35 8° \$\times 40'37 28° \$\times 31'26	1°22'56 6.05980 AU
conjunction minimum elong max. Earth dist. morning rise	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58	17°П10'00 17°П09'58 16°П50'02 19°П57'25 0°© 7°©32'52	1°31'11 6.32960 AU	conjunction minimum elong max. Earth dist. morning rise retrograde opposition	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16	5° ₹29'28 5° ₹29'25 5° ₹52'35 8° ₹40'37 28° ₹31'26 23° ₹26'19	1°22'56 6.05980 AU -2°16'41
conjunction minimum elong max. Earth dist. morning rise retrograde opposition	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44	17° II 10'00 17° II 09'58 16° II 50'02 19° II 57'25 0° II 57'25 0° II 57'25 2° II 57'25	1°31'11 6.32960 AU 2°18'08	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist.	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43	5° \$\times 29'28 5° \$\times 29'25 5° \$\times 52'35 8° \$\times 40'37 28° \$\times 31'26 23° \$\times 26'19 23° \$\times 34'42	1°22'56 6.05980 AU
conjunction minimum elong max. Earth dist. morning rise	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18	17° II 10'00 17° II 09'58 16° II 50'02 19° II 57'25 0° G 7° G32'52 2° G41'01 2° G33'14	1°31'11 6.32960 AU	conjunction minimum elong max. Earth dist. morning rise retrograde opposition	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49	5° \$\times^229'28 5° \$\times^229'25 5° \$\times^22'35 8° \$\times^440'37 28° \$\times^31'26 23° \$\times^226'19 23° \$\times^34'42 18° \$\times^227'37	1°22'56 6.05980 AU -2°16'41
conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist.	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42	17°	1°31'11 6.32960 AU 2°18'08	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11	5° ₹29'28 5° ₹29'25 5° ₹52'35 8° ₹40'37 28° ₹31'26 23° ₹26'19 23° ₹34'42 18° ₹27'37 0° ₹	1°22'56 6.05980 AU -2°16'41
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conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 Apr 22 j 03:08 -7851 May 31 j 12:03	17° II 10'00 17° II 09'58 16° II 50'02 19° II 57'25 0° II 57'25 0° II 57'25 2° II 10'1 2° II 43'28 0° II 00'8	1°31'11 6.32960 AU 2°18'08	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11 -7845 Feb 14 j 03:28	5° ₹29'28 5° ₹29'25 5° ₹52'35 8° ₹40'37 28° ₹31'26 23° ₹26'19 23° ₹34'42 18° ₹27'37 0° ₹ 7° ₹32'44	1°22'56 6.05980 AU -2°16'41 4.08449 AU
conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 Apr 22 j 03:08 -7851 May 31 j 12:03 -7851 Aug 25 j 17:10	17° II 10'00 17° II 09'58 16° II 50'02 19° II 57'25 0° S 7° S32'52 2° S41'01 2° S33'14 30° RII 27° II 43'28 0° S 15° S52'34	1°31'11 6.32960 AU 2°18'08 4.30114 AU	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11 -7845 Feb 14 j 03:28	5° ₹29'28 5° ₹29'25 5° ₹52'35 8° ₹40'37 28° ₹31'26 23° ₹26'19 23° ₹34'42 18° ₹27'37 0° ₹ 7° ₹32'44	1°22'56 6.05980 AU -2°16'41 4.08449 AU -1°32'02
conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 Apr 22 j 03:08 -7851 May 31 j 12:03	17° II 10'00 17° II 09'58 16° II 50'02 19° II 57'25 0° II 57'25 0° II 57'25 2° II 10'1 2° II 43'28 0° II 00'8	1°31'11 6.32960 AU 2°18'08	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11 -7845 Feb 14 j 03:28 -7845 Feb 27 j 20:03 -7845 Feb 27 j 20:04	5° \$\frac{\pi}{29'28} 5° \$\frac{\pi}{29'25} 5° \$\frac{\pi}{29'25} 5° \$\frac{\pi}{29'25} 8° \$\frac{\pi}{40'37} 28° \$\frac{\pi}{31'26} 23° \$\frac{\pi}{26'19} 23° \$\frac{\pi}{34'42} 18° \$\frac{\pi}{27'37} 0° \$\frac{\pi}{32'44} 10° \$\frac{\pi}{41'38} 10° \$\frac{\pi}{41'39}	1°22'56 6.05980 AU -2°16'41 4.08449 AU -1°32'02 1°32'33
conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 Apr 22 j 03:08 -7851 May 31 j 12:03 -7851 Aug 25 j 17:10	17° II 10'00 17° II 09'58 16° II 50'02 19° II 57'25 0° S 7° S32'52 2° S41'01 2° S33'14 30° RII 27° II 43'28 0° S 15° S52'34	1°31'11 6.32960 AU 2°18'08 4.30114 AU	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11 -7845 Feb 14 j 03:28	5° ₹29'28 5° ₹29'25 5° ₹52'35 8° ₹40'37 28° ₹31'26 23° ₹26'19 23° ₹34'42 18° ₹27'37 0° ₹ 7° ₹32'44	1°22'56 6.05980 AU -2°16'41 4.08449 AU -1°32'02
conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 Apr 22 j 03:08 -7851 May 31 j 12:03 -7851 Aug 25 j 17:10	17° II 10'00 17° II 09'58 16° II 50'02 19° II 57'25 0° S 7° S32'52 2° S41'01 2° S33'14 30° RII 27° II 43'28 0° S 15° S52'34	1°31'11 6.32960 AU 2°18'08 4.30114 AU	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11 -7845 Feb 14 j 03:28 -7845 Feb 27 j 20:03 -7845 Feb 27 j 20:04	5° \$\frac{\pi}{29'28} 5° \$\frac{\pi}{29'25} 5° \$\frac{\pi}{29'25} 5° \$\frac{\pi}{29'25} 8° \$\frac{\pi}{40'37} 28° \$\frac{\pi}{31'26} 23° \$\frac{\pi}{26'19} 23° \$\frac{\pi}{34'42} 18° \$\frac{\pi}{27'37} 0° \$\frac{\pi}{32'44} 10° \$\frac{\pi}{41'38} 10° \$\frac{\pi}{41'39}	1°22'56 6.05980 AU -2°16'41 4.08449 AU -1°32'02 1°32'33
conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist.	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 May 31 j 12:03 -7851 Aug 25 j 17:10 -7851 Sep 05 j 22:49	17° II 10'00 17° II 09'58 16° II 50'02 19° II 57'25 0° G 7° G32'52 2° G41'01 2° G33'14 30° RII 27° II 43'28 0° G 15° G52'34 18° G26'08	1°31'11 6.32960 AU 2°18'08 4.30114 AU	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Feb 14 j 03:28 -7845 Feb 27 j 20:03 -7845 Feb 27 j 20:04 -7845 Mar 01 j 05:03	5° *729'28 5° *729'25 5° *752'35 8° *740'37 28° *731'26 23° *726'19 23° *734'42 18° *727'37 0° *5 7° *532'44 10° *541'38 10° *541'39 11° *500'39	1°22'56 6.05980 AU -2°16'41 4.08449 AU -1°32'02 1°32'33
conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 Apr 22 j 03:08 -7851 Aug 25 j 17:10 -7851 Sep 07 j 03:13 -7851 Sep 07 j 03:15	17° II 10'00 17° II 09'58 16° II 50'02 19° II 57'25 0° II 57'25 2° II 10'1 2° II 33'14 30° RII 27° II 43'28 0° II 5° II 5° II 43'28 18° II 5° II 43'28	1°31'11 6.32960 AU 2°18'08 4.30114 AU 6.26221 AU 1°30'27	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11 -7845 Feb 27 j 20:03 -7845 Feb 27 j 20:04 -7845 Mar 01 j 05:03 -7845 Mar 13 j 13:47 -7845 Jun 05 j 10:35	5° \$\frac{\pi}{29'28} 5° \$\frac{\pi}{29'25} 5° \$\frac{\pi}{29'25} 8° \$\frac{\pi}{40'37} 28° \$\frac{\pi}{31'26} 23° \$\frac{\pi}{26'19} 23° \$\frac{\pi}{34'42} 18° \$\frac{\pi}{27'37} 0° \$\frac{\pi}{60'39} 11° \$\frac{\pi}{60'39} 13° \$\frac{\pi}{50'57} 0° \$\infty\$	1°22'56 6.05980 AU -2°16'41 4.08449 AU -1°32'02 1°32'33
conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 Apr 22 j 03:08 -7851 Aug 25 j 17:10 -7851 Sep 05 j 22:49 -7851 Sep 07 j 03:13 -7851 Sep 07 j 03:15 -7851 Sep 19 j 13:03	17° II 10'00 17° II 09'58 16° II 50'02 19° II 57'25 0° II 57'25 0° II 57'25 2° II 41'01 2° II 43'28 0° II 5° II 43'28 0° II 5° II 43'28 15° II 43'28 18° II 6' II 8' II	1°31'11 6.32960 AU 2°18'08 4.30114 AU 6.26221 AU 1°30'27	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11 -7845 Feb 27 j 20:03 -7845 Feb 27 j 20:04 -7845 Mar 01 j 05:03 -7845 Mar 13 j 13:47 -7845 Jun 05 j 10:35 -7845 Jul 19 j 09:42	5° \$\frac{\pi}{29'28} 5° \$\frac{\pi}{29'25} 5° \$\frac{\pi}{29'25} 8° \$\frac{\pi}{40'37} 28° \$\frac{\pi}{31'26} 23° \$\frac{\pi}{26'19} 23° \$\frac{\pi}{34'42} 18° \$\frac{\pi}{27'37} 0° \$\frac{\pi}{60'39} 11° \$\frac{\pi}{60'39} 13° \$\frac{\pi}{50'57} 0° \$\alpha 3° \$\alpha 00'26	1°22'56 6.05980 AU -2°16'41 4.08449 AU -1°32'02 1°32'33
conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 Apr 22 j 03:08 -7851 May 31 j 12:03 -7851 Aug 25 j 17:10 -7851 Sep 07 j 03:13 -7851 Sep 07 j 03:15 -7851 Sep 19 j 13:03 -7851 Sep 19 j 13:03 -7851 Oct 28 j 18:36	17° Π10'00 17° Π09'58 16° Π50'02 19° Π57'25 0° Φ 7° Φ32'52 2° Φ41'01 2° Φ33'14 30° R Π 27° Π43'28 0° Φ 15° Φ52'34 18° Φ26'08 18° Φ42'21 18° Φ42'21 18° Φ42'23 21° Φ32'09 0° Ω	1°31'11 6.32960 AU 2°18'08 4.30114 AU 6.26221 AU 1°30'27	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11 -7845 Feb 14 j 03:28 -7845 Feb 27 j 20:04 -7845 Mar 01 j 05:03 -7845 Mar 13 j 13:47 -7845 Jun 05 j 10:35 -7845 Jul 19 j 09:42 -7845 Sep 01 j 04:09	5° *729'28 5° *729'25 5° *752'35 8° *740'37 28° *731'26 23° *726'19 23° *734'42 18° *727'37 0° *5 7° *532'44 10° *541'38 10° *541'39 11° *500'39 13° *550'57 0° ※ 3° ※000'26 30° R*5	1°22'56 6.05980 AU -2°16'41 4.08449 AU -1°32'02 1°32'33 6.11669 AU
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conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist.	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 Apr 22 j 03:08 -7851 Aug 25 j 17:10 -7851 Sep 07 j 03:13 -7851 Sep 07 j 03:13 -7851 Sep 07 j 03:15 -7851 Sep 19 j 13:03 -7851 Oct 28 j 18:36 -7850 Mar 25 j 03:05 -7850 Mar 25 j 17:25 -7850 May 21 j 20:31 -7850 May 25 j 07:04 -7850 May 28 j 17:44 -7850 Sep 11 j 22:20	17° Π10'00 17° Π09'58 16° Π50'02 19° Π57'25 0° Θ 7° S32'52 2° S41'01 2° S33'14 30° R Π 27° Π43'28 0° Θ 15° S52'34 18° S26'08 18° S42'21 18° S42'23 21° S32'09 0° Ω 9° Ω47'38 4° Ω53'37 4° Ω49'03 30° R Θ 29° S58'52 0° Ω 15° Ω	1°31'11 6.32960 AU 2°18'08 4.30114 AU 6.26221 AU 1°30'27 1°30'58	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11 -7845 Feb 27 j 20:03 -7845 Feb 27 j 20:04 -7845 Mar 01 j 05:03 -7845 Mar 13 j 13:47 -7845 Jun 05 j 10:35 -7845 Jul 19 j 09:42 -7845 Sep 16 j 15:10 -7845 Sep 15 j 23:27 -7845 Nov 14 j 19:35 -7844 Jan 24 j 08:50 -7844 Apr 04 j 02:39	5° *729'28 5° *729'25 5° *752'35 8° *740'37 28° *731'26 23° *726'19 23° *734'42 18° *727'37 0° *8 10° *841'38 10° *841'39 11° *800'39 13° *850'57 0° ※ 3° ※00'26 30° *85 27° *855'17 0° ※ 11° ※46'59	1°22'56 6.05980 AU -2°16'41 4.08449 AU -1°32'02 1°32'33 6.11669 AU -2°04'59 4.15797 AU
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conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 Apr 22 j 03:08 -7851 Aug 25 j 17:10 -7851 Sep 07 j 03:13 -7851 Sep 07 j 03:13 -7851 Sep 07 j 03:15 -7851 Sep 19 j 13:03 -7851 Oct 28 j 18:36 -7850 Mar 25 j 03:05 -7850 Mar 25 j 17:25 -7850 May 21 j 20:31 -7850 May 25 j 07:04 -7850 May 28 j 17:44 -7850 Sep 11 j 22:20	17° Π10'00 17° Π09'58 16° Π50'02 19° Π57'25 0° Θ 7° S32'52 2° S41'01 2° S33'14 30° R Π 27° Π43'28 0° Θ 15° S52'34 18° S26'08 18° S42'21 18° S42'23 21° S32'09 0° Ω 9° Ω47'38 4° Ω53'37 4° Ω49'03 30° R Θ 29° S58'52 0° Ω 15° Ω	1°31'11 6.32960 AU 2°18'08 4.30114 AU 6.26221 AU 1°30'27 1°30'58	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11 -7845 Feb 27 j 20:03 -7845 Feb 27 j 20:04 -7845 Mar 01 j 05:03 -7845 Mar 13 j 13:47 -7845 Jun 05 j 10:35 -7845 Jul 19 j 09:42 -7845 Sep 16 j 15:10 -7845 Sep 15 j 23:27 -7845 Nov 14 j 19:35 -7844 Jan 24 j 08:50 -7844 Apr 04 j 02:39	5° *729'28 5° *729'25 5° *752'35 8° *740'37 28° *731'26 23° *726'19 23° *734'42 18° *727'37 0° *8 10° *841'38 10° *841'39 11° *800'39 13° *850'57 0° ※ 3° ※00'26 30° *85 27° *855'17 0° ※ 11° ※46'59	1°22'56 6.05980 AU -2°16'41 4.08449 AU -1°32'02 1°32'33 6.11669 AU -2°04'59 4.15797 AU
conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 Apr 22 j 03:08 -7851 Aug 25 j 17:10 -7851 Sep 07 j 03:13 -7851 Sep 07 j 03:13 -7851 Sep 07 j 03:15 -7851 Sep 19 j 13:03 -7851 Oct 28 j 18:36 -7850 Mar 25 j 03:05 -7850 Mar 25 j 17:25 -7850 May 21 j 20:31 -7850 May 25 j 07:04 -7850 May 28 j 17:44 -7850 Sep 11 j 22:20	17° Π10'00 17° Π09'58 16° Π50'02 19° Π57'25 0° Θ 7° S32'52 2° S41'01 2° S33'14 30° R Π 27° Π43'28 0° Θ 15° S52'34 18° S26'08 18° S42'21 18° S42'23 21° S32'09 0° Ω 9° Ω47'38 4° Ω53'37 4° Ω49'03 30° R Θ 29° S58'52 0° Ω 15° Ω	1°31'11 6.32960 AU 2°18'08 4.30114 AU 6.26221 AU 1°30'27 1°30'58	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11 -7845 Feb 27 j 20:03 -7845 Feb 27 j 20:04 -7845 Mar 01 j 05:03 -7845 Mar 13 j 13:47 -7845 Jun 05 j 10:35 -7845 Jul 19 j 09:42 -7845 Sep 01 j 04:09 -7845 Sep 15 j 23:27 -7845 Nov 14 j 19:35 -7844 Jan 24 j 08:50 -7844 Apr 04 j 02:39 -7844 Apr 04 j 02:44	5° *729'28 5° *729'25 5° *752'35 8° *740'37 28° *731'26 23° *726'19 23° *734'42 18° *727'37 0° *32'44 10° *341'38 10° *341'39 11° *300'39 13° *350'57 0° *8 3° *800'26 30° *8 27° *357'12 28° *302'34 22° *355'17 0° *8 11° **46'59 14° **52'43 14° **52'43	1°22'56 6.05980 AU -2°16'41 4.08449 AU -1°32'02 1°32'33 6.11669 AU -2°04'59 4.15797 AU
conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 Apr 22 j 03:08 -7851 Aug 25 j 17:10 -7851 Sep 07 j 03:13 -7851 Sep 07 j 03:13 -7851 Sep 07 j 03:15 -7851 Sep 19 j 13:03 -7851 Sep 19 j 13:03 -7851 Oct 28 j 18:36 -7850 Mar 25 j 07:04 -7850 May 25 j 07:04 -7850 May 25 j 07:04 -7850 May 25 j 07:04 -7850 Sep 11 j 22:20 -7850 Sep 26 j 14:13	17° Π10'00 17° Π09'58 16° Π50'02 19° Π57'25 0° Φ 7° Φ32'52 2° Φ41'01 2° Φ33'14 30° R Π 27° Π43'28 0° Φ 15° Φ52'34 18° Φ42'21 18° Φ42'21 18° Φ42'23 21° Φ32'09 0° Ω 9° Ω47'38 4° Ω53'37 4° Ω49'03 30° R Φ 29° Φ58'52 0° Ω 15° Ω 15° Ω 18° Ω20'23	1°31'11 6.32960 AU 2°18'08 4.30114 AU 6.26221 AU 1°30'27 1°30'58 1°57'32 4.22005 AU	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction min. Earth dist. direct evening set	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11 -7845 Feb 27 j 20:03 -7845 Feb 27 j 20:04 -7845 Mar 01 j 05:03 -7845 Mar 13 j 13:47 -7845 Jun 05 j 10:35 -7845 Jul 19 j 09:42 -7845 Sep 01 j 04:09 -7845 Sep 15 j 23:27 -7845 Nov 14 j 19:35 -7844 Jan 24 j 08:50 -7844 Apr 04 j 02:39 -7844 Apr 04 j 02:44 -7844 Apr 04 j 15:32	5° \$\frac{\pi}{29'28} 5° \$\frac{\pi}{29'25} 5° \$\frac{\pi}{29'25} 5° \$\frac{\pi}{29'25} 8° \$\frac{\pi}{40'37} 28° \$\frac{\pi}{31'26} 23° \$\frac{\pi}{23'} \$\frac{\pi}{42'137} 0° \$\frac{\pi}{60'39} 11° \$\frac{\pi}{60'39} 13° \$\frac{\pi}{50'57} 0° \$\times 3° \$\times 00'26 30° \$\frac{\pi}{60'39} 27° \$\frac{\pi}{55'17} 0° \$\times 27° \$\frac{\pi}{55'17} 0° \$\times 11° \$\times 46'59 14° \$\times 52'43 14° \$\times 52'46 15° \$\times	1°22'56 6.05'980 AU -2°16'41 4.08449 AU -1°32'02 1°32'33 6.11669 AU -2°04'59 4.15797 AU -1°09'13 1°09'39
conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 Apr 22 j 03:08 -7851 May 31 j 12:03 -7851 Aug 25 j 17:10 -7851 Sep 07 j 03:13 -7851 Sep 07 j 03:15 -7851 Sep 07 j 03:15 -7851 Sep 19 j 13:03 -7851 Sep 19 j 13:03 -7850 Mar 25 j 03:05 -7850 Mar 25 j 03:05 -7850 May 21 j 20:31 -7850 May 25 j 07:04 -7850 May 28 j 17:44 -7850 May 28 j 17:44 -7850 Sep 11 j 22:20 -7850 Sep 26 j 14:13 -7850 Oct 09 j 03:56 -7850 Oct 09 j 03:56	17° Π10'00 17° Π09'58 16° Π50'02 19° Π57'25 0° Φ 7° \$32'52 2° \$41'01 2° \$33'14 30° R Π 27° Π43'28 0° Φ 15° \$52'34 18° \$26'08 18° \$42'21 18° \$42'21 18° \$42'23 21° \$32'09 0° Ω 9° Ω47'38 4° Ω53'37 4° Ω49'03 30° R\$ 29° \$58'52 0° Ω 15° Ω 18° Ω20'23 21° Ω15'20 21° Ω15'20 21° Ω15'20	1°31'11 6.32960 AU 2°18'08 4.30114 AU 6.26221 AU 1°30'27 1°30'58 1°57'32 4.22005 AU	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction min. Earth dist. direct evening set	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11 -7845 Feb 27 j 20:03 -7845 Feb 27 j 20:04 -7845 Mar 01 j 05:03 -7845 Mar 13 j 13:47 -7845 Jun 05 j 10:35 -7845 Jul 19 j 09:42 -7845 Sep 16 j 15:10 -7845 Sep 16 j 15:10 -7845 Sep 15 j 23:27 -7845 Nov 14 j 19:35 -7844 Apr 04 j 02:39 -7844 Apr 04 j 02:39 -7844 Apr 04 j 15:32 -7844 Apr 04 j 15:32 -7844 Apr 04 j 15:32 -7844 Apr 04 j 19:16 -7844 Apr 17 j 18:57	5° \$\frac{\pi}{29'28} 5° \$\frac{\pi}{29'25} 5° \$\frac{\pi}{29'25} 5° \$\frac{\pi}{29'25} 8° \$\frac{\pi}{40'37} 28° \$\frac{\pi}{31'26} 23° \$\frac{\pi}{23'} \$\frac{\pi}{42'137} 0° \$\frac{\pi}{60'39} 13° \$\frac{\pi}{50'57} 0° \$\times 3° \$\times 00'26 30° \$\frac{\pi}{60'39} 13° \$\frac{\pi}{50'57} 12 28° \$\frac{\pi}{50'2134} 22° \$\frac{\pi}{55'17} 0° \$\times 11° \$\times 46'59 14° \$\times 52'43 14° \$\times 52'46 15° \$\times 15° \$\times 02'06 17° \$\times 57'44	1°22'56 6.05'980 AU -2°16'41 4.08449 AU -1°32'02 1°32'33 6.11669 AU -2°04'59 4.15797 AU -1°09'13 1°09'39
conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct evening set retrograde opposition min. Earth dist.	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 Apr 22 j 03:08 -7851 May 31 j 12:03 -7851 Aug 25 j 17:10 -7851 Sep 07 j 03:13 -7851 Sep 07 j 03:15 -7851 Sep 07 j 03:15 -7851 Sep 19 j 13:03 -7851 Sep 19 j 13:03 -7850 Mar 25 j 03:05 -7850 Mar 25 j 03:05 -7850 Mar 25 j 07:04 -7850 May 28 j 17:44 -7850 Sep 11 j 22:20 -7850 Sep 26 j 14:13 -7850 Oct 09 j 03:56 -7850 Oct 09 j 03:56 -7850 Oct 09 j 04:00 -7850 Oct 09 j 04:00 -7850 Oct 09 j 04:00	17° II 10'00 17° II 09'58 16° II 50'02 19° II 57'25 0° II 57'25 0° II 57'25 0° II 57'25 2° II 43'28 0° II 5° II 52'34 18° II 5° II 5° II 5° II 8° II 8	1°31'11 6.32960 AU 2°18'08 4.30114 AU 6.26221 AU 1°30'27 1°30'58 1°57'32 4.22005 AU	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction min. Earth dist. direct evening set conjunction min. Earth dist. direct evening set	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11 -7845 Feb 27 j 20:03 -7845 Feb 27 j 20:04 -7845 Mar 01 j 05:03 -7845 Mar 13 j 13:47 -7845 Jun 05 j 10:35 -7845 Jul 19 j 09:42 -7845 Sep 16 j 15:10 -7845 Sep 16 j 15:10 -7845 Sep 15 j 23:27 -7845 Nov 14 j 19:35 -7844 Apr 04 j 02:39 -7844 Apr 04 j 02:39 -7844 Apr 04 j 15:32 -7844 Apr 04 j 15:32 -7844 Apr 04 j 19:16 -7844 Apr 17 j 18:57 -7844 Jun 15 j 17:17	5° *729'28 5° *729'25 5° *752'35 8° *740'37 28° *731'26 23° *726'19 23° *734'42 18° *727'37 0° *5 7° *332'44 10° *341'39 11° *300'39 13° *350'57 0° *8 3° *800'26 30° *8 27° *357'12 28° *302'34 22° *355'17 0° *8 11° *846'59 14° *852'46 15° *8 15° *802'06 17° *857'44 0° *K	1°22'56 6.05'980 AU -2°16'41 4.08449 AU -1°32'02 1°32'33 6.11669 AU -2°04'59 4.15797 AU -1°09'13 1°09'39
conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct	-7852 Aug 06 j 23:57 -7852 Aug 06 j 23:55 -7852 Aug 05 j 12:25 -7852 Aug 19 j 10:37 -7852 Oct 06 j 20:13 -7852 Dec 19 j 21:58 -7851 Feb 18 j 22:44 -7851 Feb 19 j 23:18 -7851 Mar 13 j 07:42 -7851 Apr 22 j 03:08 -7851 May 31 j 12:03 -7851 Aug 25 j 17:10 -7851 Sep 07 j 03:13 -7851 Sep 07 j 03:15 -7851 Sep 07 j 03:15 -7851 Sep 19 j 13:03 -7851 Sep 19 j 13:03 -7851 Oct 28 j 18:36 -7850 Mar 25 j 07:04 -7850 May 25 j 07:04 -7850 May 25 j 07:04 -7850 May 28 j 17:44 -7850 May 28 j 17:44 -7850 Sep 11 j 22:20 -7850 Sep 26 j 14:13 -7850 Oct 09 j 03:56 -7850 Oct 09 j 03:56	17° Π10'00 17° Π09'58 16° Π50'02 19° Π57'25 0° Φ 7° \$32'52 2° \$41'01 2° \$33'14 30° R Π 27° Π43'28 0° Φ 15° \$52'34 18° \$26'08 18° \$42'21 18° \$42'21 18° \$42'23 21° \$32'09 0° Ω 9° Ω47'38 4° Ω53'37 4° Ω49'03 30° R\$ 29° \$58'52 0° Ω 15° Ω 18° Ω20'23 21° Ω15'20 21° Ω15'20 21° Ω15'20	1°31'11 6.32960 AU 2°18'08 4.30114 AU 6.26221 AU 1°30'27 1°30'58 1°57'32 4.22005 AU	conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct evening set conjunction min. Earth dist. direct evening set	-7846 Jan 08 j 05:18 -7846 Jan 21 j 17:52 -7846 Jan 21 j 17:47 -7846 Jan 23 j 09:22 -7846 Feb 04 j 09:13 -7846 Jun 15 j 00:41 -7846 Aug 13 j 15:16 -7846 Aug 12 j 14:43 -7846 Oct 10 j 21:49 -7845 Jan 11 j 00:11 -7845 Feb 27 j 20:03 -7845 Feb 27 j 20:04 -7845 Mar 01 j 05:03 -7845 Mar 13 j 13:47 -7845 Jun 05 j 10:35 -7845 Jul 19 j 09:42 -7845 Sep 16 j 15:10 -7845 Sep 16 j 15:10 -7845 Sep 15 j 23:27 -7845 Nov 14 j 19:35 -7844 Apr 04 j 02:39 -7844 Apr 04 j 02:39 -7844 Apr 04 j 15:32 -7844 Apr 04 j 15:32 -7844 Apr 04 j 15:32 -7844 Apr 04 j 19:16 -7844 Apr 17 j 18:57	5° \$\frac{\pi}{29'28} 5° \$\frac{\pi}{29'25} 5° \$\frac{\pi}{29'25} 5° \$\frac{\pi}{29'25} 8° \$\frac{\pi}{40'37} 28° \$\frac{\pi}{31'26} 23° \$\frac{\pi}{23'} \$\frac{\pi}{42'137} 0° \$\frac{\pi}{60'39} 13° \$\frac{\pi}{50'57} 0° \$\times 3° \$\times 00'26 30° \$\frac{\pi}{60'39} 13° \$\frac{\pi}{50'57} 12 28° \$\frac{\pi}{50'2134} 22° \$\frac{\pi}{55'17} 0° \$\times 11° \$\times 46'59 14° \$\times 52'43 14° \$\times 52'46 15° \$\times 15° \$\times 02'06 17° \$\times 57'44	1°22'56 6.05980 AU -2°16'41 4.08449 AU -1°32'02 1°32'33 6.11669 AU -2°04'59 4.15797 AU -1°09'13 1°09'39 6.20116 AU

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 6 Attention, astronomical year style is used: The year -7844 in astronomical counting style is the year 7845 BCE in historical counting style.

Attention, astronom	nical year style is used: Th	ne year -7844	in astronomical co	ounting style is the year	7845 BCE in historical c	ounting style.	C
min. Earth dist.	-7844 Oct 18 j 06:58	1° ∺ 17'08	4.24465 AU	conjunction	-7838 Oct 13 j 20:25	26° Ω 07'03	0°56'09
	-7844 Oct 27 j 22:38	30°R ≈		minimum elong	-7838 Oct 13 j 20:29	26° Ω 07'06	0°56'30
direct	-7844 Dec 17 j 19:37	26°≈12'04		max. Earth dist.	-7838 Oct 13 j 12:17	26° Ω 02'19	6.16483 AU
	-7843 Feb 06 j 21:20	0° ∀		morning rise	-7838 Oct 26 j 12:46	29° Ω 03'56	
evening set	-7843 Apr 25 j 05:18	14°)(44'38			-7838 Oct 30 j 13:57	0° m)	
		> 4		retrograde	-7837 Mar 04 j 06:38	18° m 12'59	
conjunction	-7843 May 08 j 18:46	17°) 45′25		opposition	-7837 May 04 j 12:50		0°46'55
minimum elong	-7843 May 08 j 18:48	17°) 45′26		min. Earth dist.	-7837 May 04 j 09:57	13° m 15'49	4.12398 AU
max. Earth dist.	-7843 May 08 j 11:54		6.28417 AU	direct	-7837 Jul 03 j 06:19	8° Mp 21'57	
morning rise	-7843 May 22 j 05:39	20°) (44'45		evening set	-7837 Nov 03 j 16:08	27° mg 01'30	
	-7843 Jul 05 j 16:27	0° Υ		. ,.	702731 16:14.44	00 0 0 410 6	0004144
retrograde	-7843 Sep 21 j 00:03	8°Υ20'03		conjunction	-7837 Nov 16 j 14:44	0° Ω 04'06	0°04'44
asc. node	-7843 Nov 13 j 03:26	4°Υ14'10	0001114	minimum elong	-7837 Nov 16 j 14:45	0° Ω 04'07	0°04'48
opposition	-7843 Nov 19 j 11:33	3° Υ 24'12		behind sun begin	-7837 Nov 16 j 06:49	29° m 59'28	
min. Earth dist.	-7843 Nov 19 j 22:19	3° Υ 20'39	4.31660 AU	behind sun end	-7837 Nov 16 j 22:40	0° ഫ 08'45 0° ഫ	
direct	-7843 Dec 17 j 21:20 -7842 Jan 20 j 01:55	30° ₹ 28° 升 20'08		may Earth dist	-7837 Nov 16 j 07:44	0° £ 12'20	6.08973 AU
direct	,	28 π 2008		max. Earth dist. morning rise	-7837 Nov 17 j 04:44 -7837 Nov 29 j 16:22	0 2 12 20 3° 2 08'26	0.08973 AU
ovening set	-7842 Feb 22 j 14:19 -7842 May 28 j 12:25	0° γ 16° Υ 35'44		desc. node	3	3° 2 208′26 7° 2 49′37	
evening set	-7642 May 26 J 12.23	10 1 33 44		retrograde	-7837 Dec 20 j 02:33 -7836 Apr 08 j 19:34	7 2 49 3 7 22° 2 56'44	
conjunction	-7842 Jun 10 j 17:46	19° Ƴ 30'54	0°26'53	opposition	-7836 Jun 08 j 13:22	17° £ 54'43	0025155
minimum elong	-7842 Jun 10 j 17:44	19 γ 30 34 19° γ 30'53		min. Earth dist.	-7836 Jun 07 j 21:16	17 ≥ 3443	4.06500 AU
max. Earth dist.	-7842 Jun 09 j 17:59	19 γ 30 33 19° γ 17'44		direct	-7836 Aug 06 j 05:31	18 2 00 03	4.00300 AU
morning rise	-7842 Jun 23 j 19:27	22° Υ 24'15	0.33990 AU	direct	-7836 Nov 29 j 10:37	0°M	
morning risc	-7842 Jul 29 j 21:47	0° 8		evening set	-7836 Dec 07 j 19:59	1°M.57'25	
retrograde	-7842 Oct 22 j 06:58	9° 8 37'50		evening set	-7830 DCC 07 J 19.39	1 1163/23	
opposition	-7842 Oct 22 j 00:38 -7842 Dec 21 j 07:49	4° 8 44'56	1°12'29	conjunction	-7836 Dec 21 j 02:53	5°M05'16	0.040,50
min. Earth dist.	-7842 Dec 22 j 04:10	4° 8 38'21	4.35292 AU	minimum elong	-7836 Dec 21 j 02:33	5°M05'13	
mm. Earm dist.	-7841 Feb 07 j 17:48	4 O 36 21 30° R Υ	4.33292 AU	max. Earth dist.	-7836 Dec 22 j 10:50	5°M24'07	
direct	-7841 Feb 21 j 15:40	29° Υ 42'19		morning rise	-7835 Jan 03 j 13:17	8°M14'57	0.03174 AC
direct	-7841 Mar 07 j 16:32	0°8		morning risc	-7835 Feb 02 j 07:22	15°M	
	-7841 Jun 16 j 17:21	15° 8		retrograde	-7835 May 15 j 07:19	28°M18'32	
evening set	-7841 Jun 29 j 13:56	17° 8 48'04		min. Earth dist.	-7835 Jul 13 j 09:35		4.05353 AU
max. Earth dist.	-7841 Jul 10 j 22:24		6.35306 AU	opposition	-7835 Jul 14 j 10:21	23°M 13'50	
max. Earth dist.	7011 Jul 10 J 22:21	20 017 03	0.55500710	direct	-7835 Sep 10 j 12:33	18°M18'06	1 1002
conjunction	-7841 Jul 12 j 09:19	20° 8 38'28	1°09'38		-7835 Dec 11 j 10:01	0° ∡ 7	
minimum elong	-7841 Jul 12 j 09:14	20° 8 38'25	1°09'59	evening set	-7834 Jan 13 j 09:10	7° ∡ ¹24'18	
morning rise	-7841 Jul 25 j 01:41	23° 8 27'22			700 1000	, , =	
	-7841 Aug 24 j 17:40			conjunction	-7834 Jan 26 j 22:23	10° ∡ °34'04	-1°25'50
retrograde	-7841 Nov 23 j 00:26	10° ∏ 43'24		minimum elong	-7834 Jan 26 j 22:19	10° х 34′02	
opposition	-7840 Jan 22 j 14:07	5° Ⅱ 51'54	2°02'37	max. Earth dist.	-7834 Jan 28 j 12:47	10° ∡ 56'31	6.06626 AU
min. Earth dist.	-7840 Jan 23 j 16:19	5° ∏ 43'32		morning rise	-7834 Feb 09 j 14:15	13° ∡ ¹45'05	
direct	-7840 Mar 25 j 03:23	0° I 51'47		. <i>&</i>	-7834 May 02 j 22:31	0°ප	
evening set	-7840 Jul 29 j 22:14	18° Ⅱ 56'11		retrograde	-7834 Jun 19 j 22:10	3° ට 31'18	
max. Earth dist.	-7840 Aug 09 j 23:22		6.32026 AU	č	-7834 Aug 06 j 20:22	30°R. ✓	
	C J			opposition	-7834 Aug 18 j 11:01	28° ∡ ¹26'18	-2°18'01
conjunction	-7840 Aug 11 j 10:22	21° ∏ 44'37	1°32'20	min. Earth dist.	-7834 Aug 17 j 12:02	28° ∡ ³34′09	4.09323 AU
minimum elong	-7840 Aug 11 j 10:20	21° Ⅱ 44'36		direct	-7834 Oct 15 j 20:44	23° ₹ '27'06	
morning rise	-7840 Aug 23 j 20:36	24° ∏ 32'14			-7834 Dec 21 j 07:58	ರ°ರ	
	-7840 Sep 17 j 21:55	0ಂತಾ		evening set	-7833 Feb 19 j 06:23	12° る 30'59	
retrograde	-7840 Dec 24 j 15:48	12° © 12'57					
opposition	-7839 Feb 23 j 18:20	7° 5 20'53	2°17'44	conjunction	-7833 Mar 04 j 23:28	15° る 39'37	-1°30'39
min. Earth dist.	-7839 Feb 24 j 16:40	7° 5 13'48	4.29030 AU	minimum elong	-7833 Mar 04 j 23:30	15° る 39'39	1°31'09
direct	-7839 Apr 26 j 18:41	2°523'49		max. Earth dist.	-7833 Mar 06 j 07:32	15° る 58'02	6.12709 AU
evening set	-7839 Aug 30 j 05:31	20°534'30		morning rise	-7833 Mar 18 j 17:09	18° る 48'28	
					-7833 May 10 j 16:01	0° ≈	
conjunction	-7839 Sep 11 j 15:46	23° 5 24'49	1°28'02	retrograde	-7833 Jul 24 j 02:26	7° ≈ 51'07	
minimum elong	-7839 Sep 11 j 15:48	23° © 24'51	1°28'32	opposition	-7833 Sep 21 j 06:49	2° ≈ 48′21	-1°59'39
max. Earth dist.	-7839 Sep 10 j 14:55	23° © 10'35	6.25084 AU	min. Earth dist.	-7833 Sep 20 j 16:21	2° ≈ 53'17	4.16896 AU
morning rise	-7839 Sep 24 j 01:52	26° © 15'15			-7833 Oct 13 j 04:44	30°R₹	
	-7839 Oct 10 j 18:46	$0^{\circ}\Omega$		direct	-7833 Nov 19 j 14:14	27° る 46'05	
retrograde	-7838 Jan 27 j 19:29	14° Ω 37′03			-7833 Dec 27 j 10:13	0° ≈ ≈	
opposition	-7838 Mar 30 j 02:54	9° Ω 42'38	1°51'06		-7832 Mar 19 j 04:37	15° ≈	
min. Earth dist.	-7838 Mar 30 j 15:56	9° Ω 38′28	4.20873 AU	evening set	-7832 Mar 26 j 08:26	16° ≈ 35'43	
direct	-7838 May 30 j 03:48	4° Ω 48'15					
	-7838 Aug 25 j 01:42	15° Ω		conjunction	-7832 Apr 09 j 01:35	19° ≈ 40′54	-1°03'55
evening set	-7838 Oct 01 j 05:56	23° Ω 11'17		minimum elong	-7832 Apr 09 j 01:40	19° ≈ 40'57	1°04'18

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7832 in astronomical counting style is the year 7833 BCE in historical counting style. -7832 Apr 09 j 13:24 19°≈47'34 6.21189 AU evening set -7826 Oct 05 j 20:11 27°**Ω**57'59 max. Earth dist. -7832 Apr 22 j 17:36 22°≈45'19 -7826 Oct 14 j 14:10 morning rise O° m -7832 May 26 j 08:30 0°**₩** -7832 Aug 24 j 18:35 10°**¥**57'01 -7826 Oct 18 j 11:35 0° m 54'30 0°49'47 retrograde conjunction 0° **m** 54′32 -7832 Oct 22 j 23:37 5°\;\;57'51 -1°02'30 -7826 Oct 18 j 11:39 0°50'06 opposition minimum elong min. Earth dist. -7832 Oct 22 j 22:36 5°**升**58'12 4.25404 AU max. Earth dist. -7826 Oct 18 j 06:55 0° m 51'47 6.15684 AU direct -7832 Dec 22 j 13:18 0°**)** 53'49 morning rise -7826 Oct 31 j 04:57 3° m 52'12 evening set -7831 Apr 29 j 23:56 19°**)** 24'31 retrograde -7825 Mar 09 j 08:34 23° Mp 06'08 opposition -7825 May 09 j 12:56 18°**M**,07'27 0°35'49 conjunction -7831 May 13 j 12:42 22°\ 24'41 -0°17'12 min. Earth dist. -7825 May 09 j 09:00 18°M 08'43 4.11703 AU minimum elong -7831 May 13 j 12:44 22°\ 24'42 0°17'20 direct -7825 Jul 08 j 03:54 13° m 14'31 -7831 May 13 j 04:19 -7825 Oct 29 j 19:40 max. Earth dist. 22°**)** 20'01 6.29170 AU desc. node 29° m 40'57 -7831 May 26 j 22:21 -7825 Oct 31 j 04:41 morning rise 25°**¥**23'15 0∘**⊽** -7831 Jun 17 j 05:35 $0^{\circ}\Upsilon$ evening set -7825 Nov 08 j 10:44 1°**£**55'15 asc. node -7831 Sep 22 j 23:07 12°**Y**54'17 retrograde -7831 Sep 25 j 10:21 12°Y54'53 conjunction -7825 Nov 21 j 10:26 4°**£**58'34 -0°03'13 opposition -7831 Nov 23 j 23:32 7°**Υ**59'32 0°11'56 minimum elong -7825 Nov 21 j 10:26 4°**£**58'34 0°03'12 7°**Υ**55'41 min. Earth dist. -7831 Nov 24 j 11:12 4.32179 AU behind sun begin -7825 Nov 21 j 02:19 4°**£**53'49 direct -7830 Jan 24 j 15:43 2°Y55'36 behind sun end -7825 Nov 21 j 18:32 5°**2**03'19 evening set -7830 Jun 02 j 03:23 21°Y10'12 max. Earth dist. -7825 Nov 22 j 02:33 5°**ഫ**08'03 6.08444 AU max. Earth dist. -7830 Jun 14 j 04:14 23°**Y**49'43 6.34232 AU morning rise -7825 Dec 04 j 13:23 8°**£**03'42 retrograde -7824 Apr 13 i 20:15 27°**♀**54'52 conjunction -7830 Jun 15 i 07:15 24°**Y**'04'40 0°33'47 opposition -7824 Jun 13 i 12:54 22°**♀**52'24 -0°47'11 minimum elong -7830 Jun 15 i 07:12 24°**Y**'04'39 0°33'57 min. Earth dist. -7824 Jun 12 i 18:54 22°**♀**58'23 4.06207 AU morning rise -7830 Jun 28 j 07:46 26°**Y**57′24 direct -7824 Aug 11 j 01:15 17°**£**58'48 -7830 Jul 12 j 07:24 0°8 -7824 Nov 12 j 05:59 0°M -7830 Oct 26 j 19:52 evening set -7824 Dec 12 j 19:32 6°M56'23 retrograde 14°**8**10'31 -7830 Dec 25 j 21:17 9°**8**17'55 1°21'18 opposition -7824 Dec 26 j 03:21 10°ML04'39 -0°55'59 min. Earth dist. -7830 Dec 26 j 19:20 9°**8**10'47 4.35272 AU conjunction -7829 Feb 26 j 07:18 -7824 Dec 26 j 03:17 direct 4°**8**15'34 minimum elong 10°ML04'36 0°56'16 -7829 May 30 j 07:00 -7824 Dec 27 j 11:51 15°8 max. Earth dist. 10°M23'49 6.05137 AU -7829 Jul 04 j 01:58 -7823 Jan 08 j 14:39 evening set 22°**8**21'06 13°M14'43 morning rise -7823 Jan 16 j 03:45 -7829 Jul 15 j 10:04 max. Earth dist. 24°**8**52'03 6.35024 AU 15°M -7823 Apr 03 j 15:41 0°×7 -7829 Jul 16 j 20:16 25°**8**11'05 1°14'18 -7823 May 20 j 06:47 conjunction retrograde 3°**∡**17'57 -7829 Jul 16 j 20:12 -7823 Jul 05 j 21:20 minimum elong 25°**8**11'03 1°14'41 30°RM -7829 Jul 29 j 11:25 -7823 Jul 18 j 07:32 morning rise 27°**8**59'37 min. Earth dist. 28°M21'18 4.05549 AU -7829 Aug 07 j 14:31 $0^{\circ}II$ opposition -7823 Jul 19 j 07:49 28°M13'04 -1°53'57 retrograde -7829 Nov 27 j 13:34 15°**Ⅱ**18'00 direct -7823 Sep 15 j 10:38 23°M16'52 opposition -7828 Jan 27 j 06:18 10°**I**I26'30 2°07'07 -7823 Nov 21 j 04:28 0°**⊼** min. Earth dist. -7828 Jan 28 j 07:06 10°**Ⅱ**18'35 4.33852 AU evening set -7822 Jan 18 j 11:31 12°**х** 24′03 -7828 Mar 29 j 17:28 5°**Ⅱ**26'50 direct -7828 Aug 03 j 09:17 23°II31'25 -7822 Feb 01 j 01:35 15°**∡**33'56 -1°28'30 evening set conjunction max. Earth dist. -7828 Aug 14 j 10:52 26°**Д**00'43 6.31369 AU -7822 Feb 01 j 01:32 15°**∡**33'55 1°29'00 minimum elong -7822 Feb 02 j 16:35 15°**∡**756'42 6.07057 AU max. Earth dist. conjunction -7828 Aug 15 j 20:38 26°**Ⅱ**19'46 1°33'26 morning rise -7822 Feb 14 i 17:51 18°**∡**¹44'56 minimum elong -7828 Aug 15 j 20:37 26°**Ⅱ**19'46 1°33'57 -7822 Apr 08 i 00:19 0°정 morning rise -7828 Aug 28 i 06:28 29°**Ⅲ**07'27 retrograde -7822 Jun 24 i 19:14 8°る27'17 -7828 Sep 01 i 04:28 0ಂಣ min. Earth dist. -7822 Aug 22 j 07:26 3°る30'06 4.09963 AU -7828 Dec 29 j 10:56 16°952'29 -7822 Aug 23 j 05:32 3°₹22'33 -2°18'20 retrograde opposition -7827 Feb 28 j 13:58 12°900'10 2°16'28 -7822 Sep 19 j 11:38 30°R*X* opposition min. Earth dist. -7827 Mar 01 j 11:55 11°953'12 4.28238 AU -7822 Oct 20 j 16:43 28°×722'56 direct direct -7827 May 01 j 13:10 7°903'29 0°궁 -7822 Nov 21 j 04:15 evening set -7827 Sep 03 j 17:09 25°9514'33 evening set -7821 Feb 24 j 08:35 17°る26'33 -7827 Sep 15 j 04:47 max. Earth dist. 27°952'12 6.24229 AU conjunction -7821 Mar 10 j 01:48 20° **ප**34'59 -1°28'36 conjunction -7827 Sep 16 j 03:38 28°905'18 1°25'04 minimum elong -7821 Mar 10 j 01:51 20°る35'00 1°29'07 -7827 Sep 16 j 03:41 28°**©**05'20 -7821 Mar 11 j 06:07 20°る51'13 6.13498 AU minimum elong 1°25'34 max. Earth dist. -7827 Sep 24 j 11:43 $0^{\circ}\Omega$ -7821 Mar 23 j 19:43 23°る43'32 morning rise

-7821 Apr 21 j 05:16

-7821 Jul 28 j 18:18

-7821 Sep 25 j 22:17

-7821 Sep 25 j 09:30

-7821 Nov 24 j 09:27

-7820 Mar 01 j 20:12

-7820 Mar 31 j 07:35

retrograde

opposition

evening set

direct

min. Earth dist.

0°≈

12°≈40'29

2°≈35'33

21°≈23'56

15°≈

7°≈38'09 -1°53'31

7°≈42'30 4.17759 AU

-7827 Sep 28 j 14:16

-7827 Dec 08 j 10:23

-7826 Feb 01 j 15:43

-7826 Mar 30 j 21:53

-7826 Apr 04 j 01:11

-7826 Apr 04 j 11:10

-7826 Jun 03 j 21:27

-7826 Aug 03 j 23:19

morning rise

retrograde

opposition

direct

min. Earth dist.

 $0^{\circ}\Omega56'18$

19°**£**23′16

14°**Ω**28′20

14°**Ω**25′08

9°**Ω**34'14

1°43'59

4.20006 AU

15°€

15°RΩ

15°**Ω**

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7820 in astronomical counting style is the year 7821 BCE in historical counting style. -7820 Apr 14 j 00:36 24°≈28'41 -0°58'10 retrograde -7814 Feb 06 i 15:04 24°Ω10'15 conjunction opposition -7820 Apr 14 j 00:41 24°≈28'44 0°58'31 -7814 Apr 08 j 23:35 19°**Ω**14'51 1°36'13 minimum elong 6.22096 AU -7820 Apr 14 j 10:56 min. Earth dist. -7814 Apr 09 j 08:45 19°**Ω**11'55 4.18767 AU max. Earth dist. 24°≈34'30 -7820 Apr 27 j 15:54 27°≈32'29 -7814 May 19 j 08:04 15°RΩ morning rise -7814 Jun 08 j 17:01 -7820 May 08 j 18:22 0°**)**€ 14° **Ω**20′56 direct -7820 Aug 29 j 07:51 15°**)** 38′38 -7814 Jun 28 j 22:40 retrograde 15°Ω -7820 Oct 27 j 12:54 10°¥40'04 -0°52'27 0° m opposition -7814 Sep 28 j 08:21 10°**¥**39'54 4.26268 AU -7814 Oct 10 j 11:10 min. Earth dist. -7820 Oct 27 j 13:22 evening set 2° m 47'00 direct -7820 Dec 27 j 05:39 5°**X**36'01 evening set -7819 May 04 j 18:52 24°**)** 04'57 conjunction -7814 Oct 23 j 03:39 5° **m** 44'30 0°43'04 5°**™**44'32 minimum elong -7814 Oct 23 j 03:43 0°43'20 -7819 May 18 j 06:32 27°\ 04'24 -0°09'51 -7814 Oct 23 j 01:37 5°m/43'19 conjunction max. Earth dist. 6.14451 AU -7819 May 18 j 06:32 -7814 Nov 04 j 22:19 minimum elong 27°**)**€04'24 0°09'57 morning rise 8°m/43'19 behind sun begin -7819 May 17 j 23:56 27°**₩**00'45 retrograde -7813 Mar 14 j 10:35 28° m 03'39 behind sun end -7819 May 18 j 13:09 27°\ 08'04 opposition -7813 May 14 j 13:56 23°M)04'25 0°24'22 max. Earth dist. -7819 May 17 j 18:30 26°**¥**57'43 6.29928 AU min. Earth dist. -7813 May 14 j 07:37 23° Mp 06'284.10578 AU morning rise -7819 May 31 j 15:12 0° **Y** 02'14 direct -7813 Jul 12 j 23:40 18° m 11'30 -7819 May 31 j 11:10 $0^{\circ}\Upsilon$ desc. node -7813 Sep 07 j 23:55 23°m/09'19 asc. node -7819 Aug 02 j 01:21 12°Y23'27 -7813 Oct 13 j 19:03 0∘**ত** retrograde -7819 Sep 29 j 21:53 17° Y 30'19 evening set -7813 Nov 13 j 08:03 6°**£**55'19 opposition -7819 Nov 28 j 12:16 12°**Y**35'22 0°22'35 min. Earth dist. -7819 Nov 29 i 01:37 12°\bar{`}30'59 4.32782 AU conjunction -7813 Nov 26 i 08:56 9°**£**59'35 -0°11'08 direct -7818 Jan 29 i 07:47 7°**Y**31'34 minimum elong -7813 Nov 26 i 08:55 9°**£**59'34 0°11'10 evening set -7818 Jun 06 j 17:43 25°**Y**44'31 behind sun begin -7813 Nov 26 i 02:50 9°**£**56'00 behind sun end -7813 Nov 26 i 14:59 10°**2**03'08 -7818 Jun 19 j 20:20 28°Y38'16 0°40'28 max. Earth dist. -7813 Nov 27 j 03:04 10°**♀**10'17 6.07522 AU conjunction -7818 Jun 19 j 20:17 28°Y38'14 0°40'40 -7813 Dec 09 j 13:14 13°**£**05'42 morning rise minimum elong max. Earth dist. -7818 Jun 18 j 17:27 28°**Υ**23'23 6.34627 AU -7812 Mar 05 j 04:40 oom. -7818 Jun 25 j 23:52 -7812 Apr 19 j 00:40 3°ML01'09 0°8 retrograde 30°**Ŗ**Ω -7818 Jul 02 j 19:17 1°830'14 -7812 Jun 02 j 22:48 morning rise -7818 Sep 11 j 11:39 -7812 Jun 18 j 15:06 27°**♀**58'12 -0°58'22 15°8 opposition -7818 Oct 31 j 06:12 -7812 Jun 17 j 20:03 18°**8**42'29 min. Earth dist. 28°**♀**04'33 4.05574 AU retrograde -7812 Aug 16 j 01:21 -7818 Dec 21 j 07:27 15°R₩ 23°**♀**04'17 direct -7818 Dec 30 j 10:35 13°**8**50'08 1°29'36 -7812 Oct 22 j 20:12 opposition 0°M -7818 Dec 31 j 08:44 13°**8**42'59 -7812 Dec 17 j 22:49 12°M04'42 min. Earth dist. 4.35430 AU evening set -7817 Mar 02 j 21:11 8°**8**48'09 -7812 Dec 30 j 08:50 direct 15°M -7817 May 09 j 23:56 15°8 evening set -7817 Jul 08 j 13:14 26°**8**52'39 conjunction -7812 Dec 31 j 07:50 15°M13'33 -1°02'15 max. Earth dist. -7817 Jul 19 j 18:23 29°**8**22'11 6.34891 AU minimum elong -7812 Dec 31 j 07:45 15°M13'30 1°02'33 max. Earth dist. -7811 Jan 01 j 19:12 15°M34'24 6.04851 AU conjunction -7817 Jul 21 j 06:07 29°842'06 1°18'30 morning rise -7811 Jan 13 j 20:02 18°M24'06 -7817 Jul 21 j 06:03 29°842'04 1°18'56 -7811 Mar 08 j 08:17 0°**∡**7 minimum elong -7817 Jul 22 j 14:13 $0^{\circ}II$ -7811 May 25 j 11:09 8°**х** 27′19 retrograde -7817 Aug 02 j 20:20 2°**Ⅲ**30′15 -7811 Jul 23 j 08:18 3°**х** 30'41 4.05673 AU morning rise min. Earth dist. -7817 Dec 02 j 04:00 19°**Ⅲ**50'40 -7811 Jul 24 j 08:51 3°**₹**22'20 -2°00'25 retrograde opposition -7816 Jan 31 i 21:44 14°**I**59'08 2°10'51 -7811 Aug 20 j 19:45 opposition 30°RM -7816 Feb 01 i 23:22 28°M25'44 min. Earth dist. 14°**Д**50'59 4.33425 AU direct -7811 Sep 20 j 11:10 direct -7816 Apr 03 i 09:24 9°**Ⅱ**59'50 -7811 Oct 21 i 04:41 0°×7 evening set 28°**Ⅱ**04'27 -7816 Aug 07 j 18:58 evening set -7810 Jan 23 j 18:26 17°**∡**34'03 -7816 Aug 16 j 08:20 0ಂತಾ max. Earth dist. -7816 Aug 18 j 21:48 0°534'43 6.30661 AU conjunction -7810 Feb 06 i 08:59 20°**₹**43'58 -1°30'36 -7810 Feb 06 i 08:57 20°**₹**43'57 1°31'06 minimum elong -7816 Aug 20 j 05:56 0°952'52 1°33'58 -7810 Feb 07 j 22:30 21°**х** 05'48 6.07568 AU conjunction max. Earth dist. -7816 Aug 20 j 05:56 morning rise 23°**х** 54′55 minimum elong 0°952'52 1°34'29 -7810 Feb 20 j 01:53 -7816 Sep 01 j 15:22 morning rise 3°9540'41 -7810 Mar 19 j 03:14 0°궁 -7815 Jan 03 j 02:48 retrograde 21°530'22 retrograde -7810 Jun 29 j 17:45 13°る32'31 opposition -7815 Mar 05 j 08:33 16°**©**37'47 2°14'24 min. Earth dist. -7810 Aug 27 j 05:17 8°る35'30 4.10843 AU -7815 Mar 06 j 04:44 16°931'23 -7810 Aug 28 j 03:14 8°る27'59 -2°17'40 min. Earth dist. 4.27289 AU opposition -7815 May 06 j 04:09 11°9541'31 -7810 Oct 25 j 16:49 3°る27'55 direct direct -7815 Sep 08 j 04:07 29°953'44 -7809 Mar 01 j 14:08 22°る30'05 evening set evening set -7815 Sep 08 j 15:05 $0^{\circ}\Omega$ conjunction -7809 Mar 15 j 07:44 25°**ප**38'07 -1°25'53 conjunction -7815 Sep 20 j 14:50 2°**Ω**45'05 1°21'37 minimum elong -7809 Mar 15 j 07:47 25°**る**38'09 1°26'23 minimum elong -7815 Sep 20 j 14:54 2°**Ω**45'07 1°22'05 max. Earth dist. -7809 Mar 16 j 11:41 25°**る**54'06 6.14728 AU max. Earth dist. -7815 Sep 19 j 17:38 2°**\$\Omega**32'53 6.23112 AU morning rise -7809 Mar 29 j 01:23 28°る46'02 -7815 Oct 03 j 02:07 5°**Ω**36'51 -7809 Apr 03 j 12:22 0°**≈** morning rise -7815 Nov 15 j 16:55 15°**Ω** -7809 Jun 22 j 22:50 15°**≈**

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7809 in astronomical counting style is the year 7810 BCE in historical counting style. -7809 Aug 02 j 12:41 17°≈35'05 -7803 Aug 23 j 21:53 $0^{\circ}\Omega$ retrograde -7809 Sep 11 j 20:08 -7803 Sep 12 j 11:31 4°**Ω**23'32 15°R≈≈ evening set -7809 Sep 30 j 15:55 12°≈33'15 -1°46'31 opposition -7809 Sep 30 j 04:37 -7803 Sep 24 j 22:57 min. Earth dist. 12°≈37'05 4.19223 AU 7°Ω15'47 1°17'46 conjunction 7°**≈**30'24 -7809 Nov 29 j 07:22 -7803 Sep 24 j 23:01 7°**Ω**15'49 1°18'13 direct minimum elong 7°**Ω**04'42 -7803 Sep 24 j 03:44 -7808 Feb 10 j 18:55 15°≈ max. Earth dist. 6.21560 AU -7803 Oct 07 j 10:56 evening set -7808 Apr 05 j 07:51 26°≈14'51 morning rise 10°**Ω**08'32 -7803 Oct 29 j 02:18 15°€ conjunction -7808 Apr 19 j 00:18 29°≈18'44 -0°52'01 retrograde -7802 Feb 11 j 11:09 28°**Ω**50'07 -7802 Apr 13 j 19:03 1°28'04 minimum elong -7808 Apr 19 j 00:22 29°≈18'47 0°52'20 opposition 23°**Ω**54'19 max. Earth dist. -7808 Apr 19 j 07:41 29°≈22'53 6.23699 AU min. Earth dist. -7802 Apr 14 j 02:27 23°**Ω**51'57 4.17042 AU -7808 Apr 22 j 01:52 -7802 Jun 13 j 06:55 0°**)**€ direct 19°**Ω**00'41 -7802 Sep 11 j 08:49 morning rise -7808 May 02 j 14:57 2°**)**21'33 0° m retrograde -7808 Sep 02 j 18:52 20°¥19'39 evening set -7802 Oct 15 j 00:41 7°m/31'13 opposition -7808 Nov 01 j 02:22 15°**∺**21'33 -0°42'09 min. Earth dist. -7808 Nov 01 j 03:59 15°**升**21'00 4.27871 AU conjunction -7802 Oct 27 j 18:16 10° m 30'00 0°36'12 direct -7808 Dec 31 j 23:39 10°**)** 17'25 minimum elong -7802 Oct 27 j 18:19 10° Mp 30'01 0°36'27 evening set -7807 May 09 j 12:04 28°**)**(41'39 max. Earth dist. -7802 Oct 27 j 17:49 10° **m** 29'44 6.12712 AU -7807 May 15 j 10:08 $0^{\circ}\Upsilon$ morning rise -7802 Nov 09 j 14:24 13° m 30'13 -7801 Feb 02 j 16:52 0∘**ত** conjunction -7807 May 22 j 22:32 1°Y39'58 -0°02'37 retrograde -7801 Mar 19 j 13:15 2°**£**59'11 minimum elong -7807 May 22 j 22:34 1°**Y**39'59 0°02'38 -7801 May 03 i 18:23 30°R M behind sun begin -7807 May 22 j 14:23 1°Y35'28 opposition -7801 May 19 i 14:15 27° m 59'24 0°12'53 behind sun end -7807 May 23 i 06:45 1°\cdot\cdot44'30 min. Earth dist. -7801 May 19 i 06:00 28° M 02'06 4.08968 AU max. Earth dist. -7807 May 22 j 09:00 1°Y32'29 6.31426 AU direct -7801 Jul 17 j 19:15 23° m 06'29 -7807 Jun 05 j 05:47 4°**Y**36'38 desc. node -7801 Jul 19 j 10:42 23° m 06'45 morning rise -7807 Jun 11 j 16:53 6°**Y**01'36 -7801 Sep 23 j 20:17 0∘**⊽** asc. node -7807 Oct 04 j 05:51 21°Y58'55 -7801 Nov 18 j 05:33 11°**£**55'23 retrograde evening set -7807 Dec 02 j 22:43 17°**Υ**04'26 0°32'47 opposition -7801 Dec 01 j 07:54 -7807 Dec 03 j 13:42 16°**℃**59'31 4.34052 AU 15°**2**00'51 -0°18'56 min. Earth dist. conjunction -7806 Feb 02 j 22:12 12° \bolday 00'49 -7801 Dec 01 j 07:52 15°**2**00'49 0°19'01 minimum elong direct -7806 Jun 10 j 10:39 -7801 Dec 02 j 06:17 0°8 max. Earth dist. 15°**£**14'04 6.06206 AU -7801 Dec 14 j 13:31 -7806 Jun 11 j 04:33 0°**8**09'49 18°**♀**08'09 evening set morning rise -7806 Jun 22 j 23:30 2°**8**45'55 -7800 Feb 07 j 09:15 max. Earth dist. 6.35543 AU o°m. 8°M09'09 -7800 Apr 24 j 06:53 retrograde 3° ML05'50 -1° 09'05 -7806 Jun 24 j 05:35 3°**8**02'33 0°46'41 -7800 Jun 23 j 17:50 conjunction opposition -7806 Jun 24 j 05:31 3°**8**02'31 0°46'54 -7800 Jun 22 j 21:22 minimum elong min. Earth dist. 3°M12'41 4.04714 AU morning rise -7806 Jul 07 j 03:13 5°**8**53'34 -7800 Jul 18 j 21:00 30°R₽ -7806 Aug 20 j 04:29 15°8 direct -7800 Aug 21 j 01:09 28°**£**11'43 retrograde -7806 Nov 04 j 13:21 23°**8**03'40 -7800 Sep 23 j 01:11 0°M -7805 Jan 03 j 20:06 18°**8**11'29 1°36'59 -7800 Dec 13 j 10:27 15°M opposition min. Earth dist. -7805 Jan 04 j 19:45 18°**8**03'53 4.35948 AU -7800 Dec 23 j 03:53 17°M15'49 evening set -7805 Jan 30 j 19:56 15°R₩ -7805 Mar 07 j 08:47 13°**8**09'45 -7799 Jan 05 j 13:46 20°M25'14 -1°08'01 direct conjunction -7805 Apr 12 j 00:24 15°8 -7799 Jan 05 j 13:41 20°M25'11 1°08'22 minimum elong -7805 Jul 07 i 08:18 -7799 Jan 07 i 02:00 $\mathbb{I}^{\circ 0}$ max. Earth dist. 20°M46'36 6.04491 AU -7799 Jan 19 i 03:04 evening set -7805 Jul 12 j 19:27 1°**Ⅱ**12'11 morning rise 23°M36'21 -7805 Jul 23 j 23:55 max. Earth dist. 3°**Ц**41'23 6.34948 AU -7799 Feb 16 i 06:36 0° **₹** retrograde -7799 May 30 j 14:13 13°**х** 39′15 -7805 Jul 25 j 11:20 4°II01'08 1°22'04 min. Earth dist. -7799 Jul 28 i 08:28 8° **₹**'42'54 4.05867 AU conjunction -7805 Jul 25 j 11:16 4°II01'06 1°22'31 -7799 Jul 29 j 10:20 8° x 34'05 -2°05'56 minimum elong opposition -7805 Aug 07 j 00:23 6°**Ⅱ**48'48 direct -7799 Sep 25 j 12:43 3°**х** 36′58 morning rise -7805 Dec 06 j 12:03 24°**Ⅱ**11'05 -7798 Jan 29 j 02:05 22°**∡**¹45'54 retrograde evening set opposition -7804 Feb 05 j 08:41 19°**Ⅱ**19'33 2°13'38 min. Earth dist. -7804 Feb 06 j 10:28 19°**Ц**11'22 4.33020 AU conjunction -7798 Feb 11 j 17:25 25°**₹**55'47 -1°31'58 direct -7804 Apr 07 j 19:12 14°**Ⅲ**20′39 minimum elong -7798 Feb 11 j 17:24 25°**₹**55'46 1°32'29 -7798 Feb 13 j 08:17 -7804 Aug 01 j 02:27 0°9 26°**∡**18′23 6.08274 AU max. Earth dist. -7804 Aug 12 j 00:03 -7798 Feb 25 j 10:31 29°**х** 06′29 evening set 2°9525'28 morning rise -7804 Aug 23 j 01:05 -7798 Mar 01 j 07:40 0°궁 max. Earth dist. 4°955'07 6.29804 AU -7798 Jul 04 j 17:30 18°**ප**38'10 retrograde -7804 Aug 24 j 10:27 -7798 Sep 01 j 04:30 conjunction 5°514'02 1°33'57 min. Earth dist. 13°る40'49 4.11945 AU -7804 Aug 24 j 10:28 5°9514'02 1°34'28 opposition -7798 Sep 02 j 01:01 13°る33'48 -2°15'54 minimum elong morning rise -7804 Sep 05 j 19:53 8°902'10 direct -7798 Oct 30 j 18:02 8°**る**33'15 retrograde -7803 Jan 07 j 17:29 25°957'28 evening set -7797 Mar 06 j 19:08 27°る32'51

opposition

direct

min. Earth dist.

-7803 Mar 09 j 23:12

-7803 Mar 10 j 19:28

-7803 May 10 j 16:18

21°904'37

20°958'11

16°9508'39

2°11'37

4.26023 AU

conjunction

-7797 Mar 17 j 13:59

-7797 Mar 20 j 12:45

0°≈

0°≈40'19 -1°22'33

Attention, astronom				ninting style is the year	r / /9x Bt E in historical c	ounting style	
minimum elong	-7797 Mar 20 j 12:49	0°≈40'22		ounting style is the year	-7791 Feb 02 j 13:30	30°RS	
max. Earth dist.	-7797 Mar 21 j 14:30	0°≈54'59	6.16090 AU	opposition	-7791 Mar 14 j 20:17	25°9647'18	2°07'53
morning rise	-7797 Apr 03 j 06:17	3° ≈ 47'34	0.10090110	min. Earth dist.	-7791 Mar 15 j 15:09	25°5641'19	4.24685 AU
3	-7797 May 26 j 20:14	15° ≈		direct	-7791 May 15 j 09:25	20°951'46	
retrograde	-7797 Aug 07 j 03:54	22° ≈ 28'21			-7791 Aug 05 j 16:48	$0^{\circ}\Omega$	
opposition	-7797 Oct 05 j 08:45	17° ≈ 26'56	-1°38'48	evening set	-7791 Sep 17 j 01:04	9° Ω 09'03	
min. Earth dist.	-7797 Oct 04 j 22:23	17° ≈ 30′27	4.20677 AU				
	-7797 Oct 24 j 06:35	15°R ≈		conjunction	-7791 Sep 29 j 12:58	12° Ω 02'08	1°13'13
direct	-7797 Dec 04 j 03:50	12° ≈ 23'46		minimum elong	-7791 Sep 29 j 13:02	12° Ω 02'11	1°13'38
	-7796 Jan 14 j 13:41	15° ≈		max. Earth dist.	-7791 Sep 28 j 19:05	11° Ω 51'48	6.20163 AU
	-7796 Apr 05 j 10:41	0° ∀		morning rise	-7791 Oct 12 j 02:01	14° Ω 55'56	
evening set	-7796 Apr 10 j 07:14	1° ∺ 04'31			-7791 Oct 12 j 09:06	15° Ω	
	7706 1 22:22.02	40 1/ 07/24	0045121		-7791 Dec 27 j 19:07	0° m) 3° m , 44155	
conjunction	-7796 Apr 23 j 23:03	4°) €07'34 4°) €07'36		retrograde	-7790 Feb 16 j 13:20	3° ™ 44'55 30°R Ω	
minimum elong max. Earth dist.	-7796 Apr 23 j 23:07 -7796 Apr 24 j 03:13	4° ∺ 09'54	6.25130 AU	opposition	-7790 Apr 09 j 12:15 -7790 Apr 18 j 20:36	30 κδι 28° Ω 48'34	1°18'50
morning rise	-7796 May 07 j 12:50	7° ∺ 09′26	0.23130 AU	min. Earth dist.	-7790 Apr 18 j 20:36	28°Ω47'01	4.15694 AU
retrograde	-7796 Sep 07 j 07:42	25° ₩ 00'33		direct	-7790 Jun 18 j 03:47	$23^{\circ}\Omega55'09$	4.13074 AC
opposition	-7796 Nov 05 j 15:41	20° ∺ 03'01	-0°31'35	direct	-7790 Aug 21 j 13:08	0° m/	
min. Earth dist.	-7796 Nov 05 j 20:06		4.29129 AU	evening set	-7790 Oct 19 j 19:28	12° m) 28'27	
direct	-7795 Jan 05 j 18:25	14°) 58'50			,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
asc. node	-7795 Apr 20 j 06:24	28° ∺ 11'28		conjunction	-7790 Nov 01 j 14:23	15° m) 28'16	0°28'46
	-7795 Apr 28 j 20:41	0° Y		minimum elong	-7790 Nov 01 j 14:26	15° m 28'18	0°28'58
evening set	-7795 May 14 j 05:22	3° Y 19'51		max. Earth dist.	-7790 Nov 01 j 18:43	15° m 30'49	6.11581 AU
				morning rise	-7790 Nov 14 j 11:44	18° m 29'34	
conjunction	-7795 May 27 j 14:41	6° Ƴ 17'17	0°04'52		-7789 Jan 06 j 22:44	0∘ 亚	
minimum elong	-7795 May 27 j 14:41	6° Ƴ 17'17	0°04'52	retrograde	-7789 Mar 24 j 19:02	8° ഫ 04'09	
behind sun begin	-7795 May 27 j 06:43	6° Y 12'54		opposition	-7789 May 24 j 18:05	3° ჲ 03'51	0°00'53
behind sun end	-7795 May 27 j 22:39	6° Y 21'40		min. Earth dist.	-7789 May 24 j 07:53	3° ≏ 07'12	4.08179 AU
max. Earth dist.	-7795 May 26 j 22:06	6° Y ′08′07	6.32405 AU	desc. node	-7789 May 28 j 21:26	2° £ 31'19	
morning rise	-7795 Jun 09 j 20:38	9° Υ 13'00		ti .	-7789 Jun 19 j 01:17	30°RM)	
retrograde	-7795 Oct 08 j 15:07	26° Y 31'39 21° Y 37'33	0942150	direct	-7789 Jul 22 j 19:41	28° m 10'57	
opposition min. Earth dist.	-7795 Dec 07 j 10:44 -7795 Dec 08 j 03:00	21° Y 3733 21° Y $32'14$	0°42'59 4.34702 AU	ovening set	-7789 Aug 25 j 05:43	0° ჲ 17° ჲ 01'50	
direct	-7794 Feb 07 j 12:41	16° Υ 34'04	4.34/02 AU	evening set	-7789 Nov 23 j 06:29	1/-220130	
direct	-7794 May 24 j 21:02	0° 8		conjunction	-7789 Dec 06 j 09:49	20° ♀ 07'55	-0°26'46
evening set	-7794 Jun 15 j 17:08	4° 8 41'19		minimum elong	-7789 Dec 06 j 09:46	20° ⊆ 07'54	
max. Earth dist.	-7794 Jun 27 j 09:46	7° 8 16'10	6.35808 AU	max. Earth dist.	-7789 Dec 07 j 09:55		6.05823 AU
	, , , , , , , , , , , , , , , , , , ,			morning rise	-7789 Dec 19 j 16:48	23° ♀ 15'55	
conjunction	-7794 Jun 28 j 16:47	7° 8 33'20	0°52'48		-7788 Jan 18 j 07:53	0° M ₊	
minimum elong		7° 8 33'18	0°53'04				
	-7794 Jun 28 j 16:43	/ 033 18	0 33 0 1	retrograde	-7788 Apr 29 j 10:28	13°ML18'14	
morning rise	-7794 Jun 28 j 16:43 -7794 Jul 11 j 13:00	10° 8 23'40	0 33 0 1	retrograde opposition	-7788 Apr 29 j 10:28 -7788 Jun 28 j 20:33	13°M18'14 8°M14'28	-1°19'19
morning rise	-		0 33 01	Č			-1°19'19 4.04800 AU
retrograde	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36	10° ප් 23'40 15° ප් 27° ප් 33'57		opposition	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06	8°M14'28 8°M22'05 3°M19'58	
retrograde opposition	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20	10°823'40 15°8 27°833'57 22°842'00	1°44'10	opposition min. Earth dist. direct	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42	8°M14'28 8°M22'05 3°M19'58 15°M	
retrograde opposition min. Earth dist.	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15	10°\dagge 23'40 15°\dagge 27°\dagge 33'57 22°\dagge 42'00 22°\dagge 34'01		opposition min. Earth dist.	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06	8°M14'28 8°M22'05 3°M19'58	
retrograde opposition	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23	10°\dagge 23'40 15°\dagge 27°\dagge 33'57 22°\dagge 42'00 22°\dagge 33'01 17°\dagge 40'38	1°44'10	opposition min. Earth dist. direct evening set	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25	8°M14'28 8°M22'05 3°M19'58 15°M 22°M24'23	4.04800 AU
retrograde opposition min. Earth dist. direct	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jun 20 j 15:41	10°823'40 15°8 27°833'57 22°842'00 22°834'01 17°840'38 0°∏	1°44'10	opposition min. Earth dist. direct evening set conjunction	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17	8°M.14'28 8°M.22'05 3°M.19'58 15°M. 22°M.24'23 25°M.33'55	4.04800 AU -1°13'13
retrograde opposition min. Earth dist. direct	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jun 20 j 15:41 -7793 Jul 17 j 05:47	10°823'40 15°8 27°833'57 22°842'00 22°834'01 17°840'38 0°Ⅲ 5°Ⅲ42'56	1°44'10 4.35824 AU	opposition min. Earth dist. direct evening set conjunction minimum elong	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12	8°M14'28 8°M22'05 3°M19'58 15°M 22°M24'23 25°M33'55 25°M33'55	4.04800 AU -1°13'13 1°13'38
retrograde opposition min. Earth dist. direct	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jun 20 j 15:41	10°823'40 15°8 27°833'57 22°842'00 22°834'01 17°840'38 0°∏	1°44'10	opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00	8°M14'28 8°M22'05 3°M19'58 15°M 22°M24'23 25°M33'55 25°M33'53 25°M56'42	4.04800 AU -1°13'13
retrograde opposition min. Earth dist. direct evening set max. Earth dist.	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jun 20 j 15:41 -7793 Jul 17 j 05:47 -7793 Jul 28 j 07:24	10° 8 23'40 15° 8 27° 8 33'57 22° 8 42'00 22° 8 34'01 17° 8 40'38 0°用 5°用42'56 8°用10'53	1°44'10 4.35824 AU 6.34420 AU	opposition min. Earth dist. direct evening set conjunction minimum elong	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00 -7787 Jan 24 j 09:06	8°M.14'28 8°M.22'05 3°M.19'58 15°M. 22°M.24'23 25°M.33'55 25°M.33'53 25°M.56'42 28°M.45'00	4.04800 AU -1°13'13 1°13'38
retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jun 20 j 15:41 -7793 Jul 28 j 07:24 -7793 Jul 29 j 20:31	10°823'40 15°8 27°833'57 22°842'00 22°834'01 17°840'38 0°Ⅲ 5°Ⅲ42'56	1°44'10 4.35824 AU 6.34420 AU 1°25'20	opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00 -7787 Jan 24 j 09:06 -7787 Jan 29 j 18:16	8°M14'28 8°M22'05 3°M19'58 15°M 22°M24'23 25°M33'55 25°M33'53 25°M56'42	4.04800 AU -1°13'13 1°13'38
retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jul 20 j 15:41 -7793 Jul 28 j 07:24 -7793 Jul 29 j 20:31 -7793 Jul 29 j 20:28	10°823'40 15°8 27°833'57 22°842'00 22°834'01 17°840'38 0°用 5°用42'56 8°用10'53	1°44'10 4.35824 AU 6.34420 AU	opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00 -7787 Jan 24 j 09:06 -7787 Jan 29 j 18:16 -7787 Jun 04 j 15:49	8°M.14'28 8°M.22'05 3°M.19'58 15°M. 22°M.24'23 25°M.33'55 25°M.33'53 25°M.56'42 28°M.45'00 0° ₹	4.04800 AU -1°13'13 1°13'38
retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jun 20 j 15:41 -7793 Jul 28 j 07:24 -7793 Jul 29 j 20:31	10°823'40 15°8 27°833'57 22°842'00 22°834'01 17°840'38 0°用 5°用42'56 8°用10'53 8°用31'37 8°用31'37	1°44'10 4.35824 AU 6.34420 AU 1°25'20	opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00 -7787 Jan 24 j 09:06 -7787 Jan 29 j 18:16	8°M.14'28 8°M.22'05 3°M.19'58 15°M. 22°M.24'23 25°M.33'55 25°M.33'53 25°M.56'42 28°M.45'00 0° ~ 18° ~ 44'02	4.04800 AU -1°13'13 1°13'38 6.05018 AU 4.06782 AU
retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jul 20 j 15:41 -7793 Jul 28 j 07:24 -7793 Jul 29 j 20:31 -7793 Jul 29 j 20:28 -7793 Aug 11 j 08:51	10°823'40 15°8 27°833'57 22°842'00 22°834'01 17°840'38 0°П 5°П42'56 8°П10'53 8°П31'37 8°П31'37	1°44'10 4.35824 AU 6.34420 AU 1°25'20 1°25'47	opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist.	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00 -7787 Jan 24 j 09:06 -7787 Jan 29 j 18:16 -7787 Jun 04 j 15:49 -7787 Aug 02 j 08:25	8°M.14'28 8°M.22'05 3°M.19'58 15°M. 22°M.24'23 25°M.33'55 25°M.33'53 25°M.56'42 28°M.45'00 0° 7 18° 744'02 13° 747'16	4.04800 AU -1°13'13 1°13'38 6.05018 AU 4.06782 AU
retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jul 20 j 15:41 -7793 Jul 28 j 07:24 -7793 Jul 29 j 20:31 -7793 Jul 29 j 20:28 -7793 Aug 11 j 08:51 -7793 Dec 11 j 03:06	10°823'40 15°8 27°833'57 22°842'00 22°834'01 17°840'38 0°П 5°П42'56 8°П10'53 8°П31'37 8°П31'35 11°П19'09 28°П45'09	1°44'10 4.35824 AU 6.34420 AU 1°25'20 1°25'47	opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00 -7787 Jan 24 j 09:06 -7787 Jun 04 j 15:49 -7787 Aug 02 j 08:25 -7787 Aug 03 j 09:14	8°M.14'28 8°M.22'05 3°M.19'58 15°M. 22°M.24'23 25°M.33'55 25°M.56'42 28°M.45'00 0°\$\tilde{x}\tau4'02 13°\$\tilde{x}\tau4'02 13°\$\tilde{x}\tau4'112 27°\$\tilde{x}\tau4'21	4.04800 AU -1°13'13 1°13'38 6.05018 AU 4.06782 AU
retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jul 20 j 15:41 -7793 Jul 17 j 05:47 -7793 Jul 28 j 07:24 -7793 Jul 29 j 20:31 -7793 Jul 29 j 20:28 -7793 Aug 11 j 08:51 -7793 Dec 11 j 03:06 -7792 Feb 10 j 01:07 -7792 Feb 11 j 02:42 -7792 Apr 12 j 09:53	10°823'40 15°8 27°833'57 22°842'00 22°834'01 17°840'38 0°Ш 5°Ш42'56 8°Ш10'53 8°Ш31'37 8°Ш31'35 11°Ш19'09 28°Ш45'09 23°Ш53'32 23°Ш45'24 18°Ш54'58	1°44'10 4.35824 AU 6.34420 AU 1°25'20 1°25'47 2°15'52	opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00 -7787 Jan 24 j 09:06 -7787 Jan 29 j 18:16 -7787 Jun 04 j 15:49 -7787 Aug 02 j 08:25 -7787 Aug 03 j 09:14 -7787 Sep 30 j 13:35	8°M.14'28 8°M.22'05 3°M.19'58 15°M. 22°M.24'23 25°M.33'55 25°M.33'53 25°M.56'42 28°M.45'00 0° ~ 18° ~ 44'02 13° ~ 44'11 13° ~ 438'49 8° ~ 41'12	4.04800 AU -1°13'13 1°13'38 6.05018 AU 4.06782 AU
retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jul 20 j 15:41 -7793 Jul 17 j 05:47 -7793 Jul 28 j 07:24 -7793 Jul 29 j 20:31 -7793 Jul 29 j 20:28 -7793 Aug 11 j 08:51 -7793 Dec 11 j 03:06 -7792 Feb 10 j 01:07 -7792 Feb 11 j 02:42 -7792 Apr 12 j 09:53 -7792 Jul 14 j 23:22	10°823'40 15°8 27°833'57 22°842'00 22°834'01 17°840'38 0°Ⅲ 5°Ⅲ42'56 8°Ⅲ10'53 8°Ⅲ31'35 11°Ⅲ19'09 28°Ⅲ45'09 23°Ⅲ53'32 23°Ⅲ45'24 18°Ⅲ54'58 0°©	1°44'10 4.35824 AU 6.34420 AU 1°25'20 1°25'47 2°15'52	opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00 -7787 Jan 24 j 09:06 -7787 Jan 29 j 18:16 -7787 Jun 04 j 15:49 -7787 Aug 02 j 08:25 -7787 Aug 03 j 09:14 -7787 Sep 30 j 13:35 -7786 Feb 03 j 06:34 -7786 Feb 12 j 18:22	8°M.14'28 8°M.22'05 3°M.19'58 15°M. 22°M.24'23 25°M.33'55 25°M.56'42 28°M.45'00 0° \$\tilde{x}\$ 18° \$\tilde{x}\$44'02 13° \$\tilde{x}\$47'16 13° \$\tilde{x}\$41'12 27° \$\tilde{x}\$48'21 0° \$\tilde{S}\$	4.04800 AU -1°13'13 1°13'38 6.05018 AU 4.06782 AU -2°10'19
retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist.	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jul 20 j 15:41 -7793 Jul 17 j 05:47 -7793 Jul 28 j 07:24 -7793 Jul 29 j 20:31 -7793 Jul 29 j 20:28 -7793 Aug 11 j 08:51 -7793 Dec 11 j 03:06 -7792 Feb 10 j 01:07 -7792 Feb 11 j 02:42 -7792 Apr 12 j 09:53	10°823'40 15°8 27°833'57 22°842'00 22°834'01 17°840'38 0°Ш 5°Ш42'56 8°Ш10'53 8°Ш31'37 8°Ш31'35 11°Ш19'09 28°Ш45'09 23°Ш53'32 23°Ш45'24 18°Ш54'58	1°44'10 4.35824 AU 6.34420 AU 1°25'20 1°25'47 2°15'52	opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00 -7787 Jan 24 j 09:06 -7787 Jan 29 j 18:16 -7787 Jun 04 j 15:49 -7787 Aug 02 j 08:25 -7787 Aug 03 j 09:14 -7787 Sep 30 j 13:35 -7786 Feb 03 j 06:34 -7786 Feb 12 j 18:22	8°M.14'28 8°M.22'05 3°M.19'58 15°M. 22°M.24'23 25°M.33'55 25°M.56'42 28°M.45'00 0° \$\tilde{x}\$ 18° \$\tilde{x}\$44'02 13° \$\tilde{x}\$47'16 13° \$\tilde{x}\$41'12 27° \$\tilde{x}\$48'21 0° \$\tilde{s}\$0.00	4.04800 AU -1°13'13 1°13'38 6.05018 AU 4.06782 AU -2°10'19
retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct evening set	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jul 20 j 15:41 -7793 Jul 17 j 05:47 -7793 Jul 28 j 07:24 -7793 Jul 29 j 20:31 -7793 Jul 29 j 20:28 -7793 Aug 11 j 08:51 -7793 Dec 11 j 03:06 -7792 Feb 10 j 01:07 -7792 Feb 11 j 02:42 -7792 Apr 12 j 09:53 -7792 Jul 14 j 23:22 -7792 Aug 16 j 10:32	10° 823'40 15° 8 27° 833'57 22° 842'00 22° 834'01 17° 840'38 0° П 5° П42'56 8° П31'37 8° П31'37 8° П31'35 11° П19'09 28° П45'09 23° П53'32 23° П45'24 18° П54'58 0° 9 7° 901'16	1°44'10 4.35824 AU 6.34420 AU 1°25'20 1°25'47 2°15'52 4.32142 AU	opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00 -7787 Jan 24 j 09:06 -7787 Jan 29 j 18:16 -7787 Jun 04 j 15:49 -7787 Aug 02 j 08:25 -7787 Aug 03 j 09:14 -7787 Sep 30 j 13:35 -7786 Feb 03 j 06:34 -7786 Feb 12 j 18:22 -7786 Feb 16 j 22:16 -7786 Feb 16 j 22:16	8°M.14'28 8°M.22'05 3°M.19'58 15°M. 22°M.24'23 25°M.33'55 25°M.33'53 25°M.56'42 28°M.45'00 0° 🛪 18° 🛪 44'02 13° 🛪 47'16 13° 🛪 38'49 8° 🛪 41'12 27° 🛪 48'21 0° 🛪 0° 🛪 57'52 0° 🛪 57'52	4.04800 AU -1°13'13 1°13'38 6.05018 AU 4.06782 AU -2°10'19 -1°32'37 1°33'09
retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct evening set	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jul 20 j 15:41 -7793 Jul 17 j 05:47 -7793 Jul 28 j 07:24 -7793 Jul 29 j 20:31 -7793 Jul 29 j 20:31 -7793 Jul 29 j 20:28 -7793 Aug 11 j 08:51 -7793 Feb 10 j 01:07 -7792 Feb 11 j 02:42 -7792 Apr 12 j 09:53 -7792 Jul 14 j 23:22 -7792 Aug 28 j 20:52	10°823'40 15°8 27°833'57 22°842'00 22°834'01 17°840'38 0°用 5°用42'56 8°用10'53 8°用31'37 8°用31'35 11°用19'09 28°用45'09 23°用53'32 23°用45'24 18°用54'58 0°9 7°901'16	1°44'10 4.35824 AU 6.34420 AU 1°25'20 1°25'47 2°15'52 4.32142 AU	opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist.	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00 -7787 Jan 24 j 09:06 -7787 Jan 29 j 18:16 -7787 Jun 04 j 15:49 -7787 Aug 02 j 08:25 -7787 Aug 03 j 09:14 -7787 Sep 30 j 13:35 -7786 Feb 03 j 06:34 -7786 Feb 16 j 22:16 -7786 Feb 16 j 22:16 -7786 Feb 18 j 11:38	8°M.14'28 8°M.22'05 3°M.19'58 15°M. 22°M.24'23 25°M.33'55 25°M.56'42 28°M.45'00 0° 🛪 18° 🛪 44'02 13° 🛪 44'112 27° 🛪 48'21 0° 🛪 0° 🛪 557'52 0° 🛪 557'52 1° 🛪 19'31	4.04800 AU -1°13'13 1°13'38 6.05018 AU 4.06782 AU -2°10'19
retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jul 20 j 15:41 -7793 Jul 28 j 07:24 -7793 Jul 29 j 20:31 -7793 Jul 29 j 20:28 -7793 Jul 29 j 20:28 -7793 Aug 11 j 08:51 -7793 Dec 11 j 03:06 -7792 Feb 10 j 01:07 -7792 Feb 11 j 02:42 -7792 Apr 12 j 09:53 -7792 Jul 14 j 23:22 -7792 Aug 28 j 20:52 -7792 Aug 28 j 20:53	10°823'40 15°8 27°833'57 22°842'00 22°834'01 17°840'38 0°II 5°II42'56 8°II 10'53 8°II 31'37 8°II 31'35 11°II 19'09 28°II 45'09 23°II 53'32 23°II 45'24 18°II 54'58 0°9 7°901'16	1°44'10 4.35824 AU 6.34420 AU 1°25'20 1°25'47 2°15'52 4.32142 AU 1°33'22 1°33'53	opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00 -7787 Jan 24 j 09:06 -7787 Jan 24 j 09:06 -7787 Jun 04 j 15:49 -7787 Aug 02 j 08:25 -7787 Aug 03 j 09:14 -7787 Sep 30 j 13:35 -7786 Feb 03 j 06:34 -7786 Feb 16 j 22:16 -7786 Feb 16 j 22:16 -7786 Feb 18 j 11:38 -7786 Mar 02 j 15:40	8°M.14'28 8°M.22'05 3°M.19'58 15°M. 22°M.24'23 25°M.33'55 25°M.56'42 28°M.45'00 0° 🛪 18° 🛪 44'02 13° 🛪 44'112 27° 🛪 48'21 0° 🛪 0° 🛪 557'52 0° 🛪 557'52 1° 🛪 19'31 4° 🛪 08'05	4.04800 AU -1°13'13 1°13'38 6.05018 AU 4.06782 AU -2°10'19 -1°32'37 1°33'09
retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jul 20 j 15:41 -7793 Jul 17 j 05:47 -7793 Jul 28 j 07:24 -7793 Jul 29 j 20:31 -7793 Jul 29 j 20:28 -7793 Aug 11 j 08:51 -7793 Dec 11 j 03:06 -7792 Feb 10 j 01:07 -7792 Feb 11 j 02:42 -7792 Apr 12 j 09:53 -7792 Aug 16 j 10:32 -7792 Aug 28 j 20:52 -7792 Aug 28 j 20:53 -7792 Aug 27 j 13:57	10°823'40 15°8 27°833'57 22°842'00 22°834'01 17°840'38 0°II 5°II42'56 8°II10'53 8°II31'37 8°II31'35 11°II19'09 28°II45'09 23°II53'32 23°II45'24 18°II54'58 0°9 7°901'16 9°950'11 9°950'12 9°932'37	1°44'10 4.35824 AU 6.34420 AU 1°25'20 1°25'47 2°15'52 4.32142 AU	opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00 -7787 Jan 24 j 09:06 -7787 Jan 29 j 18:16 -7787 Jun 04 j 15:49 -7787 Aug 02 j 08:25 -7787 Aug 03 j 09:14 -7787 Sep 30 j 13:35 -7786 Feb 03 j 06:34 -7786 Feb 16 j 22:16 -7786 Feb 16 j 22:16 -7786 Feb 18 j 11:38 -7786 Mar 02 j 15:40 -7786 Jul 09 j 10:28	8°M.14'28 8°M.22'05 3°M.19'58 15°M. 22°M.24'23 25°M.33'55 25°M.33'53 25°M.56'42 28°M.45'00 0° 🛪 18° 🛪 44'02 13° 🛪 44'112 27° 🛪 48'21 0° 🛪 0° 🛪 557'52 1° 🛪 19'31 4° 🛪 08'05 23° 🛪 32'17	4.04800 AU -1°13'13 1°13'38 6.05018 AU 4.06782 AU -2°10'19 -1°32'37 1°33'09 6.09465 AU
retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jul 20 j 15:41 -7793 Jul 17 j 05:47 -7793 Jul 28 j 07:24 -7793 Jul 29 j 20:31 -7793 Jul 29 j 20:28 -7793 Aug 11 j 08:51 -7793 Dec 11 j 03:06 -7792 Feb 10 j 01:07 -7792 Feb 11 j 02:42 -7792 Apr 12 j 09:53 -7792 Jul 14 j 23:22 -7792 Aug 16 j 10:32 -7792 Aug 28 j 20:52 -7792 Aug 28 j 20:53 -7792 Aug 27 j 13:57 -7792 Sep 10 j 06:09	10° 823'40 15° 8 27° 833'57 22° 842'00 22° 834'01 17° 840'38 0° II 5° II 42'56 8° II 10'53 8° II 31'37 8° II 31'35 11° II 19'09 28° II 45'09 23° II 53'32 23° II 45'24 18° II 54'58 0° 9 7° 901'16 9° 950'11 9° 950'12 9° 932'37 12° 938'46	1°44'10 4.35824 AU 6.34420 AU 1°25'20 1°25'47 2°15'52 4.32142 AU 1°33'22 1°33'53	opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00 -7787 Jan 24 j 09:06 -7787 Jan 29 j 18:16 -7787 Jun 04 j 15:49 -7787 Aug 02 j 08:25 -7787 Aug 03 j 09:14 -7787 Sep 30 j 13:35 -7786 Feb 03 j 06:34 -7786 Feb 16 j 22:16 -7786 Feb 16 j 22:16 -7786 Feb 18 j 11:38 -7786 Mar 02 j 15:40 -7786 Jul 09 j 10:28 -7786 Sep 06 j 18:19	8°M.14'28 8°M.22'05 3°M.19'58 15°M. 22°M.24'23 25°M.33'55 25°M.56'42 28°M.45'00 0° % 18° % 44'02 13° % 44'11 27° % 48'21 0° % 0° % 57'52 0° % 57'52 1° % 19'31 4° % 08'05 23° % 32'17 18° % 28'15	4.04800 AU -1°13'13 1°13'38 6.05018 AU 4.06782 AU -2°10'19 -1°32'37 1°33'09 6.09465 AU -2°13'13
retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist.	-7794 Jul 11 j 13:00 -7794 Aug 01 j 21:43 -7794 Nov 09 j 00:36 -7793 Jan 08 j 09:20 -7793 Jan 09 j 10:15 -7793 Mar 11 j 23:23 -7793 Jul 20 j 15:41 -7793 Jul 17 j 05:47 -7793 Jul 28 j 07:24 -7793 Jul 29 j 20:31 -7793 Jul 29 j 20:28 -7793 Aug 11 j 08:51 -7793 Dec 11 j 03:06 -7792 Feb 10 j 01:07 -7792 Feb 11 j 02:42 -7792 Apr 12 j 09:53 -7792 Aug 16 j 10:32 -7792 Aug 28 j 20:52 -7792 Aug 28 j 20:53 -7792 Aug 27 j 13:57	10°823'40 15°8 27°833'57 22°842'00 22°834'01 17°840'38 0°II 5°II42'56 8°II10'53 8°II31'37 8°II31'35 11°II19'09 28°II45'09 23°II53'32 23°II45'24 18°II54'58 0°9 7°901'16 9°950'11 9°950'12 9°932'37	1°44'10 4.35824 AU 6.34420 AU 1°25'20 1°25'47 2°15'52 4.32142 AU 1°33'22 1°33'53	opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde	-7788 Jun 28 j 20:33 -7788 Jun 27 j 21:52 -7788 Aug 26 j 02:06 -7788 Nov 25 j 13:42 -7788 Dec 28 j 08:25 -7787 Jan 10 j 19:17 -7787 Jan 10 j 19:12 -7787 Jan 12 j 10:00 -7787 Jan 24 j 09:06 -7787 Jan 29 j 18:16 -7787 Jun 04 j 15:49 -7787 Aug 02 j 08:25 -7787 Aug 03 j 09:14 -7787 Sep 30 j 13:35 -7786 Feb 03 j 06:34 -7786 Feb 16 j 22:16 -7786 Feb 16 j 22:16 -7786 Feb 18 j 11:38 -7786 Mar 02 j 15:40 -7786 Jul 09 j 10:28	8°M.14'28 8°M.22'05 3°M.19'58 15°M. 22°M.24'23 25°M.33'55 25°M.56'42 28°M.45'00 0° % 18° % 44'02 13° % 44'11 27° % 48'21 0° % 0° % 57'52 0° % 57'52 1° % 19'31 4° % 08'05 23° % 32'17 18° % 28'15	4.04800 AU -1°13'13 1°13'38 6.05018 AU 4.06782 AU -2°10'19 -1°32'37 1°33'09 6.09465 AU

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 11 Attention, astronomical year style is used: The year -7785 in astronomical counting style is the year 7786 BCE in historical counting style.

Attention, astronomi	ical year style is used: Th	e year -7785 i	n astronomical cou	unting style is the year	7786 BCE in historical co	ounting style.	_
	-7785 Mar 01 j 02:51	0° ≈		evening set	-7780 Aug 20 j 22:18	11° 5 41'10	
evening set	-7785 Mar 11 j 19:52	2° ≈ 23'57		max. Earth dist.	-7780 Sep 01 j 02:16	14°ഇ13'19	6.27478 AU
conjunction	-7785 Mar 25 j 13:26	5° ≈ 30'49	-1°18'45	conjunction	-7780 Sep 02 j 08:25	14° © 30'30	1°32'09
minimum elong	-7785 Mar 25 j 13:31	5°≈30'52		minimum elong	-7780 Sep 02 j 08:27	14°930'30	1°32'41
max. Earth dist.	-7785 Mar 26 j 11:17		6.17488 AU	morning rise	-7780 Sep 14 j 18:00	17° © 19'39	
morning rise	-7785 Apr 08 j 06:42	8°≈37'20		3	-7780 Nov 16 j 09:15	0°N	
S	-7785 May 07 j 10:41	15° ≈		retrograde	-7779 Jan 17 j 11:54	5° Ω 27'43	
retrograde	-7785 Aug 11 j 17:45	27° ≈ 10′26		opposition	-7779 Mar 19 j 18:58	0° Ω 34'11	2°03'11
opposition	-7785 Oct 09 j 21:45	22°≈09'34	-1°30'44	min. Earth dist.	-7779 Mar 20 j 11:11	0° Ω 29'01	4.23464 AU
min. Earth dist.	-7785 Oct 09 j 14:36	22° ≈ 11'59	4.21967 AU		-7779 Mar 24 j 06:35	30° ₹ 5	
direct	-7785 Dec 08 j 22:28	17° ≈ 06'08		direct	-7779 May 20 j 03:34	25° © 39'01	
	-7784 Mar 19 j 13:37	0° ∀			-7779 Jul 13 j 19:00	$0^{\circ}\Omega$	
evening set	-7784 Apr 15 j 02:31	5°) 44′06		evening set	-7779 Sep 21 j 15:42	13° Ω 58′05	
		001/14/20			-7779 Sep 26 j 03:05	15° Ω	
conjunction	-7784 Apr 28 j 17:52	8° ¥ 46′30				160051150	1000107
minimum elong	-7784 Apr 28 j 17:56	8°) 46′32		conjunction	-7779 Oct 04 j 04:27	16° Ω 51'59	1°08'06
max. Earth dist.	-7784 Apr 28 j 19:08		6.26220 AU	minimum elong	-7779 Oct 04 j 04:31	16° Ω 52'02	1°08'30
morning rise	-7784 May 12 j 06:45	11°) 47'35		max. Earth dist.	-7779 Oct 03 j 15:08	16° Ω 44'16	6.19021 AU
retrograde	-7784 Sep 11 j 16:25	29°\(\frac{1}{3}3'29	0021100	morning rise	-7779 Oct 16 j 18:16	19° Ω 46'40	
opposition	-7784 Nov 10 j 02:19	24°) 36'30		. 1	-7779 Dec 03 j 06:25	0° Mp	
min. Earth dist.	-7784 Nov 10 j 08:04		4.29940 AU	retrograde	-7778 Feb 21 j 16:05	8° Mp 41'48	1000157
direct	-7783 Jan 10 j 07:41	19° ¥ 32′20		opposition	-7778 Apr 23 j 22:32	3° Mp 44'55	1°08'57
asc. node	-7783 Feb 28 j 06:08	22° 升 58′18		min. Earth dist.	-7778 Apr 24 j 01:31	3° m/43'58	4.14698 AU
	-7783 Apr 11 j 08:44	0° Υ		1	-7778 May 27 j 04:50	30°R Ω	
evening set	-7783 May 18 j 20:13	7° Υ 51'53	(22000 ATT	direct	-7778 Jun 23 j 01:58	28° Ω 51'43	
max. Earth dist.	-7783 May 31 j 08:15	10° Ƴ 37'34	6.32880 AU		-7778 Jul 19 j 18:10	0° Mp 17° Mp 26'33	
conjunction	-7783 Jun 01 j 04:16	10° Ƴ 48'39	0°12'00	evening set	-7778 Oct 24 j 14:38	1/ 11/2033	
	-7783 Jun 01 j 04:14	10 γ 48 39	0°12'02	agniumation	7779 Nov. 06 i 10:21	20°m 27'11	0°21'07
minimum elong behind sun begin	-7783 May 31 j 22:43	10 γ 48 38 10° Υ 45'36	0 12 02	conjunction minimum elong	-7778 Nov 06 j 10:31 -7778 Nov 06 j 10:33	20° m) 27'11 20° m) 27'12	0°21'16
behind sun end	-7783 May 31 j 22.43	10 γ 43 30 10° γ 51'41		max. Earth dist.	-7778 Nov 06 j 16:46	20° m ₂ 30'50	6.10806 AU
morning rise	-7783 Jun 14 j 09:01	13° Υ 43'41		morning rise	-7778 Nov 19 j 09:22	23° My 29'26	0.10800 AC
morning risc	-7783 Sep 17 j 20:08	0° 8		morning rise	-7778 Dec 18 j 03:39	0° ⊽	
retrograde	-7783 Oct 13 j 01:54	1° 8 00'45		retrograde	-7777 Mar 29 j 21:49	13° ≏ 08'13	
retrograde	-7783 Nov 07 j 06:38	30°RΥ		desc. node	-7777 Apr 07 j 13:51	13° ⊆ 01'06	
opposition	-7783 Dec 11 j 21:52	26° Y ′07'07	0°52'45	opposition	-7777 May 29 j 20:50	8° ⊆ 07'20	-0°11'06
min. Earth dist.	-7783 Dec 12 j 16:35		4.34825 AU	min. Earth dist.	-7777 May 29 j 07:42		4.07690 AU
direct	-7782 Feb 12 j 02:57	21° Υ 03'54	4.54025 110	direct	-7777 Jul 27 j 18:44	3° ⊆ 14'17	4.070707110
uncet	-7782 May 06 j 17:27	0°8		evening set	-7777 Nov 28 j 06:24	22° ₽ 06'23	
evening set	-7782 Jun 20 j 05:02	9° 8 11'12		evening sec	//// 1.07 20 j 00.2 .		
max. Earth dist.	-7782 Jul 01 j 18:50	11° 8 44'43	6.35554 AU	conjunction	-7777 Dec 11 j 10:58	25° £ 13'02	-0°34'21
	.,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			minimum elong	-7777 Dec 11 j 10:55	25° £ 13'00	
conjunction	-7782 Jul 03 j 03:27	12° 8 02'47	0°58'32	max. Earth dist.	-7777 Dec 12 j 14:40	25° £ 29'23	6.05656 AU
minimum elong	-7782 Jul 03 j 03:23	12° 8 02'45	0°58'50	morning rise	-7777 Dec 24 j 18:53	28° ≏ 21'31	
morning rise	-7782 Jul 15 j 22:26	14° 8 52'43		C	-7777 Dec 31 j 19:52	0° M .	
C	-7782 Jul 16 j 11:39	15° 8			-7776 Mar 17 j 22:44	15° M ₊	
	-7782 Oct 07 j 15:52	$\Pi^{\circ}0$		retrograde	-7776 May 04 j 14:40	18°ML24'25	
retrograde	-7782 Nov 13 j 12:19	2° II 05'01		-	-7776 Jun 21 j 07:28	15°RM	
-	-7782 Dec 20 j 18:53	30° ₹ 8		opposition	-7776 Jul 03 j 21:39	13°ML20'19	-1°28'52
opposition	-7781 Jan 12 j 23:06	27° 8 13'15	1°50'42	min. Earth dist.	-7776 Jul 02 j 23:06	13°M27'54	4.04986 AU
min. Earth dist.	-7781 Jan 13 j 23:46	27° 8 05'21	4.35255 AU	direct	-7776 Aug 31 j 03:00	8°ML25'27	
direct	-7781 Mar 16 j 11:59	22° 8 12'16			-7776 Nov 04 j 22:05	15°M	
	-7781 Jun 01 j 17:50	$\Pi^{\circ}0$		evening set	-7775 Jan 02 j 11:59	27°MJ30'09	
evening set	-7781 Jul 21 j 16:38	10° Ⅱ 15'52			-7775 Jan 13 j 03:47	0° ∡ ¹	
max. Earth dist.	-7781 Aug 01 j 18:41	12° ∐ 44′24	6.33576 AU				
				conjunction	-7775 Jan 15 j 23:32	0° ∡ ³39'45	-1°17'52
conjunction	-7781 Aug 03 j 06:30	13° Ⅱ 04'28	1°28'04	minimum elong	-7775 Jan 15 j 23:28	0° ∡ ³39'43	1°18'17
minimum elong	-7781 Aug 03 j 06:27	13° Ⅱ 04'27	1°28'32	max. Earth dist.	-7775 Jan 17 j 14:18	1° ₹ 02'30	6.05518 AU
morning rise	-7781 Aug 15 j 18:02	15° Ⅱ 52'01		morning rise	-7775 Jan 29 j 14:07	3° ₹ ′50'51	
	-7781 Oct 28 j 23:45	0ංම		retrograde	-7775 Jun 09 j 13:26	23° х ⁴46′03	
retrograde	-7781 Dec 15 j 20:38	3° 5 22'52		min. Earth dist.	-7775 Aug 07 j 05:07	18° ∡ ¹49'26	4.07578 AU
	-7780 Feb 02 j 22:44	30°RⅡ		opposition	-7775 Aug 08 j 06:16	18° ∡ ¹40'51	-2°13'45
opposition	-7780 Feb 14 j 19:24	28° II 31'13	2°17'14	direct	-7775 Oct 05 j 10:55	13° ∡ ′42'46	
min. Earth dist.	-7780 Feb 15 j 20:37		4.31091 AU		-7774 Jan 27 j 01:28	0°ਰ	
direct	-7780 Apr 17 j 02:15	23° I [33'10		evening set	-7774 Feb 08 j 10:08	2° る 48'52	
	-7780 Jun 24 i 10:41	0.00					

-7780 Jun 24 j 19:41 0°១

Manufaction computation	•	inel year etyle is used: Th		•	//		, .	ge 12
minimalitioning 7774 Feb 23 jol. 6 55880 j. 13300 minimal commitment 7794 May 1916.3 1978 Jes 2018 Je			•					1920/10
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direct 7778 (No. 19) [120] 1875 (2012) 778 (1862) 778 (1862) 778 (1862) 778 (1862) 677 (1864) 778 (1862) 6					**	•		
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occupance 7778 Mar 19 j.00 "Feel 1920" relating set 7778 May 29 j.03.5 GGG Companion 1778 Mar 30 j.13.4 10 real part 1922 relating set 7778 May 29 j.09.3 1879 May 19 j.00.4 1879 May 19 j.0	direct	-			1:4			
compunetion σ.773 Mar 30 j.13-43 10 reacutes evening set .7768 Aug 25 j.00-40 6 reacutes minimum clong 7773 Mar 30 j.13-47 10 reacutes 11426 conjunction .7768 Sep 06 j.19-45 960000 13003 mack Farth dat .7773 Apr 13 j.06-34 13 °8-2708 mack Earth dist .7768 Sep 06 j.19-45 18°253783 26010 AU refrograde .7773 Apr 20 j.06-36 179-39 179-14 97-79 18°253783 26010 AU opposition .7773 Apr 13 j.06-27 179-580 P.19-14 97-78 18°253783 22-10-20 18°253783 22-10-20 18°253783 22-10-20 18°253783 22-10-20 18°253783 22-10-20 18°253783 22-10-20 18°253783 22-10-20 18°253783 22-10-20 22-10-20 18°253783 22-10-20 22-10-20 18°253783 22-10-20 22-10-20 22-10-20 22-10-20 22-10-20 22-10-20 22-10-20 22-10-20 22-10-20 22-10-20 22-10-20 22-10-20 22-10-20 22-10-20 22-10-20 22-10-20 22-10-20	. ,				direct			
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max Farth dist -7778 Mar 3 j 0947 01%-8237 6.1864 AU minimum clong -7768 Sep (6) 1947 19/2006 18/04 AU morning rise -7773 Aur 20 j 0436 15%-708 max Farth dist -7768 Sep 19 j 05:25 21/225838 6.010 AU retrograde -7773 Aur 16 j 0602 7173 Jul 12 j 2006 0°H retrograde -7767 Mar 24 j 1651 5%-01803 15%-18 opposition -7773 Aur 16 j 1606 5%-01803 91/211 25%-8570 12205 min. Earth dist -7767 Mar 24 j 1651 5%-01803 15%-18 opposition -7773 Cot 16 j 1650 0°H 12205 min. Earth dist -7767 Mar 24 j 1651 5%-01803 12713 42249 AU dried -7777 Aur 27 j 1751 1545145 128-2207 1200-218 1270-219 1272 1772 Aur 27 j 1751 1271-218 1271-218 1271-218 1271-218 1271-218 1271-218 1271-218 1271-218 1271-218 1271-218 1271-218 1271-218 1271-218 1271-218 1271-218 1271-218 1271-218 1271-218 1271-218 </td <td></td> <td>·</td> <td></td> <td></td> <td>. ,.</td> <td>77(0.0 0(:10.45</td> <td>100500103</td> <td>1020124</td>		·			. ,.	77(0.0 0(:10.45	100500103	1020124
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direct 1737 Bee Ligit 151 27 (29 ± 92) 115 0"H2 evening set -7772 per 19 † 22.4 19"22 per 19"2 evening set -7772 per 10 § 18,23 19"23 per 19"2		-				·		4.22549 AU
cvening set -772 Feb - 29 j 11.51 0°H evening set -7767 Sep 26 j 0.506 18°Q430* -792 J 19 j 22.44 19°H27 Sep 19 j 22.44 19°H27 Sep 19 j 22.45 19°H27 Sep		-		4.23033 AU	direct			
evening set -7772 Apr 19 j 22;22l 0°H 2515 conjunction -7767 Oct 08 j 18:29 2 G 23 739 1 0°237 conjunction -7772 May 03 j 12:53 13°H 26'85 8 -0°32'06 minimum clong -7767 Oct 08 j 18:33 2 1°G 23'78 1 0°22'5 minimum clong -7772 May 03 j 12:53 13°H 25'99 62713 AU morning rise -7767 Oct 10 g 10;60 2 1°G 23'97 1 1°02'57 morning rise -7772 May 17 j 0.01 16°H 27'72 retrograde -7766 Feb 26 j 14:51 2 1°R 33'07 2 1°8 3'11 retrograde -7772 Nov 08 j 13:03 30°N 1 retrograde -7766 Feb 26 j 14:51 3 1°9 3'35 7 18 opposition -7772 Nov 08 j 13:03 30°N 1 4 30°0 2 min. Earth dist. -7766 Nov 1 j 10:21 8 1°9 10'0 1 30°0 2 direct -7771 Jan 07 j 22:1 29°H 10'8 -7760 2 10°10'0 3 1°8 10'0 1 3°8 3'0 2 1°10'0 1 3°10'0 1 3°10'0 3 1°10'0 3 1°10'0 3 1°10'0 3 1°10'0 3 1°10'0 3 1°10'0 3 1°10'0 3 1°10'0 3 1°10'0 3 1°10'0 3 1°10'0	direct	,						
conjunction -7772 May 03 j 12.55 3°8 γ82658 -0°3206 minimum elong -7767 Oct 08 j 18.29 21°2,3778 10°2371 minimum elong -7772 May 03 j 12.56 18°8 γ20°0 0°3218 max. Earth dist. -7767 Oct 08 j 06.56 21°2,30757 6.181 AU max. Earth dist. -7772 May 03 j 09.58 18°4 γ20°0 error and. -7767 Oct 01.69 j 06.56 21°2,3075 0°6.181 AU 6.181 AU morning rise -7772 May 03 j 09.58 18°4 γ20°0 error and. -7767 Oct 01.69 j 06.50 21°2,3075 0°6.181 AU 0°70°0 18°1 AU 0°70°0 0°10°0 0°10°0 0°10°0 0°70°0 0°10°0 0°10°0 0°10°0 <td></td> <td>•</td> <td></td> <td></td> <td>evening set</td> <td>-7/6/ Sep 26 j 05:06</td> <td>18°3′243'04</td> <td></td>		•			evening set	-7/6/ Sep 26 j 05:06	18° 3′2 43'04	
conjunction -7772 May 0 3 j 12.55 3°% 26/8 b -0°3206 minimum elong -776 C 10 8] 6.55 21° 237° 23 19° 237° 32 18° 18° 230° 32 18° 18° 230° 32 18° 18° 230° 32 18° 18° 230° 32 18° 18° 23° 32° 32° 32° 32° 32° 32° 32° 32° 32	evening set	-77/2 Apr 19 j 22:24	10° 大 25'15			#### O	210 025120	1000105
minimum elong 7.772 May 03 j02.56 13°M2700 0°3218 max. Earth dist. -7.772 Nay 13 j09.38 13°M2509 6.2132 AU morning rise -7.776 Not 2 j09.26 24°Q33*11 7.772 Nay 17 j01.01 16°M2720 retrograde -7.7772 Nay 17 j01.01 16°M2720 retrograde -7.776 Not 2 j19.026 24°Q33*11 7.778 Nov 18 j1.03 30°R¥ retrograde -7.766 Nov 2 j1.1413 0°By33335 7.788 Nov 18 j1.03 30°R¥ min. Earth dist. -7.766 Apr 28 j2.215 8°B3610 9.884 Nov 18 j1.03 30°R¥ min. Earth dist. -7.766 Apr 28 j2.215 8°B3610 9.894 NO 9.90 NO					•			
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Partergrade 7772 Jul 25 18.44 0°PV retrograde 7766 Feb 26 14.54 3°Pu3735 8°Pu360 7772 Nov 69 14.54 8°Pu360 7772 Nov 69 14.54 8°Pu360 7766 Nov 28 22.55 8°Pu360 765844 7766 Nov 28 22.55 8°Pu360 765844 7766 Nov 28 22.55 8°Pu360 765844 7766 Nov 28 22.55 8°Pu360 7768 Nov 7772 Nov 49 24.74 29°Pu160 7766 Nov 29 20.65 29°Pu160 7766 Nov 29°Pu160				6.27132 AU	morning rise			
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opposition nin. Earth dist. -7772 Nov 14 14:10 gow 4072 yow 9707 gow 4002 yow 9707 gow 40702 yow 9707 gow 40712 yow 9707 yow 9712 yow	retrograde				**			
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Second 1,777 Jan 1,7 1,0	11	·				-		
direct -7771 Jan 15 j 00:12 j 13:10 or 0° 24°W 07's winnimum clong -776 Nov 1 j 05:00 l 25°W 2025 or 03'33' 0°13'33' evening set -7771 Mar 2 j 11:11 or 0° 12°°C 26'10 s or 0° behind sun end 1766 Nov 1 j 00:36 l 25°W 1745 or 0' 25°W		-		4.30623 AU	evening set	-7766 Oct 29 j 08:03	22° m) 19'00	
evening set		-						
evening set	direct	-			-			
conjunction -7771 Jun 05 j 18:40 15°P(22'17 or 19'10 or 10') max. Earth dist. -7766 Nov 1 j 19:40 25°R(23'05 or 10') 6.0185 AU minimum elong -7771 Jun 05 j 18:38 15°P(22'16 or 19')14 morning rise -7766 Nov 24 j 05:05 28°R(23'28 or 23'28 or 23'29 or 23					_	,	-•	0°13'33
conjunction -7771 Jun 05 j 18:40 l 5°Ψ2217 0°19'10 max. Earth dist. 7776 Nov 1 j 15:16 25° 26° 12° 21′ 10° 18° 12° 11° 11° 18° 12° 12° 18° 12° 11° 11° 18° 12° 12° 11° 11° 18° 12° 12° 11° 18° 12° 12° 11° 11° 18° 12° 12° 11° 11° 18° 12° 12° 11° 11° 18° 12° 12° 11° 11° 18° 12° 12° 11° 11° 18° 12° 12° 11° 11° 18° 12° 12° 11° 18° 12° 12° 12° 12° 12° 12° 12° 12° 12° 12	evening set	-7771 May 23 j 11:41	12°'Y'26'10			,	-•	
minimum elong -7771 Jun 05 j 18:38 15° γ2:16 0°1914 moming rise -7766 Dec 01 j 03:21 0°2 1 max. Earth dist. -7771 Jun 18 j 22:00 18°° γ1633 6.33286 AU -7766 Dec 01 j 03:21 0°2 - retrograde -7771 Aug 16 j 19:51 18°° γ163 -7765 Jun 03 j 20:59 18° 4032 - retrograde -7771 Dec 16 j 10:17 0°83900 19021 min. Earth dist. -7765 Jun 03 j 07:19 13° 4032 0°2246 opposition -7771 Dec 16 j 10:17 0°83900 190221 min. Earth dist. -7765 Jun 03 j 07:19 13° 4032 0°2246 min. Earth dist. -7771 Dec 17 j 05:11 0°83900 180° 40 direct -7765 Jun 03 j 07:19 13° 4032 0°2246 direct -7771 Dec 17 j 05:13 0°83203 4.34956 AU direct -7765 Dec 16 j 10:10 0°1 0°1 0°1 evening set -7770 Jun 24 j 17:33 13° 4302 conjunction -7765 Dec 16 j 10:12 0°1 0°1 0°1 0°1 0°1 0°1 0°1 0°1 0°1<			••			5	-	
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morning rise -7771 Jun 18 j 22:00 18°Y1636 desc. node -7765 Fb 15 j 21:51 14°Δ48'36 -776 Aug 16 j 19:51 0°B retrograde -7765 Apr 04 j 00:47 18°Δ05'55 -776 Apr 04 j 00:47 18°Δ05'55 -776 Apr 04 j 00:47 18°Δ04'32 -0°224'6 opposition -7771 Dec 17 j 11:48 5°832'16 opposition -7765 Jun 03 j 07:19 13°Δ04'32 -0°224'6 min. Earth dist. -7771 Dec 17 j 05:11 0°832'52 4.34956 AU direct -7765 Jun 03 j 07:19 13°Δ09'03 4.07280 AU direct -7770 Dec 17 j 05:11 30°8'Y evening set -7765 Dec 03 j 0:44 27°Δ04'9 -7765 Dec 15 j 10:49 0°M -7765 Dec 03 j 0:44 27°Δ04'9 -7765 Dec 15 j 10:49 0°M 0°M </td <td></td> <td>-</td> <td></td> <td></td> <td>morning rise</td> <td></td> <td></td> <td></td>		-			morning rise			
retrograde		·		6.33286 AU		,		
retrograde	morning rise	-				,		
opposition -7771 Dec 16 j 10:17 0°839'00 1°02'21 min. Earth dist. -7765 Jun 03 j 07:19 13° 20'03 4.07280 AU min. Earth dist. -7771 Dec 1 j 10:511 0°832'52 4.34956 AU direct -7765 Aug 01 j 17:07 8° 211'21 27° 204'49 -7761 Au 27° 204'49 -7761 Au 27° 204'49 -7761 Au 27° 204'49 -7761 Au 27° 204'49 -7762 Au 27° 204'49 -7762 Au -7765 Dec 15 j 13:59 0° 1.2 -7762 Au -7767 Au	_				-			
min. Earth dist.	-							
direct -7771 Dec 2 j 10:43 30°R \						,		4.07280 AU
direct	min. Earth dist.	-		4.34956 AU				
evening set		-			evening set	-		
evening set	direct					-7765 Dec 15 j 13:59	0°11L	
max. Earth dist.								
max. Earth dist.	evening set	-			•	·		
morning rise		-			•	-		
conjunction minimum elong minimum elong minimum elong morning rise -7770 Jul 07 j 14:26 16°834'02 1°04'20 retrograde -7764 Feb 21 j 12:43 23°	max. Earth dist.	-7770 Jul 06 j 04:44	16° 8 15'19	6.35398 AU				6.05481 AU
minimum elong			4.		morning rise			
morning rise		-						
-7770 Sep 10 j 13:40 0° Π min. Earth dist7764 Jul 07 j 20:04 18° M 28'03 4.05092 AU retrograde -7770 Nov 18 j 02:49 6° Π 37'35 -7764 Aug 05 j 02:33 15° κ M 28'03 4.05092 AU opposition -7769 Jan 17 j 14:15 1° Π 45'59 1° 56'40 direct -7764 Sep 04 j 22:48 13° M 24'49 -7769 Jan 18 j 15:55 1° Π 37'47 4.3484 AU -7764 Dec 27 j 17:20 0° ス 4 direct -7769 Jan 31 j 17:09 30° κ 8 evening set -7764 Dec 27 j 17:20 0° ス 4 direct -7769 May 08 j 01:03 0° Π evening set -7769 Jul 26 j 03:39 14° Π 49'19 conjunction -7763 Jan 21 j 02:04 5° ス 40'18 -1° 21'51 max. Earth dist7769 Aug 06 j 05:25 17° Π 17'59 6.32947 AU minimum elong -7763 Jan 21 j 02:00 5° ス 40'16 1° 22'17	Č	-		1°04'20	-			
retrograde	morning rise							
opposition -7769 Jan 17 j 14:15 1° I 45'59 1° 56'40 direct -7764 Sep 04 j 22:48 13° II 24'49 min. Earth dist7769 Jan 18 j 15:55 1° II 37'47 4.34848 AU -7764 Oct 05 j 20:02 15° II -7764 Dec 27 j 17:20 0° ✓ -7764 Dec 27 j 17:20 0° ✓ -7769 Jan 31 j 17:09 30° R 5 evening set -7769 Mar 21 j 03:56 26° 845'25 evening set -7763 Jan 07 j 13:45 2° ✓ 30'33 evening set -7769 Jul 26 j 03:39 14° II 49'19 conjunction -7763 Jan 21 j 02:04 5° ✓ 40'18 -1° 21'51 max. Earth dist7769 Aug 06 j 05:25 17° II 17'59 6.32947 AU minimum elong -7763 Jan 21 j 02:00 5° ✓ 40'16 1° 22'17	_				min. Earth dist.	-		4.05092 AU
min. Earth dist.	-	-		1056110				
-7769 Jan 31 j 17:09 30°R 8 -7764 Dec 27 j 17:20 0° \$\frac{1}{2}\$ direct -7769 Mar 21 j 03:56 26° \$\frac{1}{2}\$45'25 evening set -7763 Jan 07 j 13:45 2° \$\frac{1}{2}\$30'33 evening set -7769 May 08 j 01:03 0° \$\frac{1}{2}\$ conjunction -7763 Jan 21 j 02:04 5° \$\frac{1}{2}\$40'18 -1°21'51 max. Earth dist7769 Aug 06 j 05:25 17° \$\boxed{\Pi}\$17'59 6.32947 AU minimum elong -7763 Jan 21 j 02:00 5° \$\frac{1}{2}\$40'16 1°22'17		-			direct			
direct $-7769 \text{ Mar } 21 \text{ j } 03:56 \\ -7769 \text{ May } 08 \text{ j } 01:03 \\ \text{evening set} -7769 \text{ Jul } 26 \text{ j } 03:39 \\ \text{l} 26 \text{ j } 03:39 \\ \text{max. Earth dist.} -7769 \text{ Aug } 06 \text{ j } 05:25 \\ \text{l} 7^{\circ}\Pi 17^{\circ} 17^{\circ} 9 \\ \text{l} 20 \text{ j } 03:294 \text{ AU} \\ \text{minimum elong} -7763 \text{ Jan } 21 \text{ j } 02:04 \\ \text{minimum elong} -7763 \text{ Jan } 21 \text{ j } 02:00 \\ \text{l} 20 \text{ j } 03:39 \\ \text{l} 20 \text{ j } 03:45 \\ \text{l} 20 \text{ j } 03:39 \\ \text{l} 20$	mın. Earth dist.			4.34848 AU				
-7769 May 08 j 01:03 0° II evening set -7769 Jul 26 j 03:39 14° II 49'19 conjunction -7763 Jan 21 j 02:04 5° ₹ 40'18 -1°21'51 max. Earth dist7769 Aug 06 j 05:25 17° II 17'59 6.32947 AU minimum elong -7763 Jan 21 j 02:00 5° ₹ 40'16 1°22'17		-						
evening set -7769 Jul 26 j 03:39 14° II 49'19 conjunction -7763 Jan 21 j 02:04 5° 🗷 40'18 -1°21'51 max. Earth dist7769 Aug 06 j 05:25 17° II 17'59 6.32947 AU minimum elong -7763 Jan 21 j 02:00 5° 🗷 40'16 1°22'17	direct	-			evening set	-7763 Jan 07 j 13:45	2° ∡ 730′33	
max. Earth dist7769 Aug 06 j 05:25 17° II 17′59 6.32947 AU minimum elong -7763 Jan 21 j 02:00 5° ₹ 40′16 1°22′17						mm co v		1001:
	•			6 220 := :==	-			
max. Earth dist7763 Jan 22 j 16:05 6° ₹ 02'35 6.05871 AU	max. Earth dist.	-7769 Aug 06 j 05:25	17° ∐17'5 9	6.32947 AU	_	,		
					max. Earth dist.	-//63 Jan 22 j 16:05	6°×'02'35	0.US8/1 AU

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7763 in astronomical counting style is the year 7764 BCE in historical counting style. opposition -7763 Feb 03 i 17:15 8°**х** 51′27 -7757 Jan 22 j 04:41 6°II17'53 2°01'55 morning rise -7763 Jun 14 j 10:55 28°×743'39 -7757 Jan 23 j 05:31 6°**I**109'57 4.34592 AU retrograde min. Earth dist. -7763 Aug 12 j 01:55 23°**х** 46'39 4.08144 AU -7757 Mar 25 j 16:52 1°**Ⅱ**17'41 min. Earth dist. direct 19°**Ⅲ**21'15 -7763 Aug 13 j 01:37 23° x 38'33 -2°16'11 -7757 Jul 30 j 13:33 opposition evening set -7757 Aug 10 j 14:40 -7763 Oct 10 j 08:35 18°**∡**39'59 21°**Ⅱ**49'51 direct max. Earth dist. 6.32411 AU -7762 Jan 09 j 08:39 0°궁 evening set -7762 Feb 13 j 12:22 7°る46'02 conjunction -7757 Aug 12 j 01:41 22°**Ⅱ**09'33 1°32'01 -7757 Aug 12 j 01:40 22°**Ⅲ**09'32 minimum elong 1°32'32 conjunction -7762 Feb 27 j 05:05 10°る55'11 -1°31'57 morning rise -7757 Aug 24 j 12:03 24°**I**57′02 minimum elong -7762 Feb 27 j 05:06 10°る55'12 1°32'28 -7757 Sep 16 j 14:49 0ಂತಾ max. Earth dist. -7762 Feb 28 j 15:23 11°る14'57 6.11221 AU retrograde -7757 Dec 25 j 05:57 12°535'50 -7756 Feb 24 j 07:28 morning rise -7762 Mar 12 j 22:45 14°る04'43 opposition 7°**5**43'46 2°17'29 -7762 Jun 02 j 21:06 0°≈ min. Earth dist. -7756 Feb 25 j 06:57 7°**9**36'18 4.29499 AU retrograde -7762 Jul 18 j 22:13 3°≈16'44 direct -7756 Apr 26 j 10:07 2°5946'31 -7762 Sep 02 j 20:12 30°Rる evening set -7756 Aug 29 j 19:43 20°955'51 min. Earth dist. -7762 Sep 15 j 10:41 28°る19'07 4.15266 AU max. Earth dist. -7756 Sep 10 j 04:13 23°531'14 6.25590 AU opposition -7762 Sep 16 j 03:09 28°る13'30 -2°05'18 direct -7762 Nov 14 j 05:43 23°る11'43 conjunction -7756 Sep 11 j 05:56 23°9545'57 1°28'07 -7761 Jan 22 j 04:54 0°≈ minimum elong -7756 Sep 11 j 05:59 23°9545'58 1°28'36 26°536'07 evening set -7761 Mar 21 j 20:06 12°≈05'06 morning rise -7756 Sep 23 j 16:00 -7761 Apr 03 j 17:54 15°≈ -7756 Oct 08 j 19:25 $0^{\circ}\Omega$ retrograde -7755 Jan 27 i 04:51 14°**Ω**55'24 conjunction -7761 Apr 04 i 13:33 15°≈11'07 -1°09'37 opposition -7755 Mar 29 i 13:56 10°Ω01'00 1°51'33 -7761 Apr 04 i 13:38 15°≈11'10 1°10'02 min. Earth dist. -7755 Mar 30 i 02:34 9°**Ω**56′59 4.21377 AU minimum elong max. Earth dist. -7761 Apr 05 j 05:15 15°≈20'00 6.19545 AU direct -7755 May 29 j 15:09 5°£06'30 -7761 Apr 18 j 06:15 -7755 Aug 23 j 03:49 morning rise 18°≈16'31 15°Ω -7761 Jun 14 j 06:46 0°₩ -7755 Sep 30 j 18:32 23°**Ω**28′12 evening set -7761 Aug 20 j 20:20 6°**₩**37'02 retrograde -7761 Oct 19 j 00:35 -7755 Oct 13 j 08:49 1°**)** € 37'13 -1°12'55 conjunction 26°Ω23'41 0°56'43 opposition -7761 Oct 18 j 20:56 -7755 Oct 13 j 08:53 min. Earth dist. 1° **★**38'26 4.23914 AU minimum elong $26^{\circ}\Omega 23'43 \quad 0^{\circ}57'04$ -7761 Oct 31 j 06:24 -7755 Oct 13 j 00:19 30°R≈ max. Earth dist. 26°**Ω**18'44 6.16929 AU -7761 Dec 18 j 08:59 direct 26°≈33'23 -7755 Oct 26 j 00:47 29°**Ω**20′13 morning rise 0°**)**€ -7760 Feb 04 j 17:44 -7755 Oct 28 j 21:48 0° m -7760 Apr 24 j 18:09 15°**)**€07'32 -7754 Mar 03 j 17:25 18° m 27'11 evening set retrograde -7754 May 03 j 22:46 13° Mp 29'10 0°48'04 opposition -7760 May 08 j 08:04 18°**¥**08'39 -0°25'01 -7754 May 03 j 21:44 13° Mp 29'30 4.12723 AU conjunction min. Earth dist. -7760 May 08 j 08:06 minimum elong 18°**¥**08'41 0°25'11 direct -7754 Jul 02 j 18:35 8° Mp 36'07 max. Earth dist. -7760 May 08 j 03:42 18°**₭**06'14 6.27945 AU evening set -7754 Nov 03 j 03:03 27° m 14'52 morning rise -7760 May 21 j 19:03 21°**)** 08'17 -7754 Nov 14 j 20:01 0∘**⊽** -7760 Jul 03 j 03:11 $0^{\circ}\Upsilon$ retrograde -7760 Sep 20 j 15:09 8°Y45'20 conjunction -7754 Nov 16 j 01:22 0°**2**17'17 0°05'39 -7760 Nov 17 j 14:47 4°Υ01'11 -7754 Nov 16 j 01:21 0°**£**17'17 asc. node minimum elong 0°05'43 -7760 Nov 19 j 02:33 3°Y49'22 0°00'17 behind sun begin -7754 Nov 15 j 17:34 0°**£**12'43 opposition -7760 Nov 19 j 11:49 3°Υ46'19 4.31307 AU behind sun end -7754 Nov 16 j 09:09 0°**£**21'50 min. Earth dist. -7760 Dec 22 j 02:56 -7754 Nov 16 j 13:40 0°**ჲ**24'31 6.09140 AU 30°**₹** max. Earth dist. -7754 Nov 29 i 02:47 direct -7759 Jan 19 j 14:37 28° **)** 45'20 morning rise 3°**£**21'25 -7754 Dec 26 i 06:24 -7759 Feb 17 i 11:33 $0^{\circ}\Upsilon$ desc. node 9°**£**31'45 evening set -7759 May 28 j 03:14 17°Y01'51 retrograde -7753 Apr 09 i 04:12 23°**♀**08'56 max. Earth dist. -7759 Jun 09 j 08:26 19°**Y**43'45 6.33779 AU opposition -7753 Jun 08 j 22:56 18°**2**07'03 -0°34'28 min. Earth dist. -7753 Jun 08 j 06:55 18°**♀**12'21 4.06488 AU -7759 Jun 10 i 08:43 19°**Y**′57′11 0°26′14 direct -7753 Aug 06 j 14:23 13°**£**13'41 conjunction -7759 Jun 10 j 08:40 19°**Y**57′10 0°26'22 -7753 Nov 28 j 22:57 0°M minimum elong -7759 Jun 23 j 10:51 22°Y50'46 -7753 Dec 08 j 06:06 morning rise evening set 2°M10'04 -7759 Jul 27 j 07:07 0°8 retrograde -7759 Oct 21 j 23:51 10°**8**04'49 conjunction -7753 Dec 21 j 12:44 5°M17'53 -0°48'35 5°**8**11'49 -7753 Dec 21 j 12:40 -7759 Dec 20 j 23:10 1°11'36 minimum elong 5°**M**17'51 0°48'50 opposition min. Earth dist. -7759 Dec 21 j 19:50 5°**8**05'07 4.35231 AU max. Earth dist. -7753 Dec 22 j 19:12 5°M35'53 6.04992 AU -7758 Feb 21 j 07:31 0°**8**09'05 -7752 Jan 03 j 22:53 8°M27'34 direct morning rise -7758 Jun 14 j 06:45 15°8 -7752 Feb 01 j 17:12 15°M 18°**8**14'53 -7752 May 14 j 18:04 evening set -7758 Jun 29 j 05:24 retrograde 28°M32'27 -7758 Jul 10 j 15:47 20°**8**46'48 -7752 Jul 13 j 21:18 max. Earth dist. 6.35406 AU opposition 23°M27'49 -1°45'48 min. Earth dist. -7752 Jul 12 j 21:21 23°M35'55 4.04967 AU conjunction -7758 Jul 12 j 01:10 21°**8**05'21 1°09'05 direct -7752 Sep 10 j 00:07 18°MJ32'10 minimum elong -7758 Jul 12 j 01:06 21°**8**05'19 1°09'27 -7752 Dec 09 j 16:40 0°**∡**7 morning rise -7758 Jul 24 j 17:37 23°**8**54'17 evening set -7751 Jan 12 j 19:36 7°**х** 39'43 $0^{\circ}\Pi$ -7758 Aug 22 j 04:57 -7758 Nov 22 j 14:02 11°**Ⅱ**09'29 -7751 Jan 26 j 08:51 10°**∡**749'43 -1°25'19 retrograde conjunction

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7751 in astronomical counting style is the year 7752 BCE in historical counting style. opposition -7751 Jan 26 i 08:47 10°**∡**¹49'41 1°25'48 -7745 Jan 26 j 15:16 10°**I**38'47 2°06'12 minimum elong -7751 Jan 28 j 00:33 11°**∡** 12'57 -7745 Jan 27 j 17:42 10°**I**I30'21 4.34550 AU max. Earth dist. 6.06122 AU min. Earth dist. -7751 Feb 09 j 00:35 14°**₹**'00'58 -7745 Mar 30 j 04:34 5°**Ⅱ**38'55 direct morning rise 0°궁 23°**Ⅱ**41'42 -7751 Apr 30 j 06:55 -7745 Aug 03 j 18:39 evening set 3°**る**49'49 -7751 Jun 19 j 12:09 -7745 Aug 14 j 19:45 26°**Ⅲ**10′29 retrograde max. Earth dist. 6.31916 AU 30°₽**⋌**7 -7751 Aug 08 j 18:15 min. Earth dist. 26°**Ⅲ**29'56 -7751 Aug 17 j 00:43 28°**≯**52'57 4.08779 AU conjunction -7745 Aug 16 j 06:17 1°33'06 26°**Ⅲ**29'55 opposition -7751 Aug 18 j 00:16 28°**₹**44'54 -2°17'40 minimum elong -7745 Aug 16 j 06:15 1°33'36 23°**х¹**45'56 29° II 17'24 direct -7751 Oct 15 j 08:22 morning rise -7745 Aug 28 j 16:04 -7751 Dec 18 j 23:37 0°궁 -7745 Aug 31 j 20:19 0ಂತಾ evening set -7750 Feb 18 j 18:42 12°**る**51'31 retrograde -7745 Dec 29 j 16:19 17°500'19 -7744 Feb 28 j 20:26 opposition 12°**©**08'05 2°16'24 -7744 Feb 29 j 19:01 conjunction -7750 Mar 04 j 11:39 16°る00'24 -1°30'36 min. Earth dist. 12°900'56 4.28583 AU minimum elong -7750 Mar 04 j 11:41 16°**る**00'25 1°31'07 direct -7744 Apr 30 j 19:44 7°9511'15 max. Earth dist. -7750 Mar 05 j 19:19 16°**ප**18'36 6.12198 AU evening set -7744 Sep 03 j 01:57 25°522'10 morning rise -7750 Mar 18 j 05:37 19°る09'34 max. Earth dist. -7744 Sep 14 j 11:06 27°958'24 6.24328 AU -7750 May 08 j 05:20 retrograde -7750 Jul 23 j 17:21 8°≈14'44 conjunction -7744 Sep 15 j 12:19 28°9512'52 1°25'23 opposition -7750 Sep 20 j 22:05 3°≈11'54 -1°59'55 minimum elong -7744 Sep 15 j 12:22 28°9512'54 1°25'52 min. Earth dist. -7750 Sep 20 j 06:40 3°≈17'09 4.16508 AU -7744 Sep 23 j 07:10 $0^{\circ}\Omega$ -7750 Oct 16 j 11:21 30°Rる morning rise -7744 Sep 27 j 22:54 1°**Ω**03'49 direct -7750 Nov 19 i 04:43 28°る09'47 -7744 Dec 06 i 23:02 15°€ -7750 Dec 23 i 07:41 0°≈ retrograde -7743 Jan 31 i 23:43 19°**Ω**30'17 -7749 Mar 17 j 22:13 15°≈ -7743 Mar 31 i 02:46 15°RΩ -7749 Mar 26 j 22:11 17°≈00'14 opposition -7743 Apr 03 j 07:27 14°Ω35'32 1°44'55 evening set -7743 Apr 03 j 19:56 14°**Ω**31'32 4.19830 AU min. Earth dist. -7749 Apr 09 j 15:33 20°≈05'34 -1°04'16 -7743 Jun 03 j 05:41 conjunction direct 9°**Ω**41'15 -7749 Apr 09 j 15:38 20°≈05'37 1°04'38 -7743 Aug 02 j 13:02 minimum elong 15°Ω -7749 Apr 10 j 06:35 -7743 Oct 05 j 05:12 max. Earth dist. 20°≈14'03 6.21010 AU 28°**Ω**06'40 evening set -7749 Apr 23 j 07:31 -7743 Oct 13 j 08:03 23°≈10'05 0° m morning rise -7749 May 24 j 21:41 0°**)**€ -7749 Aug 25 j 10:33 -7743 Oct 17 j 20:34 1° Mp 03'20 0°50'39 11°**)** 22'37 conjunction retrograde -7749 Oct 23 j 15:28 6°**¥**23'23 -1°03'13 -7743 Oct 17 j 20:38 1° **M** 03'22 $0^{\circ}50'56$ opposition minimum elong 6.15254 AU -7749 Oct 23 j 13:00 -7743 Oct 17 j 14:01 0° m 59'30 min. Earth dist. 6°**¥**24'13 4.25465 AU max. Earth dist. -7743 Oct 30 j 13:49 4° Tp 01'10 direct -7749 Dec 23 j 03:52 1°**H** 19'31 morning rise -7742 Mar 08 j 17:03 23° Mp 16'36evening set -7748 Apr 29 j 14:00 19°**)** 49'17 retrograde -7742 May 08 j 20:57 18° m 18'07 0°37'19 opposition conjunction -7748 May 13 j 02:44 22°\dagger49'21 -0°17'50 min. Earth dist. -7742 May 08 j 17:30 18° Mp 19'14 4.11064 AU -7748 May 13 j 02:46 22°\ 49'22 0°17'58 direct -7742 Jul 07 j 10:46 13° m/25'11 minimum elong max. Earth dist. -7748 May 12 j 18:48 22°**)** 44'57 6.29472 AU -7742 Oct 29 j 16:06 0∘**⊽** -7748 May 26 j 12:42 25°**)** 47'52 desc. node -7742 Nov 05 j 12:26 1°**£**35'31 morning rise -7748 Jun 14 j 21:43 $0^{\circ}\Upsilon$ -7742 Nov 07 j 21:28 2°**2**08'54 evening set -7748 Sep 25 j 00:46 13°Y18'28 retrograde -7748 Sep 27 j 23:12 13°Y17'36 -7742 Nov 20 j 21:01 5°**2**12'31 -0°02'12 asc. node conjunction -7748 Nov 23 j 14:08 8°Υ22'57 0°10'51 -7742 Nov 20 j 21:02 5°**2**12'31 0°02'11 opposition minimum elong -7742 Nov 20 j 12:53 min. Earth dist. -7748 Nov 24 i 01:17 8°**Ƴ**19'17 4.32693 AU behind sun begin 5°**£**07'44 direct -7747 Jan 24 i 06:42 3°Y18'59 behind sun end -7742 Nov 21 i 05:11 5°**2**17'19 evening set -7747 Jun 01 j 16:13 21°**Υ**31'23 max. Earth dist. -7742 Nov 21 i 11:45 5°**₽**21'12 6.07652 AU morning rise -7742 Dec 03 i 23:54 8°**£**17'58 -7747 Jun 14 j 20:23 24°Y25'39 0°32'58 retrograde -7741 Apr 14 j 08:32 28°**♀**12'20 conjunction -7747 Jun 14 j 20:20 24°Y25'38 0°33'08 min. Earth dist. -7741 Jun 13 j 06:54 23°**2**15'44 4.05319 AU minimum elong -7747 Jun 13 j 19:33 24°Y11'56 6.34919 AU -7741 Jun 14 j 00:20 23°**£**09'56 -0°45'50 max. Earth dist. opposition -7747 Jun 27 j 20:52 27°**Y**18′09 direct -7741 Aug 11 j 12:41 18°**♀**16'22 morning rise -7747 Jul 10 j 06:32 0°8 -7741 Nov 11 j 06:03 0°M retrograde -7747 Oct 26 j 06:23 14°**8**28'48 evening set -7741 Dec 13 j 08:30 7°M17'16 9°**8**36'08 -7747 Dec 25 j 09:04 1°20'03 opposition min. Earth dist. -7747 Dec 26 j 06:24 9°**8**29'14 4.36049 AU conjunction -7741 Dec 26 j 16:25 10° M25'58 -0° 55'12 -7746 Feb 25 j 18:57 4°**8**33'44 -7741 Dec 26 j 16:20 10°M25'55 0°55'30 direct minimum elong 15°8 -7741 Dec 28 j 02:33 10° M $_46'08$ -7746 May 28 j 08:39 max. Earth dist. 6.04258 AU 22°**8**36'39 -7740 Jan 09 j 03:37 13°M36'25 evening set -7746 Jul 03 j 13:08 morning rise -7746 Jul 14 j 19:27 -7740 Jan 15 j 02:52 15°M max. Earth dist. 25°**8**06'23 6.35807 AU -7740 Mar 31 j 06:06 0°**∡**7 conjunction -7746 Jul 16 j 07:24 25°**8**26'22 1°13'33 retrograde -7740 May 19 j 23:12 3°**х** 43′03 minimum elong -7746 Jul 16 j 07:20 25°**8**26'20 1°13'57 -7740 Jul 08 j 18:39 30°RM morning rise -7746 Jul 28 j 22:50 28°**8**14'40 opposition -7740 Jul 18 j 22:59 28°M38'13 -1°53'09 -7746 Aug 05 j 22:39 $0^{\circ}\Pi$ -7740 Jul 17 j 22:02 28°M46'40 4.04774 AU min. Earth dist.

-7746 Nov 26 j 23:24

retrograde

15°**Ⅲ**30′18

direct

-7740 Sep 15 j 00:35

23°M42'09

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 15 Attention, astronomical year style is used: The year -7740 in astronomical counting style is the year 7741 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	ne year -7740 i	in astronomical co	ounting style is the year	7741 BCE in historical c	ounting style.	
	-7740 Nov 18 j 08:37	0° ∡ ¹		conjunction	-7734 Jul 20 j 16:53	29° 8 55'15	
evening set	-7739 Jan 18 j 02:46	12° ≯ 51'36		minimum elong	-7734 Jul 20 j 16:49	29° 8 55'12	1°18'13
					-7734 Jul 21 j 01:26	0°Щ	
conjunction	-7739 Jan 31 j 16:38	16° ₹ 01'44		morning rise	-7734 Aug 02 j 07:05	2° Ⅱ 43'10	
minimum elong	-7739 Jan 31 j 16:35	16° ₹ 01'42		retrograde	-7734 Dec 01 j 11:40	20° Ⅱ 01'25	
max. Earth dist.	-7739 Feb 02 j 07:47	16° ₹ 24'36	6.06447 AU	opposition	-7733 Jan 31 j 06:09	15° Ⅱ 09'56	2°10'02
morning rise	-7739 Feb 14 j 09:06	19° ∡ 13'03		min. Earth dist.	-7733 Feb 01 j 08:26	15° Ⅱ 01'35	4.33905 AU
. 1	-7739 Apr 05 j 02:54	0°る		direct	-7733 Apr 03 j 18:18	10° Ⅱ 10'30	
retrograde	-7739 Jun 24 j 11:50	8°る57'42	2010104	evening set	-7733 Aug 08 j 04:38	28° Ⅱ 14'16	
opposition	-7739 Aug 22 j 23:02	3°₹52'47	-2°18'04 4.09575 AU	Danth diet	-7733 Aug 16 j 00:40	0°ഇ 0° ഇ 42'47	(20025 ATT
min. Earth dist.	-7739 Aug 21 j 23:19 -7739 Sep 24 j 16:38	4 000 34 30°₽.∡7	4.09373 AU	max. Earth dist.	-7733 Aug 19 j 04:27	0 394247	6.30935 AU
direct	-7739 Sep 24 j 10.38 -7739 Oct 20 j 09:27	30 KX. 28° ₹753'14		conjunction	-7733 Aug 20 j 15:35	1°502'37	10221/1/1
direct	-7739 Oct 20 j 09:27 -7739 Nov 15 j 08:02	26 メ・33 14 0°る		minimum elong	-7733 Aug 20 j 15:35	1°502'37	1°34'14
evening set	-7738 Feb 24 j 00:52	0 0 17° る 57'20		morning rise	-7733 Sep 02 j 01:16	3°950'25	1 3414
evening set	-77361C0 24 J 00.32	17 03720		retrograde	-7732 Jan 03 j 11:34	21° © 39'05	
conjunction	-7738 Mar 09 j 18:14	21° る 05'50	-1°28'33	opposition	-7732 Mar 04 j 15:52	16°5946'36	2°14'28
minimum elong	-7738 Mar 09 j 18:17	21° る 05'52		min. Earth dist.	-7732 Mar 05 j 13:59	16°939'35	4.27332 AU
max. Earth dist.	-7738 Mar 11 j 01:42		6.13377 AU	direct	-7732 May 05 j 12:47	11°950'08	27552116
morning rise	-7738 Mar 23 j 12:00	24°る14'24		evening set	-7732 Sep 07 j 13:51	0° Ω 03'19	
S	-7738 Apr 18 j 11:27	0° ≈		C	-7732 Sep 07 j 08:02	0°N	
retrograde	-7738 Jul 28 j 12:23	13° ≈ 11'38		max. Earth dist.	-7732 Sep 19 j 02:29		6.22933 AU
opposition	-7738 Sep 25 j 16:17	8° ≈ 09'09	-1°53'42		1 3		
min. Earth dist.	-7738 Sep 25 j 02:37	8° ≈ 13'48	4.17897 AU	conjunction	-7732 Sep 20 j 00:46	2° Ω 54'47	1°21'58
direct	-7738 Nov 24 j 03:11	3° ≈ 06'38		minimum elong	-7732 Sep 20 j 00:49	2° Q 54'49	1°22'27
	-7737 Feb 28 j 02:14	15° ≈		morning rise	-7732 Oct 02 j 11:55	5° Ω 46'36	
evening set	-7737 Mar 31 j 23:31	21° ≈ 53'32			-7732 Nov 14 j 06:06	15° Ω	
				retrograde	-7731 Feb 05 j 23:23	24° Ω 20′28	
conjunction	-7737 Apr 14 j 16:26	24° ≈ 58′06	-0°58'29	opposition	-7731 Apr 08 j 07:29	19° Ω 25′19	1°37'11
minimum elong	-7737 Apr 14 j 16:31	24° ≈ 58′09	0°58'49	min. Earth dist.	-7731 Apr 08 j 17:25	19° Ω 22'08	4.18406 AU
max. Earth dist.	-7737 Apr 15 j 03:47	25° ≈ 04'29	6.22464 AU		-7731 May 21 j 15:37	15°R Ω	
morning rise	-7737 Apr 28 j 07:52	28° ≈ 01'45		direct	-7731 Jun 08 j 00:25	14° Ω 31'25	
	-7737 May 07 j 05:11	0° ∀			-7731 Jun 25 j 08:17	15° Ω	
retrograde	-7737 Aug 29 j 22:34	16°) €06'31			-7731 Sep 26 j 21:10	0° m)	
opposition	-7737 Oct 28 j 05:28	11°)(07'44		evening set	-7731 Oct 09 j 22:11	2° m 59'44	
min. Earth dist.	-7737 Oct 28 j 04:39	11°) (08'00	4.26833 AU	. ,.	7721 0 4 22 14 20	50 m. 5710 5	0042152
direct	-7737 Dec 27 j 22:11	6°) €03'40		conjunction	-7731 Oct 22 j 14:29	5° m 57'25	
evening set	-7736 May 04 j 09:00	24°) €29'55		minimum elong	-7731 Oct 22 j 14:33	5° m 57'27	
conjunction	7726 May 17 : 20:45	27° ¥ 29'05	0910121	max. Earth dist.	-7731 Oct 22 j 10:31		6.13953 AU
minimum elong	-7736 May 17 j 20:45 -7736 May 17 j 20:47	27° H 29'05	0°10'36	morning rise retrograde	-7731 Nov 04 j 09:05 -7730 Mar 13 j 21:52	8° My 56'24 28° My 18'36	
behind sun begin	-7736 May 17 j 14:28	27° H 25'36	0 10 30	opposition	-7730 May 14 j 00:15	23° m) 19'32	0°25'45
behind sun end	-7736 May 17 j 14.28	27°) 32'34		min. Earth dist.	-7730 May 13 j 18:26	23° m) 21'26	4.10007 AU
max. Earth dist.	-7736 May 17 j 10:31	27° H 23'25	6.30650 AU	direct	-7730 Jul 12 j 10:03	18° Mp 26'40	4.10007 710
max. Dartii dist.	-7736 May 29 j 05:09	0°Υ	0.50050710	desc. node	-7730 Sep 14 j 03:16	24° m/32'20	
morning rise	-7736 May 31 j 05:25	0° Υ 26'37			-7730 Oct 11 j 23:47	0ಂ ರ	
asc. node	-7736 Aug 07 j 04:36	13° Y '37'16		evening set	-7730 Nov 12 j 20:23	7° ≏ 12'57	
retrograde	-7736 Sep 29 j 11:03	17° Y ′52'18		· ·	J		
opposition	-7736 Nov 28 j 02:11	12° Y 57'16	0°21'26	conjunction	-7730 Nov 25 j 21:19	10° ≏ 17'27	-0°10'13
min. Earth dist.	-7736 Nov 28 j 15:19	12° Y ′52'57	4.33584 AU	minimum elong	-7730 Nov 25 j 21:18	10° ≙ 17'27	0°10'15
direct	-7735 Jan 28 j 22:28	7° Y 53'26		behind sun begin	-7730 Nov 25 j 14:48	10° ≏ 13'37	
evening set	-7735 Jun 06 j 05:57	26° Y 03'25		behind sun end	-7730 Nov 26 j 03:48	10° ≏ 21'16	
max. Earth dist.	-7735 Jun 18 j 04:24	28° Ƴ 41'17	6.35431 AU	max. Earth dist.	-7730 Nov 26 j 16:37	10° ≏ 28'51	6.06965 AU
				morning rise	-7730 Dec 09 j 01:25	13° ≏ 23'46	
conjunction	-7735 Jun 19 j 08:37	28° Y 56'53	0°39'37		-7729 Mar 03 j 04:37	0° M	
minimum elong	-7735 Jun 19 j 08:34	28° Y ′56′51	0°39'49	retrograde	-7729 Apr 19 j 14:23	3°M21'11	
	-7735 Jun 24 j 02:49	$0^{\circ}S$			-7729 Jun 06 j 04:52	30°Ŗ 죠	
morning rise	-7735 Jul 02 j 07:51	1° 8 48'37		min. Earth dist.	-7729 Jun 18 j 08:53	28° ≏ 24'44	4.05105 AU
_	-7735 Sep 09 j 00:56	15° 8		opposition	-7729 Jun 19 j 03:59	28° ≏ 18'22	-0°57'05
retrograde	-7735 Oct 30 j 16:50	18° 8 58'13		direct	-7729 Aug 16 j 13:53	23° £ 24'37	
	-7735 Dec 22 j 20:11	15° ₹8	1000:00		-7729 Oct 21 j 11:33	0°M,	
opposition	-7735 Dec 29 j 21:28	14° 8 05'47		evening set	-7729 Dec 18 j 12:22	12°M26'29	
min. Earth dist.	-7735 Dec 30 j 20:18	13° 8 58'25	4.36177 AU		-7729 Dec 29 j 09:04	15° ™	
direct	-7734 Mar 02 j 09:13	9° 8 03'37		aaniu	7720 D 21 : 21 02	150M 25124	1901120
evening set	-7734 May 07 j 22:43	15° 8		conjunction	-7729 Dec 31 j 21:03	15°M35'24	
evening sei	7724 [51 07:22.41	270 × 0515					
max. Earth dist.	-7734 Jul 07 j 23:41 -7734 Jul 19 j 05:28	27° 8 05'56	6.35529 AU	minimum elong max. Earth dist.	-7729 Dec 31 j 20:58 -7728 Jan 02 j 07:54	15°M.35'21	1°01'48 6.04499 AU

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7728 in astronomical counting style is the year 7729 BCE in historical counting style. opposition -7728 Jan 14 i 09:16 18°M46'06 -7722 Jan 03 i 09:52 18°**8**35'11 1°36'01 morning rise 18°**8**27'27 4.35796 AU -7728 Mar 05 j 22:17 0°×7 min. Earth dist. -7722 Jan 04 j 09:56 15°R₩ -7728 May 25 j 00:19 8°**х** 50′30 -7722 Feb 03 j 14:45 retrograde -7728 Jul 23 j 23:18 direct -7722 Mar 06 j 22:50 13°**8**33'25 3°**х** 45'27 -1°59'33 opposition -7722 Apr 07 j 09:20 -7728 Jul 22 j 21:23 3°**≯**54'15 4.05464 AU 15°8 min. Earth dist. -7722 Jul 05 j 02:20 -7728 Aug 24 j 14:23 30°R ML Π $^{\circ}$ 0 28°M48'55 -7722 Jul 12 j 10:10 direct -7728 Sep 20 j 01:26 evening set 1°**Ⅲ**36'39 -7728 Oct 16 j 15:02 0°**∡**¹ max. Earth dist. -7722 Jul 23 j 13:21 4°**Ⅱ**05'12 6.34800 AU evening set -7727 Jan 23 j 07:41 17°**∡**757'12 4°**Ⅱ**25'46 conjunction -7722 Jul 25 j 02:13 1°21'31 conjunction -7727 Feb 05 j 22:16 21°\$\square\$07'06 -1°30'12 minimum elong -7722 Jul 25 j 02:10 4°**Ⅱ**25'44 1°21'58 -7727 Feb 05 j 22:14 -7722 Aug 06 j 15:39 minimum elong 21°**х** 07′05 1°30'41 morning rise 7°**Ⅱ**13'37 max. Earth dist. -7727 Feb 07 j 14:16 21°**х** 30′24 6.07508 AU retrograde -7722 Dec 06 j 02:50 24°**Ⅲ**36′07 opposition morning rise -7727 Feb 19 j 14:53 24°**х** 17′59 -7721 Feb 04 j 22:41 19°**Ⅱ**44'35 2°13'04 -7727 Mar 16 j 21:39 0°정 min. Earth dist. -7721 Feb 06 j 00:28 19°**Ⅲ**36′23 4.32905 AU retrograde -7727 Jun 29 j 08:57 13°る55'54 direct -7721 Apr 08 j 09:03 14°**Ⅱ**45'34 opposition -7727 Aug 27 j 18:08 8°る51'14 -2°17'23 -7721 Jul 30 j 19:16 0ಂತಾ min. Earth dist. -7727 Aug 26 j 20:19 8°る58'42 4.10884 AU evening set -7721 Aug 12 j 15:38 2°951'10 direct -7727 Oct 25 j 07:58 3°₹51'14 max. Earth dist. -7721 Aug 23 j 18:08 5°921'35 6.29753 AU evening set -7726 Mar 01 j 02:50 22°る52'25 conjunction -7721 Aug 25 j 02:21 5°939'50 1°33'44 conjunction -7726 Mar 14 j 20:17 26° ති00'21 -1°25'57 minimum elong -7721 Aug 25 i 02:21 5°939'50 1°34'15 minimum elong -7726 Mar 14 j 20:20 26°**ප**00'23 1°26'27 morning rise -7721 Sep 06 i 11:43 8°9528'00 max. Earth dist. -7726 Mar 16 j 00:41 26°**る**16'35 6.14809 AU retrograde -7720 Jan 08 i 07:43 26°9522'53 morning rise -7726 Mar 28 j 14:02 29°る08'15 opposition -7720 Mar 09 i 13:05 21°530'10 2°11'36 -7726 Apr 01 j 09:33 -7720 Mar 10 j 09:27 21°523'42 4.26055 AU 0°≈≈ min. Earth dist. -7726 Jun 19 j 12:39 15°**≈** -7720 May 10 j 06:21 16°934'09 direct -7726 Aug 02 j 01:10 17°≈57'21 -7720 Aug 21 j 14:21 $0^{\circ}\Omega$ retrograde -7726 Sep 14 j 11:53 15°R≈ -7720 Sep 12 j 03:32 4°**Ω**49'19 evening set -7726 Sep 30 j 06:13 12°≈55'21 -1°46'56 opposition -7726 Sep 29 j 17:54 -7720 Sep 24 j 14:46 7°**Ω**41'29 1°17'57 min. Earth dist. 12°≈59'32 4.19304 AU conjunction -7720 Sep 24 j 14:50 -7726 Nov 28 j 20:22 minimum elong $7^{\circ}\Omega41'31 \quad 1^{\circ}18'23$ direct 7°≈52'32 7°**Ω**29'36 6.21672 AU -7720 Sep 23 j 18:09 -7725 Feb 08 j 06:40 max. Earth dist. 15°≈ -7725 Apr 05 j 20:06 -7720 Oct 07 j 02:48 10°**Ω**34'11 evening set 26°**≈**36'15 morning rise -7720 Oct 26 j 19:18 15°**Ω** -7725 Apr 19 j 12:35 -7719 Feb 11 j 00:59 conjunction 29°≈40'07 -0°52'31 retrograde 29°**Ω**14'43 -7725 Apr 19 j 12:39 -7719 Apr 13 j 08:45 minimum elong 29°≈40'09 0°52'50 opposition 24°Ω18'58 1°28'38 max. Earth dist. -7725 Apr 19 j 20:12 29°≈44'23 6.23752 AU min. Earth dist. -7719 Apr 13 j 16:00 24°**Ω**16'38 4.17235 AU -7725 Apr 21 j 00:01 0°**)**€ direct -7719 Jun 12 j 21:22 19°**Ω**25'16 morning rise -7725 May 03 j 03:19 2°\ 42'57 -7719 Sep 09 j 01:15 0° m -7725 Sep 03 j 09:35 20°**)** 41′26 evening set -7719 Oct 14 j 15:50 7° m 55'21 retrograde -7725 Nov 01 j 16:24 15°**)**43'15 -0°43'07 opposition -7725 Nov 01 j 18:40 15°**)** 42′29 4.27871 AU -7719 Oct 27 j 09:22 10° m 53'56 0°36'46 min. Earth dist. conjunction -7724 Jan 01 j 14:07 10°**)** 39′09 -7719 Oct 27 j 09:25 10° **m** 53'58 direct minimum elong 0°37'00 -7724 May 09 j 00:34 29°**₭**03'13 -7719 Oct 27 j 10:08 10° M 54'23 evening set max. Earth dist. 6.12989 AU -7724 May 13 i 07:33 $0^{\circ}\Upsilon$ morning rise -7719 Nov 09 i 05:06 13° m 53'54 -7718 Jan 30 i 09:02 0∘**⊽** 2°Y01'41 -0°03'23 conjunction -7724 May 22 j 11:19 retrograde -7718 Mar 19 i 02:20 3°**£**21'10 -7724 May 22 j 11:19 2°\bar{\gamma}01'41 0°03'25 -7718 May 06 j 08:08 30°R M minimum elong -7724 May 22 j 03:10 1°Y57'11 -7718 May 19 i 03:26 28° m 21'31 0°13'57 behind sun begin opposition behind sun end -7724 May 22 j 19:29 2°Y06'11 min. Earth dist. -7718 May 18 i 19:40 28° m 24'03 4.09319 AU -7724 May 21 j 21:38 1°Υ54'07 6.31359 AU direct -7718 Jul 17 j 09:44 23° m 28'40 max. Earth dist. -7724 Jun 04 j 18:50 4°Υ58'28 desc. node -7718 Jul 24 j 07:20 23° m 33'25 morning rise 7°**Y**41'13 -7718 Sep 21 j 10:32 asc. node -7724 Jun 17 j 05:22 0∘**⊽** retrograde -7724 Oct 03 j 19:01 22°Y21'21 evening set -7718 Nov 17 j 19:19 12° 2 16'15 -7724 Dec 02 j 12:22 17°**Y**26'46 0°31'38 opposition min. Earth dist. -7724 Dec 03 j 02:56 17°**Y**′22′00 4.33938 AU conjunction -7718 Nov 30 j 21:12 15°**2**21'21 -0°18'07 -7723 Feb 02 j 10:49 12°Y23'05 -7718 Nov 30 j 21:10 15°**≏**21'20 0°18'13 direct minimum elong 0°8 -7718 Dec 01 j 17:56 -7723 Jun 08 j 06:26 max. Earth dist. 15°**≏**33'37 6.06590 AU -7723 Jun 10 j 18:06 0°**8**32'39 evening set morning rise -7718 Dec 14 j 02:38 18°**≏**28'22 -7717 Feb 05 j 04:48 0°M conjunction -7723 Jun 23 j 19:27 3°**8**25'34 0°45'55 retrograde -7717 Apr 24 j 17:01 8°M27'30 minimum elong -7723 Jun 23 j 19:24 3°**8**25'32 0°46'09 min. Earth dist. -7717 Jun 23 j 08:47 3°M31'17 4.05094 AU max. Earth dist. -7723 Jun 22 j 13:59 3°**8**09'15 6.35406 AU opposition -7717 Jun 24 j 05:55 3°M24'13 -1°07'50 morning rise -7723 Jul 06 j 17:19 6°**8**16'46 -7717 Jul 22 j 11:59 30°**₹**Ω -7723 Aug 17 j 16:45 15°8 direct -7717 Aug 21 j 13:52 28°**♀**30'07

-7723 Nov 04 j 03:50

retrograde

23°**8**27'19

-7717 Sep 20 j 13:55

0°M

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 17 Attention, astronomical year style is used: The year -7717 in astronomical counting style is the year 7718 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	ne year -7717 i	n astronomical co	ounting style is the year	r 7718 BCE in historical c	ounting style.	
	-7717 Dec 12 j 16:46	15° ™		minimum elong	-7711 Jun 28 j 06:47	7° 8 55'51	0°52'19
evening set	-7717 Dec 23 j 15:18	17°M32'33		morning rise	-7711 Jul 11 j 03:25	10° 8 46'33	
					-7711 Jul 30 j 16:16	15° 8	
conjunction	-7716 Jan 06 j 01:02	20°M41'42		retrograde	-7711 Nov 08 j 14:59	27° 8 58'05	
minimum elong	-7716 Jan 06 j 00:56	20° M 41'39		opposition	-7710 Jan 07 j 23:25	23° 8 06'10	1°43'15
max. Earth dist.	-7716 Jan 07 j 14:18	21°M03'40	6.04842 AU	min. Earth dist.	-7710 Jan 08 j 23:15	22° 8 58'31	4.35510 AU
morning rise	-7716 Jan 19 j 13:50	23°M52'29		direct	-7710 Mar 11 j 11:51	18° 8 04'47	
	-7716 Feb 15 j 12:16	0° ∡			-7710 Jun 18 j 05:37	0°II	
retrograde	-7716 May 30 j 02:00	13° ∡ 754'11		evening set	-7710 Jul 16 j 21:11	6° Ⅱ 08'27	
opposition	-7716 Jul 28 j 21:55	8° ∡ ¹49'03		max. Earth dist.	-7710 Jul 28 j 00:29	8° Ⅱ 37'20	6.34264 AU
min. Earth dist.	-7716 Jul 27 j 21:01		4.06144 AU				
direct	-7716 Sep 25 j 01:23	3° ₹ 52'02		conjunction	-7710 Jul 29 j 12:12	8° Ⅱ 57'18	
evening set	-7715 Jan 28 j 11:39	22° ₹ 59'27		minimum elong	-7710 Jul 29 j 12:08	8° Ⅱ 57'16	1°25'17
				morning rise	-7710 Aug 11 j 00:39	11° Ⅱ 44'58	
conjunction	-7715 Feb 11 j 02:41	26° ₹ 09'08		retrograde	-7710 Dec 10 j 18:44	29° Ⅱ 11'04	201.512.1
minimum elong	-7715 Feb 11 j 02:40	26° ₹ 09'07		opposition	-7709 Feb 09 j 15:40	24° Ⅱ 19'33	
max. Earth dist.	-7715 Feb 12 j 17:11	26° ₹ 31'30	6.08443 AU	min. Earth dist.	-7709 Feb 10 j 17:16	24° Ⅱ 11′26	4.32173 AU
morning rise	-7715 Feb 24 j 19:45	29° ∡ 19'43		direct	-7709 Apr 13 j 00:55	19° Ⅱ 21'02	
. 1	-7715 Feb 27 j 17:48	0°る			-7709 Jul 13 j 11:12	0°95	
retrograde	-7715 Jul 04 j 02:52	18°る51'22	201.5140	evening set	-7709 Aug 17 j 02:27	7°527'25	6.00000 444
opposition	-7715 Sep 01 j 12:07	13°る46'57		max. Earth dist.	-7709 Aug 28 j 05:06	9° © 58'18	6.28879 AU
min. Earth dist.	-7715 Aug 31 j 14:42		4.11999 AU			10001211	1000110
direct	-7715 Oct 30 j 03:51	8°る46'29		conjunction	-7709 Aug 29 j 12:47	10°516'17	
evening set	-7714 Mar 06 j 04:11	27° 3 45'35		minimum elong	-7709 Aug 29 j 12:47	10°5016'17	1°33'44
	-7714 Mar 16 j 00:42	0° ≈		morning rise	-7709 Sep 10 j 22:15	13°504'50	
	771434 10:21 42	0052102	1022147	. 1	-7709 Dec 17 j 11:55	0° Ω	
conjunction	-7714 Mar 19 j 21:43	0°≈53'03		retrograde	-7708 Jan 13 j 03:26	1° Ω 05'00	
minimum elong	-7714 Mar 19 j 21:48	0°≈53'05		•,•	-7708 Feb 08 j 21:43	30°R≌	2007154
max. Earth dist.	-7714 Mar 20 j 22:50	1°≈07'21	6.16017 AU	opposition	-7708 Mar 14 j 09:50		
morning rise	-7714 Apr 02 j 15:18	4°≈00'20		min. Earth dist.	-7708 Mar 15 j 03:50	26°906'11	4.25098 AU
ratra ara da	-7714 May 25 j 00:50	15° ≈ 22° ≈ 42'16		direct	-7708 May 14 j 23:05	21° © 16'18 0° Ω	
retrograde	-7714 Aug 06 j 16:17	22°≈42′16 17°≈40'47	1920122	ovening get	-7708 Aug 03 j 06:15	9° Ω 32'23	
opposition min. Earth dist.	-7714 Oct 04 j 20:15 -7714 Oct 04 j 10:54		4.20475 AU	evening set max. Earth dist.	-7708 Sep 16 j 15:55 -7708 Sep 28 j 11:26		6.20730 AU
min. Earth dist.	•	17°≈43'37 15°R≈	4.204/3 AU	max. Earth dist.	-//08 Sep 28 J 11:26	12-861544	6.20/30 AU
direct	-7714 Oct 25 j 17:37 -7714 Dec 03 j 15:50	13 k≈ 12°≈37'40		conjunction	-7708 Sep 29 j 03:49	120 025112	1012120
direct	-7713 Jan 12 j 00:09	12 ≈3740 15°≈		minimum elong	-7708 Sep 29 j 03:49	$12^{\circ}\Omega 25^{\circ}12$	
	-7713 Apr 04 j 18:24	0° ∺		minimum ciong	-7708 Oct 10 j 08:03	12 δί 23 13	1 13 34
evening set	-7713 Apr 04 j 18:24 -7713 Apr 10 j 16:57	1°) 18'57		morning rise	-7708 Oct 10 j 08:03		
evening set	-//13 Apr 10 J 10.3/	1 /(103/		morning rise	-7708 Oct 11 j 10.29 -7708 Dec 24 j 21:32	0° m)	
conjunction	-7713 Apr 24 j 09:03	4°) 22'13	0°46'13	retrograde	-7707 Feb 16 j 01:00	4° Mg 04'46	
minimum elong	-7713 Apr 24 j 09:07	4°) €22'15	0°46'30	retrograde	-7707 Apr 11 j 15:14	4 11√04 40 30°RΩ	
max. Earth dist.	-7713 Apr 24 j 14:04	4° ¥ 25'01	6.24808 AU	opposition	-7707 Apr 18 j 08:21	29° Ω 08'32	1°19'35
morning rise	-7713 May 07 j 22:59	7° ∺ 24'18	0.24808 AU	min. Earth dist.	-7707 Apr 18 j 13:59	$29^{\circ} \Omega 06'43$	4.16356 AU
retrograde	-7713 Sep 07 j 19:16	25°) 17'13		direct	-7707 Jun 17 j 17:18	24°Ω15'06	4.10330 AC
opposition	-7713 Nov 06 j 03:50	20°) 19'35	-0°32'46	direct	-7707 Aug 19 j 05:14	0° m)	
min. Earth dist.	-7713 Nov 06 j 07:17	20° X 18'26	4.28733 AU	evening set	-7707 Oct 19 j 08:03	12° Mp 46'15	
direct	-7712 Jan 06 j 04:23	15° H 15'26	4.20733 AO	evening set	-7707 Oct 17 J 00.03	12 110 10 13	
asc. node	-7712 Jan 00 j 04:23	29° X 52'31		conjunction	-7707 Nov 01 j 02:28	15° m) 45'36	0°29'31
use. Houe	-7712 Apr 26 j 22:39	0°Υ		minimum elong	-7707 Nov 01 j 02:31	15° m) 45'37	0°29'43
evening set	-7712 May 13 j 16:54	3° Υ 37'52		max. Earth dist.	-7707 Nov 01 j 04:49	15° Mp 46'58	6.12250 AU
max. Earth dist.	-7712 May 26 j 09:28	6° Υ 26'12	6.31967 AU	morning rise	-7707 Nov 13 j 23:37	18° Mp 46'29	0.12230 710
max. Lartii dist.	7712 May 20 J 07.20	0 1 20 12	0.51707 110	morning rise	-7706 Jan 05 j 00:46	0° ⊽	
conjunction	-7712 May 27 j 02:28	6° Ƴ 35'37	0°04'01	retrograde	-7706 Mar 24 j 02:22	ა – 8° ჲ 18'04	
minimum elong	-7712 May 27 j 02:27	6° Υ 35'36	0°04'01	opposition	-7706 May 24 j 03:41	3° ⊆ 17'51	0°02'17
behind sun begin	-7712 May 26 j 18:22	6° Υ 31'09	0 0401	min. Earth dist.	-7706 May 23 j 17:11	3° 2 21′18	4.08778 AU
behind sun end	-7712 May 27 j 10:31	6° Υ 40'03		desc. node	-7706 Jun 03 j 22:09	1° ≏ 54'22	4.00770710
morning rise	-7712 Jun 09 j 08:49	9° Υ 31'40		acce. Hour	-7706 Jun 20 j 20:20	30°RM)	
retrograde	-7712 Juli 09 j 08:49	26° Υ 52'08		direct	-7706 Jul 20 j 20:20	28° My 24'55	
opposition	-7712 Dec 07 j 00:01	20 γ 52 08 21° γ 58'02	0°41'48	anoot	-7706 Aug 22 j 10:30	0° ⊽	
min. Earth dist.	-7712 Dec 07 j 16:57	21 Y 58 02 21° Y 52'30	4.34257 AU	evening set	-7706 Aug 22 j 10:30	0 ♣ 17°♣13'49	
direct	-7711 Feb 07 j 02:01	16° Υ 54'34	1.5725 / AU	evening set	1100 110V 22 J 10.01	11 -1349	
direct	-7711 Feb 07 J 02.01 -7711 May 22 j 16:19	0° 8		conjunction	-7706 Dec 05 j 19:15	20° ≏ 19'34	-0°25'45
evening set	-7711 Jun 15 j 06:46	5° 8 03'31		minimum elong	-7706 Dec 05 j 19:13	20° ⊆ 19'33	
max. Earth dist.	-7711 Jun 26 j 23:58	7° 8 38'47	6.35399 AU	max. Earth dist.	-7706 Dec 05 j 19:13	20° ⊆ 33'52	6.06293 AU
man. Durin dist.	,,11 Jun 20 J 25.50	, 03047	5.55577 AU	morning rise	-7706 Dec 19 j 01:41	20 ⊆ 33 32 23° ⊆ 27'10	5.55275 AU
conjunction	-7711 Jun 28 j 06:51	7° 8 55'53	0°52'03	morning 1150	-7705 Jan 16 j 20:41	0°M₁	
	20 , 00.01	. 30000			10 1 20.71	÷ 11•	

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7705 in astronomical counting style is the year 7706 BCE in historical counting style. -7705 Apr 29 i 19:35 13°M27'49 evening set -7699 Jun 19 i 19:28 9°835'09 retrograde 8°ML31'13 4.05075 AU -7705 Jun 28 j 08:10 -7699 Jul 01 j 09:42 12°**8**08'54 min. Earth dist. max. Earth dist. 6.35547 AU 8°M24'11 -1°17'50 -7705 Jun 29 j 05:10 opposition -7699 Jul 02 j 18:02 0°57'53 direct -7705 Aug 26 j 12:23 3°M,29'46 12°**8**26'49 conjunction -7699 Jul 02 j 17:57 12°**8**26'47 -7705 Nov 25 j 04:59 15°M minimum elong 0°58'11 22°M33'09 -7699 Jul 14 j 06:45 15°8 evening set -7705 Dec 28 j 16:07 -7699 Jul 15 j 13:21 15°**8**16'52 morning rise -7704 Jan 11 j 02:36 -7699 Oct 03 j 18:13 conjunction 25°M42'31 -1°12'24 $0^{\circ}\Pi$ minimum elong -7704 Jan 11 j 02:31 25°M42'28 1°12'48 retrograde -7699 Nov 13 j 03:51 2°**I**I28'46 max. Earth dist. -7704 Jan 12 j 15:46 26° ML04'226.05077 AU -7699 Dec 24 j 01:11 30°₽₩ morning rise -7704 Jan 24 j 16:18 28° M $_{53'30}$ opposition -7698 Jan 12 j 13:11 27°**8**36'57 1°49'52 -7704 Jan 29 j 10:40 -7698 Jan 13 j 14:18 0°**∡**7 min. Earth dist. 27°**8**28'55 4.35404 AU -7704 Jun 03 j 23:01 retrograde 18°**х** 52'59 direct -7698 Mar 16 j 03:08 22°**8**35'53 opposition -7704 Aug 02 j 18:03 13°**∡**¹47'49 -2°09'30 -7698 May 30 j 03:26 $0^{\circ}II$ min. Earth dist. -7704 Aug 01 j 16:40 13°**х**⁴56′28 4.06638 AU evening set -7698 Jul 21 j 07:06 10°**Ⅲ**38'53 direct -7704 Sep 29 j 20:58 8°**х** 50′22 max. Earth dist. -7698 Aug 01 j 09:27 13°**Ⅲ**07′28 6.33872 AU evening set -7703 Feb 02 j 13:55 27°**х** 57′51 -7703 Feb 11 j 09:10 0°る conjunction -7698 Aug 02 j 21:11 $13^{\circ} \Pi 27'28$ 1°27'38 minimum elong -7698 Aug 02 j 21:08 13°**Ⅲ**27′26 1°28'06 conjunction -7703 Feb 16 j 05:30 1°る07'28 -1°32'22 morning rise -7698 Aug 15 j 08:51 16°**Ⅱ**14'57 minimum elong -7703 Feb 16 j 05:29 1°る07'28 1°32'53 -7698 Oct 25 j 21:58 max. Earth dist. -7703 Feb 17 j 18:01 1°る28'39 6.09144 AU retrograde -7698 Dec 15 i 08:32 3°5544'12 morning rise -7703 Mar 01 j 22:52 4°る17'50 -7697 Feb 05 i 09:20 30°RⅡ retrograde -7703 Jul 08 j 21:30 23°る44'18 opposition -7697 Feb 14 i 08:03 28°II52'29 2°16'48 min. Earth dist. -7703 Sep 05 j 09:40 18°る46'44 4.12830 AU min. Earth dist. -7697 Feb 15 j 08:13 28°**Ⅱ**44'48 4.31516 AU -7703 Sep 06 j 04:46 18°る40'12 -2°13'21 -7697 Apr 17 j 14:25 23°**Ⅲ**54'19 direct opposition -7703 Nov 04 j 00:25 13°**る**39'17 -7697 Jun 23 j 08:03 direct 0ംഉ -7697 Aug 21 j 12:02 12°901'05 -7702 Feb 27 j 11:54 0°≈≈ evening set -7702 Mar 11 j 04:36 2°≈37'20 evening set -7697 Sep 02 j 22:12 14°950'12 1°32'07 conjunction 5°≈44'31 -1°19'04 -7702 Mar 24 j 22:25 -7697 Sep 02 j 22:13 conjunction 14°**©**50'13 1°32'37 minimum elong -7702 Mar 24 j 22:29 -7697 Sep 01 j 16:47 5°≈44'34 1°19'31 max. Earth dist. 14°**©**33'28 6.27997 AU minimum elong -7702 Mar 25 j 21:59 5°≈57'56 6.16936 AU -7697 Sep 15 j 07:37 17°539'06 max. Earth dist. morning rise -7702 Apr 07 j 15:46 -7697 Nov 15 j 01:53 morning rise 8°≈51'21 0 $^{\circ}\Omega$ -7702 May 05 j 16:07 -7696 Jan 17 j 23:18 15°≈ retrograde 5°**Ω**44'40 -7702 Aug 11 j 05:50 -7696 Mar 19 j 05:43 0°**Ω**51'13 2°03'27 retrograde 27°≈27'09 opposition -7702 Oct 09 j 09:55 opposition 22°≈26′11 -1°31′31 min. Earth dist. -7696 Mar 19 j 23:18 0°**Ω**45'37 4.24021 AU min. Earth dist. -7702 Oct 09 j 01:28 22°≈29'03 4.21397 AU -7696 Mar 25 j 23:31 30°Rூ -7702 Dec 08 j 08:18 17°≈22'51 direct -7696 May 19 j 16:33 25°955'56 direct -7701 Mar 18 j 14:12 0°**)**€ -7696 Jul 11 j 10:03 $0^{\circ}\Omega$ -7701 Apr 15 j 13:38 6°¥02'27 evening set -7696 Sep 21 j 03:52 14° **Ω**13'30 evening set -7696 Sep 24 j 12:37 15°**Ω** -7701 Apr 29 j 05:03 9°\cdot\05'08 -0°39'37 conjunction -7701 Apr 29 j 05:06 9°\(\mathbf{1}\)05'10 0°39'51 -7696 Oct 03 j 16:21 17°**Ω**07'05 1°08'35 minimum elong conjunction -7701 Apr 29 j 05:59 9°**₭**05'40 6.25683 AU -7696 Oct 03 j 16:25 17°**Ω**07'08 1°08'58 max. Earth dist. minimum elong 12°\ 06'35 -7696 Oct 03 i 00:59 morning rise -7701 May 12 j 18:22 max. Earth dist. 16°Ω58'12 6.19552 AU -7701 Sep 12 i 07:47 retrograde 29° **)** 54'42 morning rise -7696 Oct 16 i 06:05 20°Ω01'28 opposition -7701 Nov 10 j 16:11 24°**)** 57'34 -0°22'12 -7696 Dec 01 i 12:52 0° m min. Earth dist. -7701 Nov 10 j 22:10 24°**)** 55'35 4.29483 AU retrograde -7695 Feb 20 i 23:24 8° m 54'05 direct -7700 Jan 10 i 21:29 19°**¥**53′23 opposition -7695 Apr 23 j 07:25 3° m 57'17 1°10'02 -7700 Mar 05 j 09:31 24° **H** 05'47 min. Earth dist. -7695 Apr 23 j 10:14 3° m 56'22 4.15154 AU asc node $0^{\circ}\Upsilon$ -7695 May 29 j 05:25 30°RΩ -7700 Apr 09 j 00:47 -7700 May 18 j 09:11 8°Y14'06 direct -7695 Jun 22 j 11:20 29°**Ω**03′59 evening set -7695 Jul 16 j 15:34 0° m conjunction -7700 May 31 j 17:42 11°Υ11'09 0°11'16 evening set -7695 Oct 24 j 00:46 17° m 37'40 -7700 May 31 j 17:42 11°**Υ**11'09 0°11'18 minimum elong -7700 May 31 j 11:45 11°**Y**07'52 conjunction -7695 Nov 05 j 20:29 20° m/38'02 0°22'03 behind sun begin -7700 May 31 j 23:38 11°**Y**14'25 -7695 Nov 05 j 20:31 behind sun end minimum elong 20° m 38'03 0°22'11 -7700 May 30 j 23:52 11°**Ƴ**01'17 max. Earth dist. 6.32548 AU max. Earth dist. -7695 Nov 06 j 02:39 20° Mp 41'39 6.11141 AU -7700 Jun 13 j 22:40 14° \bar{\gamma} 06' 26 morning rise morning rise -7695 Nov 18 j 18:50 23° m 39'58 0° 8 0∘**⊽** -7700 Sep 12 j 19:33 -7695 Dec 16 j 18:03 retrograde -7700 Oct 12 j 15:40 1°**8**24'29 retrograde -7694 Mar 29 j 07:03 13°**£**17'22 -7700 Nov 11 j 13:42 30°**₹**Υ desc. node -7694 Apr 14 j 05:39 12°**£**53'08 opposition -7700 Dec 11 j 12:06 26°**Y**30'43 0°51'44 opposition -7694 May 29 j 05:08 8° 216'37 -0°09'31 min. Earth dist. -7700 Dec 12 j 05:07 26°**Y**25′10 4.34644 AU min. Earth dist. -7694 May 28 j 17:54 8°**£**20′18 4.07845 AU -7699 Feb 11 j 15:10 21°Y27'27 -7694 Jul 27 j 05:00 3°**£**23'34 direct direct

-7694 Nov 27 j 15:18

22°**£**15'25

evening set

-7699 May 04 j 04:00

0°8

•	nical year style is used: Th		•	· / ·			ge 19
conjunction	-7694 Dec 10 j 19:30	25° £ 21'57		minimum elong	-7688 Jun 05 j 07:39	15° Y 44'18	0°18'25
minimum elong	-7694 Dec 10 j 19:27	25° £ 21'55		morning rise	-7688 Jun 18 j 11:22	18° Y 38'31	0 1623
_	,			morning rise	3	0° 8	
max. Earth dist.	-7694 Dec 11 j 21:15	25° Ω 37'09	6.05610 AU		-7688 Aug 14 j 06:43		
morning rise	-7694 Dec 24 j 03:17	28° £ 30′23 0° IL		retrograde	-7688 Oct 17 j 01:00	5° 8 52'13 0° 8 58'48	1°01'04
	-7694 Dec 30 j 12:50			opposition	-7688 Dec 15 j 22:47	. •	
	-7693 Mar 17 j 03:56	15°M		min. Earth dist.	-7688 Dec 16 j 17:57	0° 8 52'34	4.35667 AU
retrograde	-7693 May 04 j 22:36	18°M33'43 15°RM		J:4	-7688 Dec 23 j 12:52	30° ₹Υ 25° Υ 55'45	
i. Darde diet	-7693 Jun 22 j 21:55	•	4.04720 ATT	direct	-7687 Feb 16 j 05:40	0° 8	
min. Earth dist.	-7693 Jul 03 j 07:33 -7693 Jul 04 j 06:24	13°M37'27			-7687 Apr 11 j 09:44	14° 8 00'05	
opposition	,	13°M29'46 8°M35'01	-1-2/30	evening set	-7687 Jun 24 j 04:50 -7687 Jun 28 j 17:41	15° 8	
direct	-7693 Aug 31 j 10:24	15°M		max. Earth dist.	,	16° 8 32'48	6.36221 AU
avanina aat	-7693 Nov 04 j 08:49	27°M40'47		max. Earm dist.	-7687 Jul 05 j 17:29	10 03248	0.30221 AU
evening set	-7692 Jan 02 j 20:43 -7692 Jan 12 j 18:11	27 1164047 0° x 7		aaniumatian	-7687 Jul 07 j 02:07	16° 8 50'53	1°03'10
	-/092 Jan 12 J 18.11	0 X		conjunction minimum elong		16° 8 50'51	1°03'30
agniumation	7602 Ion 16:00:06	0° ∡ ′50′31	1917/00	morning rise	-7687 Jul 07 j 02:03	19° 8 40'05	1 03 30
conjunction	-7692 Jan 16 j 08:06	0° ₹ ′50′28		morning rise	-7687 Jul 19 j 19:56	19 3 4003	
minimum elong	-7692 Jan 16 j 08:01 -7692 Jan 17 j 21:46				-7687 Sep 08 j 14:40	6° П 51'03	
max. Earth dist.	,	1° х 12'39 4° х 01'45	6.05096 AU	retrograde	-7687 Nov 17 j 10:29	1° П 59'22	1055122
morning rise	-7692 Jan 29 j 22:31			opposition	-7686 Jan 16 j 23:24	1° Ц 39′22 1° Ц 51′22	
retrograde	-7692 Jun 09 j 00:43	23° х 59′28 18° х 54′19	2912100	min. Earth dist.	-7686 Jan 18 j 00:24	30°R 8	4.35699 AU
opposition	-7692 Aug 07 j 17:16	18 x 34 19		J:4	-7686 Feb 01 j 23:53		
min. Earth dist.	-7692 Aug 06 j 16:45 -7692 Oct 04 j 21:57		4.07019 AU	direct	-7686 Mar 20 j 12:42	26° 8 58'39 0° Ⅱ	
direct	,	13°矛56'23 0°る			-7686 May 05 j 18:35	15° Д 00'00	
avanina aat	-7691 Jan 25 j 08:30	3°る04'22		evening set max. Earth dist.	-7686 Jul 25 j 13:05	13° Д 00'00 17° Д 27'39	6.33741 AU
evening set	-7691 Feb 07 j 20:07	3 004 22		max. Earm dist.	-7686 Aug 05 j 13:28	1/ Щ2/39	0.33741 AU
conjunction	-7691 Feb 21 j 12:22	6° る 13'56	-1°32'27	conjunction	-7686 Aug 07 j 02:06	17° Ⅱ 48'11	1°29'48
minimum elong	-7691 Feb 21 j 12:23	6°る13'57		minimum elong	-7686 Aug 07 j 02:04	17° I I48'09	1°30'17
max. Earth dist.	-7691 Feb 23 j 01:14		6.09869 AU	morning rise	-7686 Aug 19 j 13:05	20°II35'25	1 30 17
morning rise	-7691 Mar 07 j 05:57	9° る 24'05	0.07007710	morning rise	-7686 Oct 03 j 14:46	0°95	
retrograde	-7691 Jul 13 j 18:42	28°る44'44		retrograde	-7686 Dec 19 j 20:13	8°907'18	
min. Earth dist.	-7691 Sep 10 j 05:48	23° る 47'30	4.13852 AU	opposition	-7685 Feb 18 j 20:06	3°9515'30	2°17'22
opposition	-7691 Sep 11 j 00:36	23° ට 41'04		min. Earth dist.	-7685 Feb 19 j 21:32	3°907'26	4.30955 AU
direct	-7691 Nov 08 j 22:39	18° පි 39'52	2 0, 51	mm. Barur dige.	-7685 Mar 18 j 22:10	30°RⅡ	50,00110
ancet	-7690 Feb 09 j 08:36	0°≈		direct	-7685 Apr 22 j 02:12	28° Ⅱ 17'40	
evening set	-7690 Mar 16 j 08:22	7° ≈ 36'00		un eet	-7685 May 26 j 01:00	0°9	
e venning sec	, 0, 0 1, 1ar 10 j 00.22	,		evening set	-7685 Aug 25 j 17:21	16°524'54	
conjunction	-7690 Mar 30 i 01:59	10° ≈ 42'38	-1°14'43	max. Earth dist.	-7685 Sep 05 j 22:08		6.27046 AU
minimum elong	-7690 Mar 30 j 02:03	10° ≈ 42'41	1°15'09		1 3		
max. Earth dist.	-7690 Mar 30 j 22:11	10° ≈ 54'06	6.18202 AU	conjunction	-7685 Sep 07 j 03:31	19° © 14'23	1°30'31
morning rise	-7690 Apr 12 j 19:09	13° ≈ 48'49		minimum elong	-7685 Sep 07 j 03:33	19° © 14'24	1°31'01
	-7690 Apr 18 j 02:06	15° ≈		morning rise	-7685 Sep 19 j 13:11	22° © 03'47	
	-7690 Jul 08 j 21:20	0°) €			-7685 Oct 26 j 05:16	$0^{\circ}\Omega$	
retrograde	-7690 Aug 15 j 21:47	2°) 17′06		retrograde	-7684 Jan 22 j 13:06	10° Ω 15'14	
	-7690 Sep 22 j 17:28	30° R ≈		opposition	-7684 Mar 23 j 21:16	5° Ω 21′25	1°58'25
opposition	-7690 Oct 14 j 01:59	27°≈16'40	-1°22'46	min. Earth dist.	-7684 Mar 24 j 13:08	5° Ω 16′22	4.22737 AU
min. Earth dist.	-7690 Oct 13 j 19:22	27° ≈ 18'54	4.22802 AU	direct	-7684 May 24 j 03:18	0° Ω 26′26	
direct	-7690 Dec 13 j 05:39	22° ≈ 13′08			-7684 Sep 08 j 20:46	15° Ω	
	-7689 Feb 26 j 20:47	0° ∀		evening set	-7684 Sep 25 j 12:20	18° Ω 46'41	
evening set	-7689 Apr 20 j 11:44	10°) (49′07					
				conjunction	-7684 Oct 08 j 01:38	21° Ω 41'15	
conjunction	-7689 May 04 j 02:31	13° ¥ 50′54		minimum elong	-7684 Oct 08 j 01:42	21° Ω 41'17	1°03'47
minimum elong	-7689 May 04 j 02:34	13° ¥ 50′56		max. Earth dist.	-7684 Oct 07 j 12:32	21° Ω 33'38	6.18060 AU
max. Earth dist.	-7689 May 04 j 02:46	13° 米 51′02	6.27161 AU	morning rise	-7684 Oct 20 j 16:18	24° Ω 36'43	
morning rise	-7689 May 17 j 14:37	16° 米 51′18			-7684 Nov 13 j 14:19	0° m	
	-7689 Jul 23 j 16:45	0° Υ		retrograde	-7683 Feb 25 j 21:59	13° m 37'16	
retrograde	-7689 Sep 16 j 18:11	4° Ƴ 32'27		opposition	-7683 Apr 28 j 03:35	8° Mp 40'00	1°00'19
	-7689 Nov 12 j 03:49	30° Ŗ ₩		min. Earth dist.	-7683 Apr 28 j 05:58	8° m 39'15	4.13545 AU
opposition	-7689 Nov 15 j 04:42	29°) ₹35'53		direct	-7683 Jun 27 j 04:10	3° Mp 46'48	
min. Earth dist.	-7689 Nov 15 j 11:20	29°) 33'41	4.30916 AU	evening set	-7683 Oct 28 j 15:54	22° m 24'54	
asc. node	-7688 Jan 14 j 05:51	24°) €31'58					
direct	-7688 Jan 15 j 13:08	24°) €31'48		conjunction	-7683 Nov 10 j 12:50	25° m 26'30	0°14'38
	-7688 Mar 18 j 16:02	0° Υ		minimum elong	-7683 Nov 10 j 12:51	25° m 26'31	0°14'44
evening set	-7688 May 23 j 00:43	12° Y 48′23		behind sun begin	-7683 Nov 10 j 09:22	25° m 24'29	
•							
max. Earth dist.	-7688 Jun 04 j 10:26	15° Ƴ 32'35	6.33819 AU	behind sun end	-7683 Nov 10 j 16:20	25° m/28'33	6.00.701
•		15° Υ 32'35 15° Υ 44'20	6.33819 AU 0°18'21	behind sun end max. Earth dist. morning rise	-7683 Nov 10 j 16:20 -7683 Nov 10 j 20:48 -7683 Nov 23 j 12:43	25° m/28'33 25° m/31'11 28° m/29'47	6.09581 AU

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 20 Attention, astronomical year style is used: The year -7683 in astronomical counting style is the year 7684 BCE in historical counting style.

Attention, astronomi	cal year style is used: Th	e year -7683 i	n astronomical cou	nting style is the year	7684 BCE in historical c	ounting style.	<i>0</i>
	-7683 Nov 29 j 23:43	0∘ ⊽		opposition	-7677 Nov 19 j 17:01	4° Υ 11'49	-0°00'49
desc. node	-7682 Feb 23 j 15:16	15° ≏ 58'23		min. Earth dist.	-7677 Nov 20 j 01:55	4° Υ 08'52	4.31990 AU
retrograde	-7682 Apr 03 j 08:37	18° ≏ 14'32		asc. node	-7677 Nov 23 j 22:32	3° Ƴ 38'18	
opposition	-7682 Jun 03 j 04:44	13° ≏ 13'18	-0°21'03		-7677 Dec 27 j 11:36	30° ₹ ₩	
min. Earth dist.	-7682 Jun 02 j 14:58		4.06499 AU	direct	-7676 Jan 20 j 05:44	29°) €07'44	
direct	-7682 Jul 31 j 23:12	8° ≏ 20'08			-7676 Feb 13 j 06:38	0°Υ	
evening set	-7682 Dec 02 j 14:32	27° £ 16'48		evening set	-7676 May 27 j 15:33	17° Y 21′30	
	-7682 Dec 14 j 02:55	0°M₊			### AD: 01:10	200001 005	000 5100
. ,.	7(02 D 15 : 20 01	0070 24110	0040120	conjunction	-7676 Jun 09 j 21:18	20°Υ16'35	
conjunction	-7682 Dec 15 j 20:01	0°M24'19		minimum elong	-7676 Jun 09 j 21:16	20° Y 16'34 20° Y 04'13	0°25'30 6.34577 AU
minimum elong max. Earth dist.	-7682 Dec 15 j 19:57 -7682 Dec 17 j 00:12	0° M 24'17 0° M 41'00	6.04598 AU	max. Earth dist. morning rise	-7676 Jun 08 j 22:55 -7676 Jun 22 j 23:25	20° \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	6.343// AU
morning rise	-7682 Dec 29 j 05:00	3°M33'44	0.04396 AU	morning rise	-7676 Jul 25 j 07:02	0° 8	
morning risc	-7681 Feb 19 j 16:13	15°M		retrograde	-7676 Oct 21 j 09:55	10° 8 21'15	
retrograde	-7681 May 10 j 02:36	23°M40'47		opposition	-7676 Dec 20 j 10:27	5° 8 28'13	1°10'15
min. Earth dist.	-7681 Jul 08 j 08:03		4.04177 AU	min. Earth dist.	-7676 Dec 21 j 06:33	5° 8 21'42	4.36068 AU
opposition	-7681 Jul 09 j 07:33	18°M36'26		direct	-7675 Feb 20 j 18:43	0° 8 25'28	
11	-7681 Aug 08 j 11:42	15°RM			-7675 Jun 12 j 14:43	15° 8	
direct	-7681 Sep 05 j 10:36	13°M41'17		evening set	-7675 Jun 28 j 15:57	18° 8 28'34	
	-7681 Oct 03 j 09:13	15° ™		max. Earth dist.	-7675 Jul 10 j 00:23	20° 8 59'10	6.36210 AU
	-7681 Dec 26 j 20:08	0° ∡ ¹					
evening set	-7680 Jan 08 j 01:56	2° х 50′04		conjunction	-7675 Jul 11 j 11:44	21° 8 18'47	1°08'15
				minimum elong	-7675 Jul 11 j 11:39	21° 8 18'44	1°08'36
conjunction	-7680 Jan 21 j 14:21	6° ₰ 00'14	-1°21'14	morning rise	-7675 Jul 24 j 04:30	24° 8 07'29	
minimum elong	-7680 Jan 21 j 14:17	6° ₹ 00′11	1°21'40		-7675 Aug 20 j 15:20	$\Pi^{\circ}0$	
max. Earth dist.	-7680 Jan 23 j 06:39	6° х 23′54	6.05031 AU	retrograde	-7675 Nov 21 j 23:28	11° Ⅱ 19'59	
morning rise	-7680 Feb 04 j 05:29	9° ∡ 11'46		opposition	-7674 Jan 21 j 13:11	6° Ⅱ 28'25	
retrograde	-7680 Jun 14 j 02:39	29° ∡ *07'15		min. Earth dist.	-7674 Jan 22 j 15:38	6° Ⅱ 19'58	4.35295 AU
opposition	-7680 Aug 12 j 16:39	24° ₹ 02'06		direct	-7674 Mar 25 j 03:19	1° Ⅱ 28'04	
min. Earth dist.	-7680 Aug 11 j 15:38		4.07471 AU	evening set	-7674 Jul 29 j 22:23	19° Ⅱ 29'53	6 220 62 AXX
direct	-7680 Oct 09 j 22:00	19° ₹ 03'41		max. Earth dist.	-7674 Aug 09 j 23:12	21° Ⅱ 58′04	6.32963 AU
	-7679 Jan 06 j 23:11	0°る			7674 4 11:10:40	220T1004	1021124
evening set	-7679 Feb 13 j 02:44	8° る 11'23		conjunction minimum elong	-7674 Aug 11 j 10:49 -7674 Aug 11 j 10:47	22° Ⅱ 18'04 22° Ⅱ 18'03	1°31'34
conjunction	-7679 Feb 26 j 19:17	11° る 20'42	1021140	morning rise	-7674 Aug 11 j 10:47 -7674 Aug 23 j 21:09	25° I 1803	1°32'05
minimum elong	-7679 Feb 26 j 19:18	11 32042 11° 3 20'43		morning rise	-7674 Sep 15 j 08:54	0°9	
max. Earth dist.	-7679 Feb 28 j 06:02		6.10762 AU	retrograde	-7674 Dec 24 j 11:09	12° © 42'10	
morning rise	-7679 Mar 12 j 13:12	14° る 30'31	0.10702110	opposition	-7673 Feb 23 j 13:37	7°950'13	2°17'14
	-7679 May 30 j 05:30	0°≈		min. Earth dist.	-7673 Feb 24 j 13:35		4.29866 AU
retrograde	-7679 Jul 18 j 14:08	3° ≈ 44'14		direct	-7673 Apr 26 j 16:09	2°552'52	
	-7679 Sep 06 j 01:11	30°R₹		evening set	-7673 Aug 30 j 04:05	21° © 02'02	
opposition	-7679 Sep 15 j 19:50	28° ප් 40'47	-2°05'23	max. Earth dist.	-7673 Sep 10 j 10:15	23°536'04	6.25737 AU
min. Earth dist.	-7679 Sep 15 j 02:06	28°る46'50	4.15055 AU				
direct	-7679 Nov 13 j 22:05	23° る 39'03		conjunction	-7673 Sep 11 j 14:13	23° © 52'04	1°28'19
	-7678 Jan 19 j 05:02	0° ≈		minimum elong	-7673 Sep 11 j 14:16	23°952'05	1°28'48
evening set	-7678 Mar 21 j 11:02	12° ≈ 32'14		morning rise	-7673 Sep 24 j 00:17	26°5942'11	
	-7678 Apr 01 j 09:03	15° ≈			-7673 Oct 08 j 16:45	$0^{\circ}\Omega$	
					-7672 Jan 24 j 12:53	15° Ω	
conjunction	-7678 Apr 04 j 04:41	15°≈38'16		retrograde	-7672 Jan 27 j 12:21	15° Ω 00'50	
minimum elong	-7678 Apr 04 j 04:46	15°≈38'18	1°10'15	•,•	-7672 Jan 30 j 11:49	15°R Ω	1050101
max. Earth dist.	-7678 Apr 04 j 23:46	15°≈49'03	6.19609 AU	opposition	-7672 Mar 28 j 19:37	10° Ω 06'41	1°52'21
morning rise	-7678 Apr 17 j 21:15	18° ≈ 43'36 0° 米		min. Earth dist. direct	-7672 Mar 29 j 10:39	10° Ω 01'53 5° Ω 12'03	4.21290 AU
retrograde	-7678 Jun 11 j 08:56 -7678 Aug 20 j 12:22	0 X 7° ¥ 03'47		direct	-7672 May 28 j 22:48 -7672 Aug 21 j 23:13	5 8ℓ 1205	
opposition	-7678 Oct 18 j 16:58	2° H 03'50	1012121	evening set	-7672 Sep 30 j 03:06	23° Ω 35'15	
min. Earth dist.	-7678 Oct 18 j 11:57		4.24226 AU	evening set	-7072 Sep 30 J 03.00	23 0633 13	
Larm dist.	-7678 Nov 03 j 12:06	2 7(0331 30°R≈	2 1220 710	conjunction	-7672 Oct 12 j 17:21	26° Ω 30'50	0°57'32
direct	-7678 Dec 18 j 00:37	27°≈00'07		minimum elong	-7672 Oct 12 j 17:26	26° Ω 30'53	0°57'52
	-7677 Jan 31 j 23:27	0° \		max. Earth dist.	-7672 Oct 12 j 07:07	26° Ω 24'53	6.16635 AU
evening set	-7677 Apr 25 j 08:21	15°) 32′19		morning rise	-7672 Oct 25 j 09:12	29° Ω 27'27	
5	1 - 3			5	-7672 Oct 27 j 17:34	0° m)	
conjunction	-7677 May 08 j 22:09	18°) 33′12	-0°25'38	retrograde	-7671 Mar 03 j 00:43	18° m 35'23	
minimum elong	-7677 May 08 j 22:11	18°) 33′13	0°25'47	opposition	-7671 May 03 j 05:49	13° m 37'39	0°49'35
max. Earth dist.	-7677 May 08 j 18:00	18°) 30′54	6.28468 AU	min. Earth dist.	-7671 May 03 j 04:58	13° m 37'55	4.12284 AU
morning rise	-7677 May 22 j 09:23	21°) 32′39		direct	-7671 Jul 02 j 00:42	8° m 44'41	
	-7677 Jul 01 j 16:06	0° Υ		evening set	-7671 Nov 02 j 12:45	27° m 25'46	
retrograde	-7677 Sep 21 j 04:59	9° Ƴ 07'57			-7671 Nov 13 j 10:50	0∘ ⊽	

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7671 in astronomical counting style is the year 7672 BCE in historical counting style. -7671 Nov 15 i 10:52 0°**2**8′20 0°06′45 morning rise -7665 May 26 j 23:56 26° ¥ 05'45 conjunction -7671 Nov 15 i 10:52 0°**£**28'21 0°06'48 -7665 Jun 13 j 23:19 $0^{\circ}\Upsilon$ minimum elong behind sun begin -7671 Nov 15 j 03:18 0°**£**23'54 -7665 Sep 25 j 13:21 13°Y36'49 retrograde -7665 Oct 05 j 00:46 0°**£**32'47 13°**Y**27′57 -7671 Nov 15 j 18:26 behind sun end asc. node 0°**£**35'04 -7665 Nov 24 j 02:29 8°**Y**41'13 max. Earth dist. -7671 Nov 15 j 22:17 6.08618 AU opposition 0°09'35 8°**Y**37'31 min. Earth dist. -7665 Nov 24 j 13:43 morning rise -7671 Nov 28 j 12:06 3°<u>₽</u>32'39 4.32619 AU 3°**Y**37'14 11°**≏**25'14 -7664 Jan 24 j 18:40 desc. node -7670 Jan 02 j 12:52 direct 21°**Y**49'50 retrograde -7670 Apr 08 j 14:41 23°**£**22'14 evening set -7664 Jun 01 j 03:55 24°\bar{Y}29'51 opposition -7670 Jun 08 j 08:38 18°**♀**20'27 -0°32'53 max. Earth dist. -7664 Jun 13 j 06:13 6.34798 AU min. Earth dist. -7670 Jun 07 j 17:02 18°**≏**25'38 4.05945 AU direct -7670 Aug 06 j 00:25 13°**£**27'10 conjunction -7664 Jun 14 j 08:19 24°**Y**44'17 0°32'05 -7664 Jun 14 j 08:16 24° Y $^{44'}$ 15 -7670 Nov 27 j 07:27 0°M minimum elong 0°32'15 -7664 Jun 27 j 09:16 27°Y36'59 evening set -7670 Dec 07 j 17:00 2° Mc25'34morning rise -7664 Jul 08 j 07:49 0°8 conjunction -7670 Dec 20 j 23:36 5°M33'36 -0°47'36 retrograde -7664 Oct 25 j 19:18 14°848'07 minimum elong -7670 Dec 20 j 23:31 5°M33'33 0°47'52 opposition -7664 Dec 24 j 21:19 9°**8**55'21 1°18'52 max. Earth dist. -7670 Dec 22 j 07:40 5°M52'34 6.04507 AU min. Earth dist. -7664 Dec 25 j 19:00 9°**8**48'21 4.35902 AU morning rise -7669 Jan 03 j 09:33 8°M43'26 direct -7663 Feb 25 j 07:09 4°852'50 -7669 Jan 30 j 21:54 15°M -7663 May 26 j 04:55 15°8 retrograde -7669 May 15 j 06:29 28°M50'01 evening set -7663 Jul 03 j 01:58 22°856'30 min. Earth dist. -7669 Jul 13 j 08:40 23°M53'45 4.04598 AU max. Earth dist. -7663 Jul 14 j 09:55 25°**8**27'06 6.35663 AU opposition -7669 Jul 14 i 09:14 23°M45'27 -1°44'37 direct -7669 Sep 10 j 11:24 18°ML49'57 conjunction -7663 Jul 15 i 20:41 25°**8**46'25 1°12'52 -7669 Dec 08 j 17:50 0°×7 minimum elong -7663 Jul 15 i 20:36 25°**8**46'23 1°13'15 -7668 Jan 13 j 07:10 7°**х** 58′13 morning rise -7663 Jul 28 j 12:13 28°834'52 evening set -7663 Aug 03 j 23:06 $0^{\circ}\Pi$ -7668 Jan 26 j 20:04 11°**₹**08'13 -1°24'43 -7663 Nov 26 j 11:29 15°**I**I50'43 conjunction retrograde -7668 Jan 26 j 20:00 -7662 Jan 26 j 03:33 10°**I**I59'13 2°05'25 minimum elong 11° 208'11 1°25'11 opposition -7668 Jan 28 j 11:28 -7662 Jan 27 j 05:42 10°**耳**50′53 4.34429 AU max. Earth dist. 11°**≯**31'17 6.05878 AU min. Earth dist. 14°**∡**°19′33 -7668 Feb 09 j 11:50 -7662 Mar 29 j 16:31 5°**Ⅱ**59'19 direct morning rise -7662 Aug 03 j 08:39 -7668 Apr 27 j 13:08 evening set 24°**I**102'52 0°궁 -7668 Jun 18 j 23:55 -7662 Aug 14 j 08:24 6.31836 AU 4°**る**09'19 max. Earth dist. 26°**Ⅲ**30'57 retrograde -7668 Aug 10 j 17:21 30°₽**⋌** -7668 Aug 17 j 13:18 -7662 Aug 15 j 20:18 26°**I**51'11 1°32'46 opposition 29°**₹**04'13 -2°17'10 conjunction -7668 Aug 16 j 12:38 -7662 Aug 15 j 20:17 min. Earth dist. 29°**✗**12'40 4.08660 AU minimum elong 26°**Ⅲ**51'10 1°33'16 -7668 Oct 14 j 21:21 -7662 Aug 28 j 06:24 29°**Ⅲ**38'47 direct 24°**х** 05′16 morning rise -7662 Aug 29 j 20:20 -7668 Dec 16 j 14:43 0°ਰ 0ಂತಾ evening set -7667 Feb 18 j 05:44 13°る10'20 retrograde -7662 Dec 29 j 06:11 17°9521'31 -7661 Feb 28 j 08:57 12°529'20 2°16'12 opposition conjunction -7667 Mar 03 j 22:45 16°る19'11 -1°30'31 min. Earth dist. -7661 Mar 01 j 08:10 12°**©**21'57 4.28562 AU -7667 Mar 03 j 22:47 16°る19'12 1°31'02 direct -7661 May 01 j 09:19 7°532'22 minimum elong -7667 Mar 05 j 08:44 16°る38'44 6.12186 AU -7661 Sep 03 j 16:19 25°9543'47 max. Earth dist. evening set -7667 Mar 17 j 16:29 19°**る**28'18 max. Earth dist. -7661 Sep 15 j 02:18 28°920'25 morning rise 6.24383 AU -7667 May 06 j 00:42 -7667 Jul 23 j 06:32 8°≈33'45 -7661 Sep 16 j 02:53 28°534'31 1°25'28 retrograde conjunction opposition -7667 Sep 20 j 11:10 3°≈30'44 -2°00'11 minimum elong -7661 Sep 16 i 02:56 28°934'33 1°25'57 -7661 Sep 22 i 07:56 min. Earth dist. -7667 Sep 19 i 19:38 3°≈36'02 4.16548 AU $0^{\circ}\Omega$ -7667 Oct 19 i 03:45 30°Rる morning rise -7661 Sep 28 i 13:21 1°**Ω**25'25 direct -7667 Nov 18 j 17:26 28°る28'39 -7661 Dec 05 i 05:19 15°Ω -7667 Dec 19 j 16:07 0°≈ -7660 Feb 01 i 11:24 19°Ω50'59 retrograde -7666 Mar 16 j 00:23 15°**≈** -7660 Apr 02 j 19:39 14°Ω56'22 1°45'23 opposition -7666 Mar 26 j 09:02 17°≈18'14 -7660 Apr 02 j 08:15 15°RΩ evening set min. Earth dist. -7660 Apr 03 j 07:46 14°**Ω**52'30 4.19982 AU -7660 Jun 02 j 17:50 conjunction -7666 Apr 09 j 02:19 20°≈23'32 -1°04'42 direct 10°Ω02'06 -7660 Jul 30 j 22:48 minimum elong -7666 Apr 09 j 02:24 20°≈23'35 1°05'04 15°Ω max. Earth dist. -7666 Apr 09 j 17:03 20°≈31'51 6.21041 AU evening set -7660 Oct 04 j 19:23 28° **Q**27'20 -7666 Apr 22 j 18:29 23°≈28'05 -7660 Oct 11 j 10:50 0° m morning rise -7666 May 22 j 21:52 0°**∀** -7666 Aug 24 j 21:54 11°**)** 40'55 -7660 Oct 17 j 10:27 1° My 23'48 0° 51'10 retrograde conjunction -7666 Oct 23 j 04:04 -7660 Oct 17 j 10:31 0°51'28 opposition 6°\dagger41'29 -1°04'10 minimum elong 1° Mp 23'50 min. Earth dist. -7666 Oct 23 j 01:05 6°**)** 42′29 4.25468 AU max. Earth dist. -7660 Oct 17 j 03:06 1° m, 19'30 6.15490 AU direct -7666 Dec 22 j 15:37 1°**)** 37'34 morning rise -7660 Oct 30 j 03:33 4° Mp 21'26 evening set -7665 Apr 30 j 00:53 20°****07'00 retrograde -7659 Mar 08 j 04:42 23° m 35'27 opposition -7659 May 08 j 08:48 18° **m** 37'02 0°38'23 conjunction -7665 May 13 j 13:52 23°**₭**07'08 -0°18'38 min. Earth dist. -7659 May 08 j 05:35 18° M 38'05 4.11366 AU -7665 May 13 j 13:54 23°**)**€07'09 0°18'46 -7659 Jul 07 j 00:01 13° Mp 44'06 minimum elong direct

-7659 Oct 27 j 21:38

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max. Earth dist.

-7665 May 13 j 06:52 23°**米** 03'16 6.29441 AU

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7659 in astronomical counting style is the year 7660 BCE in historical counting style. -7659 Nov 07 j 10:06 2°**2**26'49 -7653 May 18 j 06:00 27°**)** 42'14 0°11'33 evening set minimum elong -7659 Nov 11 j 02:38 -7653 May 18 j 00:10 27°\ 39'01 desc. node 3°<u>₽</u>18'48 behind sun begin 27°**)** 45′27 -7653 May 18 j 11:49 behind sun end -7659 Nov 20 j 09:31 27°**)**€36'34 5°**2**30'11 -0°01'20 max. Earth dist. -7653 May 17 j 19:45 6.30239 AU conjunction $0^{\circ}\Upsilon$ -7659 Nov 20 j 09:30 0°01'19 minimum elong 5°**£**30'11 -7653 May 28 j 14:24 -7659 Nov 20 j 01:21 0°Υ40'06 behind sun begin 5°**£**25'24 morning rise -7653 May 31 j 15:00 14°**Y**54'34 behind sun end -7659 Nov 20 j 17:39 5°**-**234'58 asc. node -7653 Aug 15 j 02:04 18°**Y**07'44 max. Earth dist. -7659 Nov 21 j 01:11 5°**£**39'25 6.08014 AU retrograde -7653 Sep 29 j 21:59 13° Y12'36morning rise -7659 Dec 03 j 11:58 8°**£**35'19 opposition -7653 Nov 28 j 13:19 0°20'02 retrograde -7658 Apr 13 j 19:08 28°**£**27'50 min. Earth dist. -7653 Nov 29 j 01:49 13°**Y**′08′29 4.33135 AU opposition -7658 Jun 13 j 11:24 23°**º**25'35 -0°44'26 direct -7652 Jan 29 j 07:51 8°**Y**08'45 26° Y20'26min. Earth dist. -7658 Jun 12 j 18:12 23°**₽**31'17 4.05720 AU evening set -7652 Jun 05 j 17:03 direct -7658 Aug 11 j 00:31 18°**♀**32'07 -7658 Nov 09 j 13:48 0°M conjunction -7652 Jun 18 j 20:07 29°**Υ**14'14 0°38'42 evening set -7658 Dec 12 j 19:11 7°M31'22 minimum elong -7652 Jun 18 j 20:04 29°**Y**14'12 0°38'54 max. Earth dist. -7652 Jun 17 j 16:47 28°**Y**59'07 6.34997 AU conjunction -7658 Dec 26 j 02:36 10°M39'42 -0°54'18 -7652 Jun 22 j 06:47 0°8 minimum elong -7658 Dec 26 j 02:31 10°M39'39 0°54'35 morning rise -7652 Jul 01 j 19:41 2°806'18 max. Earth dist. -7658 Dec 27 j 11:07 10°M58'54 6.04646 AU -7652 Sep 06 j 10:02 15°8 morning rise -7657 Jan 08 j 13:37 13°M49'52 retrograde -7652 Oct 30 j 06:02 19°**8**17'25 -7657 Jan 13 j 13:49 15°M -7652 Dec 24 j 20:41 15°R -7657 Mar 30 i 04:34 0°×7 opposition -7652 Dec 29 i 09:33 14°**8**25'01 1°27'10 -7657 May 20 j 07:21 3°**х** 55′03 min. Earth dist. -7652 Dec 30 i 08:27 14°**8**17'38 4.35793 AU retrograde -7657 Jul 10 j 17:30 30°RM direct -7651 Mar 01 i 21:10 9°**8**22'54 min. Earth dist. -7657 Jul 18 j 07:41 28°M58'51 4.05106 AU -7651 May 05 j 09:27 15°8 -7657 Jul 19 j 09:06 28°M250'15 -1°51'59 -7651 Jul 07 j 12:52 27°**8**26'46 evening set opposition direct -7657 Sep 15 j 11:19 -7651 Jul 18 j 18:04 29°**8**56'09 23°M.54'17 max Earth dist 6 35241 AU -7651 Jul 19 j 00:59 -7657 Nov 17 j 15:48 0°×7 0°Π -7656 Jan 18 j 11:03 13°**х** 02′04 evening set -7651 Jul 20 j 06:19 0°**Ц**16'20 1°17'08 conjunction -7656 Feb 01 j 00:48 -7651 Jul 20 j 06:15 16°**х** 12′00 -1°27′34 0°**Ⅱ**16′18 1°17'33 conjunction minimum elong -7651 Aug 01 j 20:57 -7656 Feb 01 j 00:45 16°**∡**11'58 1°28'03 3°**Ⅱ**04'32 minimum elong morning rise -7651 Dec 01 j 01:16 -7656 Feb 02 j 17:16 16°**✗**35'38 6.06707 AU 20°**Ⅲ**23′26 max. Earth dist. retrograde -7656 Feb 14 j 16:50 -7650 Jan 30 j 18:58 15°**耳**31'58 2°09'20 morning rise 19°**х** 23′04 opposition -7656 Apr 03 j 14:34 -7650 Jan 31 j 20:43 15°**Ⅲ**23'45 4.33764 AU 0°궁 min. Earth dist. -7656 Jun 23 j 21:55 9°**る**07'24 -7650 Apr 03 j 06:47 retrograde direct 10°**Ⅲ**32′29 min. Earth dist. -7656 Aug 21 j 09:51 4°る10'21 4.09729 AU evening set -7650 Aug 07 j 18:49 28°**Ⅲ**36'57 -7656 Aug 22 j 08:49 4°る02'29 -2°17'41 -7650 Aug 13 j 22:42 0ಂತಾ opposition -7656 Sep 26 j 02:36 30°R.**✓** max. Earth dist. -7650 Aug 18 j 20:56 1°506'40 6.30989 AU direct -7656 Oct 19 j 19:33 29°**х** 03′06 -7656 Nov 12 j 16:28 0°ರ conjunction -7650 Aug 20 j 06:05 1°525'23 1°33'26 -7655 Feb 23 j 08:03 18°**る**06'10 -7650 Aug 20 j 06:04 1°525'23 evening set minimum elong 1°33'56 -7650 Sep 01 j 15:42 4°9513'11 morning rise -7655 Mar 09 j 01:14 21°る14'36 -1°28'39 -7649 Jan 02 j 23:59 22°9500'58 conjunction retrograde -7655 Mar 09 j 01:17 21°る14'38 1°29'09 -7649 Mar 05 j 04:20 17°508'35 2°14'20 minimum elong opposition max. Earth dist. -7655 Mar 10 j 08:17 21°る32'24 6.13399 AU min. Earth dist. -7649 Mar 06 i 01:58 17°501'43 4.27598 AU morning rise -7655 Mar 22 j 19:07 24°る23'11 direct -7649 May 06 i 01:38 12°9512'07 -7655 Apr 17 j 02:10 0°≈ -7649 Sep 06 i 08:47 $0^{\circ}\Omega$ retrograde -7655 Jul 27 j 20:29 13°≈21'16 -7649 Sep 08 j 03:54 0°Ω24'33 evening set -7655 Sep 24 j 11:29 8°≈23'36 4.17793 AU min. Earth dist. -7655 Sep 25 j 01:51 8°≈18'42 -1°54'17 -7649 Sep 20 j 14:35 3°Ω15'47 1°22'08 opposition conjunction -7655 Nov 23 j 11:05 3°≈16'16 -7649 Sep 20 j 14:39 3°Ω15'49 1°22'36 direct minimum elong -7649 Sep 19 j 15:21 3°**Ω**02'25 6.23383 AU -7654 Feb 26 j 14:59 15°≈ max. Earth dist. -7654 Mar 31 j 07:04 22°≈03'21 morning rise -7649 Oct 03 j 01:46 6°Ω07'22 evening set -7649 Nov 13 j 02:47 15°**Ω** -7654 Apr 14 j 00:05 25°≈08'03 -0°59'09 retrograde -7648 Feb 06 j 10:14 24°**Ω**38'46 conjunction -7654 Apr 14 j 00:09 25°≈08'05 0°59'29 -7648 Apr 07 j 18:20 19°**Ω**43'38 1°37'47 minimum elong opposition -7654 Apr 14 j 11:26 -7648 Apr 08 j 04:08 19°**Ω**40'30 4.19000 AU max. Earth dist. 25°≈14'26 6.22245 AU min. Earth dist. 28°≈11'51 15°RΩ morning rise -7654 Apr 27 j 15:39 -7648 May 28 j 02:50 0°**)**€ -7648 Jun 07 j 12:38 14°**Ω**49'36 -7654 May 05 j 18:35 direct 15°€ retrograde -7654 Aug 29 j 10:05 16°**)** 18'19 -7648 Jun 17 j 22:22 -7654 Oct 27 j 15:49 11°**米**19′29 -0°54′24 -7648 Sep 25 j 03:57 0° m opposition min. Earth dist. -7654 Oct 27 j 15:43 11°**)** 19'30 4.26508 AU evening set -7648 Oct 09 j 10:06 3° Mp 16'00 direct -7654 Dec 27 j 08:19 6° **★**15'29 evening set -7653 May 04 j 17:53 24°**)** 42'46 conjunction -7648 Oct 22 j 02:17 6° Mp 13'17 0°44'35 -7648 Oct 22 j 02:20 6° m 13'19 0°44'50 minimum elong

max. Earth dist.

-7648 Oct 21 j 23:12

6° Mp 11'29 6.14632 AU

-7653 May 18 j 05:59 27° **€** 42'14 -0°11'28

conjunction

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7648 in astronomical counting style is the year 7649 BCE in historical counting style. morning rise -7648 Nov 03 j 20:23 9° m 11'47 -7642 May 02 j 12:08 2° ¥ 54'59 morning rise -7647 Mar 13 j 05:59 28° m 30'40 -7642 Sep 02 j 20:25 20°¥56′02 retrograde retrograde -7647 May 13 j 09:04 23° m 31'43 -7642 Nov 01 j 03:43 15°**)** 57'43 -0°44'19 0°27'08 opposition opposition -7647 May 13 j 04:02 -7642 Nov 01 j 04:29 min. Earth dist. 23° Mp 33'21 4.10696 AU min. Earth dist. 15°**¥**57'27 4.27327 AU -7647 Jul 11 j 20:30 -7642 Dec 31 j 23:03 direct 18° m 38'50 direct 10°**¥**53'38 -7647 Sep 20 j 22:35 desc. node 26° m 03'39 evening set -7641 May 09 j 11:14 29°**H** 19'17 -7641 May 12 j 13:05 $0^{\circ}\Upsilon$ -7647 Oct 10 j 13:30 0∘ଫ evening set -7647 Nov 12 j 05:30 7°**£**22'43 2°Y18'02 -0°04'14 conjunction -7641 May 22 j 22:10 conjunction -7647 Nov 25 j 05:52 10°**£**26'44 -0°09'08 minimum elong -7641 May 22 j 22:12 2°**Υ**18'03 0°04'16 2°**Y**13'35 minimum elong -7647 Nov 25 j 05:51 10°**≏**26'43 0°09'10 behind sun begin -7641 May 22 j 14:08 -7641 May 23 j 06:16 2°**Y**22'30 behind sun begin -7647 Nov 24 j 22:56 10°**£**22'39 behind sun end 2° Y 10'45 behind sun end -7647 Nov 25 j 12:46 10°**♀**30'47 max. Earth dist. -7641 May 22 j 09:03 6.30919 AU max. Earth dist. -7647 Nov 25 j 22:45 10°**≏**36'41 6.07572 AU morning rise -7641 Jun 05 j 06:07 5°Y15'10 morning rise -7647 Dec 08 j 09:42 13°**△**32'36 asc. node -7641 Jun 24 j 08:50 9°Y23'36 -7646 Mar 01 j 15:08 0°M retrograde -7641 Oct 04 j 09:06 22°**Y**39'36 retrograde -7646 Apr 18 j 19:24 3°M27'31 opposition -7641 Dec 03 j 00:50 17°**Y**44'55 0°30'24 -7646 Jun 06 j 08:14 min. Earth dist. -7641 Dec 03 j 15:32 17° Υ 40'06 4.33630 AU opposition -7646 Jun 18 j 11:02 28° **2**4'46 -0°55'23 direct -7640 Feb 02 j 23:29 12° Y 41'13 min. Earth dist. -7646 Jun 17 j 15:56 28°**♀**31'08 4.05553 AU -7640 Jun 06 j 08:00 0°8 direct -7646 Aug 15 j 21:55 23°**£**31'00 evening set -7640 Jun 10 j 06:18 0°851'36 -7646 Oct 20 i 06:08 0°M max. Earth dist. -7640 Jun 22 j 03:30 3°**8**28'55 6.35254 AU evening set -7646 Dec 17 i 18:45 12°MJ31'13 -7646 Dec 28 j 07:37 15°M conjunction -7640 Jun 23 i 08:05 3°**8**44'44 0°45'07 -7640 Jun 23 j 08:01 3°**8**44'42 0°45'21 minimum elong -7646 Dec 31 j 03:16 15°MJ39'54 -1°00'28 -7640 Jul 06 j 06:16 6°836'08 conjunction morning rise -7646 Dec 31 j 03:11 15°MJ39'51 1°00'47 -7640 Aug 15 j 12:44 15°8 minimum elong -7645 Jan 01 j 14:19 -7640 Nov 03 j 15:53 23°846'53 max. Earth dist. 16°M00'35 6.04757 AU retrograde -7645 Jan 13 j 14:58 -7639 Jan 02 j 22:11 18°M50'18 opposition 18°**8**54'38 1°34'58 morning rise 18°**8**47'19 4.35816 AU -7645 Mar 05 j 19:44 min. Earth dist. -7639 Jan 03 j 20:56 0°×7 8°**∡**′54′13 -7645 May 25 j 07:46 -7639 Feb 06 j 23:04 retrograde 15°R₩ 13°**8**52'47 -7645 Jul 23 j 05:42 -7639 Mar 06 j 09:57 min. Earth dist. 3°**≯**57'34 4.05499 AU direct -7645 Jul 24 j 06:10 3°**₹**49'16 -1°58'23 -7639 Apr 03 j 01:15 15°8 opposition -7645 Aug 25 j 15:33 -7639 Jul 03 j 03:40 30°R,ML $0^{\circ}\Pi$ -7645 Sep 20 j 09:05 -7639 Jul 11 j 23:09 direct 28°M52'50 evening set 1°**I**I55′59 max. Earth dist. -7639 Jul 23 j 03:54 4°**Ⅲ**25′18 -7645 Oct 16 j 03:38 0°**√** 6.35003 AU 18°**∡**¹00'47 -7644 Jan 23 j 13:03 evening set conjunction -7639 Jul 24 j 15:27 4°II45'07 1°20'57 conjunction -7644 Feb 06 j 03:19 21° 🗷 10'40 -1°29'43 minimum elong -7639 Jul 24 j 15:23 4°**Ⅱ**45′05 1°21'23 minimum elong -7644 Feb 06 j 03:17 21°**∡**10′39 1°30'13 morning rise -7639 Aug 06 j 04:58 7°**Ⅲ**32'57 max. Earth dist. -7644 Feb 07 j 18:11 21°**✗**33′20 6.07322 AU retrograde -7639 Dec 05 j 14:53 24°**Ⅲ**54'13 -7644 Feb 19 j 19:57 24°**∡**′21′38 -7638 Feb 04 j 10:06 20°II02'44 2°12'27 morning rise opposition -7644 Mar 15 j 19:39 0°궁 min. Earth dist. -7638 Feb 05 j 12:08 19°**I**I54'27 4.33265 AU -7644 Jun 28 j 15:24 14°る01'10 -7638 Apr 07 j 21:35 15°**Ⅱ**03'39 retrograde direct -7644 Aug 26 j 03:20 9°る04'13 4.10525 AU -7638 Jul 29 j 00:01 0ಂತಾ min. Earth dist. opposition -7644 Aug 27 j 01:58 8°중56'28 -2°17'15 evening set -7638 Aug 12 j 04:06 3°9508'14 direct -7644 Oct 24 i 14:00 3°る56'35 max. Earth dist. -7638 Aug 23 j 05:21 5°937'49 6.30236 AU evening set -7643 Feb 28 j 08:57 22°る58'49 conjunction -7638 Aug 24 j 14:48 5°956'45 1°33'33 minimum elong -7643 Mar 14 j 02:26 26°**ප**06'58 -1°26'10 -7638 Aug 24 j 14:48 5°956'45 1°34'04 conjunction -7643 Mar 14 i 02:29 26°**ප**07'00 1°26'39 -7638 Sep 06 j 00:21 8°9544'46 minimum elong morning rise -7643 Mar 15 j 06:40 26°る23'08 6.14320 AU -7637 Jan 07 j 17:05 26°937'20 max. Earth dist. retrograde -7643 Mar 27 j 20:17 29°る15'09 -7637 Mar 09 j 22:36 morning rise opposition 21°9544'37 2°11'40 -7643 Mar 31 j 03:32 0°22 min. Earth dist. -7637 Mar 10 j 18:38 21°**©**38'15 4.26624 AU -7643 Jun 17 j 16:56 15°≈ direct -7637 May 10 j 16:19 16°5548'29 retrograde -7643 Aug 01 j 12:12 18°≈07'01 -7637 Aug 21 j 00:52 $0^{\circ}\Omega$ 5°**Ω**02'10 -7643 Sep 15 j 04:22 15°R≈ evening set -7637 Sep 12 j 14:31 -7643 Sep 29 j 16:00 13°≈04'55 -1°47'42 -7637 Sep 24 j 05:53 7°**Ω**42'37 6.22278 AU opposition max. Earth dist. -7643 Sep 29 j 04:21 min. Earth dist. 13°≈08'53 4.18737 AU -7637 Sep 25 j 01:46 7°**Ω**54'04 1°18'20 direct -7643 Nov 28 j 06:06 8°≈02'10 conjunction -7637 Sep 25 j 01:50 1°18'45 -7642 Feb 06 j 15:24 15°≈ minimum elong 7°**Ω**54'07 evening set -7642 Apr 05 j 04:24 26°≈47'33 morning rise -7637 Oct 07 j 13:27 10°**Ω**46′24 -7637 Oct 26 j 08:22 15°€ conjunction -7642 Apr 18 j 21:11 29°≈51'48 -0°53'13 retrograde -7636 Feb 11 j 08:41 29°**Ω**24'05 minimum elong -7642 Apr 18 j 21:15 29°≈51'50 0°53'32 opposition -7636 Apr 12 j 16:14 24°**Ω**28'31 1°29'36 max. Earth dist. -7642 Apr 19 j 06:22 29°≈56'57 6.23160 AU min. Earth dist. -7636 Apr 13 j 00:50 24°**Ω**25'45 4.17818 AU

-7636 Jun 12 j 06:35

direct

19°**Ω**34'46

-7642 Apr 19 j 11:48

0°**)**€

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 24 Attention, astronomical year style is used: The year -7636 in astronomical counting style is the year 7637 BCE in historical counting style.

Attention, astronom	nical year style is used: Th	e year -7636 i	in astronomical co		7637 BCE in historical c	ounting style.	_
	-7636 Sep 07 j 17:44	0° m)		conjunction	-7630 Apr 23 j 20:29	4°){ 41'36	-0°46'51
evening set	-7636 Oct 14 j 00:51	8° Mp 03'21		minimum elong	-7630 Apr 23 j 20:33	4°) 41′38	
				max. Earth dist.	-7630 Apr 24 j 02:12	4°) 44'48	6.24529 AU
conjunction	-7636 Oct 26 j 17:55	11° m 01'34		morning rise	-7630 May 07 j 10:46	7°) 43′56	
minimum elong	-7636 Oct 26 j 17:58	11° m)01'36		retrograde	-7630 Sep 07 j 09:47	25°) 37′57	
max. Earth dist.	-7636 Oct 26 j 16:02	11° Mp 00'27	6.13479 AU	opposition	-7630 Nov 05 j 17:23	20°) (40′10	
morning rise	-7636 Nov 08 j 13:29	14° Mp 01'11		min. Earth dist.	-7630 Nov 05 j 20:23	20°) (39'10	4.28709 AU
. 1	-7635 Jan 28 j 23:05	0° ⊽		direct	-7629 Jan 05 j 18:23	15°) €36'04	
retrograde	-7635 Mar 18 j 06:36	3° Ω 26'17		1	-7629 Apr 25 j 20:34	0°Υ 1° 00 27120	
	-7635 May 06 j 07:07	30° ሺ መ 28° ሙ 26'45	0015120	asc. node	-7629 May 03 j 11:06	1° Y 37'30 3° Y 57'50	
opposition min. Earth dist.	-7635 May 18 j 09:27 -7635 May 18 j 01:46	28° Th 29'16		evening set	-7629 May 14 j 04:43	3 13/30	
direct	-7635 Jul 16 j 16:28	28 m/29 16 23° m/33'52	4.09038 AU	conjunction	-7629 May 27 j 14:36	6° Y 55'35	0°03'09
desc. node	-7635 Jul 31 j 22:21	23° m 56'59		minimum elong	-7629 May 27 j 14:36	6°Υ55'35	0°03'10
desc. node	-7635 Sep 20 j 06:49	0ಂ ⊽		behind sun begin	-7629 May 27 j 06:27	6° Υ 51'05	0 03 10
evening set	-7635 Nov 17 j 02:13	0 <u>−</u> 12° <u>₽</u> 20'40		behind sun end	-7629 May 27 j 22:45	7° Υ '00'04	
e venning see	7033 1101 17 J 02.13	12 —20 10		max. Earth dist.	-7629 May 27 j 00:41	6° Υ 47'53	6.32224 AU
conjunction	-7635 Nov 30 j 03:58	15° ≏ 25'36	-0°16'55	morning rise	-7629 Jun 09 j 21:03	9° Υ 51'36	0.52221110
minimum elong	-7635 Nov 30 j 03:56	15° Ω 25'35		retrograde	-7629 Oct 08 j 17:06	27° Υ 10'57	
max. Earth dist.	-7635 Dec 01 j 00:37	15° ≏ 37'48		opposition	-7629 Dec 07 j 12:09	22° Y 16'40	0°40'26
morning rise	-7635 Dec 13 j 08:54	18° ≏ 32'22		min. Earth dist.	-7629 Dec 08 j 03:02	22° Y 11'48	4.34773 AU
C	-7634 Feb 04 j 02:45	0°M		direct	-7628 Feb 07 j 12:54	17° Y °13′10	
retrograde	-7634 Apr 24 j 00:14	8°M31'05			-7628 May 20 j 18:34	0°8	
opposition	-7634 Jun 23 j 12:06	3°M27'58	-1°06'06	evening set	-7628 Jun 14 j 17:50	5° 8 19'53	
min. Earth dist.	-7634 Jun 22 j 16:45	3°M34'26	4.05029 AU	max. Earth dist.	-7628 Jun 26 j 11:21	7° 8 55'05	6.36134 AU
	-7634 Jul 22 j 10:34	30° Ŗ Ω					
direct	-7634 Aug 20 j 21:24	28° ჲ 33'56		conjunction	-7628 Jun 27 j 17:57	8° 8 12'00	0°51'07
	-7634 Sep 19 j 04:37	0° M		minimum elong	-7628 Jun 27 j 17:53	8° 8 11'58	0°51'24
	-7634 Dec 11 j 15:46	15° ™		morning rise	-7628 Jul 10 j 14:46	11° 8 02'26	
evening set	-7634 Dec 22 j 21:29	17° M 36'47			-7628 Jul 28 j 22:20	15° 8	
				retrograde	-7628 Nov 08 j 01:07	28° 8 11'06	
conjunction	-7633 Jan 05 j 06:53	20°M45'58		opposition	-7627 Jan 07 j 08:48	23° 8 19'05	1°41'56
minimum elong	-7633 Jan 05 j 06:48	20° M 45′55		min. Earth dist.	-7627 Jan 08 j 09:23	23° 8 11'12	4.36377 AU
max. Earth dist.	-7633 Jan 06 j 18:18	21°M06'50	6.04556 AU	direct	-7627 Mar 10 j 23:13	18° 8 17'31	
morning rise	-7633 Jan 18 j 19:40	23°M56'51		_	-7627 Jun 16 j 17:36	0°II	
	-7633 Feb 14 j 09:29	0° ∡ ¹		evening set	-7627 Jul 16 j 06:08	6°Ⅱ18'15	6.05150 AXX
retrograde	-7633 May 30 j 08:36	14° ∡ ′00′19	105660 177	max. Earth dist.	-7627 Jul 27 j 08:54	8° Ⅱ 46'29	6.35173 AU
min. Earth dist.	-7633 Jul 28 j 04:00		4.05668 AU		7(27 1 1 20 : 21 20	00110	102400
opposition	-7633 Jul 29 j 05:34	8° 🖈 55'17	-2*04*04	conjunction	-7627 Jul 28 j 21:20		
direct evening set	-7633 Sep 25 j 07:10 -7632 Jan 28 j 18:34	3° х 58′26 23° х 07′32		minimum elong morning rise	-7627 Jul 28 j 21:17 -7627 Aug 10 j 09:53	9° Ⅱ 06'47 11° Ⅱ 54'10	1-24 33
evening set	-/032 Jan 20 J 10.34	23 **0/32		retrograde	-7627 Aug 10 j 09:33	29° Ⅱ 16'43	
conjunction	-7632 Feb 11 j 09:33	26° ∡ 17'29	-1°31'16	opposition	-7626 Feb 08 j 21:32	24° I I25'08	2°14'37
minimum elong	-7632 Feb 11 j 09:31	26° × 17'28	1°31'46	min. Earth dist.	-7626 Feb 09 j 22:59	24° I 17'03	4.33042 AU
max. Earth dist.	-7632 Feb 12 j 23:41	26° × 39'41	6.07836 AU	direct	-7626 Apr 12 j 06:56	19° Ⅲ 26'23	4.55042 110
morning rise	-7632 Feb 25 j 02:35	29° ∡ 28′22	0.07050110		-7626 Jul 12 j 10:18	0.00	
morning not	-7632 Feb 27 j 09:30	0°る		evening set	-7626 Aug 16 j 09:14	7° © 30'22	
retrograde	-7632 Jul 03 j 14:06	19° පි 03'20		max. Earth dist.	-7626 Aug 27 j 11:19	10° © 00'38	6.29629 AU
opposition	-7632 Aug 31 j 22:31	13° る 58'55	-2°15'49		<u> </u>		
min. Earth dist.	-7632 Aug 31 j 01:34	14° පි 06'05	4.11329 AU	conjunction	-7626 Aug 28 j 19:37	10°9518'57	1°33'06
direct	-7632 Oct 29 j 13:56	8° る 58'38		minimum elong	-7626 Aug 28 j 19:37	10° © 18'57	1°33'37
evening set	-7631 Mar 05 j 13:16	27° る 59'48		morning rise	-7626 Sep 10 j 04:56	13° © 07'08	
	-7631 Mar 14 j 08:29	0° ≈			-7626 Dec 16 j 18:26	$0^{\circ}\Omega$	
				retrograde	-7625 Jan 12 j 07:28	1° Ω 04'18	
conjunction	-7631 Mar 19 j 07:03	1° ≈ 07'39	-1°23'01		-7625 Feb 07 j 21:13	30° ₹ 5	
minimum elong	-7631 Mar 19 j 07:07	1° ≈ 07'42	1°23'28	opposition	-7625 Mar 14 j 13:01	26° © 11'19	2°08'17
max. Earth dist.	-7631 Mar 20 j 10:36	1° ≈ 23′23	6.15383 AU	min. Earth dist.	-7625 Mar 15 j 09:27	26° © 04'49	4.25647 AU
morning rise	-7631 Apr 02 j 00:43	4° ≈ 15'19		direct	-7625 May 15 j 04:42	21° © 15'28	
	-7631 May 22 j 23:42	15° ≈		_	-7625 Aug 03 j 14:05	0 ° Ω	
retrograde	-7631 Aug 06 j 04:37	23° ≈ 00'08		evening set	-7625 Sep 16 j 21:17	9° Ω 30'40	
opposition	-7631 Oct 04 j 08:44	17°≈58'36				0 -	
min. Earth dist.	-7631 Oct 03 j 21:27		4.19980 AU	conjunction	-7625 Sep 29 j 08:58	12° Ω 23'17	
J 4	-7631 Oct 27 j 22:03	15°R≈		minimum elong	-7625 Sep 29 j 09:02	12° Ω 23'19	1°14'35
direct	-7631 Dec 03 j 02:02	12°≈55'40		max. Earth dist.	-7625 Sep 28 j 13:04		6.21018 AU
	-7630 Jan 08 j 17:49	15° ≈ 0°) €		marning ris-	-7625 Oct 10 j 16:49	15° Ω	
evening set	-7630 Apr 02 j 18:57 -7630 Apr 10 j 04:23	0° X 1° X 38'10		morning rise	-7625 Oct 11 j 21:35 -7625 Dec 25 j 09:59	15° Ω 16'31 0° m	
evening set	7050 Apr 10 J 04.23	1 1/3010			1023 DCC 23 J 07.39	עווי ∨	

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 25 Attention, astronomical year style is used: The year -7624 in astronomical counting style is the year 7625 BCE in historical counting style.

Attention, astronomi	cal year style is used: Th	e year -7624 i	n astronomical cou	nting style is the year	7625 BCE in historical co	ounting style.	
retrograde	-7624 Feb 16 j 02:19	4° ™ 01'17		evening set	-7618 Apr 15 j 02:25	6°) 24′26	
	-7624 Apr 10 j 06:48	30°R Ω					
opposition	-7624 Apr 17 j 10:21	29° Ω 05′11	1°21'08	conjunction	-7618 Apr 28 j 18:03	9° ∺ 27'04	-0°40'12
min. Earth dist.	-7624 Apr 17 j 16:48	29° Ω 03'07	4.16358 AU	minimum elong	-7618 Apr 28 j 18:07	9° ∺ 27'06	0°40'26
direct	-7624 Jun 16 j 19:31	24° Ω 11'36		max. Earth dist.	-7618 Apr 28 j 22:27	9° ∺ 29'31	6.25910 AU
	-7624 Aug 18 j 16:57	0° m		morning rise	-7618 May 12 j 07:17	12° ∺ 28′25	
evening set	-7624 Oct 18 j 12:54	12° m 43'47			-7618 Aug 30 j 05:28	0° Υ	
				retrograde	-7618 Sep 11 j 20:31	0° Υ 15'43	
conjunction	-7624 Oct 31 j 07:15	15° m 43'10	0°30'48		-7618 Sep 24 j 10:25	30° ₹ ₩	
minimum elong	-7624 Oct 31 j 07:18	15° Mp 43'12	0°30'59	opposition	-7618 Nov 10 j 05:54	25° 升 18′28	-0°23'17
max. Earth dist.	-7624 Oct 31 j 08:41	15° Mp 44'01	6.11970 AU	min. Earth dist.	-7618 Nov 10 j 10:02	25°) 17′06	4.29942 AU
morning rise	-7624 Nov 13 j 03:58	18° Mp 44'01		direct	-7617 Jan 10 j 09:58	20°) 14′23	
· ·	-7623 Jan 04 j 08:53	0∘ ⊽		asc. node	-7617 Mar 12 j 09:49	25°) 23′57	
retrograde	-7623 Mar 23 j 08:10	8° ≏ 16'43			-7617 Apr 07 j 19:48	$0^{\circ}\mathbf{\Upsilon}$	
opposition	-7623 May 23 j 07:27	3° ≏ 16'42	0°04'21	evening set	-7617 May 18 j 21:01	8° Ƴ 32'55	
min. Earth dist.	-7623 May 22 j 23:11	3° Ω 19'25	4.08228 AU	max. Earth dist.	-7617 May 31 j 11:21	11° Υ 19'43	6.33197 AU
desc. node	-7623 Jun 12 j 21:30	0° £ 43'06			, ,		
	-7623 Jun 19 j 19:22	30°₽ ™		conjunction	-7617 Jun 01 j 05:29	11° Ƴ 29'44	0°10'23
direct	-7623 Jul 21 j 11:08	28° m) 23'45		minimum elong	-7617 Jun 01 j 05:27	11° Υ 29'43	0°10'24
	-7623 Aug 21 j 19:02	0∘ ⊽		behind sun begin	-7617 May 31 j 23:05	11° Υ 26'12	
evening set	-7623 Nov 21 j 22:00	17° Ω 15'13		behind sun end	-7617 Jun 01 j 11:50	11° Y 33'14	
evening sec	, 025 1101 21 j 22.00	17 —10 15		morning rise	-7617 Jun 14 j 10:44	14° Υ 24'49	
conjunction	-7623 Dec 05 j 00:55	20° ჲ 21'14	-0°24'25	morning rise	-7617 Sep 10 j 10:00	0°8	
minimum elong	-7623 Dec 05 j 00:52	20° £ 21'12		retrograde	-7617 Oct 13 j 03:39	1° 8 40'42	
max. Earth dist.	-7623 Dec 05 j 00:32	20° ⊆ 34'23		retrograde	-7617 Nov 14 j 21:52	30°RY	
morning rise	-7623 Dec 18 j 07:22	23° ⊆ 29'09	0.03332710	opposition	-7617 Dec 11 j 23:27	26° Y 46′50	0°50'18
morning risc	-7622 Jan 15 j 21:13	0° M		min. Earth dist.	-7617 Dec 11 j 25:27	26° Υ 41'09	4.35419 AU
retrograde	-7622 Apr 29 j 02:27	13°M233'00		direct	-7617 Dec 12 j 10:34 -7616 Feb 12 j 03:49	20 γ 41 09 21° γ 43'30	4.33419 AU
opposition	-7622 Apr 29 j 02.27 -7622 Jun 28 j 12:12	8°M29'28	1016110	direct	-7616 May 02 j 06:03	0° 8	
	-						
min. Earth dist.	-7622 Jun 27 j 14:30		4.04182 AU	evening set	-7616 Jun 19 j 05:19	9° 8 48'29	(2(207 AII
direct	-7622 Aug 25 j 17:23	3°M35'09		max. Earth dist.	-7616 Jun 30 j 20:57	12 022 38	6.36387 AU
. ,	-7622 Nov 23 j 22:50	15°M			7616 1 1 02:04 14	120 420156	0056156
evening set	-7622 Dec 28 j 00:18	22°M41'52		conjunction	-7616 Jul 02 j 04:14	12° 8 39'56	
	# co. 1	2.50W 51110	1011120	minimum elong	-7616 Jul 02 j 04:10	12° 8 39'54	0°57'14
conjunction	-7621 Jan 10 j 10:45	25°M51'40			-7616 Jul 12 j 17:37	15° 8	
minimum elong	-7621 Jan 10 j 10:41	25°M51'37		morning rise	-7616 Jul 14 j 23:34	15° 8 29'42	
max. Earth dist.	-7621 Jan 12 j 00:01	26°M13′38	6.04143 AU		-7616 Oct 01 j 16:06	$\Pi^{\circ 0}$	
morning rise	-7621 Jan 24 j 00:23	29°M03'04		retrograde	-7616 Nov 12 j 10:29	2° ∏ 38'42	
	-7621 Jan 28 j 02:04	0°⊀			-7616 Dec 24 j 20:39		
retrograde	-7621 Jun 04 j 10:46	19° ∡ ¹06'35		opposition	-7615 Jan 11 j 21:08	27° 8 46'52	1°48'33
min. Earth dist.	-7621 Aug 02 j 03:46	14° ≯ 10′01	4.05743 AU	min. Earth dist.	-7615 Jan 12 j 21:40	27° 8 39'01	4.36244 AU
opposition	-7621 Aug 03 j 05:06	14° ≯ 01'23	-2°08'42	direct	-7615 Mar 15 j 10:28	22° 8 45'43	
direct	-7621 Sep 30 j 07:52	9° ∡ 04'03			-7615 May 28 j 15:46	Π $^{\circ}$ 0	
evening set	-7620 Feb 03 j 00:33	28° ≯ 14'15		evening set	-7615 Jul 20 j 15:17	10° ∏ 46′22	
	-7620 Feb 10 j 15:11	0°ප		max. Earth dist.	-7615 Jul 31 j 16:13	13° Ⅱ 13'55	6.34647 AU
conjunction	-7620 Feb 16 j 16:16	1° る 24'15		conjunction	-7615 Aug 02 j 05:22	13° Ⅱ 34'41	1°26'59
minimum elong	-7620 Feb 16 j 16:15	1° る 24'14		minimum elong	-7615 Aug 02 j 05:19	13° Ⅱ 34'39	1°27'27
max. Earth dist.	-7620 Feb 18 j 07:36		6.08385 AU	morning rise	-7615 Aug 14 j 17:12	16° Ⅱ 21'55	
morning rise	-7620 Mar 01 j 09:37	4° る 35'00			-7615 Oct 24 j 14:50	0 \circ	
retrograde	-7620 Jul 08 j 11:24	24° る 04'28		retrograde	-7615 Dec 14 j 15:14	3° 5 48'23	
opposition	-7620 Sep 05 j 18:37	19° る 00'17	-2°13'20		-7614 Feb 05 j 04:15	30°Ŗ Ⅱ	
min. Earth dist.	-7620 Sep 04 j 21:36	19° る 07'28	4.12286 AU	opposition	-7614 Feb 13 j 13:21	28° Ⅱ 56'47	2°16'13
direct	-7620 Nov 03 j 12:20	13° る 59'33		min. Earth dist.	-7614 Feb 14 j 15:41	28° Ⅱ 48'25	4.32154 AU
	-7619 Feb 25 j 10:05	0° ≈		direct	-7614 Apr 16 j 22:03	23° ∏ 58′27	
evening set	-7619 Mar 10 j 17:11	2° ≈ 58'41			-7614 Jun 22 j 05:45	0 \circ \odot	
				evening set	-7614 Aug 20 j 18:42	12° © 03'56	
conjunction	-7619 Mar 24 j 10:52	6° ≈ 05'59	-1°19'15	max. Earth dist.	-7614 Aug 31 j 21:22	14° © 34'58	6.28451 AU
minimum elong	-7619 Mar 24 j 10:57	6° ≈ 06'02	1°19'42				
max. Earth dist.	-7619 Mar 25 j 11:08	6° ≈ 19'48	6.16639 AU	conjunction	-7614 Sep 02 j 04:57	14° © 52'55	1°32'07
morning rise	-7619 Apr 07 j 04:29	9° ≈ 13'01		minimum elong	-7614 Sep 02 j 04:59	14° © 52'56	1°32'37
	-7619 May 03 j 11:26	15° ≈		morning rise	-7614 Sep 14 j 14:23	17°5541'39	
retrograde	-7619 Aug 10 j 20:33	27° ≈ 49'59			-7614 Nov 14 j 04:14	$0^{\circ}\Omega$	
opposition	-7619 Oct 09 j 00:45	22° ≈ 48′50	-1°32'06	retrograde	-7613 Jan 17 j 01:46	5° Ω 45'21	
min. Earth dist.	-7619 Oct 08 j 15:31	22° ≈ 51'57	4.21358 AU	opposition	-7613 Mar 19 j 09:05	0° Ω 52'03	2°04'00
direct	-7619 Dec 07 j 23:22	17° ≈ 45'32		min. Earth dist.	-7613 Mar 20 j 03:11	0° Ω 46'18	4.24265 AU
	-7618 Mar 16 j 08:05	0°)			-7613 Mar 26 j 05:45	30°Rூ	
	v						

-	nical year style is used: Th		•			, .	50 20
direct	-7613 May 19 j 19:43	-		conjunction	-7607 Mar 29 j 10:23	10° ≈ 54'33	-1°15'05
	-7613 Jul 11 j 13:12	$0^{\circ}\Omega$		minimum elong	-7607 Mar 29 j 10:27	10° ≈ 54'36	1°15'31
evening set	-7613 Sep 21 j 10:04	14° Ω 14'35		max. Earth dist.	-7607 Mar 30 j 08:49	11° ≈ 07'17	6.18183 AU
	-7613 Sep 24 j 17:00	15° Ω		morning rise	-7607 Apr 12 j 03:26	14°≈00'43	
					-7607 Apr 16 j 13:09	15° ≈	
conjunction	-7613 Oct 03 j 22:29	17° Ω 08′07	1°09'19		-7607 Jul 06 j 12:40	0° ∀	
minimum elong	-7613 Oct 03 j 22:33	17° Ω 08'10	1°09'43	retrograde	-7607 Aug 15 j 08:11	2°) 29′25	
max. Earth dist.	-7613 Oct 03 j 05:50	16° Ω 58′29	6.19573 AU		-7607 Sep 23 j 22:54	30° R ≈	
morning rise	-7613 Oct 16 j 11:57	20° Ω 02'24		opposition	-7607 Oct 13 j 12:30	27° ≈ 28'48	
	-7613 Dec 01 j 16:31	0° m)		min. Earth dist.	-7607 Oct 13 j 05:20		4.22795 AU
retrograde	-7612 Feb 21 j 04:56	8° m 54'48		direct	-7607 Dec 12 j 15:00	22°≈25'17	
opposition	-7612 Apr 22 j 11:11	3° m 58'17			-7606 Feb 25 j 03:15	0° ∺	
min. Earth dist.	-7612 Apr 22 j 16:22	3° m 56'37	4.14951 AU	evening set	-7606 Apr 19 j 20:14	11°) €00'43	
T'	-7612 May 28 j 14:28	30°R€			7(0())(02:11.02	1.40 1/ 0.212.2	0022124
direct	-7612 Jun 21 j 17:04	29° Ω 04'57		conjunction	-7606 May 03 j 11:02	14° ¥ 02'33	
	-7612 Jul 15 j 14:39	0° Т р 17° Т р40'18		minimum elong	-7606 May 03 j 11:05	14° ¥ 02'35	6.27123 AU
evening set	-7612 Oct 23 j 07:17	1/11/4018		max. Earth dist.	-7606 May 03 j 10:14	14° ★02'06 17° ★03'04	6.2/123 AU
agniumation	7612 Nov. 05 : 02:46	20° m/40'46	0°23'17	morning rise	-7606 May 16 j 23:31 -7606 Jul 21 j 18:42	1/°π03'04 0°Υ	
conjunction minimum elong	-7612 Nov 05 j 02:46 -7612 Nov 05 j 02:48	20° m) 40'47		retrograde	-7606 Sep 16 j 04:40	0 1 4° Υ 44'48	
max. Earth dist.	-7612 Nov 05 j 06:58	20° m/40'47' 20° m/43'14	6.10763 AU	renograde	-7606 Nov 13 j 02:56	4 1 44 46 30°R ∺	
morning rise	-7612 Nov 18 j 01:00	23° m/42'48	0.10703 AO	opposition	-7606 Nov 14 j 15:02	29°) 48′01	-0°12'57
morning risc	-7612 Dec 15 j 18:11	ე∘ <u>ი</u>		min. Earth dist.	-7606 Nov 14 j 21:54		4.30840 AU
retrograde	-7611 Mar 28 j 12:29	13° ≏ 21'32		direct	-7605 Jan 14 j 23:10	24°) 43'51	4.50040 AC
desc. node	-7611 Apr 22 j 16:23	13° ⊆ 21'32		asc. node	-7605 Jan 21 j 07:04	24°) 47'36	
opposition	-7611 May 28 j 10:48	8° £ 21'00	-0°07'35	use. Houe	-7605 Mar 17 j 18:10	0°Υ	
min. Earth dist.	-7611 May 27 j 23:10	8° Ω 24'49	4.07368 AU	evening set	-7605 May 23 j 09:42	13° Y ′00'31	
direct	-7611 Jul 26 j 09:27	3° ₽ 28'03			, , , , , , , , , , , , , , , , , , ,		
evening set	-7611 Nov 26 j 22:46	22° ≏ 21'57		conjunction	-7605 Jun 05 j 17:08	15° Y 56'38	0°17'19
	v			minimum elong	-7605 Jun 05 j 17:06	15° Ƴ 56'37	0°17'24
conjunction	-7611 Dec 10 j 02:51	25° ≙ 28'39	-0°32'03	max. Earth dist.	-7605 Jun 04 j 21:18	15° Ƴ 45'40	6.33714 AU
minimum elong	-7611 Dec 10 j 02:47	25° ≏ 28'37	0°32'13	morning rise	-7605 Jun 18 j 20:58	18° Ƴ 50'59	
max. Earth dist.	-7611 Dec 11 j 04:31	25° ≏ 43'51	6.05106 AU		-7605 Aug 13 j 10:23	$0^{\circ}S$	
morning rise	-7611 Dec 23 j 10:23	28° ≏ 37'14		retrograde	-7605 Oct 17 j 10:53	6° 8 05'13	
	-7611 Dec 29 j 08:00	0° M		opposition	-7605 Dec 16 j 08:50	1° 8 11'45	0°59'38
	-7610 Mar 15 j 11:05	15° ™		min. Earth dist.	-7605 Dec 17 j 03:29	1° 8 05'41	4.35538 AU
retrograde	-7610 May 04 j 07:05	18°M42'35			-7605 Dec 25 j 15:51	30° ŖƳ	
	-7610 Jun 23 j 09:43	15°RM		direct	-7604 Feb 16 j 14:22	26° Y ′08'40	
opposition	-7610 Jul 03 j 14:42	13° ™ 38'39			-7604 Apr 09 j 05:33	0° 8	
min. Earth dist.	-7610 Jul 02 j 16:10	13°M46'14	4.04256 AU	evening set	-7604 Jun 23 j 15:12	14° 8 13'35	
direct	-7610 Aug 30 j 19:23	8°M43'59			-7604 Jun 27 j 03:31	15° 8	
	-7610 Nov 02 j 19:56	15°M		max. Earth dist.	-7604 Jul 05 j 02:28	16° 8 45'38	6.36077 AU
evening set	-7609 Jan 02 j 05:00	27°M51'03			7604 7 1 06:12 40	170 40 40 5	1000117
	-7609 Jan 11 j 08:45	0° ∡ ¹		conjunction	-7604 Jul 06 j 12:40	17° 8 04'35	1°02'17
	7(00 I 15:16:20	1° ∡ 100'56	101717	minimum elong	-7604 Jul 06 j 12:36	17° 8 04'33	1°02'37
conjunction minimum elong	-7609 Jan 15 j 16:20 -7609 Jan 15 j 16:15	1°×'00'56		morning rise	-7604 Jul 19 j 07:00 -7604 Sep 06 j 17:55	19° 8 54′00 0° Ⅱ	
max. Earth dist.	-7609 Jan 17 j 08:00	1° × 700'33	6.04698 AU	retrograde	-7604 Nov 16 j 22:27	7° 耳 05'19	
morning rise	-7609 Jan 17 j 08:00	4° × 12'18	0.07090 AU	opposition	-7603 Jan 16 j 09:33	7 П 03 19 2° П 13'38	1°54'29
retrograde	-7609 Jun 09 j 10:48	24° x 11'27		min. Earth dist.	-7603 Jan 17 j 11:34	2° I 15'58	4.35555 AU
min. Earth dist.	-7609 Aug 07 j 01:45	19° × 1127	4.06744 AU	Durin dist.	-7603 Feb 03 j 11:00	30°R 8	
opposition	-7609 Aug 08 j 03:25	19° ∡ 06'15		direct	-7603 Mar 19 j 23:37	27° 8 12'48	
direct	-7609 Oct 05 j 07:04	14° ∡ *08′26			-7603 May 03 j 05:40	0°II	
	-7608 Jan 24 j 19:37	0°ප		evening set	-7603 Jul 25 j 00:29	15° Ⅱ 15′02	
evening set	-7608 Feb 08 j 04:38	3° ප 16'25		max. Earth dist.	-7603 Aug 05 j 01:59	17° Ⅱ 43'17	6.33626 AU
	v				•		
conjunction	-7608 Feb 21 j 20:36	6° る 25'57	-1°32'11	conjunction	-7603 Aug 06 j 13:56	18° Ⅱ 03'25	1°29'17
minimum elong	-7608 Feb 21 j 20:36	6° る 25'58	1°32'42	minimum elong	-7603 Aug 06 j 13:54	18° Ⅱ 03'24	1°29'47
max. Earth dist.	-7608 Feb 23 j 09:14	6°₹47′10	6.09705 AU	morning rise	-7603 Aug 19 j 01:01	20° Ⅲ 50'47	
morning rise	-7608 Mar 06 j 14:17	9° ප 36'10			-7603 Oct 01 j 17:48	0ංම	
retrograde	-7608 Jul 13 j 04:21	28° る 57'38		retrograde	-7603 Dec 19 j 05:48	8°522'39	
opposition	-7608 Sep 10 j 11:21	23° る 53'42	-2°09'56	opposition	-7602 Feb 18 j 06:17	3°530'54	2°16'58
min. Earth dist.	-7608 Sep 09 j 15:55		4.13774 AU	min. Earth dist.	-7602 Feb 19 j 06:56	3° © 23'05	4.30898 AU
direct	-7608 Nov 08 j 09:28	18° る 52'27			-7602 Mar 21 j 03:22	30°RⅡ	
	-7607 Feb 07 j 17:32	0° ≈		direct	-7602 Apr 21 j 11:28	28° Ⅱ 33'03	
evening set	-7607 Mar 15 j 16:36	7° ≈ 47'54			-7602 May 22 j 17:49	0°95	
				evening set	-7602 Aug 25 j 05:39	16° © 40'59	

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max. Earth dist.	-7602 Sep 05 j 10:01	-		morning rise	-7596 Mar 11 j 17:48	14° る 34'10	
man. Darvir dige.	7002 Sep 00 j 10.01	1, 21331	0.2,002110	morning rise	-7596 May 28 j 23:52	0° ≈	
conjunction	-7602 Sep 06 j 15:47	19° © 30'30	1°30'30	retrograde	-7596 Jul 17 j 21:55	3°≈48'23	
minimum elong	-7602 Sep 06 j 15:49	19° © 30'31	1°31'00	retrograde	-7596 Sep 05 j 20:49	30°Rる	
morning rise	-7602 Sep 19 j 01:32	22° © 19'55	1 31 00	min. Earth dist.	-7596 Sep 14 j 09:51	28°る50'50	4.15063 AU
morning risc	-7602 Oct 24 j 09:42	0°Ω		opposition	-7596 Sep 15 j 03:15	28°る44'54	
retrograde	-7601 Jan 22 j 00:52	10° Ω 30'48		direct	-7596 Nov 13 j 04:52	23° る 43'18	-2 03 40
opposition	-7601 Mar 24 j 07:31	5° Ω 37'07	1°58'46	direct	-7595 Jan 18 j 01:13	0°≈	
min. Earth dist.	-7601 Mar 25 j 00:26	5° Ω 31'43	4.22830 AU	evening set	-7595 Mar 20 j 15:50	0 ~ 12° ≈ 36'06	
direct	-7601 May 24 j 15:28	0°Ω42'04	4.22030 AU	evening set	-7595 Mar 31 j 06:53	15° ≈	
direct	-7601 Sep 08 j 04:20	15° Ω			-7393 Wiai 31 J 00.33	13 🗪	
evening set	-7601 Sep 26 j 00:32	19° Ω 02'30		conjunction	-7595 Apr 03 j 09:25	15° ≈ 42'10	1010128
evening set	-7001 Sep 20 J 00.32	19 6602 30		minimum elong	-7595 Apr 03 j 09:30		1°10'52
conjunction	-7601 Oct 08 j 13:46	21° Ω 56'58	1°03'54	max. Earth dist.	-7595 Apr 04 j 03:41	15°≈52'29	6.19476 AU
minimum elong	-7601 Oct 08 j 13:51	$21^{\circ}\Omega50'30'$	1°04'16	morning rise	-7595 Apr 17 j 02:16	13 ≈ 32 27 18° ≈ 47'40	0.17470 AC
max. Earth dist.	-7601 Oct 08 j 00:26	21° Ω 49'13	6.18233 AU	morning risc	-7595 Jun 10 j 04:18	0°) €	
morning rise	-7601 Oct 08 j 00:20	24° Ω 52'17	0.16233 AU	retrograde	-7595 Aug 19 j 19:14	7° ∺ 09'17	
morning risc	-7601 Nov 12 j 21:57	0° m)		opposition	-7595 Oct 18 j 00:36	2° H 09'12	1014440
retrograde	-7600 Feb 26 j 06:41	13° Mp 51'32		min. Earth dist.	-7595 Oct 17 j 19:17		4.23975 AU
opposition	-7600 Apr 27 j 13:16	8° m) 54'27	1°01'24	iiiii. Eartii tiist.	-7595 Nov 03 j 13:19	2 /(1039 30°R≈	4.23973 AU
min. Earth dist.	-7600 Apr 27 j 14:58	8° My 53'54	4.13816 AU	direct	-7595 Dec 17 j 06:42	30 k≈ 27°≈05'30	
	-7600 Apr 27 j 14.38	4°Mp01'19	4.13810 AU	direct	-7594 Jan 30 j 11:46	27 ≈ 03 30	
direct evening set	-7600 Jun 26 j 13:46 -7600 Oct 28 j 03:05	-		avanina aat	,	15° ∺ 38'27	
evening set	-/600 Oct 28 J 03.03	22° Tp 38'44		evening set	-7594 Apr 24 j 14:14	13 八3827	
conjunction	-7600 Nov 09 j 23:40	25° m/40'04	0°15'32	conjunction	-7594 May 08 j 04:22	18° ¥ 39'35	0026141
	-7600 Nov 09 j 23:40	25° m/40'05	0°15'38	minimum elong	-7594 May 08 j 04:24	18°) (3933	
minimum elong	-7600 Nov 09 j 23.42 -7600 Nov 09 j 21:31	-	0 13 38	max. Earth dist.	-7594 May 08 j 01:04	18° X 3937	6.28124 AU
behind sun begin behind sun end	,	25° TD 38'48			, ,	21° H 39'17	6.28124 AU
max. Earth dist.	-7600 Nov 10 j 01:53	25° Mp 41'21	6.09924 AU	morning rise	-7594 May 21 j 15:47	21° π 39°17 0° Υ	
	-7600 Nov 10 j 07:29	25° m 44'39	0.09924 AU		-7594 Jun 30 j 08:05	9° Υ 16'25	
morning rise	-7600 Nov 22 j 23:12 -7600 Nov 28 j 11:27	28° ™ 43'02 0° ₽		retrograde	-7594 Sep 20 j 14:09 -7594 Nov 19 j 01:25	4° Υ 20'13	0002127
desc. node	-7599 Mar 02 j 01:01	0 <u>≈</u> 16° ≏ 53'46		opposition min. Earth dist.	-7594 Nov 19 j 10:24	4 1 20 13 4°Υ17'15	4.31579 AU
	-7599 Apr 02 j 17:36	18° £ 26'07		asc. node	-7594 Dec 01 j 20:27	2° Υ 40'37	4.31379 AU
retrograde opposition	-7599 Jun 02 j 17:56	13° £ 25'00	0°10'20	asc. node	-7594 Dec 28 j 19:47	2 1 40 37 30° ₹	
min. Earth dist.	-7599 Jun 02 j 13:30	13° ⊆ 23'00	4.06882 AU	direct	-7593 Jan 19 j 13:05	29° ∺ 16′10	
direct	-7599 Jul 31 j 10:02	8° £ 31'54	4.00882 AU	direct	-7593 Feb 10 j 11:50	29 χ 10 10 0° Υ	
evening set	-7599 Dec 01 j 23:33	27° £ 27'04		evening set	-7593 May 27 j 23:25	17° Υ 31'20	
evening set	-7599 Dec 12 j 18:46	0°M		max. Earth dist.	-7593 Jun 09 j 06:07		6.34124 AU
	7377 Dec 12 j 10.40	O IIU		max. Earth dist.	7373 Jun 07 J 00:07	20 1331	0.54124710
conjunction	-7599 Dec 15 j 04:46	0° M 34'17	-0°39'27	conjunction	-7593 Jun 10 j 05:31	20° Y ′26'46	0°24'16
minimum elong	-7599 Dec 15 j 04:42	0° M 34'15	0°39'40	minimum elong	-7593 Jun 10 j 05:28	20° Y ′26′45	0°24'24
max. Earth dist.	-7599 Dec 16 j 09:51	0°M51'29	6.05001 AU	morning rise	-7593 Jun 23 j 08:11	23° Y ′20'27	
morning rise	-7599 Dec 28 j 13:22	3°M43'22			-7593 Jul 24 j 17:56	0°8	
5	-7598 Feb 18 j 05:44	15° ™		retrograde	-7593 Oct 21 j 20:13	10° 8 33'32	
retrograde	-7598 May 09 j 10:10	23°M48'44		opposition	-7593 Dec 20 j 19:47	5° 8 40'24	1°08'47
opposition	-7598 Jul 08 j 15:50	18° M ₊44'32	-1°34'56	min. Earth dist.	-7593 Dec 21 j 15:57	5° 8 33'51	4.35623 AU
min. Earth dist.	-7598 Jul 07 j 16:16		4.04570 AU	direct	-7592 Feb 21 j 03:19	0° 8 37'33	
	-7598 Aug 09 j 09:44	15°RM			-7592 Jun 10 j 23:04	15° 8	
direct	-7598 Sep 04 j 19:00	13°M49'33		evening set	-7592 Jun 28 j 01:59	18° 8 42'23	
	-7598 Oct 01 j 05:21	15° M ₊		ū	Ÿ		
	-7598 Dec 25 j 15:27	0° ∡ ¹		conjunction	-7592 Jul 10 j 22:19	21° 8 32'57	1°07'23
evening set	-7597 Jan 07 j 08:47	2° ∡ ′56'31		minimum elong	-7592 Jul 10 j 22:14	21° 8 32'54	1°07'44
	-			max. Earth dist.	-7592 Jul 09 j 12:38	21° 8 14'15	6.35832 AU
conjunction	-7597 Jan 20 j 20:42	6° ∡ °06′21	-1°20'28	morning rise	-7592 Jul 23 j 15:18	24° 8 21'56	
minimum elong	-7597 Jan 20 j 20:38	6° ∡ 06'19	1°20'54		-7592 Aug 18 j 21:31	$\Pi^{\circ}0$	
max. Earth dist.	-7597 Jan 22 j 11:31	6° ₹ ′29'08	6.05361 AU	retrograde	-7592 Nov 21 j 09:33	11° Ⅱ 35′23	
morning rise	-7597 Feb 03 j 11:41	9° ∡ 17'40		opposition	-7591 Jan 20 j 23:11	6° Ⅱ 43'52	1°59'52
retrograde	-7597 Jun 14 j 08:34	29° ∡ 12'23		min. Earth dist.	-7591 Jan 22 j 00:56	6° Ⅱ 35'39	4.35027 AU
min. Earth dist.	-7597 Aug 11 j 22:56	24° ∡ 15'52	4.07704 AU	direct	-7591 Mar 24 j 12:43	1° Ⅱ 43'31	
opposition	-7597 Aug 13 j 00:12	24° х ⁴07'14	-2°14'59	evening set	-7591 Jul 29 j 10:14	19° Ⅱ 46′30	
direct	-7597 Oct 10 j 06:06	19° ∡ *08'55		max. Earth dist.	-7591 Aug 09 j 10:21	22°∏14'22	6.32850 AU
	-7596 Jan 06 j 20:26	ರ∘ರ			-		
evening set	-7596 Feb 13 j 07:38	8° ප 15'16		conjunction	-7591 Aug 10 j 22:44	22° ∏ 34'49	1°31'07
	-			minimum elong	-7591 Aug 10 j 22:42	22° ∏ 34'48	1°31'37
conjunction	-7596 Feb 27 j 00:11	11° る 24'29	-1°31'42	morning rise	-7591 Aug 23 j 09:25	25° Ⅱ 22'16	
minimum elong	-7596 Feb 27 j 00:12	11° る 24'30	1°32'12		-7591 Sep 13 j 13:09	0oo	
max. Earth dist.	-7596 Feb 28 j 12:23	11° る 45'23	6.10891 AU	retrograde	-7591 Dec 23 j 22:44	12° 9 58'49	

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7590 in astronomical counting style is the year 7591 BCE in historical counting style. -7590 Feb 23 i 00:03 8°906'54 2°16'55 -7585 Dec 16 j 23:36 0°정 opposition -7590 Feb 24 j 00:07 -7584 Feb 18 j 08:42 13°る08'33 min. Earth dist. 7°959'15 4.29940 AU evening set -7590 Apr 26 j 03:45 3°9609'27 direct -7584 Mar 03 j 01:32 16°る17'33 -1°30'34 evening set -7590 Aug 29 j 16:11 21°9518'33 conjunction -7590 Sep 09 j 23:50 max. Earth dist. 6.26019 AU -7584 Mar 03 j 01:34 23°**©**53'17 minimum elong 16°る17'34 1°31'04 -7584 Mar 04 j 10:49 max. Earth dist. 16°**ප**36'42 6.11782 AU conjunction -7590 Sep 11 j 02:31 24°908'31 1°28'22 morning rise -7584 Mar 16 j 19:28 19°**る**26'54 minimum elong -7590 Sep 11 j 02:34 24°908'33 1°28'51 -7584 May 05 j 05:07 0°≈ -7584 Jul 22 j 11:59 8°≈34'59 morning rise -7590 Sep 23 j 12:26 26°958'30 retrograde -7590 Oct 06 j 23:44 $0^{\circ}\Omega$ opposition -7584 Sep 19 j 17:37 3°≈31'52 -2°00'51 -7589 Jan 14 j 02:20 15°€ min. Earth dist. -7584 Sep 19 j 01:14 3°≈37'28 4.16018 AU -7584 Oct 18 j 14:41 retrograde -7589 Jan 26 j 20:33 15°**Ω**15′08 30°Ŗる 28°る29'54 -7589 Feb 08 j 15:53 15°R€ direct -7584 Nov 17 j 21:47 opposition -7589 Mar 29 j 04:51 10°**Ω**21′03 1°52'49 -7584 Dec 18 j 15:08 0°≈ min. Earth dist. -7589 Mar 29 j 19:06 10°**Ω**16'31 4.21778 AU -7583 Mar 15 j 00:13 15°**≈** direct -7589 May 29 j 08:27 5°**Ω**26'23 evening set -7583 Mar 25 j 13:53 17°≈21'10 -7589 Aug 21 j 07:05 15°€ evening set -7589 Sep 30 j 14:04 23°**Ω**48′02 conjunction -7583 Apr 08 j 07:21 20°≈26'48 -1°05'25 minimum elong -7583 Apr 08 j 07:26 20°≈26'51 1°05'46 20°**≈**35'30 conjunction -7589 Oct 13 j 03:58 26°**Ω**43'13 0°58'10 max. Earth dist. -7583 Apr 08 j 22:45 6.20448 AU minimum elong -7589 Oct 13 j 04:02 26°**Ω**43'16 0°58'29 morning rise -7583 Apr 21 j 23:43 23°≈31'42 max. Earth dist. -7589 Oct 12 j 17:03 26°**Ω**36'52 6.17268 AU -7583 May 21 j 19:06 0°**)** morning rise -7589 Oct 25 j 19:34 29°**£**39′26 retrograde -7583 Aug 24 j 07:51 11° **)** 47'29 -7589 Oct 27 j 07:14 0° m opposition -7583 Oct 22 j 12:29 6°\(\)47'58 -1°05'30 -7588 Mar 02 j 07:32 18° **m** 44'08min. Earth dist. -7583 Oct 22 j 09:47 6°**)** 48'52 4.24866 AU retrograde -7588 May 02 j 13:09 13° m 46'25 -7583 Dec 21 j 23:23 1° # 44'09 0°50'56 direct opposition -7588 May 02 j 12:51 -7582 Apr 29 j 08:16 20°¥15'25 min. Earth dist. 13° m 46'31 4.12986 AU evening set -7588 Jul 01 j 10:17 8° m 53'20 direct -7588 Nov 01 j 20:42 27° m 31'58 conjunction -7582 May 12 j 21:35 23°\(\mathbf{1}\)15'57 -0°19'38 evening set 23°**升**15′58 0°19′46 -7588 Nov 12 j 08:42 -7582 May 12 j 21:37 0∘ଫ minimum elong -7582 May 12 j 15:24 6.28881 AU max. Earth dist. 23°**)** 12'31 -7588 Nov 14 j 18:32 0°**2**34'04 0°07'52 -7582 May 26 j 08:02 26°**)** 14'57 conjunction morning rise $0^{\circ}\Upsilon$ -7588 Nov 14 j 18:33 0°**£**34'04 0°07'56 -7582 Jun 12 j 13:43 minimum elong -7588 Nov 14 j 11:16 0°**£**29'48 -7582 Sep 24 j 22:54 13°**Y**48'14 behind sun begin retrograde -7582 Oct 12 j 06:07 13°Y18'54 behind sun end -7588 Nov 15 j 01:50 0°**£**38′20 asc. node 8°**Y**52'30 0°08'05 -7582 Nov 23 j 12:16 max. Earth dist. -7588 Nov 15 j 06:06 0°**£**40'52 6.09315 AU opposition 4.32165 AU morning rise -7588 Nov 27 j 19:16 3°**£**37'51 min. Earth dist. -7582 Nov 23 j 22:18 8°**Y**49'11 desc. node -7587 Jan 10 j 05:57 13°**♀**13'50 direct -7581 Jan 24 j 02:34 3°Y48'32 retrograde -7587 Apr 07 j 18:58 23°**£**24'12 -7581 Jun 01 j 13:23 22°Y02'29 evening set -7587 Jun 07 j 13:59 18°**≏**22'34 -0°30'59 opposition min. Earth dist. -7587 Jun 06 j 23:05 18°**≏**27'30 4.06558 AU conjunction -7581 Jun 14 j 18:10 24°**Y**'57'13 0°31'06 -7587 Aug 05 j 06:59 13°**♀**29'20 -7581 Jun 14 j 18:07 24°Y57'12 0°31'16 direct minimum elong -7587 Nov 26 j 12:22 max. Earth dist. -7581 Jun 13 j 17:46 24°**Y**43'43 0°M 6.34504 AU -7587 Dec 06 j 22:02 -7581 Jun 27 j 19:26 27°Y50'11 evening set 2° Mc25'27morning rise -7581 Jul 07 j 17:29 0°8 conjunction -7587 Dec 20 i 04:04 5°MJ33'04 -0°46'22 -7581 Oct 21 i 12:51 15°8 minimum elong -7587 Dec 20 i 04:00 5°M33'01 0°46'38 retrograde -7581 Oct 26 i 06:23 15°**8**02'10 max. Earth dist. -7587 Dec 21 i 09:31 5°M50'28 6.04958 AU -7581 Oct 31 i 00:02 15°R₩ morning rise -7586 Jan 02 i 13:45 8°M42'33 opposition -7581 Dec 25 i 07:35 10°**8**09'23 1°17'34 -7586 Jan 30 j 04:15 min. Earth dist. -7581 Dec 26 j 04:52 10°**8**02'30 4.35778 AU 15°M. -7586 May 14 j 08:56 28°M47'39 direct -7580 Feb 25 j 17:32 5°806'52 retrograde -7586 Jul 13 j 13:29 23°M43'08 -1°43'02 -7580 May 24 j 09:37 15°8 opposition min. Earth dist. -7586 Jul 12 j 13:11 23°M-51'21 4.04826 AU -7580 Jul 02 j 12:43 23°810'56 evening set direct -7586 Sep 09 j 16:23 18°M47'41 max. Earth dist. -7580 Jul 13 j 20:27 25°**8**41'24 6.35716 AU -7586 Dec 08 j 02:55 0°×7 -7585 Jan 12 j 10:03 7°**х** 55′00 conjunction -7580 Jul 15 j 07:40 26°**8**00'58 1°12'06 evening set -7580 Jul 15 j 07:36 26°**8**00'55 1°12'30 minimum elong -7585 Jan 25 j 22:53 11° ₹04'55 -1°23'58 -7580 Jul 27 j 23:36 28°849'31 conjunction morning rise -7585 Jan 25 j 22:49 -7580 Aug 02 j 07:41 $0^{\circ}\Pi$ minimum elong 11°**х** 04′53 1°24'26 -7585 Jan 27 j 14:51 11°**×**⁷28'20 -7580 Nov 25 j 21:24 16°**Ⅲ**04'42 max. Earth dist. 6.05886 AU retrograde 14°**∡**16′08 -7579 Jan 25 j 13:07 morning rise -7585 Feb 08 j 14:14 opposition 11°**Ⅱ**13'10 2°04'33 -7585 Apr 27 j 23:58 0°궁 min. Earth dist. -7579 Jan 26 j 14:47 11°**Ⅲ**04'59 4.34661 AU retrograde -7585 Jun 19 j 05:42 4°る06'50 direct -7579 Mar 29 j 02:20 6°**Ⅲ**13′09 -7585 Aug 10 j 14:50 30°R*X* evening set -7579 Aug 02 j 19:19 24°**Ⅱ**16'10 opposition -7585 Aug 17 j 18:18 29°**х** 01'47 -2°16'40 max. Earth dist. -7579 Aug 13 j 20:57 26°**Ⅱ**45′07 6.32240 AU -7585 Aug 16 j 18:38 min. Earth dist. 29°**₹**'09'52 4.08451 AU -7585 Oct 15 j 02:11 -7579 Aug 15 j 07:14 27°**Ⅲ**04'25 1°32'25 direct 24°**х** 03′00 conjunction

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 29 Attention, astronomical year style is used: The year -7579 in astronomical counting style is the year 7580 BCE in historical counting style.

Attention, astronom	ical year style is used: Th	ie year -7579 i	in astronomical co	unting style is the year	7580 BCE in historical c	counting style.	
minimum elong	-7579 Aug 15 j 07:13	27° Ⅱ 04'25	1°32'55		-7573 Apr 03 j 17:16	5°0	
morning rise	-7579 Aug 27 j 17:14	29° ∏ 51′52		retrograde	-7573 Jun 24 j 03:04	9° る 09'33	
	-7579 Aug 28 j 07:47	0 \circ		opposition	-7573 Aug 22 j 15:08	4° る 04'38	-2°17'24
retrograde	-7579 Dec 28 j 13:46	17° © 32'31		min. Earth dist.	-7573 Aug 21 j 15:11	4° る 12'50	4.09056 AU
opposition	-7578 Feb 27 j 16:56	12° 5 40'26	2°16'03		-7573 Sep 26 j 20:20	30°₽ ⋌	
min. Earth dist.	-7578 Feb 28 j 16:03	12° © 33'06	4.29108 AU	direct	-7573 Oct 19 j 23:44	29° ∡ ¹05'24	
direct	-7578 Apr 30 j 18:13	7° © 43'25			-7573 Nov 12 j 09:17	0°₹	
evening set	-7578 Sep 03 j 01:53	25°\$53'23		evening set	-7572 Feb 23 j 13:11	18° る 10'38	
max. Earth dist.	-7578 Sep 14 j 09:58	28° © 28'47	6.25013 AU				
				conjunction	-7572 Mar 08 j 06:26	21° る 19'26	-1°28'46
conjunction	-7578 Sep 15 j 12:12	28°5643'48	1°25'43	minimum elong	-7572 Mar 08 j 06:28	21° る 19'27	1°29'15
minimum elong	-7578 Sep 15 j 12:15	28°543'50	1°26'12	max. Earth dist.	-7572 Mar 09 j 14:04	21° る 37'37	6.12667 AU
C	-7578 Sep 21 j 01:16	$0^{\circ}\Omega$		morning rise	-7572 Mar 22 j 00:23	24° る 28'24	
morning rise	-7578 Sep 27 j 22:41	1° Ω 34'25		•	-7572 Apr 15 j 20:35	0° ≈	
C	-7578 Dec 03 j 18:48	15° Ω		retrograde	-7572 Jul 27 j 07:04	13° ≈ 30'06	
retrograde	-7577 Jan 31 j 17:26	19° Ω 57'03		opposition	-7572 Sep 24 j 11:07	8° ≈ 27'27	-1°54'58
opposition	-7577 Apr 03 j 01:24	15° Ω 02'30	1°46'12	min. Earth dist.	-7572 Sep 23 j 20:54		4.17091 AU
11	-7577 Apr 03 j 09:14	15°RΩ		direct	-7572 Nov 22 j 19:58	3° ≈ 25'11	
min. Earth dist.	-7577 Apr 03 j 14:02	14°Ω58'28	4.20637 AU		-7571 Feb 25 j 02:47	15° ≈	
direct	-7577 Jun 03 j 01:11	10° Ω 08'05		evening set	-7571 Mar 30 j 14:53	22° ≈ 14'13	
	-7577 Jul 30 j 16:19	15° Ω		evening sec	7071 Mai 30 j 1 1.03		
evening set	-7577 Oct 05 j 02:42	28° Ω 31'36		conjunction	-7571 Apr 13 j 08:11	25° ≈ 19'17	-0°59'48
evening set	-7577 Oct 11 j 11:03	0° m)		minimum elong	-7571 Apr 13 j 08:16	25°≈19'20	1°00'08
	7377 Oct 11 j 11.03	עוו י		max. Earth dist.	-7571 Apr 13 j 22:04	25°≈27'06	6.21667 AU
conjunction	-7577 Oct 17 j 17:39	1° m 27'43	0°52'05	morning rise	-7571 Apr 15 j 22:04 -7571 Apr 26 j 23:59	28°≈23'28	0.21007 AC
minimum elong	-7577 Oct 17 j 17:33	1° Mp 27'45		morning risc	-7571 May 04 j 05:37	0° \	
max. Earth dist.	-7577 Oct 17 j 17:43	1° m) 23'29	6.16110 AU	retrograde	-7571 May 04 j 05:37	16°) 32'15	
morning rise	-7577 Oct 17 j 10:25	4° Mp 24'55	0.10110 AU	opposition	-7571 Aug 28 j 20:14 -7571 Oct 27 j 02:44	10 X 32 13	0055127
-	-			min. Earth dist.			4.26145 AU
retrograde	-7576 Mar 07 j 08:10	23° m 35'59 18° m 37'46	0940100		-7571 Oct 27 j 00:27		4.20143 AU
opposition	-7576 May 07 j 12:33			direct	-7571 Dec 26 j 17:06	6° ¥ 29'23	
min. Earth dist.	-7576 May 07 j 10:33	18° Mp 38'25	4.11895 AU	evening set	-7570 May 04 j 03:40	24°) 57′15	
direct	-7576 Jul 06 j 05:02	13° m/44'49			7570 M 17:15 52	270 1 5 (140	0012125
	-7576 Oct 27 j 03:37	0∘ ʊ		conjunction	-7570 May 17 j 15:52	27°) 56'48	
evening set	-7576 Nov 06 j 15:08	2° ≏ 26'06		minimum elong	-7570 May 17 j 15:53	27°) 56'49	0°12'29
	### () Y 10 : 10 #0	50 0 0010 6	0000104	behind sun begin	-7570 May 17 j 10:39	27°) €53'55	
conjunction	-7576 Nov 19 j 13:59	5° Ω 29'06	0°00'04	behind sun end	-7570 May 17 j 21:07	27°) 59'43	C 20150 177
minimum elong	-7576 Nov 19 j 13:59	5° Ω 29'06	0°00'05	max. Earth dist.	-7570 May 17 j 07:13	27°) 52′01	6.30159 AU
behind sun begin	-7576 Nov 19 j 06:12	5° Ω 24'32			-7570 May 26 j 21:56	0°Υ	
behind sun end	-7576 Nov 19 j 21:45	5° Ω 33'39		morning rise	-7570 May 31 j 01:12	0° Y ′54'48	
max. Earth dist.	-7576 Nov 20 j 02:47		6.08379 AU	asc. node	-7570 Aug 22 j 01:35	16° ℃ 05'04	
desc. node	-7576 Nov 20 j 00:39	5° Ω 35'22		retrograde	-7570 Sep 29 j 09:57	18° Y ′22'33	
morning rise	-7576 Dec 02 j 16:10	8° ≏ 33'54		opposition	-7570 Nov 28 j 00:24	13° Y ′27'17	0°18'33
retrograde	-7575 Apr 12 j 20:28	28° ≏ 24'57		min. Earth dist.	-7570 Nov 28 j 12:25	13° Y ′23′20	4.33342 AU
opposition	-7575 Jun 12 j 14:25	23° Ω 22'48		direct	-7569 Jan 28 j 19:47	8° Y 23′26	
min. Earth dist.	-7575 Jun 11 j 21:32	23° ≏ 28'24	4.05866 AU	evening set	-7569 Jun 06 j 02:44	26° Ƴ 33'43	
direct	-7575 Aug 10 j 04:23	18° ≏ 29'19		max. Earth dist.	-7569 Jun 18 j 04:22	29° Y 13′13	6.35482 AU
	-7575 Nov 08 j 23:04	0°M₊					
evening set	-7575 Dec 11 j 22:19	7° ™ 28'13		conjunction	-7569 Jun 19 j 06:07	29° Y 27'26	0°37'40
				minimum elong	-7569 Jun 19 j 06:04	29° Y ′27′25	0°37'52
conjunction	-7575 Dec 25 j 05:38	10°M36'30			-7569 Jun 21 j 17:02	0°8	
minimum elong	-7575 Dec 25 j 05:33	10° ™ 36′27	0°53'19	morning rise	-7569 Jul 02 j 05:53	2° 8 19'23	
max. Earth dist.	-7575 Dec 26 j 14:14	10° ™ 55'45	6.04568 AU		-7569 Sep 05 j 12:22	15° 8	
morning rise	-7574 Jan 07 j 16:11	13°M46'33		retrograde	-7569 Oct 30 j 13:40	19° 8 28'26	
	-7574 Jan 12 j 22:03	15° M			-7569 Dec 26 j 15:26	15° ₹ 8	
	-7574 Mar 29 j 14:59	0° ∡ ¹		opposition	-7569 Dec 29 j 18:22	14° 8 35'51	1°25'40
retrograde	-7574 May 19 j 12:35	3° ₹ 52'36		min. Earth dist.	-7569 Dec 30 j 15:49	14° 8 28'56	4.36512 AU
	-7574 Jul 09 j 14:05	30°RM		direct	-7568 Mar 01 j 05:38	9° 8 33'35	
opposition	-7574 Jul 18 j 13:12	28°M47'53			-7568 May 03 j 17:02	15° 8	
min. Earth dist.	-7574 Jul 17 j 13:15		4.04790 AU	evening set	-7568 Jul 06 j 21:09	27° 8 34'48	
direct	-7574 Sep 14 j 15:53	23°M52'02			-7568 Jul 17 j 19:27	Π °0	
	-7574 Nov 17 j 00:08	0° ∡ °		max. Earth dist.	-7568 Jul 18 j 03:34	0° Ⅱ 04'30	6.36136 AU
evening set	-7573 Jan 17 j 14:23	13° ∡ 00'53					
				conjunction	-7568 Jul 19 j 14:47	0° Ⅱ 24′05	1°16'16
conjunction	-7573 Jan 31 j 03:51	16° ∡ 10′59	-1°26'56	minimum elong	-7568 Jul 19 j 14:43	0°Ⅱ24′02	1°16'41
minimum elong	-7573 Jan 31 j 03:48	16° ∡ 10'57		morning rise	-7568 Aug 01 j 05:28	3° Ⅱ 11'57	
max. Earth dist.	-7573 Feb 01 j 18:58	16° ∡ ³33'51	6.06177 AU	retrograde	-7568 Nov 30 j 06:43	20° Ⅱ 27'16	
morning rise	-7573 Feb 13 j 19:58	19° ∡ ′22′18		opposition	-7567 Jan 30 j 00:29	15° Ⅱ 35'47	2°08'16

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7567 in astronomical counting style is the year 7568 BCE in historical counting style. 15°**П**27'22 4.34732 AU min. Earth dist. -7567 Jan 31 j 02:58 direct -7562 Sep 19 j 12:44 28°M54'51 -7567 Apr 02 j 14:20 10°**Ⅱ**36′09 -7562 Oct 14 j 22:29 0°**∡**¹ direct evening set -7567 Aug 07 j 00:48 28°X37'39 -7561 Jan 22 j 19:08 18°**≯**06'04 evening set -7567 Aug 13 j 03:43 0ಂತಾ max. Earth dist. -7567 Aug 18 j 00:31 -7561 Feb 05 j 09:26 21° 🖈 16'24 -1°29'09 1°**©**05'43 6.31933 AU conjunction -7561 Feb 05 j 09:24 1°29'38 minimum elong 21°**х¹**16′23 -7567 Aug 19 j 12:00 1°33'06 -7561 Feb 07 j 01:08 21°**∡**³39'37 conjunction 1°925'43 max. Earth dist. 6.06389 AU -7567 Aug 19 j 12:00 -7561 Feb 19 j 02:02 24°**∡**°27'49 minimum elong 1°9525'42 1°33'36 morning rise -7561 Mar 15 j 12:59 morning rise -7567 Aug 31 j 21:45 4°9513'09 0°ಕ retrograde -7566 Jan 02 j 01:38 21°957'10 retrograde -7561 Jun 29 j 02:09 14°**ප**11'31 opposition -7566 Mar 04 j 06:22 17°**5**04'49 2°14'20 opposition -7561 Aug 27 j 11:51 9°**ට**06'43 -2°17'01 -7566 Mar 05 j 04:41 -7561 Aug 26 j 13:04 min. Earth dist. 16°**9**57'43 4.28431 AU min. Earth dist. 9°**궁**14'31 4.09699 AU -7561 Oct 24 j 23:21 direct -7566 May 05 j 04:45 12°908'05 direct 4°る07'00 -7566 Sep 05 j 22:58 $0^{\circ}\Omega$ evening set -7560 Feb 28 j 17:29 23°る11'26 evening set -7566 Sep 07 j 07:36 $0^{\circ}\Omega18'33$ conjunction -7560 Mar 13 j 11:07 26°る19'57 -1°26'16 conjunction -7566 Sep 19 j 18:20 3°**Ω**09'30 1°22'39 minimum elong -7560 Mar 13 j 11:11 26°る19'59 1°26'45 minimum elong -7566 Sep 19 j 18:23 3°**Ω**09'32 1°23'06 max. Earth dist. -7560 Mar 14 j 18:31 26°る37'56 6.13679 AU 6.24035 AU max. Earth dist. -7566 Sep 18 j 18:26 2°**Ω**55'47 morning rise -7560 Mar 27 j 05:03 29°る28'27 morning rise -7566 Oct 02 j 05:08 6°**Ω**00'42 -7560 Mar 29 j 12:39 0°≈ -7566 Nov 12 j 21:19 15°€ -7560 Jun 15 j 05:08 15°≈ retrograde -7565 Feb 05 i 10:26 24°**Ω**29'20 retrograde -7560 Jul 31 i 23:23 18°≈22'55 opposition -7565 Apr 07 j 18:03 19°**Ω**34'26 1°39'09 -7560 Sep 16 j 18:22 15°R≈ min. Earth dist. -7565 Apr 08 i 06:07 19°**Ω**30'34 4.19405 AU opposition -7560 Sep 29 j 03:52 13°≈20'40 -1°48'16 -7565 May 24 j 03:34 15°RΩ min. Earth dist. -7560 Sep 28 j 13:54 13°**≈**25′26 4.18342 AU direct -7565 Jun 07 j 14:05 14°**Ω**40'16 direct -7560 Nov 27 i 15:54 8°≈18'04 -7565 Jun 21 j 23:30 15°**Ω** -7559 Feb 04 j 12:37 15°**≈** -7559 Apr 04 j 14:40 27°≈03'59 -7565 Sep 25 j 23:13 0° m evening set -7565 Oct 09 j 12:30 3° M) 06'23 -7559 Apr 17 j 16:38 0°) evening set -7565 Oct 22 j 04:15 6° m 03'28 0°45'52 -7559 Apr 18 j 07:23 0°\(\)\(08'17\)\(-0^53'49\) conjunction conjunction 0°**₭**08'20 0°54'07 -7565 Oct 22 j 04:19 6° Mp 03'30 $0^{\circ}46'08$ -7559 Apr 18 j 07:28 minimum elong minimum elong -7565 Oct 21 j 21:19 5° Mp 59'25 6.14741 AU -7559 Apr 18 j 17:31 max. Earth dist. max. Earth dist. 0° **★**13'59 6.23033 AU -7559 May 01 j 22:38 -7565 Nov 03 j 22:14 9°M 01'50 3°**₩**11'37 morning rise morning rise -7559 Sep 02 j 09:11 -7564 Mar 12 j 05:05 28° My 20'1321°**)** 13'10 retrograde retrograde -7559 Oct 31 j 15:53 -7564 May 12 j 08:44 23° Mp 21'28 0°29'26 16°**升**14'41 -0°45'27 opposition opposition 16°**光**14'34 4.27457 AU -7564 May 12 j 04:31 23° m 22'50 -7559 Oct 31 j 16:15 min. Earth dist. 4.10493 AU min. Earth dist. direct -7564 Jul 10 j 20:26 18° Mp 28'32 direct -7559 Dec 31 j 11:59 11°**)** 10'39 desc. node -7564 Oct 01 j 12:03 28° Mp 08'51 evening set -7558 May 08 j 21:19 29°\ 35'06 -7564 Oct 10 j 08:47 0∘**⊽** -7558 May 10 j 18:34 $0^{\circ}\Upsilon$ evening set -7564 Nov 11 j 07:28 7° - 14'01 -7558 May 22 j 08:36 2°Y33'47 -0°05'10 conjunction -7564 Nov 24 j 07:46 10°**♀**18'11 -0°07'32 -7558 May 22 j 08:36 2° Y 33'47 0° 05'12 conjunction minimum elong -7564 Nov 24 j 07:45 10°**△**18'10 0°07'35 behind sun begin -7558 May 22 j 00:39 2°Y29'24 minimum elong -7564 Nov 24 j 00:21 10°**≏**13'49 behind sun end -7558 May 22 j 16:32 2°Y38'10 behind sun begin -7564 Nov 24 i 15:09 -7558 May 21 j 22:17 2°**Y**28'05 behind sun end 10°**£**22'32 max. Earth dist. 6.31297 AU -7564 Nov 25 i 00:15 5°**Y**30'47 max. Earth dist. 10°**£**27'55 6.07093 AU morning rise -7558 Jun 04 i 16:32 11°Y12'16 morning rise -7564 Dec 07 j 11:10 13°**£**24'08 asc. node -7558 Jul 01 i 06:20 22°Y53'52 -7563 Mar 01 j 13:00 0°M retrograde -7558 Oct 03 i 18:05 -7563 Apr 17 j 23:35 3°M21'16 -7558 Dec 02 i 11:16 17°**Υ**59'03 0°28'53 retrograde opposition -7563 Jun 04 j 14:59 30°R**≏** min. Earth dist. -7558 Dec 03 j 00:05 17°**Y**′54'51 4.34218 AU -7563 Jun 17 j 13:24 28° **1**8'44 -0°53'10 direct -7557 Feb 02 j 08:40 12°Y55'21 opposition -7563 Jun 16 j 19:59 28°**2**24'32 4.04832 AU -7557 Jun 05 j 19:09 0°8 min. Earth dist. -7557 Jun 10 j 15:15 direct -7563 Aug 15 j 00:43 23°**₽**25'05 evening set 1°803'21 -7563 Oct 19 j 20:14 0°M evening set -7563 Dec 16 j 22:21 12°M28'14 conjunction -7557 Jun 23 j 17:05 3°**8**56'14 0°44'04 -7563 Dec 27 j 15:35 15°M⋅ minimum elong -7557 Jun 23 j 17:01 3°**8**56'12 0°44'17 -7557 Jun 22 j 12:32 3°**8**40'28 6.36007 AU max. Earth dist. -7563 Dec 30 j 06:37 15°M237'16 -0°59'11 -7557 Jul 06 j 15:34 6°**8**47'25 conjunction morning rise -7563 Dec 30 j 06:32 -7557 Aug 15 j 00:24 15°8 minimum elong 15°M37'13 0°59'30 -7557 Nov 04 j 00:30 23°**8**55'30 max. Earth dist. -7563 Dec 31 j 16:04 15°**™**57'02 6.03869 AU retrograde morning rise -7562 Jan 12 j 18:25 18°M48'07 opposition -7556 Jan 03 j 05:50 19°**8**03'14 1°33'27 -7562 Mar 05 j 00:21 0°**∡**¹ min. Earth dist. -7556 Jan 04 j 05:26 18°**8**55'38 4.36657 AU retrograde -7562 May 24 j 13:21 8°**х** 55′59 -7556 Feb 09 j 03:05 15°R₩ min. Earth dist. -7562 Jul 22 j 10:28 3°**≯**59'48 4.04539 AU direct -7556 Mar 05 j 19:22 14°**8**01'15 -7562 Jul 23 j 12:08 3°**∡**751'06 -1°57'05 -7556 Mar 31 j 13:53 15°8 opposition -7562 Aug 25 j 06:29 -7556 Jul 01 j 23:45 $0^{\circ}\Pi$ 30°RM

Attention, astronom	ical year style is used: Th	e vear -7556 i	n astronomical co	unting ctule ic the year	7557 RCF in historical c	ounting style	
evening set	-7556 Jul 11 j 06:13	e year -7336 i 2° ∏ 01'45	n astronomicai co	minimum elong	-7550 Jan 04 j 11:13	20° M .46'06	1°05'27
max. Earth dist.	-7556 Jul 22 j 10:32		6.35863 AU	max. Earth dist.	-7550 Jan 05 j 23:20	20 11C40 00 21°11C07'26	6.04094 AU
max. Earm dist.	-/330 Jul 22 J 10.32	4 L 30 29	0.33803 AU	morning rise	-7550 Jan 17 j 23:51	23°M57'11	0.04094 AU
conjunction	-7556 Jul 23 j 22:46	4° Ⅱ 50'38	1°20'06	morning rise	-7550 Feb 13 j 12:13	0° ⊼	
minimum elong	-7556 Jul 23 j 22:42	4° I I50'36	1°20'32	retrograde	-7550 May 29 j 15:02	14° ∡ ¹02'38	
_	-7556 Aug 05 j 12:26	7° Ⅱ 38'12	1 20 32	min. Earth dist.	-7550 May 29 j 13:02 -7550 Jul 27 j 10:35	9° x ⁷ 06'10	4.05257 AU
morning rise retrograde	-7556 Dec 04 j 18:18	24° II 56'16		opposition	-7550 Jul 28 j 11:59	9 x · 00 10 8° x · 57'31	
opposition	-7555 Feb 03 j 14:21	20° I 04'46	2°11'30	direct	-7550 Sep 24 j 14:15	4° × ⁷ 00'46	-2 02 46
min. Earth dist.	-7555 Feb 04 j 16:14	19° I 56'32	4.34083 AU	evening set	-7549 Jan 27 j 23:37	23°×10'31	
direct	-7555 Apr 07 j 01:40	15° I 05'30	4.54065 AU	evening set	-7549 Jan 27 j 25.57	23 × 1031	
direct	-7555 Jul 28 j 05:11	0.ee		conjunction	-7549 Feb 10 j 14:33	26° ∡ ¹20'34	1°30'45
evening set	-7555 Aug 11 j 09:26	3°508'00		minimum elong	-7549 Feb 10 j 14:31		1°31'14
max. Earth dist.	-7555 Aug 22 j 10:16	5°937'04	6.30954 AU	max. Earth dist.	-7549 Feb 12 j 06:56	26° × 20'35 26° × 44'05	6.07517 AU
max. Earth dist.	7333 Mag 22 j 10.10	3 37 04	0.50754710	morning rise	-7549 Feb 24 j 07:27	29° х 44°03	0.07517710
conjunction	-7555 Aug 23 j 20:13	5°956'15	1°33'19	morning risc	-7549 Feb 26 j 08:47	20 ス 313ず	
minimum elong	-7555 Aug 23 j 20:13	5°956'15	1°33'50	retrograde	-7549 Jul 03 j 21:02	0 3 19° る 07'53	
morning rise	-7555 Sep 05 j 05:39	8°943'58	1 33 30	min. Earth dist.	-7549 Aug 31 j 07:39	14°る11'01	4.11123 AU
retrograde	-7554 Jan 06 j 20:01	26°933'42		opposition	-7549 Sep 01 j 06:11	14° ろ 03'19	
opposition	-7554 Mar 09 j 00:25	21°541'08	2°11'52	direct	-7549 Oct 29 j 20:11	9° ට 03'07	2 1337
min. Earth dist.	-7554 Mar 09 j 22:42	21°934'04	4.27179 AU	evening set	-7548 Mar 04 j 18:35	28° る 03'59	
direct	-7554 May 09 j 20:21	16°944'49	4.2/1//110	evening set	-7548 Mar 13 j 06:23	0° ≈	
direct	-7554 Aug 20 j 12:46	0°Ω			75 10 17tai 15 j 00.25	0 / 0 /	
evening set	-7554 Sep 11 j 18:30	4° Ω 57'37		conjunction	-7548 Mar 18 j 12:09	1° ≈ 11'48	-1°23'16
max. Earth dist.	-7554 Sep 23 j 06:27		6.22620 AU	minimum elong	-7548 Mar 18 j 12:13	1°≈11'51	
man. Darun dist.	700 . Sep 25 j 00.27	, 000000	0.22020110	max. Earth dist.	-7548 Mar 19 j 15:27	1°≈27'23	6.15261 AU
conjunction	-7554 Sep 24 j 05:34	7° Ω 49'19	1°18'56	morning rise	-7548 Apr 01 j 06:01	4°≈19'33	
minimum elong	-7554 Sep 24 j 05:38	7° Ω 49'21	1°19'22		-7548 May 21 j 19:41	15° ≈	
morning rise	-7554 Oct 06 j 17:16	10° Ω 41′28	1 17 ==	retrograde	-7548 Aug 05 j 12:17	23° ≈ 05'15	
morning not	-7554 Oct 25 j 21:24	15° Ω		opposition	-7548 Oct 03 j 16:42	18° ≈ 03'26	-1°41'05
retrograde	-7553 Feb 10 j 08:36	29° Ω 17'36		min. Earth dist.	-7548 Oct 03 j 05:23		4.19903 AU
opposition	-7553 Apr 12 j 16:47	24°Ω22'11	1°31'05	mm. Barm anst.	-7548 Oct 27 j 23:52	15°R≈	,, 05 110
min. Earth dist.	-7553 Apr 13 j 02:03	24° Ω 19'13	4.17931 AU	direct	-7548 Dec 02 j 10:13	13° ≈ 00'27	
direct	-7553 Jun 12 j 07:21	19° £ 28′19			-7547 Jan 07 j 06:40	15° ≈	
	-7553 Sep 08 j 08:35	0° m/p			-7547 Apr 01 j 16:29	0°) €	
evening set	-7553 Oct 14 j 04:16	7° m 57'36		evening set	-7547 Apr 09 j 09:43	1°) 42′29	
conjunction	-7553 Oct 26 j 21:15	10° m 55'48	0°39'00	conjunction	-7547 Apr 23 j 02:08	4°) 46′01	-0°47'43
minimum elong	-7553 Oct 26 j 21:19	10° m 55'50	0°39'14	minimum elong	-7547 Apr 23 j 02:12	4°) 46′03	0°47'59
max. Earth dist.	-7553 Oct 26 j 18:52	10° My $54'23$	6.13374 AU	max. Earth dist.	-7547 Apr 23 j 10:00	4° ¥ 50′25	6.24467 AU
morning rise	-7553 Nov 08 j 16:22	13° m 55'19		morning rise	-7547 May 06 j 16:26	7°) 48′24	
	-7552 Jan 29 j 18:06	0∘ 亚		retrograde	-7547 Sep 06 j 16:55	25°) 43′05	
retrograde	-7552 Mar 17 j 10:06	3° ≏ 20'42		•,•		2001/45110	0°35'25
				opposition	-7547 Nov 05 j 00:59	20°) 45′10	-0 33 23
opposition	-7552 May 04 j 15:04	30°R, Mp		min. Earth dist.	-7547 Nov 05 j 00:59 -7547 Nov 05 j 02:58	20° X 45'10 20° X 44'30	4.28633 AU
- P P	-7552 May 04 J 15:04 -7552 May 17 j 11:09	30° ዪ ነው 28° ነው 21'26	0°17'52	**		20°) 44'30 15°) 41'04	
min. Earth dist.		-	0°17'52 4.09361 AU	min. Earth dist.	-7547 Nov 05 j 02:58	20°) 44'30 15°) 41'04 0° °	
• •	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39	28° m/21'26 28° m/23'17 23° m/28'34		min. Earth dist.	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51	20°\;\;44'30 15°\;\;41'04 0°\;\;\; 3°\;\;41'25	
min. Earth dist.	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40	28° m 21'26 28° m 23'17 23° m 28'34 24° m 35'08		min. Earth dist. direct	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10	20°) 44'30 15°) 41'04 0° °	
min. Earth dist. direct desc. node	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45	28° m 21'26 28° m 23'17 23° m 28'34 24° m 35'08 0° <u>a</u>		min. Earth dist. direct asc. node evening set	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 13 j 10:50	20°¥44'30 15°¥41'04 0°Y 3°Y41'25 4°Y02'49	4.28633 AU
min. Earth dist. direct	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40	28° m 21'26 28° m 23'17 23° m 28'34 24° m 35'08		min. Earth dist. direct asc. node evening set conjunction	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 26 j 20:49	20°¥44'30 15°¥41'04 0°Y 3°Y41'25 4°Y02'49 7°Y00'41	4.28633 AU 0°01'58
min. Earth dist. direct desc. node evening set	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° Ω 12° № 17'01	4.09361 AU	min. Earth dist. direct asc. node evening set conjunction minimum elong	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 13 j 10:50 -7546 May 26 j 20:49 -7546 May 26 j 20:50	20°\;\;44'30 15°\;\;41'04 0°\;\'\' 3°\;\'\41'25 4°\;\'\'\02'49 7°\;\'\00'41 7°\;\'\00'41	4.28633 AU
min. Earth dist. direct desc. node evening set conjunction	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:24	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° Ω 12° Ω 17'01 15° Ω 22'02	4.09361 AU -0°15'24	min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 13 j 10:50 -7546 May 26 j 20:49 -7546 May 26 j 20:50 -7546 May 26 j 12:38	20°\;\;44'30 15°\;\;41'04 0°\;\'\'\'\'\'\'\'\'\'\'\'\'\'\'\'\'\'\'\	4.28633 AU 0°01'58
min. Earth dist. direct desc. node evening set conjunction minimum elong	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:24 -7552 Nov 29 j 07:23	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° Ω 12° Ω 17'01 15° Ω 22'02 15° Ω 22'01	4.09361 AU	min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 13 j 10:50 -7546 May 26 j 20:49 -7546 May 26 j 20:50 -7546 May 26 j 12:38 -7546 May 27 j 05:02	20°\;\;\44'30 15°\;\41'04 0°\?\ 3°\?\41'25 4°\?\02'49 7°\?\00'41 7°\?\00'41 6°\?\56'10 7°\?\05'12	4.28633 AU 0°01'58 0°01'59
min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:24 -7552 Nov 29 j 07:23 -7552 Nov 29 j 05:03	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° \(\Omega\) 12° \(\Omega\) 17'01 15° \(\Omega\) 22'02 15° \(\Omega\) 22'01 15° \(\Omega\) 22'038	4.09361 AU -0°15'24	min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist.	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 13 j 10:50 -7546 May 26 j 20:49 -7546 May 26 j 20:50 -7546 May 26 j 12:38 -7546 May 27 j 05:02 -7546 May 26 j 05:36	20°\;\;\44'30 15°\;\41'04 0°\?\ 3°\?\41'25 4°\?\02'49 7°\?\00'41 7°\?\00'41 6°\?\56'10 7°\?\05'12 6°\?\52'16	4.28633 AU 0°01'58
min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:24 -7552 Nov 29 j 07:23 -7552 Nov 29 j 05:03 -7552 Nov 29 j 09:43	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° \(\Omega\) 12° \(\Omega\) 17'01 15° \(\Omega\) 22'02 15° \(\Omega\) 22'01 15° \(\Omega\) 22'38 15° \(\Omega\) 23'23	4.09361 AU -0°15'24 0°15'29	min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 13 j 10:50 -7546 May 26 j 20:49 -7546 May 26 j 20:50 -7546 May 26 j 12:38 -7546 May 26 j 05:36 -7546 Jun 09 j 03:47	20°\;\;\44'30 15°\;\41'04 0°\?\;\3°\!\41'25 4°\!\02'49 7°\!\00'41 7°\!\00'41 6°\!\756'10 7°\!\05'12 6°\!\752'16 9°\!\756'54	4.28633 AU 0°01'58 0°01'59
min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist.	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:23 -7552 Nov 29 j 05:03 -7552 Nov 29 j 09:43 -7552 Nov 30 j 02:22	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° Ω 12° Ω 17'01 15° Ω 22'02 15° Ω 22'01 15° Ω 20'38 15° Ω 23'23 15° Ω 33'14	4.09361 AU -0°15'24	min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 13 j 10:50 -7546 May 26 j 20:49 -7546 May 26 j 12:38 -7546 May 26 j 05:36 -7546 Jun 09 j 03:47 -7546 Oct 08 j 02:18	20°\;\;\44'30 15°\;\41'04 0°\?\ 3°\!\41'25 4°\!\902'49 7°\!\900'41 7°\!\90'41 6°\!\756'10 7°\!\905'12 6°\!\752'16 9°\!\756'54 27°\!\16'59	4.28633 AU 0°01'58 0°01'59 6.32117 AU
min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:23 -7552 Nov 29 j 07:23 -7552 Nov 29 j 05:03 -7552 Nov 29 j 09:43 -7552 Nov 30 j 02:22 -7552 Dec 12 j 12:16	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° \(\Omega\) 12° \(\Omega\) 17'01 15° \(\Omega\) 22'02 15° \(\Omega\) 22'01 15° \(\Omega\) 22'03 15° \(\Omega\) 23'23 15° \(\Omega\) 33'14 18° \(\Omega\) 28'56	4.09361 AU -0°15'24 0°15'29	min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 26 j 20:49 -7546 May 26 j 20:50 -7546 May 26 j 12:38 -7546 May 26 j 05:36 -7546 Jun 09 j 03:47 -7546 Oct 08 j 02:18 -7546 Dec 06 j 19:44	20°\;\;\44'30 15°\;\41'04 0°\;\7 3°\;\41'25 4°\;\702'49 7°\;\700'41 7°\;\700'41 6°\;\756'10 7°\;\705'12 6°\;\752'16 9°\;\756'54 27°\;\716'59 22°\;\722'36	4.28633 AU 0°01'58 0°01'59 6.32117 AU 0°38'43
min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:24 -7552 Nov 29 j 07:23 -7552 Nov 29 j 09:43 -7552 Nov 29 j 09:43 -7552 Nov 30 j 02:22 -7552 Dec 12 j 12:16 -7551 Feb 03 j 11:31	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° Ω 12° Ω 17'01 15° Ω 22'02 15° Ω 22'01 15° Ω 23'23 15° Ω 33'14 18° Ω 28'56 0° ML	4.09361 AU -0°15'24 0°15'29	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.	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 26 j 20:49 -7546 May 26 j 20:50 -7546 May 26 j 12:38 -7546 May 26 j 05:36 -7546 Jun 09 j 03:47 -7546 Oct 08 j 02:18 -7546 Dec 06 j 19:44 -7546 Dec 07 j 11:28	20°\;\;\44'30 15°\;\41'04 0°\?\ 3°\;\41'25 4°\;\02'49 7°\;\00'41 7°\;\00'41 6°\;\56'10 7°\;\05'12 6°\;\52'16 9°\;\56'54 27°\;\16'59 22°\;\22'36 22°\;\17'27	4.28633 AU 0°01'58 0°01'59 6.32117 AU
min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:24 -7552 Nov 29 j 07:23 -7552 Nov 29 j 05:03 -7552 Nov 29 j 09:43 -7552 Nov 30 j 02:22 -7552 Dec 12 j 12:16 -7551 Feb 03 j 11:31 -7551 Apr 23 j 03:24	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° \(\Oldsymbol{\Omega} \) 12° \(\Oldsymbol{\Omega} \) 15° \(\Oldsymbol{\Omega} \) 15° \(\Oldsymbol{\Omega} \) 15° \(\Oldsymbol{\Omega} \) 15° \(\Oldsymbol{\Omega} \) 22'01 15° \(\Oldsymbol{\Omega} \) 22'03 15° \(\Oldsymbol{\Omega} \) 23'14 18° \(\Oldsymbol{\Omega} \) 28'56 0° m. 8° m. 29'18	4.09361 AU -0°15'24 0°15'29 6.06323 AU	min. Earth dist. direct asc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 26 j 20:49 -7546 May 26 j 20:50 -7546 May 26 j 12:38 -7546 May 26 j 05:36 -7546 Jun 09 j 03:47 -7546 Oct 08 j 02:18 -7546 Dec 06 j 19:44 -7546 Dec 07 j 11:28 -7545 Feb 06 j 20:36	20°\(\)44'30 15°\(\)\(\)41'04 0°\(\)' 3°\(\)'41'25 4°\(\)'02'49 7°\(\)'00'41 7°\(\)'00'41 6°\(\)'56'10 7°\(\)'05'12 6°\(\)'52'16 9°\(\)'56'54 27°\(\)'16'59 22°\(\)'22'36 22°\(\)'17'27 17°\(\)'19'00	4.28633 AU 0°01'58 0°01'59 6.32117 AU 0°38'43
min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:24 -7552 Nov 29 j 07:23 -7552 Nov 29 j 07:23 -7552 Nov 29 j 09:43 -7552 Nov 30 j 02:22 -7552 Dec 12 j 12:16 -7551 Feb 03 j 11:31 -7551 Apr 23 j 03:24 -7551 Jun 22 j 16:03	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° \(\Omega\) 12° \(\Omega\) 17'01 15° \(\Omega\) 22'02 15° \(\Omega\) 22'01 15° \(\Omega\) 22'03 15° \(\Omega\) 23'14 18° \(\Omega\) 28'56 0° m. 8° m. 29'18 3° m. 26'18	4.09361 AU -0°15'24 0°15'29 6.06323 AU -1°04'02	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	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 26 j 20:49 -7546 May 26 j 20:50 -7546 May 26 j 12:38 -7546 May 26 j 05:36 -7546 Jun 09 j 03:47 -7546 Oct 08 j 02:18 -7546 Dec 06 j 19:44 -7546 Dec 07 j 11:28 -7545 Feb 06 j 20:36 -7545 May 20 j 13:13	20°\(\frac{44'30}{15°\(\frac{44'30}{0°\(\frac{9}{4}'\)}} 3°\(\frac{41'25}{4°\(\frac{90'41}{25}\)} 7°\(\frac{90'41}{7°\(\frac{90'41}{10'5'}\)} 6°\(\frac{756'10}{5''05'12}\) 6°\(\frac{756'54}{27°\(\frac{9}{16'59}\)} 22°\(\frac{92'36}{22'\(\frac{717'27}{17°\(\frac{9}{19'00}\)}} 0°\(\frac{8}{0''}\)	4.28633 AU 0°01'58 0°01'59 6.32117 AU 0°38'43
min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:24 -7552 Nov 29 j 07:23 -7552 Nov 29 j 07:23 -7552 Nov 29 j 09:43 -7552 Nov 30 j 02:22 -7552 Dec 12 j 12:16 -7551 Feb 03 j 11:31 -7551 Apr 23 j 03:24 -7551 Jun 22 j 16:03 -7551 Jun 21 j 19:45	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° \(\Omega\) 12° \(\Omega\) 17'01 15° \(\Omega\) 22'02 15° \(\Omega\) 22'01 15° \(\Omega\) 22'03 15° \(\Omega\) 23'23 15° \(\Omega\) 33'14 18° \(\Omega\) 28'56 0° \(\Omega\) 8° \(\Omega\) 29'18 3° \(\Omega\) 26'18 3° \(\Omega\) 33'05	4.09361 AU -0°15'24 0°15'29 6.06323 AU	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	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 26 j 20:49 -7546 May 26 j 20:50 -7546 May 26 j 12:38 -7546 May 26 j 12:38 -7546 May 26 j 05:36 -7546 May 26 j 05:36 -7546 Jun 09 j 03:47 -7546 Oct 08 j 02:18 -7546 Dec 06 j 19:44 -7546 Dec 07 j 11:28 -7545 Feb 06 j 20:36 -7545 May 20 j 13:13 -7545 Jun 15 j 00:53	20°\;\;\44'30 15°\;\41'04 0°\;\7 3°\;\41'25 4°\;\702'49 7°\;\700'41 7°\;\700'41 6°\;\756'10 7°\;\705'12 6°\;\756'54 27°\;\716'59 22°\;\72'36 22°\;\71'27 17°\;\719'00 0°\;\85°\;\826'18	4.28633 AU 0°01'58 0°01'59 6.32117 AU 0°38'43 4.34634 AU
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.	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:24 -7552 Nov 29 j 07:23 -7552 Nov 29 j 07:23 -7552 Nov 29 j 09:43 -7552 Nov 30 j 02:22 -7552 Dec 12 j 12:16 -7551 Feb 03 j 11:31 -7551 Apr 23 j 03:24 -7551 Jun 22 j 16:03 -7551 Jun 21 j 19:45 -7551 Jul 21 j 07:44	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° \(\Omega\) 12° \(\Omega\) 22'02 15° \(\Omega\) 22'02 15° \(\Omega\) 22'03 15° \(\Omega\) 22'33 15° \(\Omega\) 23'23 15° \(\Omega\) 33'14 18° \(\Omega\) 28'56 0° \(\Omega\) 8° \(\Omega\) 29'18 3° \(\Omega\) 26'18 3° \(\Omega\) 33'05 30° R\(\Omega\)	4.09361 AU -0°15'24 0°15'29 6.06323 AU -1°04'02	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	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 26 j 20:49 -7546 May 26 j 20:50 -7546 May 26 j 12:38 -7546 May 26 j 05:36 -7546 Jun 09 j 03:47 -7546 Oct 08 j 02:18 -7546 Dec 06 j 19:44 -7546 Dec 07 j 11:28 -7545 Feb 06 j 20:36 -7545 May 20 j 13:13	20°\(\frac{44'30}{15°\(\frac{44'30}{0°\(\frac{9}{4}'\)}} 3°\(\frac{41'25}{4°\(\frac{90'41}{25}\)} 7°\(\frac{90'41}{7°\(\frac{90'41}{10'5'}\)} 6°\(\frac{756'10}{5''05'12}\) 6°\(\frac{756'54}{27°\(\frac{9}{16'59}\)} 22°\(\frac{92'36}{22'\(\frac{717'27}{17°\(\frac{9}{19'00}\)}} 0°\(\frac{8}{0''}\)	4.28633 AU 0°01'58 0°01'59 6.32117 AU 0°38'43
min. Earth dist. direct desc. node evening set conjunction minimum elong behind sun begin behind sun end max. Earth dist. morning rise retrograde opposition	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:24 -7552 Nov 29 j 07:23 -7552 Nov 29 j 07:23 -7552 Nov 29 j 09:43 -7552 Nov 30 j 02:22 -7552 Dec 12 j 12:16 -7551 Feb 03 j 11:31 -7551 Apr 23 j 03:24 -7551 Jun 22 j 16:03 -7551 Jun 21 j 19:45 -7551 Jul 21 j 07:44 -7551 Aug 19 j 23:55	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° \(\Oldsymbol{\Omega} \) 12° \(\Oldsymbol{\Omega} \) 15° \(\Oldsymbol{\Omega} \) 22'02 15° \(\Oldsymbol{\Omega} \) 22'02 15° \(\Oldsymbol{\Omega} \) 22'03 15° \(\Oldsymbol{\Omega} \) 23'23 15° \(\Oldsymbol{\Omega} \) 28' \(\Oldsymbol{\Omega} \) 3° m \(\Oldsymbol{\Omega} \) 3° m \(\Oldsymbol{\Omega} \) 30° \(\Oldsymbol{\Omega} \) 28° \(\Oldsymbol{\Omega}	4.09361 AU -0°15'24 0°15'29 6.06323 AU -1°04'02	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 max. Earth dist.	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 26 j 20:49 -7546 May 26 j 20:50 -7546 May 26 j 12:38 -7546 May 26 j 05:36 -7546 May 26 j 05:36 -7546 Jun 09 j 03:47 -7546 Dec 06 j 19:44 -7546 Dec 07 j 11:28 -7545 Feb 06 j 20:36 -7545 May 20 j 13:13 -7545 Jun 15 j 00:53 -7545 Jun 26 j 19:55	20°\(\)44'30 15°\(\)\(\)41'04 0°\(\)' 3°\(\)\(\)41'25 4°\(\)\(\)0'41 7°\(\)\(\)0'41 6°\(\)'56'10 7°\(\)\(\)5'12 6°\(\)'56'54 27°\(\)\(\)\(\)16'59 22°\(\)\(\)2'\(\)\(\)16'59 22°\(\)\(\)17'27 17°\(\)\(\)19'00 0°\(\)\(\)5°\(\)26'18 8°\(\)\(\)2'16	4.28633 AU 0°01'58 0°01'59 6.32117 AU 0°38'43 4.34634 AU 6.35976 AU
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.	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:24 -7552 Nov 29 j 07:23 -7552 Nov 29 j 07:23 -7552 Nov 29 j 05:03 -7552 Nov 29 j 09:43 -7552 Nov 30 j 02:22 -7552 Dec 12 j 12:16 -7551 Feb 03 j 11:31 -7551 Apr 23 j 03:24 -7551 Jun 22 j 16:03 -7551 Jun 21 j 19:45 -7551 Jul 21 j 07:44 -7551 Aug 19 j 23:55 -7551 Sep 18 j 14:42	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° \(\Oldsymbol{\Omega}\) 12° \(\Oldsymbol{\Omega}\) 15° \(\Oldsymbol{\Omega}\) 22'02 15° \(\Oldsymbol{\Omega}\) 22'02 15° \(\Oldsymbol{\Omega}\) 23'23 15° \(\Oldsymbol{\Omega}\) 28' \(\Oldsymbol{\Omega}\) 30" \(\Oldsymbol{\Omega}\) 28' \(\Oldsymbol{\Omega}\) 30" \(\Oldsymbol{\Omega}\)	4.09361 AU -0°15'24 0°15'29 6.06323 AU -1°04'02	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 max. Earth dist.	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 13 j 10:50 -7546 May 26 j 20:49 -7546 May 26 j 20:50 -7546 May 26 j 12:38 -7546 May 26 j 05:36 -7546 May 26 j 05:36 -7546 Jun 09 j 03:47 -7546 Dec 06 j 19:44 -7546 Dec 07 j 11:28 -7545 Feb 06 j 20:36 -7545 May 20 j 13:13 -7545 Jun 15 j 00:53 -7545 Jun 26 j 19:55	20°\(\)\(44'30\) 15°\(\)\(41'04\) 0°\(\)'\(3°\)\(41'25\) 4°\(\)\(02'49\) 7°\(\)\(00'41\) 7°\(\)\(00'41\) 6°\(\)\(56'10\) 7°\(\)\(05'12\) 6°\(\)\(56'54\) 27°\(\)\(16'59\) 22°\(\)\(12'27\) 17°\(\)\(19'00\) 0°\(\)\(5°\)\(52'18\) 8°\(\)\(20'16\) 8°\(\)\(21'18\) 8°\(\)\(21'16\) 8°\(\)\(21'16\) 8°\(\)\(21'16\) 8°\(\)\(21'16\) 8°\(\)\(21'16\)	4.28633 AU 0°01'58 0°01'59 6.32117 AU 0°38'43 4.34634 AU 6.35976 AU 0°50'01
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	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:24 -7552 Nov 29 j 07:23 -7552 Nov 29 j 05:03 -7552 Nov 29 j 09:43 -7552 Nov 29 j 09:43 -7552 Nov 30 j 02:22 -7552 Dec 12 j 12:16 -7551 Feb 03 j 11:31 -7551 Apr 23 j 03:24 -7551 Jun 22 j 16:03 -7551 Jun 21 j 19:45 -7551 Jul 21 j 07:44 -7551 Aug 19 j 23:55 -7551 Sep 18 j 14:42 -7551 Dec 10 j 20:35	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° \(\Oldsymbol{\Omega}\) 12° \(\Oldsymbol{\Omega}\) 17'01 15° \(\Oldsymbol{\Omega}\) 22'02 15° \(\Oldsymbol{\Omega}\) 22'02 15° \(\Oldsymbol{\Omega}\) 23'23 15° \(\Oldsymbol{\Omega}\) 28' \(\Oldsymbol{\Omega}\) 30° \(\Oldsymbol{\Omega}\) 28° \(\Oldsymbol{\Omega}\) 215° \(\Oldsymbol{\Omega}\)	4.09361 AU -0°15'24 0°15'29 6.06323 AU -1°04'02	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 max. Earth dist. conjunction minimum elong	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 26 j 20:49 -7546 May 26 j 20:50 -7546 May 26 j 12:38 -7546 May 26 j 05:36 -7546 May 27 j 05:02 -7546 May 27 j 05:02 -7546 Jun 09 j 03:47 -7546 Oct 08 j 02:18 -7546 Dec 06 j 19:44 -7546 Dec 07 j 11:28 -7545 Feb 06 j 20:36 -7545 Jun 15 j 00:53 -7545 Jun 26 j 19:55 -7545 Jun 28 j 01:36 -7545 Jun 28 j 01:36	20°\(\)\(44'30\) 15°\(\)\(41'04\) 0°\(\)'\(3°\)\(41'25\) 4°\(\)\(02'49\) 7°\(\)\(00'41\) 7°\(\)\(00'41\) 6°\(\)\(56'10\) 7°\(\)\(05'12\) 6°\(\)\(56'54\) 27°\(\)\(16'59\) 22°\(\)\(12'27\) 17°\(\)\(19'00\) 0°\(\)\(5°\)\(52'18\) 8°\(\)\(20'16\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\)	4.28633 AU 0°01'58 0°01'59 6.32117 AU 0°38'43 4.34634 AU 6.35976 AU
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.	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:24 -7552 Nov 29 j 07:23 -7552 Nov 29 j 07:23 -7552 Nov 29 j 05:03 -7552 Nov 29 j 09:43 -7552 Nov 30 j 02:22 -7552 Dec 12 j 12:16 -7551 Feb 03 j 11:31 -7551 Apr 23 j 03:24 -7551 Jun 22 j 16:03 -7551 Jun 21 j 19:45 -7551 Jul 21 j 07:44 -7551 Aug 19 j 23:55 -7551 Sep 18 j 14:42	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° \(\Oldsymbol{\Omega}\) 12° \(\Oldsymbol{\Omega}\) 15° \(\Oldsymbol{\Omega}\) 22'02 15° \(\Oldsymbol{\Omega}\) 22'02 15° \(\Oldsymbol{\Omega}\) 23'23 15° \(\Oldsymbol{\Omega}\) 28' \(\Oldsymbol{\Omega}\) 30" \(\Oldsymbol{\Omega}\) 28' \(\Oldsymbol{\Omega}\) 30" \(\Oldsymbol{\Omega}\)	4.09361 AU -0°15'24 0°15'29 6.06323 AU -1°04'02	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 max. Earth dist.	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 26 j 20:49 -7546 May 26 j 20:50 -7546 May 26 j 12:38 -7546 May 26 j 05:36 -7546 May 26 j 05:36 -7546 Jun 09 j 03:47 -7546 Oct 08 j 02:18 -7546 Dec 06 j 19:44 -7546 Dec 07 j 11:28 -7545 Feb 06 j 20:36 -7545 Jun 15 j 00:53 -7545 Jun 28 j 01:36 -7545 Jun 28 j 01:36 -7545 Jun 28 j 01:32 -7545 Jul 10 j 22:40	20°\(\pm44'30\) 15°\(\pm44'30\) 0°\(\pm\) 3°\(\pm41'25\) 4°\(\pm02'49\) 7°\(\pm00'41\) 7°\(\pm00'41\) 6°\(\pm56'10\) 7°\(\pm05'12\) 6°\(\pm55'16\) 9°\(\pm56'54\) 27°\(\pm16'59\) 22°\(\pm12'27\) 17°\(\pm19'00\) 0°\(\pm85\) 5°\(\pm26'18\) 8°\(\pm32'16\) 8°\(\pm318'41\) 8°\(\pm318'39\) 11°\(\pm309'20\)	4.28633 AU 0°01'58 0°01'59 6.32117 AU 0°38'43 4.34634 AU 6.35976 AU 0°50'01
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	-7552 May 17 j 11:09 -7552 May 17 j 05:29 -7552 Jul 15 j 19:39 -7552 Aug 10 j 19:40 -7552 Sep 19 j 20:45 -7552 Nov 16 j 06:01 -7552 Nov 29 j 07:24 -7552 Nov 29 j 07:23 -7552 Nov 29 j 05:03 -7552 Nov 29 j 09:43 -7552 Nov 29 j 09:43 -7552 Nov 30 j 02:22 -7552 Dec 12 j 12:16 -7551 Feb 03 j 11:31 -7551 Apr 23 j 03:24 -7551 Jun 22 j 16:03 -7551 Jun 21 j 19:45 -7551 Jul 21 j 07:44 -7551 Aug 19 j 23:55 -7551 Sep 18 j 14:42 -7551 Dec 10 j 20:35	28° my 21'26 28° my 23'17 23° my 28'34 24° my 35'08 0° \(\Oldsymbol{\Omega}\) 12° \(\Oldsymbol{\Omega}\) 17'01 15° \(\Oldsymbol{\Omega}\) 22'02 15° \(\Oldsymbol{\Omega}\) 22'02 15° \(\Oldsymbol{\Omega}\) 23'23 15° \(\Oldsymbol{\Omega}\) 28' \(\Oldsymbol{\Omega}\) 215' \(\Oldsymbol{\Omega}\)	4.09361 AU -0°15'24 0°15'29 6.06323 AU -1°04'02 4.04551 AU	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 max. Earth dist. conjunction minimum elong	-7547 Nov 05 j 02:58 -7546 Jan 05 j 00:04 -7546 Apr 24 j 17:10 -7546 May 11 j 19:51 -7546 May 26 j 20:49 -7546 May 26 j 20:50 -7546 May 26 j 12:38 -7546 May 26 j 05:36 -7546 May 27 j 05:02 -7546 May 27 j 05:02 -7546 Jun 09 j 03:47 -7546 Oct 08 j 02:18 -7546 Dec 06 j 19:44 -7546 Dec 07 j 11:28 -7545 Feb 06 j 20:36 -7545 Jun 15 j 00:53 -7545 Jun 26 j 19:55 -7545 Jun 28 j 01:36 -7545 Jun 28 j 01:36	20°\(\)\(44'30\) 15°\(\)\(41'04\) 0°\(\)'\(3°\)\(41'25\) 4°\(\)\(02'49\) 7°\(\)\(00'41\) 7°\(\)\(00'41\) 6°\(\)\(56'10\) 7°\(\)\(05'12\) 6°\(\)\(56'54\) 27°\(\)\(16'59\) 22°\(\)\(12'27\) 17°\(\)\(19'00\) 0°\(\)\(5°\)\(52'18\) 8°\(\)\(20'16\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\) 8°\(\)\(21'18\)	4.28633 AU 0°01'58 0°01'59 6.32117 AU 0°38'43 4.34634 AU 6.35976 AU 0°50'01

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7544 in astronomical counting style is the year 7545 BCE in historical counting style. -7544 Jan 07 j 16:01 23°**8**26'27 1°40'33 -7539 Nov 22 i 23:53 15°M opposition -7544 Jan 08 j 15:46 23°**8**18'50 -7539 Dec 27 j 05:15 22°M43'39 min. Earth dist. 4.36217 AU evening set -7544 Mar 10 j 04:26 18°**8**24'51 direct -7538 Jan 09 j 15:25 -7544 Jun 15 j 09:50 $0^{\circ}\Pi$ 25°M53'09 -1°10'30 conjunction -7544 Jul 15 j 14:42 -7538 Jan 09 j 15:20 1°10'53 evening set 6°**I**I26'34 minimum elong 25°M53'06 max. Earth dist. -7538 Jan 11 j 05:30 -7544 Jul 26 j 16:58 8°**Ⅲ**54'35 6.35034 AU max. Earth dist. 26°M15'35 6.04526 AU morning rise -7538 Jan 23 j 04:41 29°ML04'14 -7544 Jul 28 j 06:07 -7538 Jan 27 j 04:23 conjunction 9°**Ⅱ**15'19 1°23'25 0°**∡** minimum elong -7544 Jul 28 j 06:04 9°**Ⅱ**15'18 1°23'51 retrograde -7538 Jun 03 j 14:58 19°**х** 06′25 morning rise -7544 Aug 09 j 19:03 12°**I**I02'52 min. Earth dist. -7538 Aug 01 j 08:29 14°**∡**10′04 4.06070 AU retrograde -7544 Dec 09 j 09:18 29°**Ⅲ**25'35 opposition -7538 Aug 02 j 10:15 14°**₹**01'18 -2°07'36 -7543 Feb 08 j 05:03 -7538 Sep 29 j 12:35 opposition 24°**Ⅲ**34′07 2°13'56 direct 9°**₰**04'08 -7537 Feb 02 j 03:28 min. Earth dist. -7543 Feb 09 j 07:45 24°**Ⅲ**25'38 4.32932 AU evening set 28°**х¹**12'35 direct -7543 Apr 11 j 15:33 19°**Ⅲ**35'17 -7537 Feb 09 j 21:00 0°ರ -7543 Jul 11 j 00:14 0ಂತಾ evening set -7543 Aug 15 j 18:44 7°5540'14 conjunction -7537 Feb 15 j 18:44 1°る22'19 -1°31'42 max. Earth dist. -7543 Aug 26 j 20:24 10°9510'17 6.29570 AU minimum elong -7537 Feb 15 j 18:43 1°**る**22'19 1°32'13 max. Earth dist. -7537 Feb 17 j 08:35 1°**る**44'17 6.08613 AU conjunction -7543 Aug 28 j 05:19 10°928'56 1°32'56 morning rise -7537 Mar 01 j 12:02 4°る32'54 minimum elong -7543 Aug 28 j 05:20 10°9528'56 1°33'27 retrograde -7537 Jul 08 j 15:10 24°る02'22 morning rise -7543 Sep 09 j 14:47 13°917'13 opposition -7537 Sep 05 j 23:24 18°る58'05 -2°13'25 -7543 Dec 14 i 03:27 $0^{\circ}\Omega$ min. Earth dist. -7537 Sep 05 i 02:30 19°る05'14 4.12392 AU -7542 Jan 11 j 14:19 1°Ω14'02 direct -7537 Nov 03 i 17:29 13°る57'24 retrograde -7542 Feb 09 j 05:34 30°R55 -7536 Feb 25 i 17:28 0°≈ -7542 Mar 13 j 20:27 26°521'09 2°08'29 -7536 Mar 09 j 18:56 2°≈55'37 opposition evening set -7542 Mar 14 j 16:02 26°914'55 min. Earth dist. 4 25671 AU -7542 May 14 j 11:15 21°925'18 -7536 Mar 23 j 12:45 6°≈02'57 -1°19'44 direct conjunction -7542 Aug 02 j 02:19 1°20'11 $0^{\circ}\Omega$ minimum elong -7536 Mar 23 j 12:50 6°≈02'59 -7542 Sep 16 j 07:14 -7536 Mar 24 j 14:34 9°**Ω**41′02 max. Earth dist. 6°≈17'38 6.16621 AU evening set morning rise -7536 Apr 06 j 06:13 9°≈09'58 -7542 Sep 28 j 18:54 12°**Q**33'36 1°14'36 -7536 May 02 j 18:55 conjunction 15°≈ -7536 Aug 10 j 01:31 -7542 Sep 28 j 18:58 12°**Ω**33'39 1°15'00 retrograde 27°≈48'00 minimum elong -7542 Sep 27 j 23:36 -7536 Oct 08 j 05:33 max. Earth dist. 12°**Ω**22'27 6.21133 AU 22°≈46'45 -1°33'20 opposition 22°≈49'57 4.21219 AU -7542 Oct 09 j 08:44 -7536 Oct 07 j 20:05 15°**Ω** min. Earth dist. -7542 Oct 11 j 07:18 -7536 Dec 07 j 02:36 morning rise 15°**Ω**26'44 direct 17°≈43'32 -7542 Dec 23 j 16:12 0° m -7535 Mar 15 j 14:35 0°**₩** retrograde -7541 Feb 15 j 10:50 4° Mp 10'26 evening set -7535 Apr 14 j 05:06 6°**∺**22'38 -7541 Apr 11 j 19:28 30°R€ opposition -7541 Apr 17 j 17:41 29°**Ω**14'33 1°22'11 conjunction -7535 Apr 27 j 20:46 9°\ 25'26 -0°41'19 min. Earth dist. -7541 Apr 18 j 01:20 29°**Ω**12'05 4.16561 AU minimum elong -7535 Apr 27 j 20:50 9°\ 25'28 0°41'32 direct -7541 Jun 17 j 05:09 24° **Q**20'58 max. Earth dist. -7535 Apr 27 j 23:45 9°**升**27'05 6.25640 AU -7541 Aug 18 j 03:52 -7535 May 11 j 10:27 12°**升**27′02 morning rise -7541 Oct 18 j 22:11 -7535 Aug 29 j 09:13 $0^{\circ}\Upsilon$ evening set 12° m 52'53 -7535 Sep 11 j 02:25 0°Y16'01 retrograde -7541 Oct 31 j 16:12 15° m 52'03 0°31'45 -7535 Sep 23 j 18:04 30°**₹** conjunction -7541 Oct 31 i 16:15 minimum elong 15° m 52'04 0°31'55 opposition -7535 Nov 09 j 11:14 25°¥18'36 -0°25'08 max. Earth dist. -7541 Oct 31 i 16:41 15° m 52'20 6.12251 AU min. Earth dist. -7535 Nov 09 i 15:47 25°**)** 17'05 4.29574 AU morning rise -7541 Nov 13 j 12:45 18° m 52'40 direct -7534 Jan 09 i 14:27 20°**)** 14'25 -7540 Jan 04 i 00:11 0∘**⊽** asc. node -7534 Mar 21 i 17:42 27° **)** 03'34 -7540 Mar 22 i 13:28 8°**₽**23'38 -7534 Apr 06 j 22:23 $0^{\circ}\Upsilon$ retrograde -7540 May 22 j 14:10 3°**£**23'48 0°06'02 -7534 May 18 j 01:18 8°Y34'11 opposition evening set min. Earth dist. -7540 May 22 j 05:00 3°**£**26'48 4.08587 AU desc. node -7540 Jun 20 j 05:18 0°**2**00′50 -7534 May 31 j 10:19 11°**Y**'31'21 0°09'04 conjunction 11°**Y**'31'20 -7540 Jun 20 j 08:50 30°R, My minimum elong -7534 May 31 j 10:18 0°09'06 11°**Υ**27'32 -7534 May 31 j 03:23 direct -7540 Jul 20 j 17:50 28° m 30'57 behind sun begin 11°Y35'09 -7540 Aug 19 j 21:48 0∘**⊽** behind sun end -7534 May 31 j 17:12 11°**Y**22'06 -7540 Nov 21 j 05:22 17°**£**21′09 max. Earth dist. -7534 May 30 j 17:35 6.32768 AU evening set 14°**Υ**26'46 -7534 Jun 13 j 15:49 morning rise -7540 Dec 04 j 07:56 20° **2**6'50 -0°23'13 -7534 Sep 09 j 02:47 0°8 conjunction -7540 Dec 04 j 07:54 -7534 Oct 12 j 10:00 1°**8**44'21 minimum elong 20°**£**26'49 0°23'20 retrograde max. Earth dist. -7540 Dec 05 j 06:27 20°**₽**40′09 6.05940 AU -7534 Nov 14 j 19:16 30°RΥ morning rise -7540 Dec 17 j 13:53 23°**♀**34'23 opposition -7534 Dec 11 j 05:34 26°**Y**50′24 0°48'29 -7539 Jan 14 j 18:39 0°M min. Earth dist. -7534 Dec 11 j 22:24 26°**Y**44'54 4.34966 AU retrograde -7539 Apr 28 j 08:02 13°M36'29 direct -7533 Feb 11 j 08:03 21°\partial 47'02 opposition -7539 Jun 27 j 18:17 8°M33'02 -1°14'24 -7533 May 02 j 02:16 0° 8 min. Earth dist. -7539 Jun 26 j 21:18 8°M40'04 4.04591 AU -7533 Jun 19 j 11:59 9°853'41 evening set

max. Earth dist.

-7533 Jul 01 j 02:37

12°**8**27'27 6.35947 AU

-7539 Aug 25 j 01:16

3°M38'49

direct

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 33 Attention, astronomical year style is used: The year -7533 in astronomical counting style is the year 7534 BCE in historical counting style.

Attention, astronomi	cal year style is used: Th	e year -7533 i	n astronomical cou	nting style is the year	7534 BCE in historical co	ounting style.	8
conjunction	-7533 Jul 02 j 11:12	12° 8 45'29	0°55'49	max. Earth dist.	-7528 Dec 10 j 07:16	25° ≏ 38'49	6.05713 AU
minimum elong	-7533 Jul 02 j 11:08	12° 8 45'26	0°56'07	morning rise	-7528 Dec 22 j 12:56	28° ≏ 31'55	
	-7533 Jul 12 j 14:28	15° 8			-7528 Dec 28 j 19:48	0° M	
morning rise	-7533 Jul 15 j 07:10	15° 8 35'38			-7527 Mar 15 j 09:11	15° M ₊	
	-7533 Oct 01 j 01:24	Π $^{\circ}$ 0		retrograde	-7527 May 03 j 07:58	18°MJ34'51	
retrograde	-7533 Nov 12 j 19:40	2° ∏ 45'54			-7527 Jun 21 j 11:47	15°RM	
	-7533 Dec 26 j 04:59	30° ₹ 8		opposition	-7527 Jul 02 j 16:40	13°M31'05	
opposition	-7532 Jan 12 j 04:14	27° 8 54'03		min. Earth dist.	-7527 Jul 01 j 18:35		4.04698 AU
min. Earth dist.	-7532 Jan 13 j 05:30		4.35860 AU	direct	-7527 Aug 29 j 21:38	8°M36'33	
direct	-7532 Mar 14 j 17:57	22° 8 52'46		. ,	-7527 Nov 02 j 16:18	15°M	
avanina aat	-7532 May 27 j 05:23 -7532 Jul 19 j 23:56	0° П 10° П 55'03		evening set	-7526 Jan 01 j 05:46 -7526 Jan 11 j 01:06	27° M .41'54 0° ⋌ ¹	
evening set max. Earth dist.	-7532 Jul 19 J 25:56 -7532 Jul 31 j 02:37		6.34374 AU		-/326 Jan 11 J 01:06	0-X1	
max. Earth dist.	-7552 Jul 31 J 02.57	13 112333	0.34374 AO	conjunction	-7526 Jan 14 j 16:36	0° ∡ 751'30	1015'14
conjunction	-7532 Aug 01 j 14:32	13° Ⅱ 43'39	1°26'20	minimum elong	-7526 Jan 14 j 16:32	0° х 51′30′ 0° х 51′27	
minimum elong	-7532 Aug 01 j 14:29	13° Ⅱ 43'38	1°26'48	max. Earth dist.	-7526 Jan 16 j 05:53	1°×13'25	
morning rise	-7532 Aug 14 j 02:31	16° Ⅲ 31'06	1 20 10	morning rise	-7526 Jan 28 j 06:40	4°×702'40	0.01)20110
morning rise	-7532 Oct 22 j 21:18	0.ತ		retrograde	-7526 Jun 08 j 11:19	24° ₹ '01'51	
retrograde	-7532 Dec 13 j 22:13	3°957'51		min. Earth dist.	-7526 Aug 06 j 03:58	19° ₹ '05'19	4.06717 AU
Č	-7531 Feb 05 j 18:36	30°R∏		opposition	-7526 Aug 07 j 05:16	18° ∡ 756'41	
opposition	-7531 Feb 12 j 20:49	29° Ⅱ 06'17	2°15'39	direct	-7526 Oct 04 j 09:21	13° ∡ 59′01	
min. Earth dist.	-7531 Feb 13 j 21:56	28° Ⅱ 58'19	4.32049 AU		-7525 Jan 24 j 12:36	0°ರ	
direct	-7531 Apr 16 j 04:37	24° Ⅱ 07'56		evening set	-7525 Feb 07 j 04:18	3° ට 06'53	
	-7531 Jun 20 j 14:50	0ಂ ತಾ					
evening set	-7531 Aug 20 j 04:37	12°9514'08		conjunction	-7525 Feb 20 j 20:17	6° ප 16'31	-1°32'00
max. Earth dist.	-7531 Aug 31 j 07:31	14° 5 45'18	6.28545 AU	minimum elong	-7525 Feb 20 j 20:17	6° ප 16'31	1°32'30
				max. Earth dist.	-7525 Feb 22 j 10:02	6° る 38'23	6.09463 AU
conjunction	-7531 Sep 01 j 14:51	15° © 03'06	1°32'02	morning rise	-7525 Mar 06 j 13:41	9° ට 26'47	
minimum elong	-7531 Sep 01 j 14:53	15° © 03'07	1°32'32	retrograde	-7525 Jul 13 j 08:28	28° る 50'29	
morning rise	-7531 Sep 14 j 00:23	17° 9 51'49		opposition	-7525 Sep 10 j 14:35	23° る 46'33	-2°10'22
	-7531 Nov 12 j 14:30	$0 ^{\circ} \Omega$		min. Earth dist.	-7525 Sep 09 j 19:27		4.13354 AU
retrograde	-7530 Jan 16 j 10:23	5° Ω 54′20		direct	-7525 Nov 08 j 11:24	18° る 45'32	
opposition	-7530 Mar 18 j 16:27	1° Ω 01′06			-7524 Feb 08 j 06:51	0° ≈	
min. Earth dist.	-7530 Mar 19 j 11:11		4.24567 AU	evening set	-7524 Mar 14 j 17:37	7° ≈ 42'14	
	-7530 Mar 26 j 17:57	30°Rூ					
direct	-7530 May 19 j 05:20	26° © 05'37		conjunction	-7524 Mar 28 j 11:22	10°≈49'10	
	-7530 Jul 09 j 21:15	0°N		minimum elong	-7524 Mar 28 j 11:27	10°≈49'12	
evening set	-7530 Sep 20 j 19:16 -7530 Sep 23 j 12:06	14° Ω 22'44 15° Ω		max. Earth dist. morning rise	-7524 Mar 29 j 09:09 -7524 Apr 11 j 04:47		6.17622 AU
	-/330 Sep 23 J 12:00	13-96		morning rise	-7524 Apr 11 j 04:47	13°≈55'42 15°≈	
conjunction	-7530 Oct 03 j 07:35	17° Ω 16′02	1°09'52		-7524 Apr 15 j 25.16 -7524 Jul 06 j 00:53	0° ∺	
minimum elong	-7530 Oct 03 j 07:40	17° Ω 16'04	1°10'16	retrograde	-7524 Aug 14 j 12:54	2° ∺ 27'33	
max. Earth dist.	-7530 Oct 03 j 07:40	17° Ω 06'27	6.20062 AU	retrograde	-7524 Sep 22 j 21:18	2 7(2/33 30°R≈	
morning rise	-7530 Oct 15 j 20:52	20°Ω10'00	0.20002710	opposition	-7524 Oct 12 j 17:28	27°≈26'49	-1°25'06
morning rise	-7530 Nov 30 j 11:15	0° m)		min. Earth dist.	-7524 Oct 12 j 09:41	27°≈29'27	4.22168 AU
retrograde	-7529 Feb 20 j 08:48	8° m 59'31		direct	-7524 Dec 11 j 17:50	22° ≈ 23'23	
opposition	-7529 Apr 22 j 16:43	4° m 03'06	1°12'52		-7523 Feb 24 j 08:42	0°) €	
min. Earth dist.	-7529 Apr 22 j 21:07	4° mp 01'41	4.15603 AU	evening set	-7523 Apr 18 j 23:45	11° ₩ 00'50	
	-7529 May 29 j 23:31	30°R€		-			
direct	-7529 Jun 21 j 23:11	29° Ω 09'43		conjunction	-7523 May 02 j 14:57	14°) €03'05	-0°34'41
	-7529 Jul 14 j 20:53	0° m		minimum elong	-7523 May 02 j 15:00	14°) €03'07	0°34'52
evening set	-7529 Oct 23 j 14:14	17° Mp 42'56		max. Earth dist.	-7523 May 02 j 15:51	14°) €03'35	6.26504 AU
				morning rise	-7523 May 16 j 03:41	17°) €04'00	
conjunction	-7529 Nov 05 j 09:17	20° Mp 42'53	0°24'26		-7523 Jul 20 j 17:26	0° Υ	
minimum elong	-7529 Nov 05 j 09:20	20° Mp $42'54$	0°24'34	retrograde	-7523 Sep 15 j 12:27	4° Υ 48'27	
max. Earth dist.	-7529 Nov 05 j 13:08	20° Mp 45'08	6.11491 AU		-7523 Nov 12 j 20:29	30° ₹ ₩	
morning rise	-7529 Nov 18 j 07:01	23° m 44'22		opposition	-7523 Nov 13 j 21:47	29° ∺ 51'36	
	-7529 Dec 15 j 22:19	0∘ ⊽		min. Earth dist.	-7523 Nov 14 j 04:07	29°) 49′30	4.30279 AU
retrograde	-7528 Mar 27 j 15:26	13° ≏ 19'40		direct	-7522 Jan 14 j 04:24	24°) (47′33	
desc. node	-7528 May 01 j 04:15	11° Ω 30'29		asc. node	-7522 Jan 29 j 20:57	25°) 10′17	
opposition	-7528 May 27 j 14:20	8° £ 19'13			-7522 Mar 16 j 12:38	0° Υ	
min. Earth dist.	-7528 May 27 j 03:50	8° £ 22'40	4.08072 AU	evening set	-7522 May 22 j 15:47	13° Y 05′54	
direct	-7528 Jul 25 j 15:36	3° £ 26'14			7522 1 04:22.22	1.00000000	001707
evening set	-7528 Nov 26 j 02:12	22° £ 17'34		conjunction	-7522 Jun 04 j 23:32	16° Y 02′22	0°16'07
agniunation	7529 Dag 00 : 05:52	250 0 22140	0.30130	minimum elong	-7522 Jun 04 j 23:30	16° Υ 02'21 15° Υ 51'23	0°16'13
conjunction minimum elong	-7528 Dec 09 j 05:52 -7528 Dec 09 j 05:49	25° £ 23'48 25° £ 23'47		max. Earth dist. morning rise	-7522 Jun 04 j 03:39 -7522 Jun 18 j 03:56	18° Y 57'07	6.33259 AU
minimum ciong	-7320 Dec 09 J 03.49	23 == 23 4/	0 30 40	morning rise	-1322 Juli 10 J U3.30	10 13/0/	

•	nical year style is used: Th		-	` //		· •	150 3 1
ŕ	-7522 Aug 12 j 01:31	0°8		min. Earth dist.	-7516 Jun 01 j 01:56		4.07263 AU
retrograde	-7522 Oct 16 j 19:18	6° 8 12'56		direct	-7516 Jul 30 j 11:13	8° £ 22'48	
opposition	-7522 Dec 15 j 16:33	1° 8 19'20	0°58'01	evening set	-7516 Dec 01 j 00:15	27° £ 16'43	
min. Earth dist.	-7522 Dec 16 j 10:40	1° 8 13'26	4.35232 AU		-7516 Dec 12 j 12:56	0° M	
	-7522 Dec 25 j 23:18	30° ₹ Υ					
direct	-7521 Feb 15 j 21:16	26° Y 16'12		conjunction	-7516 Dec 14 j 04:56	0°M23'40	-0°37'55
	-7521 Apr 08 j 13:31	0° 8		minimum elong	-7516 Dec 14 j 04:52	0°M23'38	0°38'08
evening set	-7521 Jun 23 j 23:01	14° 8 22'04		max. Earth dist.	-7516 Dec 15 j 07:10	0°M39'11	6.05159 AU
	-7521 Jun 26 j 20:00	15° 8		morning rise	-7516 Dec 27 j 13:14	3°M32'30	
					-7515 Feb 18 j 04:19	15°M	
conjunction	-7521 Jul 06 j 21:00	17° 8 13'18		retrograde	-7515 May 08 j 09:14	23°M37'36	
minimum elong	-7521 Jul 06 j 20:56	17° 8 13'15	1°01'38	opposition	-7515 Jul 07 j 16:16	18°M33'26	-1°32'58
max. Earth dist.	-7521 Jul 05 j 13:08	16° 8 55'38	6.35965 AU	min. Earth dist.	-7515 Jul 06 j 17:09	18°M41'13	4.04464 AU
morning rise	-7521 Jul 19 j 15:32	20° 8 02'53			-7515 Aug 06 j 08:30	15°RM	
	-7521 Sep 06 j 06:34	$\Pi^{\circ}0$		direct	-7515 Sep 03 j 20:07	13°M38'28	
retrograde	-7521 Nov 17 j 05:34	7° Ⅱ 14'07			-7515 Oct 02 j 07:33	15°M	
opposition	-7520 Jan 16 j 16:54	2° ∏ 22′26	1°53'19		-7515 Dec 25 j 10:22	0°⊀	
min. Earth dist.	-7520 Jan 17 j 17:53	2° Ⅱ 14′26	4.35640 AU	evening set	-7514 Jan 06 j 08:24	2° ∡ ⁴45'42	
	-7520 Feb 05 j 01:18	30° ₹8					
direct	-7520 Mar 19 j 06:45	27° 8 21'35		conjunction	-7514 Jan 19 j 20:16	5° ≯ 55'38	
	-7520 May 01 j 07:47	0°Щ		minimum elong	-7514 Jan 19 j 20:12	5° ≯ 55'36	
evening set	-7520 Jul 24 j 09:04	15° Ⅱ 23'39		max. Earth dist.	-7514 Jan 21 j 11:38	6° ≯ 18'45	6.05014 AU
max. Earth dist.	-7520 Aug 04 j 09:47	17° Ⅱ 51'24	6.33901 AU	morning rise	-7514 Feb 02 j 10:53	9° ∡ 07'00	
		🗨		retrograde	-7514 Jun 13 j 12:03	29° ∡ 03'57	
conjunction	-7520 Aug 05 j 22:34	18° Ⅱ 12'00	1°28'44	min. Earth dist.	-7514 Aug 11 j 02:10	24° ₹ 07'08	
minimum elong	-7520 Aug 05 j 22:31	18° Ⅱ 11'59	1°29'14	opposition	-7514 Aug 12 j 02:32	23° ₹ 58'49	-2°14'16
morning rise	-7520 Aug 18 j 09:59	20° ∏ 59′21		direct	-7514 Oct 09 j 07:49	19° ∡ 00'40	
	-7520 Sep 30 j 09:26	0°©			-7513 Jan 06 j 11:37	0°る 	
retrograde	-7520 Dec 18 j 12:50	8°\$29'35		evening set	-7513 Feb 12 j 08:34	8° る 08'45	
opposition	-7519 Feb 17 j 12:34	3°537'52			5512 F. J. 26:00 55		1001107
min. Earth dist.	-7519 Feb 18 j 13:36		4.31338 AU	conjunction	-7513 Feb 26 j 00:55	11°る18'16	
T'	-7519 Mar 21 j 17:33	30°RⅡ		minimum elong	-7513 Feb 26 j 00:56	11°る18'17	
direct	-7519 Apr 20 j 19:30	28° ∏ 39'52		max. Earth dist.	-7513 Feb 27 j 12:26		6.10158 AU
	-7519 May 20 j 18:38	0°95		morning rise	-7513 Mar 11 j 18:45	14°る28'20	
evening set	-7519 Aug 24 j 13:16	16° © 46'36		. 1	-7513 May 29 j 11:38	0°≈	
conjunction	7510 Com 05 : 22:24	19° © 35'55	1°30'35	retrograde	-7513 Jul 18 j 02:05	3°≈46'21 30°Rる	
5	-7519 Sep 05 j 23:34				-7513 Sep 05 j 19:46	30°KO 28° 石 42'44	2006110
minimum elong max. Earth dist.	-7519 Sep 05 j 23:36	19° © 35'56 19° © 19'24		opposition	-7513 Sep 15 j 08:19		
morning rise	-7519 Sep 04 j 18:33 -7519 Sep 18 j 09:07	22°\$25'03	6.27641 AU	min. Earth dist. direct	-7513 Sep 14 j 13:45 -7513 Nov 13 j 07:36	28°る49'05 23°る41'17	4.14201 AU
morning rise	-7519 Oct 23 j 08:24	0°Ω		direct	-7512 Jan 18 j 07:11	23 ⊙ 41 17 0° ≈	
retrograde	-7518 Jan 21 j 03:34	10° Ω 33'01		evening set	-7512 Mar 19 j 19:22	0 ~ 12° ≈ 36'32	
opposition	-7518 Mar 23 j 11:35	5° Ω 39'26	1°59'23	evening set	-7512 Mar 30 j 09:16	12 ≈30 32 15°≈	
min. Earth dist.	-7518 Mar 24 j 04:08	5° Ω 34'10	4.23513 AU		-/312 Wai 30 J 07.10	13 ~	
direct	-7518 May 23 j 20:20	0° Ω 44'18	4.23313710	conjunction	-7512 Apr 02 j 13:10	15° ≈ 43'01	-1°11'07
uncet	-7518 Sep 07 j 08:57	15° Ω		minimum elong	-7512 Apr 02 j 13:16	15°≈43'04	
evening set	-7518 Sep 25 j 06:28	19° Ω 02'50		max. Earth dist.	-7512 Apr 03 j 09:05	15°≈54'19	6.18705 AU
oronning sec	7510 Sep 25 J 00.26	17 0602 30		morning rise	-7512 Apr 16 j 06:11	13 ≈3419 18°≈48'57	0.10/03 AU
conjunction	-7518 Oct 07 j 19:20	21° Ω 56'52	1°04'44		-7512 Jun 09 j 02:32	0°) €	
minimum elong	-7518 Oct 07 j 19:25	21° Ω 56'54	1°05'05	retrograde	-7512 Aug 19 j 04:24	7°) 14′04	
max. Earth dist.	-7518 Oct 07 j 04:35	21° Ω 48'18	6.18944 AU	opposition	-7512 Aug 17 j 04:24	2° H 13'52	-1°16'07
morning rise	-7518 Oct 20 j 09:36	24° Ω 51'45		min. Earth dist.	-7512 Oct 17 j 00:20		4.23327 AU
	-7518 Nov 12 j 05:01	0° my		20101	-7512 Nov 03 j 11:57	30°R≈	
retrograde	-7517 Feb 25 j 08:31	13° m) 47'38		direct	-7512 Dec 16 j 13:39	27°≈10'19	
opposition	-7517 Apr 27 j 15:01	8° my 50'38	1°03'07		-7511 Jan 29 j 01:13	0° H	
min. Earth dist.	-7517 Apr 27 j 17:57	8° m) 49'42	4.14476 AU	evening set	-7511 Apr 23 j 20:41	15°) 44'56	
direct	-7517 Jun 26 j 17:58	3° m 57'21		<i>3</i> · · ·	1		
evening set	-7517 Oct 28 j 06:11	22° m/32'53		conjunction	-7511 May 07 j 11:05	18°) 46′24	-0°27'43
C	. ,	• • •		minimum elong	-7511 May 07 j 11:07	18°) (46′25	
conjunction	-7517 Nov 10 j 02:29	25° m 33'48	0°16'58	max. Earth dist.	-7511 May 07 j 09:42	18°) 45′38	6.27681 AU
minimum elong	-7517 Nov 10 j 02:30	25° m 33'49	0°17'04	morning rise	-7511 May 20 j 22:52	21°) (46'26	
max. Earth dist.	-7517 Nov 10 j 09:33	25° m) 37'56	6.10473 AU	Ç	-7511 Jun 28 j 23:38	$0^{\circ}\Upsilon$	
morning rise	-7517 Nov 23 j 01:29	28° m/36'19		retrograde	-7511 Sep 19 j 22:11	9° Υ 25'08	
5	-7517 Nov 29 j 01:26	0∘ ⊽		opposition	-7511 Nov 18 j 10:13	4° Υ 28'45	-0°04'05
desc. node	-7516 Mar 11 j 23:59	17° ≏ 36'44		min. Earth dist.	-7511 Nov 18 j 17:18	4° Υ 26'24	4.31409 AU
retrograde	-7516 Apr 01 j 17:02	18° ≏ 16'50		asc. node	-7511 Dec 09 j 19:26	1° Y 48′05	
opposition	-7516 Jun 01 j 14:16	13° Ω 15'52	-0°17'09		-7511 Dec 30 j 10:27	30° ₹ ₩	
	<i>j</i>				. .	*	

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7510 in astronomical counting style is the year 7511 BCE in historical counting style. 29°**)** 24'44 direct -7510 Jan 18 j 20:21 behind sun end -7505 Nov 14 i 23:49 0°**£**21'16 -7510 Feb 07 j 12:15 $0^{\circ}\Upsilon$ -7505 Nov 15 j 01:03 0°**£**21'59 6.09210 AU max Earth dist -7510 May 27 j 07:11 17°**Ƴ**39'52 -7505 Nov 27 j 17:36 3°**₽**21'02 evening set morning rise -7504 Jan 23 j 02:58 15°**£**27'19 desc. node 20°**Y**35′21 -7504 Apr 06 j 15:52 conjunction -7510 Jun 09 j 13:33 0°23'06 retrograde 23°**₽**08'03 20° Y35'20-7510 Jun 09 j 13:31 0°23'14 -7504 Jun 06 j 11:37 minimum elong opposition 18° 206'37 -0°28'18 -7504 Jun 05 j 21:30 -7510 Jun 08 j 16:47 20°**Y**23′52 max. Earth dist. 6.34277 AU min. Earth dist. 18°**≗**11'17 4.06134 AU 23°Y29'04 morning rise -7510 Jun 22 j 16:27 direct -7504 Aug 04 j 04:54 13°**2**13'24 -7510 Jul 23 j 09:37 0° 8 -7504 Nov 26 j 11:50 0°M retrograde -7510 Oct 21 j 04:14 10°**8**41'16 evening set -7504 Dec 05 j 21:05 2°M11'38 opposition -7510 Dec 20 j 03:42 5°**8**48'02 1°07'06 -7504 Dec 19 j 03:07 min. Earth dist. -7510 Dec 20 j 23:00 5°**8**41'47 4.36073 AU conjunction 5°M19'32 -0°44'44 -7504 Dec 19 j 03:03 direct -7509 Feb 20 j 12:00 0°**8**45'11 minimum elong 5°**M**19′29 0°44'59 -7509 Jun 10 j 18:38 15°8 max. Earth dist. -7504 Dec 20 j 08:44 5°M37'03 6.04284 AU evening set -7509 Jun 28 j 09:10 18°**8**48'05 morning rise -7503 Jan 01 j 12:28 8°M29'14 max. Earth dist. -7509 Jul 09 j 19:52 21°**8**19'44 6.36537 AU -7503 Jan 30 j 01:55 15°M retrograde -7503 May 13 j 11:49 28° M $_{37'36}$ conjunction -7509 Jul 11 j 05:40 21°**8**38'28 1°06'21 opposition -7503 Jul 12 j 14:32 23°M233'15 -1°41'09 minimum elong -7509 Jul 11 j 05:35 21°**8**38'25 1°06'42 min. Earth dist. -7503 Jul 11 j 15:19 23°M41'06 4.03960 AU morning rise -7509 Jul 23 j 23:00 24°827'17 direct -7503 Sep 08 j 17:11 18°MJ37'58 -7509 Aug 18 j 20:06 $0^{\circ}\Pi$ -7503 Dec 07 j 18:51 0°×7 retrograde -7509 Nov 21 j 14:13 11°**Ⅱ**37'49 evening set -7502 Jan 11 j 11:19 7°**∡**148'24 opposition -7508 Jan 21 i 04:15 6°**Ⅱ**46'11 1°58'32 min. Earth dist. -7508 Jan 22 i 05:39 6°**Ⅱ**38′04 4.35919 AU conjunction -7502 Jan 24 i 23:57 10° ₹ 58'45 -1°23'04 direct -7508 Mar 23 j 18:51 1°**Ⅱ**45'38 -7502 Jan 24 j 23:53 10° **₹** 58'43 1°23'31 minimum elong -7508 Jul 28 j 15:26 19°**Ⅱ**45'47 max. Earth dist. -7502 Jan 26 j 15:00 11°**₹**'21'40 6.04911 AU evening set -7508 Aug 08 j 16:49 22°**Ⅱ**13'58 6.33851 AU -7502 Feb 07 j 15:31 14°**∡**10′29 max. Earth dist. morning rise -7502 Apr 27 j 09:38 0°궁 -7508 Aug 10 j 04:11 22°II33'46 1°30'33 -7502 Jun 18 j 09:46 4°る05'38 conjunction retrograde -7502 Aug 09 j 16:18 -7508 Aug 10 j 04:09 minimum elong 22°**Ⅲ**33'45 1°31'03 30°R **₹** -7502 Aug 16 j 23:13 -7508 Aug 22 j 14:43 25°**Ⅲ**20'49 opposition 29°×00'32 -2°16'04 morning rise -7508 Sep 12 j 22:29 -7502 Aug 15 j 22:01 0ಂತಾ min. Earth dist. 29°**尽**09'10 4.07471 AU -7502 Oct 14 j 04:39 -7508 Dec 22 j 23:06 24°**х** 01′55 12°**©**53'18 retrograde direct -7507 Feb 22 j 01:19 -7502 Dec 16 j 03:29 0°궁 opposition 8°901'28 2°16'31 -7507 Feb 23 j 01:57 -7501 Feb 17 j 12:44 13°る10'29 min. Earth dist. 7°953'40 4.30954 AU evening set direct -7507 Apr 25 j 06:43 3°**©**03'53 -7501 Mar 03 j 05:40 16°る19'55 -1°30'31 evening set -7507 Aug 28 j 18:56 21°5010'16 conjunction max. Earth dist. -7507 Sep 08 j 23:30 23°9542'58 6.26942 AU minimum elong -7501 Mar 03 j 05:42 16°る19'56 1°31'00 max. Earth dist. -7501 Mar 04 j 16:40 16°**ප්**40'06 6.10899 AU conjunction -7507 Sep 10 j 05:01 23°959'48 1°28'38 morning rise -7501 Mar 16 j 23:39 19°る29'43 -7507 Sep 10 j 05:03 23°959'49 1°29'06 -7501 May 05 j 00:35 0°≈ minimum elong -7507 Sep 22 j 14:55 26°9549'21 -7501 Jul 22 j 21:24 8°≈41'38 morning rise retrograde -7507 Oct 06 j 19:19 $0^{\circ}\Omega$ -7501 Sep 19 j 09:11 3°≈44'05 4.15301 AU min. Earth dist. -7506 Jan 20 j 20:43 15°**Ω** -7501 Sep 20 j 01:57 3°≈38'22 -2°01'20 opposition -7506 Jan 25 j 19:03 15°**Ω**02'16 -7501 Oct 20 j 02:22 30°Ŗ⋜ retrograde 28°**る**36'32 -7506 Jan 30 i 17:27 15°RΩ direct -7501 Nov 18 i 05:29 opposition -7506 Mar 28 i 02:57 10°Ω08'20 1°53'51 -7501 Dec 17 j 16:32 0°≈ min. Earth dist. -7506 Mar 28 i 18:50 10°**Ω**03'16 4.22520 AU -7500 Mar 13 i 16:07 15°**≈** direct -7506 May 28 j 08:35 5°**Ω**13'26 evening set -7500 Mar 24 j 20:22 17°≈29'25 -7506 Aug 21 j 10:59 15°Ω conjunction -7506 Sep 29 j 14:20 23°**£**33'38 -7500 Apr 07 i 14:04 20°≈35'21 -1°06'00 evening set -7500 Apr 07 i 14:09 20°≈35'24 1°06'21 minimum elong -7506 Oct 12 j 04:09 26°**Ω**28'33 0°59'21 -7500 Apr 08 j 08:23 20°≈45'42 6.19954 AU conjunction max. Earth dist. -7500 Apr 21 j 06:39 minimum elong -7506 Oct 12 j 04:14 26°Ω28'35 0°59'41 morning rise 23°≈40'33 0°**∀** max. Earth dist. -7506 Oct 11 j 15:57 26°**Ω**21'27 6.17767 AU -7500 May 20 j 08:19 11°**¥**58′11 -7506 Oct 24 j 19:18 29°**Ω**24'22 retrograde -7500 Aug 23 j 16:07 morning rise -7506 Oct 27 j 09:08 0° m opposition -7500 Oct 21 j 21:57 6°**¥**58'27 -1°06'41 -7505 Mar 02 j 04:21 -7500 Oct 21 j 16:54 7°**升**00'09 4.24634 AU retrograde 18° Mp 26'56 min. Earth dist. -7505 May 02 j 09:42 1°**)** 54'41 opposition 13°**m** 29'31 0°53'16 direct -7500 Dec 21 j 06:58 -7505 May 02 j 11:19 -7499 Apr 28 j 16:05 20°¥25'56 min. Earth dist. 13° m 29'00 4.13196 AU evening set -7505 Jul 01 j 07:38 direct 8° Mp 36'25 evening set -7505 Nov 01 j 19:46 27° m 15'21 conjunction -7499 May 12 j 05:31 23°¥26'29 -0°20'38 -7505 Nov 13 j 11:43 0∘**⊽** minimum elong -7499 May 12 j 05:33 23°**∺**26'30 0°20'45 max. Earth dist. -7499 May 12 j 00:52 23°**∺**23'54 6.28930 AU conjunction -7505 Nov 14 j 17:06 0°**£**17'20 0°09'38 morning rise -7499 May 25 j 16:16 26°**H**25'34 -7505 Nov 14 j 17:07 0°₽17'20 0°09'42 -7499 Jun 11 j 02:10 $0^{\circ}\Upsilon$ minimum elong

-7505 Nov 14 j 10:26

behind sun begin

0°**£**13'25

-7499 Sep 24 j 08:46

retrograde

13°Y58'35

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7499 in astronomical counting style is the year 7500 BCE in historical counting style. 12°Y55'08 conjunction -7499 Oct 19 i 22:18 -7493 Nov 19 j 14:19 5°**£**16'13 0°01'49 asc. node -7499 Nov 22 j 21:26 9°**Υ**02'41 0°06'28 -7493 Nov 19 j 14:20 5°**£**16'13 0°01'50 minimum elong opposition 4.32463 AU -7499 Nov 23 j 07:04 8°Y59'30 -7493 Nov 19 j 06:11 min. Earth dist. behind sun begin 5° £11'26 3°Y58'42 -7498 Jan 23 j 12:41 -7493 Nov 19 j 22:28 5°**£**21'00 direct behind sun end 22°**Y**10'57 5°**£**23'46 evening set -7498 May 31 j 20:41 max. Earth dist. -7493 Nov 20 j 03:08 6.08153 AU 24°**Y**52'53 max. Earth dist. -7498 Jun 13 j 02:46 6.35024 AU morning rise -7493 Dec 02 j 16:00 8°**£**20'57 desc. node -7493 Dec 02 j 07:54 8°**£**16'13 $25^{\circ} \mathbf{Y} 05'35$ -7498 Jun 14 j 01:47 conjunction 0°29'56 retrograde -7492 Apr 11 j 21:49 28° **2**12'57 -7498 Jun 14 j 01:44 25°**Y**05'34 minimum elong 0°30'06 opposition -7492 Jun 11 j 14:18 23°**£**11'03 -0°39'51 27°Y58'26 morning rise -7498 Jun 27 j 03:17 min. Earth dist. -7492 Jun 10 j 22:47 23°**2**16'12 4.05494 AU -7498 Jul 06 j 10:23 0° 8 direct -7492 Aug 09 j 05:01 18°**£**17'44 15°8 -7498 Oct 16 j 04:46 -7492 Nov 08 j 19:50 0°M retrograde -7498 Oct 25 j 11:59 15°**8**08'25 evening set -7492 Dec 10 j 23:10 7°ML18'07 -7498 Nov 03 j 20:07 15°R₩ opposition -7498 Dec 24 j 14:23 10°**8**15'28 1°15'51 conjunction -7492 Dec 24 j 06:06 10°M26'30 -0°51'32 min. Earth dist. -7498 Dec 25 j 10:21 10°**8**09'00 4.36476 AU minimum elong -7492 Dec 24 j 06:01 10°M26'27 0°51'49 direct -7497 Feb 24 j 23:49 5°**8**12'49 max. Earth dist. -7492 Dec 25 j 13:22 10°M44'59 6.04116 AU -7497 May 24 j 06:16 15°8 morning rise -7491 Jan 06 j 16:38 13°M36'44 evening set -7497 Jul 02 j 18:44 23°814'22 -7491 Jan 12 j 15:10 15°M max. Earth dist. -7497 Jul 14 j 03:32 25°**8**45'06 6.36548 AU -7491 Mar 29 j 15:35 0°×7 retrograde -7491 May 18 j 13:36 3°**∡**¹44'46 conjunction -7497 Jul 15 i 13:55 26°**8**04'10 1°11'05 -7491 Jul 07 i 16:41 30°RML -7497 Jul 15 i 13:51 26°**8**04'08 1°11'28 opposition -7491 Jul 17 i 15:24 28° ML40'07 -1°48'47 minimum elong -7497 Jul 28 j 05:59 28°**8**52'28 min. Earth dist. -7491 Jul 16 i 14:04 28°M48'41 4.04329 AU morning rise -7497 Aug 02 j 09:00 Π °0 direct -7491 Sep 13 j 16:35 23°M44'25 -7497 Nov 26 j 01:12 16°**Ⅱ**04'26 -7491 Nov 16 j 18:25 0°**∡**7 retrograde -7496 Jan 25 j 16:44 11°**II**12'55 2°03'17 evening set -7490 Jan 16 j 15:54 12°**х** 54′27 opposition -7496 Jan 26 j 19:08 min. Earth dist. 11°**I**04'30 4.35545 AU -7490 Jan 30 j 05:16 16°**∡**04'41 -1°26'06 -7496 Mar 28 j 07:40 6°∏12'44 conjunction direct -7496 Aug 01 j 23:30 24°**Ⅱ**13'10 -7490 Jan 30 j 05:13 minimum elong 16° **₹**04'39 1°26'35 evening set -7490 Jan 31 j 21:30 16°**∡**28'15 6.05766 AU max. Earth dist. -7496 Aug 12 j 22:53 26°**Ⅱ**40'34 6.33099 AU max. Earth dist. -7490 Feb 12 j 21:10 19°**₰**16'08 morning rise -7490 Apr 03 j 05:41 27°**耳**01′07 1°31′56 -7496 Aug 14 j 11:28 0°ಕ conjunction -7496 Aug 14 j 11:26 -7490 Jun 23 j 07:32 9°**る**05'23 minimum elong 27°**Ⅲ**01′06 1°32'26 retrograde -7496 Aug 26 j 21:40 -7490 Aug 21 j 19:24 4°る00'21 -2°16'52 morning rise 29°**Ⅱ**48'16 opposition -7496 Aug 27 j 18:41 -7490 Aug 20 j 19:32 0ಂತಾ min. Earth dist. 4°る08'31 4.08718 AU -7490 Sep 25 j 02:36 retrograde -7496 Dec 27 j 14:09 17°**©**25'29 30°₽**⋌**7 -7495 Feb 26 j 17:24 12°**©**33'26 2°15'51 direct -7490 Oct 19 j 04:16 29°**х** 01'15 opposition min. Earth dist. -7495 Feb 27 j 17:10 12°**©**25'53 4.29879 AU -7490 Nov 12 j 09:49 0°정 -7495 Apr 29 j 19:33 7°536'10 evening set -7489 Feb 22 j 15:07 18°**පි**06'44 direct -7495 Sep 02 j 04:05 25°5544'22 evening set -7495 Sep 13 j 11:54 28°**©**19'18 -7489 Mar 08 j 08:20 21°る15'36 -1°28'49 max. Earth dist. 6.25642 AU conjunction -7489 Mar 08 j 08:23 21°る15'38 1°29'19 minimum elong -7495 Sep 14 j 14:30 28°934'31 -7489 Mar 09 j 18:16 21°る35'06 6.12415 AU conjunction 1°26'06 max. Earth dist. -7495 Sep 14 j 14:33 28°934'33 -7489 Mar 22 j 02:16 24°**♂**24'41 minimum elong 1°26'35 morning rise -7495 Sep 20 i 19:56 $0^{\circ}\Omega$ -7489 Apr 16 j 05:06 0°≈ -7495 Sep 27 i 00:40 morning rise 1°**Ω**24'47 retrograde -7489 Jul 27 i 10:39 13°≈27'44 -7495 Dec 04 i 01:02 15°Ω opposition -7489 Sep 24 i 16:04 8°≈24'53 -1°55'39 retrograde -7494 Jan 30 j 16:12 19°**Ω**44'42 min. Earth dist. -7489 Sep 24 i 00:04 8°≈30'20 4.16930 AU -7494 Mar 31 i 17:36 15°RΩ direct -7489 Nov 22 i 23:06 3°≈22'41 -7494 Apr 01 j 23:47 14°Ω50'23 1°47'26 -7488 Feb 25 j 10:38 15°≈ opposition 22°≈11'26 min. Earth dist. -7494 Apr 02 j 14:22 14°Ω45'44 4.21075 AU -7488 Mar 29 j 17:12 evening set direct -7494 Jun 02 j 01:11 9°**Q**55′50 -7494 Jul 31 j 00:16 15°Ω conjunction -7488 Apr 12 j 10:26 25°≈16'31 -1°00'38 -7494 Oct 04 j 03:50 28°**Ω**18'56 minimum elong -7488 Apr 12 j 10:31 25°≈16'34 1°00'58 evening set -7494 Oct 11 j 09:58 0° m max. Earth dist. -7488 Apr 13 j 00:09 25°≈24'15 6.21557 AU -7488 Apr 26 j 02:31 28°≈20'49 morning rise -7494 Oct 16 j 18:24 1° **Th** $14'49 \quad 0^{\circ}53'20$ -7488 May 03 j 12:55 0°**)**€ conjunction -7494 Oct 16 j 18:28 -7488 Aug 28 j 01:57 16°**¥**30'35 minimum elong 1° Mp 14'52 0°53'37 retrograde -7488 Oct 26 j 07:45 max. Earth dist. -7494 Oct 16 j 07:37 1° Mp 08'32 6.16317 AU opposition 11°**X**31'23 -0°57'13 morning rise -7494 Oct 29 j 10:52 4° m 11'50 min. Earth dist. -7488 Oct 26 j 05:57 11°**)** 32'00 4.26048 AU -7493 Mar 07 j 05:40 23° m 21'53 direct -7488 Dec 25 j 22:29 6°**₩**27'27 retrograde opposition -7493 May 07 j 10:30 18° Mp 23'54 0°42'29 evening set -7487 May 03 j 06:30 24°**)** 55'14 min. Earth dist. -7493 May 07 j 09:13 18° Mp 24'194.11863 AU direct -7493 Jul 06 j 03:37 13° Mp 30'54 conjunction -7487 May 16 j 19:07 27°\dagger 54'58 -0°13'42 -7493 Oct 28 j 02:45 0∘**⊽** -7487 May 16 j 19:09 27°**)** 54'59 0°13'46 minimum elong -7493 Nov 06 j 15:34 2°**£**13'11 -7487 May 16 j 14:57 27°**)** 52'40 evening set behind sun begin

•	nical year style is used: Th		-	· / ·			ge 37
behind sun end		1e year - /48 / 1 27° 	n astronomicai co				0°31'10
	-7487 May 16 j 23:21		6.30044 AU	opposition min. Earth dist.	-7481 May 12 j 13:10	23° m 23'40 23° m 24'40	4.10779 AU
max. Earth dist.	-7487 May 16 j 11:58	2/° π 3101 0° Υ	6.30044 AU		-7481 May 12 j 10:03	~	4.10779 AU
	-7487 May 26 j 04:28 -7487 May 30 j 04:38	0° Υ 53'08		direct desc. node	-7481 Jul 11 j 03:06 -7481 Oct 10 j 21:48	18° Mp 30'46 0° ⊆ 05'28	
morning rise	-7487 May 30 j 04.38	17° Υ 06'15		desc. node	-7481 Oct 10 j 21:48	0° ⊡	
asc. node	<i>U</i> ,	1/° \ 0613			,	0° 22 7° 2 15'21	
retrograde	-7487 Sep 28 j 13:54	18° Y 21'40	0°16'35	evening set	-7481 Nov 11 j 13:13	/ 2215/21	
opposition min. Earth dist.	-7487 Nov 27 j 04:59	13° Y 20 10 13° Y 22'40			7401 N 24 : 12.01	100 0 10111	0007114
	-7487 Nov 27 j 15:54		4.33206 AU	conjunction	-7481 Nov 24 j 13:01	10° ♀ 19'11	
direct	-7486 Jan 27 j 22:15	8° Y 22′24		minimum elong	-7481 Nov 24 j 13:00		0°06'17
evening set	-7486 Jun 05 j 06:47	26° Y 33'10	6 25220 ATT	behind sun begin	-7481 Nov 24 j 05:18	10° № 14'39	
max. Earth dist.	-7486 Jun 17 j 07:54	29° Ƴ 12′27	6.35328 AU	behind sun end	-7481 Nov 24 j 20:42	10° £ 23'42	C 07442 ATT
	74061 10:10.25	2000027106	0026121	max. Earth dist.	-7481 Nov 25 j 04:20	10° £ 28'13	6.07442 AU
conjunction	-7486 Jun 18 j 10:25	29° Y 27'06	0°36'21	morning rise	-7481 Dec 07 j 16:10	13° £ 24'50	
minimum elong	-7486 Jun 18 j 10:22	29° Y 27'04	0°36'32		-7480 Feb 29 j 18:57	0°M,	
	-7486 Jun 20 j 21:56	0°8		retrograde	-7480 Apr 17 j 01:19	3°M20'03	
morning rise	-7486 Jul 01 j 10:42	2° 8 19'18			-7480 Jun 03 j 15:03	30° ₹ Ω	0051110
_	-7486 Sep 04 j 16:50	15° 8		opposition	-7480 Jun 16 j 17:05	28° ≏ 17'38	
retrograde	-7486 Oct 29 j 20:29	19° 8 28'58		min. Earth dist.	-7480 Jun 15 j 22:37	28° ≏ 23'46	4.05229 AU
	-7486 Dec 25 j 21:39	15° ₹ 8		direct	-7480 Aug 14 j 04:25	23° ≏ 24'04	
opposition	-7486 Dec 28 j 22:58	14° 8 36'23	1°23'57		-7480 Oct 19 j 04:12	0° M ₊	
min. Earth dist.	-7486 Dec 29 j 21:29	14° 8 29'07	4.36338 AU	evening set	-7480 Dec 16 j 01:37	12°M25'25	
direct	-7485 Mar 01 j 10:37	9° 8 34'01			-7480 Dec 26 j 23:52	15° M	
	-7485 May 03 j 19:33	15° 8					
evening set	-7485 Jul 07 j 02:26	27° 8 36'11		conjunction	-7480 Dec 29 j 09:35	15° ™ 34'07	
	-7485 Jul 17 j 22:14	Π $^{\circ}0$		minimum elong	-7480 Dec 29 j 09:30	15° M 34'04	0°58'16
max. Earth dist.	-7485 Jul 18 j 08:48	0° Ⅱ 05'52	6.35955 AU	max. Earth dist.	-7480 Dec 30 j 19:37	15°M54'13	6.04286 AU
				morning rise	-7479 Jan 11 j 20:53	18° M 44'34	
conjunction	-7485 Jul 19 j 20:33	0° Ⅱ 25'44	1°15'18		-7479 Mar 04 j 11:17	0° ∡ ¹	
minimum elong	-7485 Jul 19 j 20:29	0° Ⅱ 25'42	1°15'43	retrograde	-7479 May 23 j 15:32	8° ∡ 750'54	
morning rise	-7485 Aug 01 j 11:37	3° Ⅱ 13'51		opposition	-7479 Jul 22 j 15:13	3° х 46′00	-1°55'36
retrograde	-7485 Nov 30 j 11:35	20° Ⅱ 29'29		min. Earth dist.	-7479 Jul 21 j 14:19	3° ∡ ′54'27	4.04917 AU
opposition	-7484 Jan 30 j 04:53	15° Ⅱ 38′02	2°07'16		-7479 Aug 23 j 10:13	30°RML	
min. Earth dist.	-7484 Jan 31 j 06:51	15° Ⅱ 29'45	4.34570 AU	direct	-7479 Sep 18 j 17:32	28° M 49'51	
direct	-7484 Apr 01 j 17:08	10° Ⅲ 38′16			-7479 Oct 15 j 01:51	0° ∡ ¹	
evening set	-7484 Aug 06 j 07:30	28° Ⅱ 40′59		evening set	-7478 Jan 21 j 20:00	17° ∡ ′59′02	
	-7484 Aug 12 j 04:32	0ංම					
max. Earth dist.	-7484 Aug 17 j 08:02	1° © 09'31	6.31816 AU	conjunction	-7478 Feb 04 j 10:02	21° ₮ 09'05	-1°28'32
				minimum elong	-7478 Feb 04 j 09:59	21° ₮ 09'04	1°29'00
conjunction	-7484 Aug 18 j 18:58	1° © 29'13	1°32'44	max. Earth dist.	-7478 Feb 06 j 02:33	21° ∡ ³32'45	6.06700 AU
minimum elong	-7484 Aug 18 j 18:57	1° © 29'12	1°33'14	morning rise	-7478 Feb 18 j 02:22	24° ∡ °20′15	
morning rise	-7484 Aug 31 j 04:47	4°গু16'45			-7478 Mar 15 j 03:32	0°ರ	
retrograde	-7483 Jan 01 j 08:16	22° © 00'36		retrograde	-7478 Jun 28 j 03:11	14° පි 03'16	
opposition	-7483 Mar 03 j 11:03	17° 5 08'24	2°14'18	opposition	-7478 Aug 26 j 14:14	8° る 58'27	-2°16'44
min. Earth dist.	-7483 Mar 04 j 10:29	17° © 00'58	4.28374 AU	min. Earth dist.	-7478 Aug 25 j 14:32	9° ප 06'34	4.09922 AU
direct	-7483 May 04 j 10:30	12° © 11'38		direct	-7478 Oct 24 j 00:45	3° ⋜ 58'53	
	-7483 Sep 04 j 22:39	$0^{\circ}\Omega$		evening set	-7477 Feb 27 j 16:51	23° පි 01'48	
evening set	-7483 Sep 06 j 15:02	0° £ 22′58					
max. Earth dist.	-7483 Sep 18 j 00:17	2° Ω 59'20	6.24048 AU	conjunction	-7477 Mar 13 j 10:10	26° ප 10'09	-1°26'33
	-			minimum elong	-7477 Mar 13 j 10:13	26° ප 10'11	1°27'02
conjunction	-7483 Sep 19 j 01:40	3° £ 13′54	1°22'57	max. Earth dist.	-7477 Mar 14 j 16:17	26° る 27'24	6.13782 AU
minimum elong	-7483 Sep 19 j 01:43	3° Ω 13′56	1°23'25	morning rise	-7477 Mar 27 j 04:10	29° る 18'37	
morning rise	-7483 Oct 01 j 12:35	6° Ω 05'07		_	-7477 Mar 30 j 05:11	0° ≈	
-	-7483 Nov 11 j 19:41	15° Ω			-7477 Jun 16 j 09:44	15° ≈	
retrograde	-7482 Feb 04 j 14:32	24° Ω 32'58		retrograde	-7477 Aug 01 j 01:25	18° ≈ 13'46	
opposition	-7482 Apr 06 j 22:37	19° Ω 38'09	1°40'07	Č	-7477 Sep 15 j 15:16	15° R ≈	
min. Earth dist.	-7482 Apr 07 j 10:05	19° Ω 34'29	4.19511 AU	opposition	-7477 Sep 29 j 06:09	13° ≈ 11'21	-1°49'19
	-7482 May 24 j 19:40	15° Ŗ Ω		min. Earth dist.	-7477 Sep 28 j 16:41	13° ≈ 15'56	4.18314 AU
direct	-7482 Jun 06 j 18:30	14° Ω 43'57		direct	-7477 Nov 27 j 18:21	8° ≈ 08'46	
	-	15° Ω			-7476 Feb 05 j 10:30	15° ≈	
uniot	-7482 Jun 19 i 18:26				J		
	-7482 Jun 19 j 18:26 -7482 Sep 24 j 23:27			evening set	-7476 Apr 03 i 13:54	26° ≈ 54'18	
evening set	-7482 Jun 19 j 18:26 -7482 Sep 24 j 23:27 -7482 Oct 08 j 19:37	0° my 3° my 10'15		evening set	-7476 Apr 03 j 13:54	26°≈54'18	
	-7482 Sep 24 j 23:27	0° m		evening set		26°≈54'18 29°≈58'44	-0°54'54
evening set	-7482 Sep 24 j 23:27 -7482 Oct 08 j 19:37	0° m	0°46'48	conjunction	-7476 Apr 17 j 06:57		-0°54'54 0°55'13
evening set	-7482 Sep 24 j 23:27 -7482 Oct 08 j 19:37 -7482 Oct 21 j 11:20	0° m/ 3° m/10'15	0°46'48 0°47'03	-	-7476 Apr 17 j 06:57 -7476 Apr 17 j 07:02	29° ≈ 58'44	
evening set	-7482 Sep 24 j 23:27 -7482 Oct 08 j 19:37 -7482 Oct 21 j 11:20 -7482 Oct 21 j 11:23	0° m, 3° m, 10'15 6° m, 07'13		conjunction	-7476 Apr 17 j 06:57 -7476 Apr 17 j 07:02 -7476 Apr 17 j 09:13	29°≈58'44 29°≈58'47	
evening set conjunction minimum elong max. Earth dist.	-7482 Sep 24 j 23:27 -7482 Oct 08 j 19:37 -7482 Oct 21 j 11:20	0° m, 3° m, 10'15 6° m, 07'13 6° m, 07'15	0°47'03	conjunction minimum elong max. Earth dist.	-7476 Apr 17 j 06:57 -7476 Apr 17 j 07:02	29°≈58'44 29°≈58'47 0°¥	0°55'13
evening set conjunction minimum elong	-7482 Sep 24 j 23:27 -7482 Oct 08 j 19:37 -7482 Oct 21 j 11:20 -7482 Oct 21 j 11:23 -7482 Oct 21 j 05:35	0° my 3° my 10'15 6° my 07'13 6° my 07'15 6° my 03'51	0°47'03	conjunction minimum elong	-7476 Apr 17 j 06:57 -7476 Apr 17 j 07:02 -7476 Apr 17 j 09:13 -7476 Apr 17 j 18:40	29°≈58'44 29°≈58'47 0°₩ 0°₩05'19	0°55'13

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7476 in astronomical counting style is the year 7477 BCE in historical counting style. opposition -7476 Oct 30 j 18:11 16° **H** 06'32 $-0^{\circ}47'24$ conjunction -7470 Oct 26 j 02:41 10° M 55'05 0°40'05 min. Earth dist. -7476 Oct 30 j 17:46 16° ★ 06'40 4.27194 AU minimum elong -7470 Oct 26 j 02:45 10° m 55'07 0°40'19

min. Earth dist.	-7476 Oct 30 j 17:46	16°) €06'40	4.27194 AU	minimum elong	-7470 Oct 26 j 02:45	10° ™ 55'07	0°40'19
direct	-7476 Dec 30 j 11:59	11°) €02'30		max. Earth dist.	-7470 Oct 25 j 23:18	10° m 53'06	6.14007 AU
evening set	-7475 May 07 j 22:13	29°) 27'43		morning rise	-7470 Nov 07 j 21:32	13° m 54'10	
Č	-7475 May 10 j 08:49	$0^{\circ}\Upsilon$		C	-7469 Jan 29 j 08:13	0∘ ⊽	
	, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	• •		retrograde	-7469 Mar 17 j 09:57	3° ₽ 16'12	
	7475 Mars 21 : 00-40	2° Y 26'40	0007120	renograde	•		
conjunction	-7475 May 21 j 09:40				-7469 May 04 j 02:44	30°R, Mp	
minimum elong	-7475 May 21 j 09:40	2° Y 26'40	0°06'40	opposition	-7469 May 17 j 13:10	28° m 17'04	0°19'54
behind sun begin	-7475 May 21 j 02:00	2° Y 22'26		min. Earth dist.	-7469 May 17 j 06:46	28° m 19'09	4.10079 AU
behind sun end	-7475 May 21 j 17:20	2° Ƴ 30'54		direct	-7469 Jul 15 j 22:24	23° m 24'13	
max. Earth dist.	-7475 May 20 j 21:47	2° Y 20'05	6.30933 AU	desc. node	-7469 Aug 21 j 05:02	25° Mp 30'48	
morning rise	-7475 Jun 03 j 18:12	5° Y 24'01			-7469 Sep 20 j 12:01	0∘ ত	
asc. node	-7475 Jul 11 j 20:46	13° Y 24'17		evening set	-7469 Nov 16 j 08:35	12° ♀ 10'07	
retrograde	-7475 Oct 02 j 23:13	22° Υ 48'50		evening sec	, 10) 1101 10 j 00.55	12 —100,	
~	3		0006145		74(0 N 20 : 00 22	150 0 14127	0012154
opposition	-7475 Dec 01 j 14:28	17° Y 53'53	0°26'45	conjunction	-7469 Nov 29 j 09:32	15° ⊆ 14'37	
min. Earth dist.	-7475 Dec 02 j 04:10	17° Y 49′23	4.33783 AU	minimum elong	-7469 Nov 29 j 09:30	15° ≙ 14'36	0°13'59
direct	-7474 Feb 01 j 11:33	12° Y 50′05		behind sun begin	-7469 Nov 29 j 05:19	15° ≏ 12'08	
	-7474 Jun 05 j 04:55	$_{0\circ}$ 8		behind sun end	-7469 Nov 29 j 13:42	15° ≏ 17'04	
evening set	-7474 Jun 09 j 18:03	0° ප 59'37		max. Earth dist.	-7469 Nov 30 j 04:20	15° ≏ 25'43	6.07031 AU
-	-			morning rise	-7469 Dec 12 j 13:44	18° ≏ 20'56	
conjunction	-7474 Jun 22 j 20:34	3° 8 52'56	0°42'42	Ü	-7468 Feb 04 j 07:59	0°M	
minimum elong	-7474 Jun 22 j 20:30	3° 8 52'54		retrograde	-7468 Apr 22 j 03:19	8°M18'21	
	-	_		•			1001147
max. Earth dist.	-7474 Jun 21 j 17:05		6.35543 AU	opposition	-7468 Jun 21 j 16:22	3°M15′28	
morning rise	-7474 Jul 05 j 19:23	6° 8 44'29		min. Earth dist.	-7468 Jun 20 j 21:28		4.05145 AU
	-7474 Aug 14 j 09:36	15° 8			-7468 Jul 18 j 11:59	30°Ŗ Ω	
retrograde	-7474 Nov 03 j 04:26	23° 8 54'07		direct	-7468 Aug 19 j 02:32	28° ≏ 21'37	
opposition	-7473 Jan 02 j 09:41	19° 8 01'47	1°31'46		-7468 Sep 19 j 12:38	0° M ,	
min. Earth dist.	-7473 Jan 03 j 08:16		4.36210 AU		-7468 Dec 10 j 18:14	15° M ₊	
mm. Earth dist.	-7473 Feb 07 j 22:34	15°R 8	1.50210110	evening set	-7468 Dec 21 j 01:02	17°ML23'41	
11	·			evening set	-/408 DCC 21 J 01.02	17 1162341	
direct	-7473 Mar 05 j 20:51	13° 8 59'45				w	
	-7473 Apr 01 j 00:37	15° 8		conjunction	-7467 Jan 03 j 09:54	20°M32'39	
	-7473 Jul 02 j 04:29	Π $\circ 0$		minimum elong	-7467 Jan 03 j 09:49	20°M32'36	1°04'08
evening set	-7473 Jul 11 j 11:36	2° ∏ 02'07		max. Earth dist.	-7467 Jan 04 j 21:34	20°M53'41	6.04512 AU
max. Earth dist.	-7473 Jul 22 j 15:49	4° Ⅱ 30′56	6.35483 AU	morning rise	-7467 Jan 16 j 22:04	23°M43'20	
	v				-7467 Feb 13 j 12:09	0° ⊼ ¹	
conjunction	-7473 Jul 24 i 04:27	4° ∏ 51′20	1°19'12		-	13° х 47'43	
conjunction					-/46/ May 28 i 13:18		
minimum alana	3			retrograde	-7467 May 28 j 13:18		4.05450 ATT
minimum elong	-7473 Jul 24 j 04:23	4° Ⅱ 51'18		min. Earth dist.	-7467 Jul 26 j 09:59	8° ∡ 51'22	4.05459 AU
morning rise	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35	4°П51'18 7°П39'13		min. Earth dist.	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23	8° х 51′22 8° х 42′44	
morning rise retrograde	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26	4°П51'18 7°П39'13 24°П58'06	1°19'38	min. Earth dist.	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51	8° ₹ 51'22 8° ₹ 42'44 3° ₹ 46'12	
morning rise	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35	4°П51'18 7°П39'13	1°19'38	min. Earth dist.	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23	8° х 51′22 8° х 42′44	
morning rise retrograde	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26	4°П51'18 7°П39'13 24°П58'06 20°П06'42	1°19'38	min. Earth dist. opposition direct	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51	8° ₹ 51'22 8° ₹ 42'44 3° ₹ 46'12	
morning rise retrograde opposition min. Earth dist.	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52	4°П51'18 7°П39'13 24°П58'06 20°П06'42 19°П58'10	1°19'38 2°10'38	min. Earth dist. opposition direct evening set	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Jan 26 j 20:55	8° ₹ 51'22 8° ₹ 42'44 3° ₹ 46'12	-2°01'21
morning rise retrograde opposition	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14	4° Π51'18 7° Π39'13 24° Π58'06 20° Π06'42 19° Π58'10 15° Π07'22	1°19'38 2°10'38	min. Earth dist. opposition direct evening set conjunction	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Jan 26 j 20:55 -7466 Feb 09 j 11:25	8° ₹ 51'22 8° ₹ 42'44 3° ₹ 46'12 22° ₹ 54'59 26° ₹ 04'54	-2°01'21 -1°30'14
morning rise retrograde opposition min. Earth dist. direct	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16	4° Π51'18 7° Π39'13 24° Π58'06 20° Π06'42 19° Π58'10 15° Π07'22 0° Φ	1°19'38 2°10'38	min. Earth dist. opposition direct evening set conjunction minimum elong	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Jan 26 j 20:55 -7466 Feb 09 j 11:25 -7466 Feb 09 j 11:23	8° ₹51'22 8° ₹42'44 3° ₹46'12 22° ₹54'59 26° ₹04'54 26° ₹04'54	-2°01'21 -1°30'14 1°30'44
morning rise retrograde opposition min. Earth dist. direct	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16 -7472 Aug 10 j 16:26	4° Π51'18 7° Π39'13 24° Π58'06 20° Π06'42 19° Π58'10 15° Π07'22 0° \$\mathref{S}\$ 3° \$\mathref{S}\$11'17	1°19'38 2°10'38 4.33808 AU	min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist.	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Jan 26 j 20:55 -7466 Feb 09 j 11:25 -7466 Feb 09 j 11:23 -7466 Feb 11 j 01:47	8° ₹51'22 8° ₹42'44 3° ₹46'12 22° ₹54'59 26° ₹04'54 26° ₹04'53 26° ₹27'16	-2°01'21 -1°30'14
morning rise retrograde opposition min. Earth dist. direct	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16	4° Π51'18 7° Π39'13 24° Π58'06 20° Π06'42 19° Π58'10 15° Π07'22 0° Φ	1°19'38 2°10'38	min. Earth dist. opposition direct evening set conjunction minimum elong	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Jan 26 j 20:55 -7466 Feb 09 j 11:25 -7466 Feb 09 j 11:23 -7466 Feb 11 j 01:47 -7466 Feb 23 j 04:15	8° \$\times 51'22 8° \$\times 42'44 3° \$\times 46'12 22° \$\times 54'59 26° \$\times 04'54 26° \$\times 04'53 26° \$\times 27'16 29° \$\times 15'52	-2°01'21 -1°30'14 1°30'44
morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist.	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16 -7472 Aug 10 j 16:26 -7472 Aug 21 j 17:29	4° Π51'18 7° Π39'13 24° Π58'06 20° Π06'42 19° Π58'10 15° Π07'22 0° \$3° \$311'17 5° \$340'30	1°19'38 2°10'38 4.33808 AU 6.30831 AU	min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Jan 26 j 20:55 -7466 Feb 09 j 11:23 -7466 Feb 09 j 11:23 -7466 Feb 11 j 01:47 -7466 Feb 23 j 04:15 -7466 Feb 26 j 08:49	8° ₹51'22 8° ₹42'44 3° ₹46'12 22° ₹54'59 26° ₹04'54 26° ₹04'53 26° ₹27'16 29° ₹15'52 0° ₹	-2°01'21 -1°30'14 1°30'44
morning rise retrograde opposition min. Earth dist. direct	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16 -7472 Aug 10 j 16:26	4° Π51'18 7° Π39'13 24° Π58'06 20° Π06'42 19° Π58'10 15° Π07'22 0° © 3° ©11'17 5° ©40'30	1°19'38 2°10'38 4.33808 AU	min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist.	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Jan 26 j 20:55 -7466 Feb 09 j 11:25 -7466 Feb 09 j 11:23 -7466 Feb 11 j 01:47 -7466 Feb 23 j 04:15	8° \$\times 51'22 8° \$\times 42'44 3° \$\times 46'12 22° \$\times 54'59 26° \$\times 04'54 26° \$\times 04'53 26° \$\times 27'16 29° \$\times 15'52	-2°01'21 -1°30'14 1°30'44
morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist.	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16 -7472 Aug 10 j 16:26 -7472 Aug 21 j 17:29	4° Π51'18 7° Π39'13 24° Π58'06 20° Π06'42 19° Π58'10 15° Π07'22 0° \$3° \$311'17 5° \$340'30	1°19'38 2°10'38 4.33808 AU 6.30831 AU	min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Jan 26 j 20:55 -7466 Feb 09 j 11:23 -7466 Feb 09 j 11:23 -7466 Feb 11 j 01:47 -7466 Feb 23 j 04:15 -7466 Feb 26 j 08:49	8° ₹51'22 8° ₹42'44 3° ₹46'12 22° ₹54'59 26° ₹04'54 26° ₹04'53 26° ₹27'16 29° ₹15'52 0° ₹	-2°01'21 -1°30'14 1°30'44
morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16 -7472 Aug 10 j 16:26 -7472 Aug 21 j 17:29 -7472 Aug 23 j 03:30	4° Π51'18 7° Π39'13 24° Π58'06 20° Π06'42 19° Π58'10 15° Π07'22 0° \$\mathref{s}\$ 3° \$\mathref{s}\$11'17 5° \$\mathref{s}\$40'30 5° \$\mathref{s}\$59'43	1°19'38 2°10'38 4.33808 AU 6.30831 AU 1°33'03	min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Jan 26 j 20:55 -7466 Feb 09 j 11:25 -7466 Feb 09 j 11:23 -7466 Feb 11 j 01:47 -7466 Feb 23 j 04:15 -7466 Feb 26 j 08:49 -7466 Jul 02 j 20:37	8° ₹51'22 8° ₹42'44 3° ₹46'12 22° ₹54'59 26° ₹04'54 26° ₹04'53 26° ₹27'16 29° ₹15'52 0° ₹ 18° ₹53'41	-2°01'21 -1°30'14 1°30'44 6.07477 AU 4.10852 AU
morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16 -7472 Aug 10 j 16:26 -7472 Aug 21 j 17:29 -7472 Aug 23 j 03:30 -7472 Aug 23 j 03:30 -7472 Sep 04 j 13:07	4° Π51'18 7° Π39'13 24° Π58'06 20° Π06'42 19° Π58'10 15° Π07'22 0° \$\mathref{s}\$ 3° \$\mathref{s}\$ 11'17 5° \$\mathref{s}\$ 40'30 5° \$\mathref{s}\$ 59'43 8° \$\mathref{s}\$ 47'33	1°19'38 2°10'38 4.33808 AU 6.30831 AU 1°33'03	min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Jan 26 j 20:55 -7466 Feb 09 j 11:25 -7466 Feb 09 j 11:23 -7466 Feb 11 j 01:47 -7466 Feb 23 j 04:15 -7466 Feb 26 j 08:49 -7466 Jul 02 j 20:37 -7466 Aug 30 j 08:15 -7466 Aug 31 j 06:17	8° ₹51'22 8° ₹42'44 3° ₹46'12 22° ₹54'59 26° ₹04'54 26° ₹07'16 29° ₹15'52 0° ₹ 18° ₹55'41 13° ₹56'38 13° ₹49'05	-2°01'21 -1°30'14 1°30'44 6.07477 AU 4.10852 AU
morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16 -7472 Aug 10 j 16:26 -7472 Aug 21 j 17:29 -7472 Aug 23 j 03:30 -7472 Aug 23 j 03:30 -7472 Sep 04 j 13:07 -7471 Jan 06 j 00:20	4° Π51'18 7° Π39'13 24° Π58'06 20° Π06'42 19° Π58'10 15° Π07'22 0° Φ 3° Φ11'17 5° Φ40'30 5° Φ59'43 5° Φ59'43 8° Φ47'33 26° Φ36'55	1°19'38 2°10'38 4.33808 AU 6.30831 AU 1°33'03 1°33'33	min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Jan 26 j 20:55 -7466 Feb 09 j 11:25 -7466 Feb 09 j 11:23 -7466 Feb 11 j 01:47 -7466 Feb 26 j 08:49 -7466 Jul 02 j 20:37 -7466 Aug 30 j 08:15 -7466 Aug 31 j 06:17 -7466 Oct 28 j 20:22	8° オ51'22 8° オ42'44 3° オ46'12 22° オ54'59 26° オ04'54 26° オ04'53 26° オ27'16 29° オ15'52 0° 云 18° 云53'41 13° 云56'38 13° 云49'05 8° 云49'03	-2°01'21 -1°30'14 1°30'44 6.07477 AU 4.10852 AU
morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16 -7472 Aug 10 j 16:26 -7472 Aug 21 j 17:29 -7472 Aug 23 j 03:30 -7472 Aug 23 j 03:30 -7472 Sep 04 j 13:07 -7471 Jan 06 j 00:20 -7471 Mar 08 j 05:19	4° Π51'18 7° Π39'13 24° Π58'06 20° Π06'42 19° Π58'10 15° Π07'22 0° ໑ 3° ໑11'17 5° ໑40'30 5° ໑59'43 5° ໑59'43 8° ໑47'33 26° ໑36'55 21° ໑44'26	1°19'38 2°10'38 4.33808 AU 6.30831 AU 1°33'03 1°33'33	min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Jan 26 j 20:55 -7466 Feb 09 j 11:25 -7466 Feb 09 j 11:23 -7466 Feb 11 j 01:47 -7466 Feb 26 j 08:49 -7466 Jul 02 j 20:37 -7466 Aug 30 j 08:15 -7466 Aug 31 j 06:17 -7466 Oct 28 j 20:22 -7465 Mar 04 j 15:59	8° \$\times 51'22 8° \$\times 42'44 3° \$\times 46'12 22° \$\times 54'59 26° \$\times 04'54 26° \$\times 27'16 29° \$\times 15'52 0° \$\times 15'52 18° \$\times 53'41 13° \$\times 56'38 13° \$\times 49'05 8° \$\times 49'03 27° \$\times 50'35	-2°01'21 -1°30'14 1°30'44 6.07477 AU 4.10852 AU
morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist.	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16 -7472 Aug 10 j 16:26 -7472 Aug 21 j 17:29 -7472 Aug 23 j 03:30 -7472 Aug 23 j 03:30 -7472 Sep 04 j 13:07 -7471 Jan 06 j 00:20 -7471 Mar 08 j 05:19 -7471 Mar 09 j 02:16	4°II51'18 7°II39'13 24°II58'06 20°II06'42 19°II58'10 15°II07'22 0°S 3°S11'17 5°S40'30 5°S59'43 5°S59'43 8°S47'33 26°S36'55 21°S44'26 21°S37'47	1°19'38 2°10'38 4.33808 AU 6.30831 AU 1°33'03 1°33'33	min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Jan 26 j 20:55 -7466 Feb 09 j 11:25 -7466 Feb 09 j 11:23 -7466 Feb 11 j 01:47 -7466 Feb 26 j 08:49 -7466 Jul 02 j 20:37 -7466 Aug 30 j 08:15 -7466 Aug 31 j 06:17 -7466 Oct 28 j 20:22	8° オ51'22 8° オ42'44 3° オ46'12 22° オ54'59 26° オ04'54 26° オ04'53 26° オ27'16 29° オ15'52 0° 云 18° 云53'41 13° 云56'38 13° 云49'05 8° 云49'03	-2°01'21 -1°30'14 1°30'44 6.07477 AU 4.10852 AU
morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16 -7472 Aug 10 j 16:26 -7472 Aug 21 j 17:29 -7472 Aug 23 j 03:30 -7472 Aug 23 j 03:30 -7472 Sep 04 j 13:07 -7471 Jan 06 j 00:20 -7471 Mar 08 j 05:19 -7471 Mar 09 j 02:16 -7471 May 09 j 00:28	4° II 51'18 7° II 39'13 24° II 58'06 20° II 06'42 19° II 58'10 15° II 07'22 0° S 3° S11'17 5° S40'30 5° S59'43 8° S47'33 26° S36'55 21° S44'26 21° S37'47 16° S48'06	1°19'38 2°10'38 4.33808 AU 6.30831 AU 1°33'03 1°33'33	min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Feb 09 j 11:25 -7466 Feb 09 j 11:23 -7466 Feb 11 j 01:47 -7466 Feb 23 j 04:15 -7466 Feb 26 j 08:49 -7466 Jul 02 j 20:37 -7466 Aug 30 j 08:15 -7466 Aug 31 j 06:17 -7466 Oct 28 j 20:22 -7465 Mar 04 j 15:59 -7465 Mar 14 j 03:05	8° ₹51'22 8° ₹42'44 3° ₹46'12 22° ₹54'59 26° ₹04'54 26° ₹07'16 29° ₹15'52 0° ₹ 18° ₹53'41 13° ₹56'38 13° ₹49'03 27° ₹50'35 0° ≈	-2°01'21 -1°30'14 1°30'44 6.07477 AU 4.10852 AU -2°15'41
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morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16 -7472 Aug 10 j 16:26 -7472 Aug 21 j 17:29 -7472 Aug 23 j 03:30 -7472 Aug 23 j 03:30 -7472 Sep 04 j 13:07 -7471 Jan 06 j 00:20 -7471 Mar 08 j 05:19 -7471 Mar 09 j 02:16 -7471 May 09 j 00:28 -7471 Aug 19 j 13:32 -7471 Sep 23 j 12:50 -7471 Sep 23 j 12:53 -7471 Sep 23 j 12:53 -7471 Sep 23 j 12:56 -7471 Oct 06 j 00:19 -7471 Oct 06 j 00:19 -7470 Feb 09 j 13:38 -7470 Apr 11 j 20:58	4° Π51'18 7° Π39'13 24° Π58'06 20° Π06'42 19° Π58'10 15° Π07'22 0° Θ 3° Θ11'17 5° Θ40'30 5° Θ59'43 5° Θ59'43 8° Θ47'33 26° Θ36'55 21° Θ44'26 21° Θ37'47 16° Θ48'06 0° Ω 5° Ω01'02 7° Ω52'36 7° Ω52'38 7° Ω40'02 10° Ω44'33 15° Ω 29° Ω18'41 24° Ω23'25	1°19'38 2°10'38 4.33808 AU 6.30831 AU 1°33'03 1°33'33 2°11'58 4.27259 AU 1°19'21 1°19'46 6.22914 AU 1°32'12	min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition minimum elong max. Earth dist. morning rise	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Feb 23 j 12:55 -7466 Feb 09 j 11:25 -7466 Feb 09 j 11:23 -7466 Feb 11 j 01:47 -7466 Feb 26 j 08:49 -7466 Feb 26 j 08:49 -7466 Aug 30 j 08:15 -7466 Aug 30 j 08:15 -7466 Aug 31 j 06:17 -7466 Oct 28 j 20:22 -7465 Mar 04 j 15:59 -7465 Mar 14 j 03:05 -7465 Mar 18 j 09:43 -7465 Mar 19 j 14:40 -7465 Apr 01 j 03:29 -7465 Aug 05 j 14:42 -7465 Oct 03 j 18:26 -7465 Oct 03 j 06:37 -7465 Oct 26 j 12:14 -7465 Dec 02 j 09:39	8° \$\times 51'22 8° \$\times 42'44 3° \$\times 42'44 3° \$\times 42'44 26° \$\times 04'54 26° \$\times 04'54 26° \$\times 04'54 26° \$\times 04'54 26° \$\times 27'16 29° \$\times 15'52 0° \$\times 53'41 13° \$\times 56'38 13° \$\times 49'05 8° \$\times 49'03 27° \$\times 50'35 0° \$\times 00' \$\times 58'49 0° \$\times 58'49 0° \$\times 58'49 10° \$\times 58'49 11° \$\times 53'26 15° \$\times 22° \$\times 57'27 15° \$\times 12° \$\times 50'37	-2°01'21 -1°30'14 1°30'44 6.07477 AU 4.10852 AU -2°15'41 -1°23'45 1°24'12 6.14809 AU -1°42'25
morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist.	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16 -7472 Aug 10 j 16:26 -7472 Aug 21 j 17:29 -7472 Aug 23 j 03:30 -7472 Aug 23 j 03:30 -7472 Sep 04 j 13:07 -7471 Jan 06 j 00:20 -7471 Mar 08 j 05:19 -7471 Mar 09 j 02:16 -7471 May 09 j 00:28 -7471 Aug 19 j 13:32 -7471 Sep 11 j 01:50 -7471 Sep 23 j 12:53 -7471 Sep 23 j 12:56 -7471 Sep 22 j 15:02 -7471 Oct 06 j 00:19 -7470 Feb 09 j 13:38 -7470 Apr 11 j 20:58 -7470 Apr 12 j 07:06 -7470 Jun 11 j 14:13	4° Π51'18 7° Π39'13 24° Π58'06 20° Π06'42 19° Π58'10 15° Π07'22 0° \$\text{3} \text{3} \text{2} \text{3}	1°19'38 2°10'38 4.33808 AU 6.30831 AU 1°33'03 1°33'33 2°11'58 4.27259 AU 1°19'21 1°19'46 6.22914 AU 1°32'12	min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition minimum elong max. Earth dist. morning rise	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Feb 23 j 12:55 -7466 Feb 09 j 11:25 -7466 Feb 09 j 11:23 -7466 Feb 11 j 01:47 -7466 Feb 23 j 04:15 -7466 Feb 26 j 08:49 -7466 Jul 02 j 20:37 -7466 Aug 30 j 08:15 -7466 Aug 31 j 06:17 -7466 Oct 28 j 20:22 -7465 Mar 04 j 15:59 -7465 Mar 18 j 09:43 -7465 Mar 18 j 09:43 -7465 Mar 19 j 14:40 -7465 Apr 01 j 03:29 -7465 Aug 05 j 14:42 -7465 Oct 03 j 18:26 -7465 Oct 03 j 06:37 -7465 Dec 02 j 09:39 -7464 Jan 08 j 18:15 -7464 Apr 01 j 07:11	8° \$\times 51'22 8° \$\times 42'44 3° \$\times 42'44 3° \$\times 42'44 26° \$\times 04'54 26° \$\times 04'54 26° \$\times 04'54 26° \$\times 04'54 26° \$\times 27'16 29° \$\times 15'52 0° \$\times 53'41 13° \$\times 56'38 13° \$\times 49'05 8° \$\times 49'03 27° \$\times 50'35 0° \$\times 0° \$\times 58'49 0° \$\times 58'49 0° \$\times 58'49 1°	-2°01'21 -1°30'14 1°30'44 6.07477 AU 4.10852 AU -2°15'41 -1°23'45 1°24'12 6.14809 AU -1°42'25
morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct evening set conjunction min Earth dist. direct evening set retrograde opposition minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist. direct	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16 -7472 Aug 10 j 16:26 -7472 Aug 21 j 17:29 -7472 Aug 23 j 03:30 -7472 Aug 23 j 03:30 -7472 Sep 04 j 13:07 -7471 Jan 06 j 00:20 -7471 Mar 08 j 05:19 -7471 Mar 09 j 02:16 -7471 May 09 j 00:28 -7471 Aug 19 j 13:32 -7471 Sep 11 j 01:50 -7471 Sep 23 j 12:53 -7471 Sep 23 j 12:53 -7471 Sep 23 j 12:56 -7471 Oct 06 j 00:19 -7470 Oct 06 j 00:19 -7470 Apr 11 j 20:58 -7470 Apr 12 j 07:06 -7470 Jun 11 j 14:13 -7470 Sep 07 j 13:50	4° \$\Pi\$51'18 7° \$\Pi\$39'13 24° \$\Pi\$58'06 20° \$\Pi\$06'42 19° \$\Pi\$58'10 15° \$\Pi\$07'22 0° \$\Sigma\$ 3° \$\Si\$11'17 5° \$\Si\$40'30 5° \$\Si\$59'43 8° \$\Si\$47'33 26° \$\Si\$36'55 21° \$\Si\$44'26 21° \$\Si\$37'47 16° \$\Si\$48'06 0° \$\Omega\$ 5° \$\Omega\$01'02 7° \$\Omega\$2'36 7° \$\Omega\$2'38 7° \$\Omega\$40'02 10° \$\Omega\$44'33 15° \$\Omega\$ 29° \$\Omega\$18'41 24° \$\Omega\$23'25 24° \$\Omega\$20'11 19° \$\Omega\$29'31 0° \$\Pi\$	1°19'38 2°10'38 4.33808 AU 6.30831 AU 1°33'03 1°33'33 2°11'58 4.27259 AU 1°19'21 1°19'46 6.22914 AU 1°32'12	min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition minimum elong max. Earth dist. morning rise	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Feb 09 j 11:25 -7466 Feb 09 j 11:25 -7466 Feb 09 j 11:23 -7466 Feb 11 j 01:47 -7466 Feb 23 j 04:15 -7466 Feb 26 j 08:49 -7466 Jul 02 j 20:37 -7466 Aug 30 j 08:15 -7466 Aug 31 j 06:17 -7466 Oct 28 j 20:22 -7465 Mar 04 j 15:59 -7465 Mar 14 j 03:05 -7465 Mar 18 j 09:43 -7465 Mar 18 j 09:47 -7465 Aug 05 j 14:40 -7465 Aug 05 j 14:42 -7465 Oct 03 j 06:37 -7465 Oct 03 j 06:37 -7465 Dec 02 j 09:39 -7464 Jan 08 j 18:15	8° 水51'22 8° 水42'44 3° 水46'12 22° 水54'59 26° 水04'54 26° 水04'53 26° 水27'16 29° 水15'52 0° 云 18° 云53'41 13° 云56'38 13° 云49'03 27° 云50'35 0° ≈ 0° ≈58'39 0° ≈58'41 1° ≈15'11 4° ≈06'36 15° ≈ 22° ≈55'18 17° ≈53'26 17° ≈57'27 15° ≈ 12° ≈50'37 15° ≈	-2°01'21 -1°30'14 1°30'44 6.07477 AU 4.10852 AU -2°15'41 -1°23'45 1°24'12 6.14809 AU -1°42'25
morning rise retrograde opposition min. Earth dist. direct evening set max. Earth dist. conjunction minimum elong morning rise retrograde opposition min. Earth dist. direct evening set conjunction minimum elong max. Earth dist. direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition min. Earth dist.	-7473 Jul 24 j 04:23 -7473 Aug 05 j 18:35 -7473 Dec 05 j 01:26 -7472 Feb 03 j 19:04 -7472 Feb 04 j 21:52 -7472 Apr 06 j 07:14 -7472 Jul 27 j 06:16 -7472 Aug 10 j 16:26 -7472 Aug 21 j 17:29 -7472 Aug 23 j 03:30 -7472 Aug 23 j 03:30 -7472 Sep 04 j 13:07 -7471 Jan 06 j 00:20 -7471 Mar 08 j 05:19 -7471 Mar 09 j 02:16 -7471 May 09 j 00:28 -7471 Aug 19 j 13:32 -7471 Sep 11 j 01:50 -7471 Sep 23 j 12:53 -7471 Sep 23 j 12:56 -7471 Sep 22 j 15:02 -7471 Oct 06 j 00:19 -7470 Feb 09 j 13:38 -7470 Apr 11 j 20:58 -7470 Apr 12 j 07:06 -7470 Jun 11 j 14:13	4° Π51'18 7° Π39'13 24° Π58'06 20° Π06'42 19° Π58'10 15° Π07'22 0° \$\text{3} \text{3} \text{2} \text{3}	1°19'38 2°10'38 4.33808 AU 6.30831 AU 1°33'03 1°33'33 2°11'58 4.27259 AU 1°19'21 1°19'46 6.22914 AU 1°32'12	min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde min. Earth dist. opposition direct evening set conjunction minimum elong max. Earth dist. morning rise retrograde opposition minimum elong max. Earth dist. morning rise	-7467 Jul 26 j 09:59 -7467 Jul 27 j 11:23 -7467 Sep 23 j 12:51 -7466 Feb 23 j 12:55 -7466 Feb 09 j 11:25 -7466 Feb 09 j 11:23 -7466 Feb 11 j 01:47 -7466 Feb 23 j 04:15 -7466 Feb 26 j 08:49 -7466 Jul 02 j 20:37 -7466 Aug 30 j 08:15 -7466 Aug 31 j 06:17 -7466 Oct 28 j 20:22 -7465 Mar 04 j 15:59 -7465 Mar 18 j 09:43 -7465 Mar 18 j 09:43 -7465 Mar 19 j 14:40 -7465 Apr 01 j 03:29 -7465 Aug 05 j 14:42 -7465 Oct 03 j 18:26 -7465 Oct 03 j 06:37 -7465 Dec 02 j 09:39 -7464 Jan 08 j 18:15 -7464 Apr 01 j 07:11	8° 水51'22 8° 水42'44 3° 水46'12 22° 水54'59 26° 水04'54 26° 水04'53 26° 水27'16 29° 水15'52 0° 云 18° 云53'41 13° 云56'38 13° 云49'03 27° 云50'35 0° ≈ 0° ≈58'39 0° ≈58'41 1° ≈15'11 4° ≈06'36 15° ≈ 22° ≈55'18 17° ≈53'26 17° ≈57'27 15° ≈ 12° ≈50'37 15° ≈	-2°01'21 -1°30'14 1°30'44 6.07477 AU 4.10852 AU -2°15'41 -1°23'45 1°24'12 6.14809 AU -1°42'25

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7464 in astronomical counting style is the year 7465 BCE in historical counting style. -7464 Apr 22 i 01:59 4°\;\;\;38'16\;\ -0°48'54 retrograde -7458 Feb 14 i 09:07 4° m 02'41 conjunction -7464 Apr 22 j 02:04 4°**H**38'19 0°49'10 -7458 Apr 09 j 19:21 30°R€ minimum elong max. Earth dist. -7464 Apr 22 j 09:03 4°**)** 42'14 6.23827 AU -7458 Apr 16 j 17:47 29° **Ω**06'55 1°23'45 opposition -7458 Apr 17 j 01:08 29°**Ω**04'33 4.17310 AU -7464 May 05 j 16:50 7°**)**€41'08 min. Earth dist. morning rise -7464 Sep 05 j 21:30 -7458 Jun 16 j 06:06 retrograde 25°**)** 38'55 direct 24°**Ω**13'13 -7464 Nov 04 j 04:34 20°\dagger40'49 -0°37'23 opposition -7458 Aug 18 j 02:09 0° m -7464 Nov 04 j 06:30 -7458 Oct 18 j 00:08 min. Earth dist. 20°**₭**40'11 4.27993 AU evening set 12° m 42'58 -7463 Jan 04 j 02:12 direct 15°**)** 36'44 $0^{\circ}\Upsilon$ -7463 Apr 24 j 00:43 conjunction -7458 Oct 30 j 17:45 15° Mp 41'38 0°33'09 4° **Y**00'28 evening set -7463 May 12 j 13:19 minimum elong -7458 Oct 30 j 17:48 15°Mp41'40 0°33'20 asc. node -7463 May 21 j 19:08 6°**Y**02'55 max. Earth dist. -7458 Oct 30 j 17:15 15°Mp41'21 6.12957 AU

-7458 Nov 12 j 13:46 morning rise 18° Mp 41'43 6°Υ58'47 0°00'33 conjunction -7463 May 25 j 23:54 -7457 Jan 04 j 02:35 0∘**ত** minimum elong -7463 May 25 j 23:54 6°**Y**58'47 0°00'33 retrograde -7457 Mar 22 j 11:32 8°**2**09'26 behind sun begin -7463 May 25 j 15:43 6°Y54'16 opposition -7457 May 22 j 12:23 3°**≙**09'43 0°08'30 behind sun end -7463 May 26 j 08:06 7°**Υ**03'18 min. Earth dist. -7457 May 22 j 04:56 3°**₽**12'09 4.09159 AU max. Earth dist. -7463 May 25 j 11:01 6°**Y**51'39 6.31547 AU -7457 Jun 17 j 21:04 30°R, M) morning rise -7463 Jun 08 j 07:07 9°Y55'23 desc. node -7457 Jul 02 j 02:39 28° m 51'11 retrograde -7463 Oct 07 j 07:21 27°Y17'33 direct -7457 Jul 20 j 18:49 28° m) 16'46 opposition -7463 Dec 06 j 00:33 22°**Y**23'04 0°36'47 -7457 Aug 22 j 07:41 0∘**ত**

min. Earth dist. -7463 Dec 06 j 15:00 22° Y 18'20 4.34183 AU evening set -7457 Nov 21 j 04:12 17°**£**05'08 direct -7462 Feb 05 i 23:18 17°**Y**19'31 -7462 May 19 j 14:52 0°8 conjunction -7457 Dec 04 i 06:21 20° **2**10'27 -0°21'29 evening set -7462 Jun 14 i 05:51 5°828'09 minimum elong -7457 Dec 04 i 06:18 20° **2**10'25 0°21'36 max. Earth dist. -7462 Jun 26 j 00:47 8°**8**04'11 6.35688 AU max. Earth dist. -7457 Dec 05 i 03:41 20°**₽**23'03 6.06327 AU -7457 Dec 17 j 11:51 23°**♀**17'37 morning rise

-7462 Jun 27 j 06:49 8°**8**20'48 0°48'49 -7456 Jan 15 j 23:48 conjunction o°m. -7462 Jun 27 j 06:46 8°**8**20'46 0°49'05 -7456 Apr 27 j 04:22 13°ML18'09 retrograde minimum elong -7462 Jul 10 j 04:30 11°**8**11'47 -7456 Jun 26 j 15:47 8°ML14'51 -1°11'59 morning rise opposition 15°8 -7462 Jul 27 j 18:15 -7456 Jun 25 j 19:19 min. Earth dist. 8°M21'41 4.04746 AU -7462 Nov 07 j 15:12 28°**8**21'34 -7456 Aug 23 j 22:50 direct 3°M20'43 retrograde -7456 Nov 23 j 08:09 -7461 Jan 06 j 21:20 15°M 23°**8**29'26 1°39'04 opposition -7461 Jan 07 j 21:20 min. Earth dist. 23°**8**21'43 4.36112 AU -7456 Dec 26 j 02:11 22°M24'54 evening set

-7461 Mar 10 j 10:16 18°**8**27'42 direct -7461 Jun 15 j 09:15 $0^{\circ}\Pi$ -7455 Jan 08 j 11:54 25°M34'16 -1°09'10 conjunction -7461 Jul 15 j 20:46 -7455 Jan 08 j 11:49 evening set 6°**Ⅲ**29'47 minimum elong 25°M34'13 1°09'33 -7461 Jul 27 j 01:13 -7455 Jan 09 j 23:30 max. Earth dist. 8°**Ⅱ**58'54 6.35132 AU max. Earth dist. 25°M55'15 6.04423 AU

morning rise -7455 Jan 22 j 00:59 28°M45'19 conjunction -7461 Jul 28 j 12:42 9°**Ⅱ**18'41 1°22'39 -7455 Jan 27 j 09:16 0°**∡**7 minimum elong -7461 Jul 28 j 12:38 9°**Ⅱ**18'39 1°23'05 retrograde -7455 Jun 02 j 12:37 18°**∡**¹48'44 morning rise -7461 Aug 10 j 01:46 12°**Ⅱ**06'17 min. Earth dist. -7455 Jul 31 j 07:36 13°**✗**′52′11 4.05692 AU -7461 Dec 09 j 12:38 29°**Ⅲ**27'54 -7455 Aug 01 j 08:48 13°**х** 43'36 -2°06'20 retrograde opposition

-7460 Feb 08 j 09:20 24°**II**36'23 2°13'13 -7455 Sep 28 j 11:26 8°**х** 46′31 opposition direct min. Earth dist. -7460 Feb 09 j 10:46 24°**I**28'19 4.33233 AU -7454 Feb 01 j 00:27 27°**х** 756′06 evening set -7460 Apr 10 j 19:29 19°**Ⅲ**37'29 -7454 Feb 09 j 22:06 0°る direct -7460 Jul 10 j 02:21

evening set

-7460 Aug 15 i 00:52

7°9541'39

-7454 Feb 14 i 15:47 max. Earth dist. -7460 Aug 26 j 02:25 10°9511'30 6.30053 AU minimum elong 1°る06'06 1°31'50 max. Earth dist. -7454 Feb 16 i 06:52 1°る28'50 6.08013 AU -7460 Aug 27 j 11:25 10°930'11 1°32'49 -7454 Feb 28 i 08:54 4°**ප**16'57 conjunction morning rise -7460 Aug 27 j 11:25 10°930'11 1°33'19 retrograde -7454 Jul 07 i 17:30 23°**⋜**49'54 minimum elong

conjunction

-7454 Feb 14 i 15:48

1°る06'07 -1°31'20

-7460 Sep 08 j 20:55 13°9518'16 -7454 Sep 04 j 03:46 18°る52'43 4.11631 AU morning rise min. Earth dist. -7460 Dec 13 j 13:11 $0^{\circ}\Omega$ -7454 Sep 05 j 00:36 18°る45'35 -2°13'41 opposition 13°る45'07 retrograde -7459 Jan 10 j 17:50 1° € 12'29 direct -7454 Nov 02 j 16:55 -7459 Feb 08 j 00:43 30°R55 -7453 Feb 25 j 11:15 0°≈

opposition -7459 Mar 12 j 23:10 26°519'40 2°08'49 evening set -7453 Mar 09 j 18:18 2°≈45'42 min. Earth dist. -7459 Mar 13 j 19:50 26°9513'06 4.26293 AU -7459 May 13 j 16:51 21°523'40 -7453 Mar 23 j 12:05 5°≈53'26 -1°20'18 direct conjunction -7459 Aug 01 j 11:52 $0^{\circ}\Omega$ -7453 Mar 23 j 12:09 minimum elong 5°≈53'28 1°20'44

-7459 Sep 15 j 11:43 9°**Ω**37'38 -7453 Mar 24 j 13:34 evening set max. Earth dist. 6°≈07'58 6.15765 AU morning rise -7453 Apr 06 j 05:57 9°≈00'59 conjunction -7459 Sep 27 j 23:16 12°**Ω**29'51 1°15'16 -7453 May 03 j 10:17 15°≈ minimum elong -7459 Sep 27 j 23:19 12°**Ω**29'53 1°15'40 retrograde -7453 Aug 10 j 05:27 27°≈43'12 max. Earth dist. -7459 Sep 27 j 03:14 12°**Ω**18'19 6.21842 AU opposition -7453 Oct 08 j 09:35 22°≈41'47 -1°34'41

max. Earth dist. -7459 Get 08 j 20:03 + 12 \$0.21842 AO opposition -7459 Oct 08 j 09:33 + 12 \$0.21842 AO opposition -7459 Oct 08 j 09:33 + 12 \$0.21842 AO min. Earth dist. $-7459 \text{ Oct } 07 \text{ j } 23:07 + 22^{\circ} \approx 45'21 + 4.20378 \text{ AU}$ morning rise $-7459 \text{ Oct } 10 \text{ j } 11:27 + 15^{\circ} \Omega 22'35 + 17^{\circ} \Omega 2$

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 40 Attention, astronomical year style is used: The year -7452 in astronomical counting style is the year 7453 BCE in historical counting style.

Attention, astronomi	cal year style is used: Th	e year -7452 i	n astronomical cou	nting style is the year	7453 BCE in historical co	ounting style.	0
evening set	-7452 Apr 13 j 07:40	6° ℋ 20′22		direct	-7447 May 18 j 04:01	25° © 51'47	
					-7447 Jul 10 j 12:52	$0^{\circ}\Omega$	
conjunction	-7452 Apr 26 j 23:46	9°) €23'38		evening set	-7447 Sep 19 j 18:41	14° Ω 06′26	
minimum elong	-7452 Apr 26 j 23:50	9°) 23′41	0°42'38		-7447 Sep 23 j 15:59	15° Ω	
max. Earth dist.	-7452 Apr 27 j 05:27		6.24927 AU	max. Earth dist.	-7447 Oct 01 j 11:36	16° Ω 48'15	6.20891 AU
morning rise	-7452 May 10 j 13:42	12°) 25′42					
	-7452 Aug 28 j 00:41	0 ° $\mathbf{\gamma}$		conjunction	-7447 Oct 02 j 06:39	16° Ω 59'16	1°10'50
retrograde	-7452 Sep 10 j 09:33	0° Ƴ 17'35		minimum elong	-7447 Oct 02 j 06:43	16° Ω 59'18	1°11'14
	-7452 Sep 23 j 16:06	30° ₹ ₩		morning rise	-7447 Oct 14 j 19:38	19° Ω 52'46	
opposition	-7452 Nov 08 j 17:21	25° ∺ 20′05			-7447 Nov 30 j 24:00	0° m þ	
min. Earth dist.	-7452 Nov 08 j 20:41		4.29069 AU	retrograde	-7446 Feb 19 j 04:18	8° m 38'53	
direct	-7451 Jan 08 j 18:57	20°) 16′04		opposition	-7446 Apr 21 j 11:30	3° m 42'39	1°15'00
asc. node	-7451 Mar 30 j 21:05	28° ∺ 51'51		min. Earth dist.	-7446 Apr 21 j 18:10	3° Mp 40'30	4.16183 AU
	-7451 Apr 05 j 22:09	0° Y			-7446 May 24 j 08:21	30°R Ω	
evening set	-7451 May 17 j 06:30	8° Y 37'03		direct	-7446 Jun 20 j 20:37	28° Ω 49'05	
					-7446 Jul 18 j 03:00	0° m)	
conjunction	-7451 May 30 j 15:46	11° Y 34'27		evening set	-7446 Oct 22 j 11:13	17° m 21'20	
minimum elong	-7451 May 30 j 15:46	11° Y 34'27	0°07'50				
behind sun begin	-7451 May 30 j 08:26	11° Y 30'25		conjunction	-7446 Nov 04 j 06:00	20° m 21'01	
behind sun end	-7451 May 30 j 23:06	11° Y 38'29		minimum elong	-7446 Nov 04 j 06:02	20° Mg 21'02	0°26'20
max. Earth dist.	-7451 May 29 j 24:00	11° Y 25'44	6.32534 AU	max. Earth dist.	-7446 Nov 04 j 07:47	20° m 22'04	6.11776 AU
morning rise	-7451 Jun 12 j 21:49	14° Y 30'10		morning rise	-7446 Nov 17 j 03:16	23° M 22'11	
	-7451 Sep 07 j 17:58	9° 8			-7446 Dec 16 j 11:45	0° ⊡	
retrograde	-7451 Oct 11 j 16:45	1° 8 48'23		retrograde	-7445 Mar 27 j 09:31	12° ≏ 56'16	
	-7451 Nov 14 j 17:48	30° ₹Ƴ		desc. node	-7445 May 14 j 20:42	9° ≏ 32'40	
opposition	-7451 Dec 10 j 12:05	26° Ƴ 54'17	0°46'38	opposition	-7445 May 27 j 08:34	7° ≙ 56'07	-0°02'38
min. Earth dist.	-7451 Dec 11 j 03:47	26° Ƴ 49'09	4.35038 AU	min. Earth dist.	-7445 May 26 j 23:24	7° ≙ 59'07	4.08039 AU
direct	-7450 Feb 10 j 14:01	21° Y 50'55		direct	-7445 Jul 25 j 09:50	3° ≙ 03'10	
	-7450 Apr 30 j 23:48	8° 0		evening set	-7445 Nov 25 j 22:13	21° ≏ 55'20	
evening set	-7450 Jun 18 j 17:38	9° 8 56'51					
max. Earth dist.	-7450 Jun 30 j 11:49	12° 8 32'21	6.36346 AU	conjunction	-7445 Dec 09 j 01:26	25° ≏ 01'34	-0°28'44
	·			minimum elong	-7445 Dec 09 j 01:24	25° ≏ 01'32	0°28'53
conjunction	-7450 Jul 01 j 17:18	12° 8 48'39	0°54'38	max. Earth dist.	-7445 Dec 09 j 23:41	25° ≏ 14'44	6.05364 AU
minimum elong	-7450 Jul 01 j 17:14	12° 8 48'37	0°54'56	morning rise	-7445 Dec 22 j 08:15	28° ≏ 09'43	
C	-7450 Jul 11 j 14:59	15° 8		C	-7445 Dec 30 j 05:12	0° M .	
morning rise	-7450 Jul 14 j 13:24	15° 8 38'45			-7444 Mar 16 j 18:40	15° M ₊	
· ·	-7450 Sep 30 j 01:25	0° I I		retrograde	-7444 May 02 j 03:57	18°ML14'34	
retrograde	-7450 Nov 11 j 23:23	2° Ⅱ 47'10		C	-7444 Jun 17 j 16:33	15°RML	
	-7450 Dec 25 j 14:04	30°R₩		opposition	-7444 Jul 01 j 13:08	13°ML10'55	-1°21'28
opposition	-7449 Jan 11 j 08:49	27° 8 55'15	1°45'41	min. Earth dist.	-7444 Jun 30 j 15:43		4.04053 AU
min. Earth dist.	-7449 Jan 12 j 08:42	27° 8 47'35	4.36539 AU	direct	-7444 Aug 28 j 18:17	8°M16'27	
direct	-7449 Mar 14 j 22:49	22° 8 53'56			-7444 Nov 03 j 07:55	15° M ₊	
	-7449 May 27 j 09:38	0°II		evening set	-7444 Dec 31 j 02:29	27°M24'15	
evening set	-7449 Jul 20 j 04:36	10° Ⅲ 53'50		8	-7443 Jan 11 j 03:18	0° ∡ ¹	
max. Earth dist.	-7449 Jul 31 j 06:24		6.35267 AU		,		
	J			conjunction	-7443 Jan 13 j 13:23	0° ∡ ³34'14	-1°13'57
conjunction	-7449 Aug 01 j 19:14	13° Ⅱ 42'10	1°25'32	minimum elong	-7443 Jan 13 j 13:18	0° ∡ ³34'11	1°14'20
minimum elong	-7449 Aug 01 j 19:10	13° Ⅱ 42'08	1°26'00	max. Earth dist.	-7443 Jan 15 j 03:35	0° ∡ ¹56'45	6.04070 AU
morning rise	-7449 Aug 14 j 07:31	16° Ⅲ 29'21		morning rise	-7443 Jan 27 j 03:13	3° ∡ ¹45'46	
8	-7449 Oct 23 j 12:53	0ಂತಾ		retrograde	-7443 Jun 07 j 13:24	23° ∡ ¹49'04	
retrograde	-7449 Dec 13 j 23:43	3°952'23		min. Earth dist.	-7443 Aug 05 j 04:41	18° ∡ 52′26	4.05744 AU
	-7448 Feb 05 j 02:07	30°R Ⅱ		opposition	-7443 Aug 06 j 05:36	18° ∡ ¹43'56	
opposition	-7448 Feb 12 j 22:01	29° Ⅱ 00'49	2°14'53	direct	-7443 Oct 03 j 08:30	13° ∡ ¹46'26	
min. Earth dist.	-7448 Feb 13 j 23:57	28° I I52'35	4.33064 AU		-7442 Jan 24 j 05:41	0°ಕ	
direct	-7448 Apr 15 j 08:17	24° Ⅲ 02'15		evening set	-7442 Feb 06 j 03:54	2° る 57'25	
	-7448 Jun 20 j 09:19	0 ಲ			, , , _ , , , , , , , , , , , , , , , ,		
evening set	-7448 Aug 19 j 06:42	12° © 05'30		conjunction	-7442 Feb 19 j 19:44	6° る 07'29	-1°31'40
max. Earth dist.	-7448 Aug 30 j 09:33	14°536'13	6.29589 AU	minimum elong	-7442 Feb 19 j 19:44	6° る 07'29	1°32'11
man. Bartin diot.	7	1. 03013	0.2,00,110	max. Earth dist.	-7442 Feb 21 j 09:21	6° る 29'19	6.08448 AU
conjunction	-7448 Aug 31 j 17:04	14°954'05	1°32'00	morning rise	-7442 Mar 05 j 13:25	9°る18'18	5.00110710
minimum elong	-7448 Aug 31 j 17:05	14°954'06	1°32'30	retrograde	-7442 Jul 12 j 11:33	28°පි46'31	
morning rise	-7448 Sep 13 j 02:22	17°9542'20	. 5250	opposition	-7442 Sep 09 j 18:36	23°る42'25	-2°10'39
morning 1150	-7448 Nov 12 j 20:00	17 3 42 20 0° Ω		min. Earth dist.	-7442 Sep 09 j 18:30	23° る 42'23	4.12407 AU
retrograde	-7447 Jan 15 j 06:09	5° Ω 40'30		direct	-7442 Sep 08 j 21.33	23 3 4930	7.1270/ AU
opposition	-7447 Mar 17 j 13:49	0° Ω 47′25	2°04'54	411000	-7441 Feb 07 j 13:57	0°≈	
min. Earth dist.	-7447 Mar 18 j 08:55	0° Ω 41'21	4.25554 AU	evening set	-7441 Nar 14 j 20:09	0 ≈ 7°≈40'47	
mm. Darm dist.	-7447 Mar 23 j 19:49	0 8€41 21 30°Rூ	1.23337 AU	evening set	/ ++1 1/101 1+ J 20.09	, ~TU +/	
	/ TT / 14101 23 J 17.49	30 N-3					

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7441 in astronomical counting style is the year 7442 BCE in historical counting style. -7441 Mar 28 j 14:07 10°≈48'07 -1°16'15 -7436 May 21 j 13:05 0ಂತಾ conjunction -7441 Mar 28 j 14:12 10°≈48'10 1°16'40 -7436 Aug 23 j 14:52 16°935'24 minimum elong evening set -7441 Mar 29 j 14:30 11°≈02'00 6.16836 AU -7436 Sep 03 j 17:16 19°9506'20 max. Earth dist. max. Earth dist. -7441 Apr 11 j 07:39 13°≈55'04 morning rise -7436 Sep 05 j 00:58 -7441 Apr 16 j 03:09 1°30'42 15°≈ conjunction 19°9524'20 -7441 Jul 05 j 23:19 0°**)**€ -7436 Sep 05 j 00:59 minimum elong 19°9524'21 1°31'10 -7436 Sep 17 j 10:33 retrograde -7441 Aug 14 j 20:35 2°**H**30'07 morning rise 22°9513'08 -7441 Sep 23 j 12:33 -7436 Oct 23 j 11:06 30°R≈ 0 $^{\circ}\Omega$ 10°**Ω**17'41 -7435 Jan 20 j 01:15 opposition -7441 Oct 13 j 00:07 27°≈29'09 -1°26'18 retrograde min. Earth dist. -7441 Oct 12 j 15:37 27°≈32'02 4.21596 AU opposition -7435 Mar 22 j 08:40 5°**Ω**24'14 2°00'13 direct -7441 Dec 11 j 23:48 22°≈25'49 min. Earth dist. -7435 Mar 23 j 02:48 5°**Ω**18'28 0°**)**€ -7435 May 22 j 19:27 -7440 Feb 24 j 06:57 direct 0°**Ω**28'53 11°**)**€04'18 -7435 Sep 07 j 14:12 evening set -7440 Apr 18 j 04:36 15°€ evening set -7435 Sep 24 j 06:00 18°**Ω**46'10

6.28456 AU 4.24189 AU conjunction -7440 May 01 j 20:01 14°\ 06'46 -0°35'43 minimum elong -7440 May 01 j 20:05 14°\mathcal{H}06'48 0°35'54 conjunction -7435 Oct 06 j 18:50 21°**Ω**39'57 1°05'48 max. Earth dist. -7440 May 01 j 22:55 14°**₭**08'23 6.26178 AU minimum elong -7435 Oct 06 j 18:54 21°**Ω**39'59 1°06'10 morning rise -7440 May 15 j 09:07 17°**)** 07'57 max. Earth dist. -7435 Oct 06 j 03:02 21°**Ω**30'48 6.19438 AU -7440 Jul 19 j 11:43 $0^{\circ}\Upsilon$ morning rise -7435 Oct 19 j 08:40 24°**Ω**34'28 retrograde -7440 Sep 14 j 18:27 4°Υ53'27 -7435 Nov 12 j 12:25 0°m -7440 Nov 12 j 17:54 30°**₹** retrograde -7434 Feb 24 i 04:06 13° m 28'05 opposition -7440 Nov 13 i 04:55 29°\ 56'20 -0°16'25 opposition -7434 Apr 26 j 10:34 8° m 31'24 1°05'20 min. Earth dist. -7440 Nov 13 i 09:28 29°**)** 54'50 4.30218 AU min. Earth dist. -7434 Apr 26 j 15:01 8°m 29'58 4.14756 AU direct -7439 Jan 13 j 10:21 24° **)** 52'14 direct -7434 Jun 25 j 14:19 3° m 38'07 asc. node -7439 Feb 07 j 10:36 25°\(\)49'05 evening set -7434 Oct 27 j 04:35 22° m 13'46 -7439 Mar 15 j 06:31 $0^{\circ}\Upsilon$ -7439 May 21 j 21:31 13°Y10'03 -7434 Nov 09 i 00:25 25° m 14'30 0°18'43 conjunction evening set max. Earth dist. -7439 Jun 03 j 12:00 15°**Y**56'51 -7434 Nov 09 j 00:26 0°18'49 6.33477 AU minimum elong 25° m 14'31 -7434 Nov 09 j 04:23 max. Earth dist. 25° Mp 16'50 6.10518 AU 16°Υ06'32 0°14'53 -7439 Jun 04 j 05:32 morning rise -7434 Nov 21 j 23:08 conjunction 28° Mp 16'51 -7439 Jun 04 j 05:30 16°**Y**06'31 -7434 Nov 29 j 08:42 0°14'58 0∘∙თ minimum elong -7439 Jun 04 j 02:38 16°**Y**04'56 -7433 Mar 25 j 01:28 desc. node 17°**£**51'53 behind sun begin -7433 Apr 01 j 12:41 -7439 Jun 04 j 08:23 16°**Y**08'06 17°**£**57'14 behind sun end retrograde 19°**Y**01'16 -7439 Jun 17 j 10:08 -7433 Jun 01 j 10:27 12°**2**56'32 -0°14'22 morning rise opposition -7439 Aug 10 j 23:20 -7433 May 31 j 22:47 13°**♀**00'23 4.07082 AU 0° 8 min. Earth dist. -7439 Oct 16 j 01:17 6°**8**16'02 -7433 Jul 30 j 08:07 retrograde direct 8°**£**03'33 1°**8**22'18 0°56'10 -7439 Dec 14 j 22:32 opposition evening set -7433 Nov 30 j 22:00 26°**♀**58'43 min. Earth dist. -7439 Dec 15 j 15:57 1°**8**16'38 4.35686 AU -7433 Dec 13 j 16:52 0°M -7439 Dec 25 j 14:46 30°RY direct -7438 Feb 15 j 04:03 26°Y19'08 conjunction -7433 Dec 14 j 02:33 0°M05'44 -0°36'08 -7438 Apr 07 j 11:21 0°8 minimum elong -7433 Dec 14 j 02:30 0°M05'42 0°36'21 -7438 Jun 23 j 04:05 14°**8**23'02 max. Earth dist. -7433 Dec 15 j 05:25 0°**M**21′38 6.04827 AU evening set -7438 Jun 25 j 23:22 15°8 -7433 Dec 27 j 10:25 3°M14'36 morning rise max. Earth dist. -7438 Jul 04 j 18:02 16°**8**56'17 6.36613 AU -7432 Feb 19 j 13:23 15°M -7432 May 07 j 08:53 23°M21'19 retrograde -7438 Jul 06 i 02:17 17°814'07 1°00'08 -7432 Jul 06 i 14:51 conjunction opposition 18°M17'23 -1°30'44 -7438 Jul 06 i 02:13 -7432 Jul 05 i 16:24 minimum elong 17°**8**14'05 1°00'27 min. Earth dist. 18°M24'56 4.04041 AU -7438 Jul 18 j 21:11 20°803'34 morning rise -7432 Aug 02 j 12:21 15°RM -7438 Sep 05 i 13:12 $0^{\circ}II$ direct -7432 Sep 02 i 18:50 13°M22'40 -7438 Nov 16 i 08:35 7°**Ⅱ**12'11 -7432 Oct 03 i 23:04 15°M retrograde -7437 Jan 15 j 20:10 2°**I**I20'22 1°51'48 -7432 Dec 25 j 10:16 0°×7 opposition 2°**∡**³31'13 min. Earth dist. -7437 Jan 16 j 20:59 2°**П**12'25 4.36427 AU -7431 Jan 05 j 06:47 evening set -7437 Feb 03 j 21:17 30°R₩ 27°**8**19'19 direct -7437 Mar 19 j 10:53 conjunction -7431 Jan 18 j 18:17 5°**х** 41'15 -1°18'20 -7437 May 01 j 20:18 $0^{\circ}II$ minimum elong -7431 Jan 18 j 18:13 5°**х** 41'13 1°18'46 -7437 Jul 24 j 12:32 6.04563 AU evening set 15°**Ⅲ**18'56 max. Earth dist. -7431 Jan 20 j 08:45 6°**х**¹03'53 8°**∡**¹52'50 max. Earth dist. -7437 Aug 04 j 14:32 17°**Ⅲ**47'02 6.34773 AU -7431 Feb 01 j 08:57 morning rise -7431 Jun 12 j 11:12 28° 🖍 52'00 retrograde -7437 Aug 06 j 02:21 18°**耳**07'03 1°28'02 -7431 Aug 10 j 01:19 23°**✗**55'41 4.06720 AU conjunction min. Earth dist. -7437 Aug 06 j 02:19 18°**Ⅲ**07′01 1°28'30 -7431 Aug 11 j 03:14 23°**х** 46'50 -2°13'17 minimum elong opposition 20°**I**54′04 18°**∡**¹48'51 morning rise -7437 Aug 18 j 13:43 direct -7431 Oct 08 j 07:04 -7437 Oct 01 j 03:03 0 \circ \odot -7430 Jan 06 j 08:44 0°궁 retrograde -7437 Dec 18 j 12:01 8°9520'43 evening set -7430 Feb 11 j 07:31 7°る57'44 opposition -7436 Feb 17 j 12:24 3°529'04 2°15'56 min. Earth dist. -7436 Feb 18 j 13:54 3°920'59 4.32222 AU conjunction -7430 Feb 24 j 23:50 11°る07'22 -1°31'24 -7436 Mar 19 j 01:26 30°R∏ -7430 Feb 24 j 23:51 11°**る**07'23 minimum elong 1°31'54

max. Earth dist.

-7430 Feb 26 j 13:01

11°る28'54 6.09814 AU

direct

-7436 Apr 19 j 20:44

28°**Ⅲ**30′56

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -7430 in astronomical counting style is the year 7431 BCE in historical counting style. -7430 Mar 10 j 17:31 14°る17'34 opposition -7424 Feb 22 j 03:23 7°958'47 2°16'12 morning rise -7430 May 29 j 14:28 -7424 Feb 23 j 04:05 7°950'56 4.30802 AU 0°≈≈ min. Earth dist. -7424 Apr 24 j 08:18 -7430 Jul 17 j 04:53 3°≈37'29 3°901'01 direct retrograde -7430 Sep 03 j 18:28 30°R₹ -7424 Aug 27 j 23:50 21°9508'36 evening set -7424 Sep 08 j 05:38 -7430 Sep 14 j 10:41 opposition 28°る33'43 -2°06'44 max. Earth dist. 23°9541'59 6.26850 AU min. Earth dist. -7430 Sep 13 j 16:04 28°**る**40'05 4.14001 AU -7424 Sep 09 j 10:09 direct -7430 Nov 12 j 09:43 23°**る**32'24 conjunction 23°958'15 1°28'46 -7424 Sep 09 j 10:12 -7429 Jan 18 j 04:18 0°≈ minimum elong 23°958'16 1°29'15 -7424 Sep 21 j 19:54 evening set -7429 Mar 19 j 18:45 12°≈27'33 morning rise 26°9547'49 -7429 Mar 31 j 00:22 15°≈ -7424 Oct 06 j 03:10 $0^{\circ}\Omega$ -7423 Jan 23 j 05:38 15°€ -7429 Apr 02 j 12:36 -7423 Jan 24 j 22:25 conjunction 15°≈34'08 -1°11'49 retrograde 15°**Ω**00′16 -7429 Apr 02 j 12:41 -7423 Jan 26 j 15:08 minimum elong 15°≈34'11 1°12'13 15°RΩ max. Earth dist. -7429 Apr 03 j 10:21 15°**≈**46′27 6.18515 AU opposition -7423 Mar 27 j 05:23 10°**Ω**06′29 1°54'38 morning rise -7429 Apr 16 j 05:45 18°≈40'11 min. Earth dist. -7423 Mar 27 j 21:49 10°**Ω**01'15 4.22513 AU -7429 Jun 09 j 21:13 0°**)**€ direct -7423 May 27 j 11:38 5°Ω11'33 retrograde -7429 Aug 19 j 05:14 7°**¥**06'32 -7423 Aug 20 j 18:43 15°Ω opposition -7429 Oct 17 j 10:48 2°\(\)4106'05 -1°17'41 evening set -7423 Sep 28 j 19:38 23°**Q**32'20 min. Earth dist. -7429 Oct 17 j 03:30 2°**)**€08'33 4.23196 AU -7429 Nov 02 j 12:48 30°R≈ conjunction -7423 Oct 11 j 09:09 26°**Ω**27'07 1°00'13 direct -7429 Dec 16 j 14:18 27°≈02'32 minimum elong -7423 Oct 11 j 09:13 26°**Ω**27'10 1°00'32 -7428 Jan 30 i 03:17 0°**∀** max. Earth dist. -7423 Oct 10 i 19:25 26°**Ω**19'08 6.17842 AU evening set -7428 Apr 22 j 20:46 15°\ 36'59 morning rise -7423 Oct 24 i 00:15 29°**Ω**22'51 -7423 Oct 26 i 16:44 0° m conjunction -7428 May 06 j 11:19 18°\(\dagger)38'33 -0°29'03 retrograde -7422 Mar 01 j 06:12 18° m 24'21 -7428 May 06 j 11:22 18°**¥**38'34 0°29'12 -7422 May 01 j 12:08 13° m 27'01 minimum elong opposition 0°54'58 -7428 May 06 j 10:09 18°**)** 37'53 6.27576 AU -7422 May 01 j 13:21 max. Earth dist. min. Earth dist. 13° Mp 26'37 4.13360 AU -7428 May 19 j 23:26 21°**)**(38'44 -7422 Jun 30 j 10:52 direct 8° m 33'52 morning rise -7428 Jun 28 j 16:03 $0^{\circ}\Upsilon$ -7422 Nov 01 j 00:04 27° m 12'29 evening set -7428 Sep 19 j 01:40 9°Υ18'16 -7422 Nov 12 j 21:05 0∘ಹ retrograde -7428 Nov 17 j 12:31 4°**Υ**21'43 -0°06'14 opposition -7428 Nov 17 j 20:09 -7422 Nov 13 j 21:15 0°**2**14'14 0°10'58 min. Earth dist. 4°Υ19'12 4.31292 AU conjunction -7428 Dec 20 j 05:20 0°**Y**33'35 -7422 Nov 13 j 21:16 0° 214'15 0° 11'01 asc. node minimum elong -7428 Dec 27 j 14:30 -7422 Nov 13 j 15:09 0°**£**10'40 30°**₹**₩ behind sun begin -7427 Jan 17 j 22:59 29°**升**17'39 -7422 Nov 14 j 03:23 direct behind sun end 0°**£**17'51 $0^{\circ}\Upsilon$ -7422 Nov 14 j 06:39 -7427 Feb 08 j 11:15 max. Earth dist. 0°**₽**19'46 6.09462 AU -7427 May 26 j 08:09 17°**Y**32′59 evening set morning rise -7422 Nov 26 j 21:11 3°**£**17'37 desc. node -7421 Feb 01 j 04:26 17°**♀**07'52 conjunction -7427 Jun 08 j 15:00 20°**Y**28'43 0°21'37 retrograde -7421 Apr 06 j 18:30 23°**♀**02'57 -7427 Jun 08 j 14:58 20°**Υ**28'41 0°21'44 opposition -7421 Jun 06 j 13:51 18°**2**01'41 -0°26'10 minimum elong max. Earth dist. -7427 Jun 07 j 18:17 20°Υ17'16 6.34127 AU min. Earth dist. -7421 Jun 06 j 00:26 18°**≙**06'07 4.06465 AU -7427 Jun 21 j 18:18 23°**Y**22'40 -7421 Aug 04 j 08:48 13°**♀**08'34 morning rise direct -7427 Jul 23 j 00:08 0° 8 -7421 Nov 27 j 00:56 0°M -7427 Oct 20 j 06:06 10°**8**35'33 -7421 Dec 05 j 23:25 2°ML05'18 retrograde evening set -7427 Dec 19 j 05:44 1°05'04 opposition 5°**8**42'11 -7421 Dec 19 i 04:51 min. Earth dist. -7427 Dec 20 i 00:23 5°**8**36'07 4.35897 AU conjunction 5°M12'47 -0°43'21 direct -7426 Feb 19 i 12:24 0°**8**39'12 minimum elong -7421 Dec 19 i 04:47 5°M12'45 0°43'35 -7426 Jun 10 j 06:50 15°8 max. Earth dist. -7421 Dec 20 i 09:21 5°M29'38 6.04658 AU evening set -7426 Jun 27 j 11:28 18°**8**42'54 morning rise -7420 Jan 01 i 13:57 8°M22'11 6.36353 AU max. Earth dist. -7426 Jul 08 j 22:57 21°815'00 -7420 Jan 30 i 16:49 15°M -7420 May 12 j 10:54 28°M28'50 retrograde -7426 Jul 10 j 08:25 21°833'33 1°05'08 -7420 Jul 11 j 16:03 23°M24'31 -1°39'19 conjunction opposition -7426 Jul 10 j 08:21 21°**8**33'30 1°05'30 min. Earth dist. -7420 Jul 10 j 15:37 23°M-32'45 4.04350 AU minimum elong 24°**8**22'36 morning rise -7426 Jul 23 j 02:07 direct -7420 Sep 07 j 18:31 18°M29'21 -7426 Aug 18 j 08:13 $0^{\circ}II$ -7420 Dec 07 j 14:05 0°×7 -7419 Jan 10 j 10:56 retrograde -7426 Nov 20 j 17:38 11°**Ⅲ**33'32 evening set 7°**∡**37'38 -7425 Jan 20 j 06:13 6°**Ⅱ**41'56 1°57'11 opposition -7425 Jan 21 j 08:18 6°**Ⅲ**33'36 4.35730 AU -7419 Jan 23 j 23:18 10°**₹**47'40 -1°22'10 min. Earth dist. conjunction -7425 Mar 23 j 21:01 1°**Ⅱ**41'16 -7419 Jan 23 j 23:15 10°**∡**'47'38 direct minimum elong 1°22'37 19°**Ⅲ**42'34 -7419 Jan 25 j 15:12 11°**⋌**11′05 6.05289 AU evening set -7425 Jul 28 j 19:17 max. Earth dist. -7425 Aug 08 j 19:05 22°**Ⅱ**09'55 -7419 Feb 06 j 14:24 13°**х** 59′04 max. Earth dist. 6.33668 AU morning rise -7419 Apr 27 j 18:23 0°궁

conjunction

morning rise

retrograde

minimum elong

-7425 Aug 10 j 08:17

-7425 Aug 10 j 08:15

-7425 Aug 22 j 19:15

-7425 Sep 13 j 08:08

-7425 Dec 23 j 02:20

22°**Ⅲ**30'46

22°**Ⅲ**30'45

25°**Ⅱ**18′02

12°950'34

0ಂತಾ

1°29'57

1°30'26

retrograde

opposition

direct

min. Earth dist.

-7419 Jun 17 j 10:07

-7419 Aug 07 j 03:40

-7419 Aug 14 j 23:40

-7419 Aug 16 j 00:10

-7419 Oct 13 j 06:45

3°る53'15

23°**х**⁴49'38

28°**≯**56'28 4.07784 AU

28°**∡**148'06 -2°15'21

30°R.**✓**

Planetary Phenomena of Jupiter from -7900 through -7398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 43 Attention, astronomical year style is used: The year -7419 in astronomical counting style is the year 7420 BCE in historical counting style.

Attention, astronom	nical year style is used: Th	ne year -7419 i	in astronomical co	unting style is the year	7420 BCE in historical c	ounting style.	
	-7419 Dec 16 j 09:19	5°0			-7413 Aug 28 j 03:46	0 \circ \mathfrak{s}	
evening set	-7418 Feb 16 j 10:20	12° る 56'12		retrograde	-7413 Dec 27 j 18:49	17° © 23'29	
				opposition	-7412 Feb 26 j 20:06	12° © 31'36	
conjunction	-7418 Mar 02 j 03:02	16° る 05'25		min. Earth dist.	-7412 Feb 27 j 20:30	12° © 23'52	4.29735 AU
minimum elong	-7418 Mar 02 j 03:04	16° る 05'26		direct	-7412 Apr 28 j 23:03	7° 5 34'21	
max. Earth dist.	-7418 Mar 03 j 14:55	16° පි 26'07	6.11115 AU	evening set	-7412 Sep 01 j 09:36	25° © 43'36	
morning rise	-7418 Mar 15 j 20:52	19° る 15'04					
	-7418 May 05 j 05:13	0° ≈		conjunction	-7412 Sep 13 j 19:57	28° © 33'46	1°26'21
retrograde	-7418 Jul 21 j 19:51	8° ≈ 27'06		minimum elong	-7412 Sep 13 j 20:00	28°533'48	1°26'49
min. Earth dist.	-7418 Sep 18 j 08:14		4.15416 AU	max. Earth dist.	-7412 Sep 12 j 16:27	28°9518'02	6.25680 AU
opposition	-7418 Sep 19 j 02:12	3°≈23'44	-2°02'05		-7412 Sep 20 j 02:47	0° U	
1.	-7418 Oct 16 j 13:35	30°Rる		morning rise	-7412 Sep 26 j 06:15	1° Ω 24'01	
direct	-7418 Nov 17 j 04:12	28° る 22'02			-7412 Dec 03 j 08:57	15° Ω	
	-7418 Dec 19 j 05:14	0°≈		retrograde	-7411 Jan 29 j 18:21	19° Ω 42'56	
. ,	-7417 Mar 14 j 17:04	15° ≈		***	-7411 Mar 30 j 14:54	15°R Ω	1040120
evening set	-7417 Mar 24 j 17:19	17°≈13'53		opposition	-7411 Apr 01 j 02:20	14° Ω 48'42 14° Ω 44'22	4.21324 AU
aaniumatian	-7417 Apr 07 j 10:53	20° ≈ 19'47	1906159	min. Earth dist.	-7411 Apr 01 j 15:56 -7411 Jun 01 j 03:43	9° Ω 54'08	4.21324 AU
conjunction	-7417 Apr 07 j 10:58	20 ≈1947 20°≈19'49		direct	-7411 Jul 30 j 09:04	9 δ ί 34 08 15° Ω	
minimum elong max. Earth dist.	-7417 Apr 07 j 10.38	20 ≈1949 20°≈29'40	6.19946 AU	evening set	-7411 Jul 30 j 09:04 -7411 Oct 03 j 08:43	13 δι 28° Ω 16'44	
morning rise	-7417 Apr 08 j 04:23	20 ≈2940 23°≈25'03	0.19940 AU	evening set	-7411 Oct 03 j 08:43	0° m)	
morning rise	-7417 Apr 21 j 03:40	23 ≈ 23 03			-/411 Oct 10 j 16.51	V III	
retrograde	-7417 Aug 23 j 17:09	11°) 43'52		conjunction	-7411 Oct 15 j 23:12	1° Mp 12'22	0°54'18
opposition	-7417 Aug 23 j 17:09 -7417 Oct 21 j 22:13	6°) 43'58	1008136	minimum elong	-7411 Oct 15 j 23:16	1° My 12'25	0°54'35
min. Earth dist.	-7417 Oct 21 j 22:13		4.24501 AU	max. Earth dist.	-7411 Oct 15 j 14:05	1° Mg 07'04	6.16766 AU
direct	-7417 Dec 21 j 07:18	1°) 40'13	4.24301 AU	morning rise	-7411 Oct 13 j 14:03	4°M)09'01	0.10700 AC
evening set	-7417 Dec 21 j 07:18 -7416 Apr 27 j 13:43	20°) 11'37		retrograde	-7411 Oct 28 j 13.11 -7410 Mar 06 j 07:10	23° M) 16'22	
evening set	-/410 Apr 2/ j 13.43	20 /(1137		opposition	-7410 May 06 j 11:50	18° m) 18'33	0°44'23
conjunction	-7416 May 11 j 03:37	23°) 12′26	-0°22'10	min. Earth dist.	-7410 May 06 j 11:30	18° m) 18'40	4.12472 AU
minimum elong	-7416 May 11 j 03:39	23°) 12'27		direct	-7410 Jul 05 j 07:36	13° m) 25'34	4.12472 AO
max. Earth dist.	-7416 May 11 j 00:03	23° H 10'28		uncci	-7410 Oct 27 j 17:49	0° ⊽	
morning rise	-7416 May 24 j 14:38	26°) 11'45	0.20073 AC	evening set	-7410 Nov 05 j 18:04	ა <u> </u>	
morning 1130	-7416 Jun 11 j 02:21	0°Υ		evening set	7410 NOV 05 J 10.04	2 -03 43	
retrograde	-7416 Sep 23 j 08:41	13° Υ 46'24		conjunction	-7410 Nov 18 j 16:12	5° ჲ 08'14	0°03'20
asc. node	-7416 Oct 31 j 07:35	11° Y 31'48		minimum elong	-7410 Nov 18 j 16:13	5° 2 08'15	0°03'20
opposition	-7416 Nov 21 j 21:48	8° Υ '50'22	0°04'07	behind sun begin	-7410 Nov 18 j 08:09	5° ₾ 03'31	0 03 20
min. Earth dist.	-7416 Nov 22 j 06:30	8° Υ 47'29	4.32112 AU	behind sun end	-7410 Nov 19 j 00:17	5° ₽ 12'59	
direct	-7415 Jan 22 j 10:32	3° Y '46'22		max. Earth dist.	-7410 Nov 19 j 03:28		6.08836 AU
evening set	-7415 May 30 j 20:26			morning rise	-7410 Dec 01 j 17:33	8° ₾ 12'29	
max. Earth dist.	-7415 Jun 12 j 01:59	24° Υ 41'40	6.34607 AU	desc. node	-7410 Dec 12 j 08:38	10° Ω 40'31	
	, ,			retrograde	-7409 Apr 11 j 18:40	28° ჲ 01'07	
conjunction	-7415 Jun 13 j 01:52	24° Y ′54'53	0°28'21	opposition	-7409 Jun 11 j 13:35	22° ჲ 59'20	-0°37'26
minimum elong	-7415 Jun 13 j 01:50	24° Y ′54'51	0°28'31	min. Earth dist.	-7409 Jun 10 j 21:26	23° ≏ 04'41	4.06169 AU
morning rise	-7415 Jun 26 j 03:57	27° Y ′48′07		direct	-7409 Aug 09 j 05:08	18° ≏ 06'02	
S	-7415 Jul 06 j 06:01	0°8			-7409 Nov 09 j 20:09	0° M	
retrograde	-7415 Oct 24 j 15:40	14° 8 59'46		evening set	-7409 Dec 10 j 21:50	7°M03'46	
opposition	-7415 Dec 23 j 15:40	10° 8 06'47	1°13'49	Č	J		
min. Earth dist.	-7415 Dec 24 j 12:38	9° 8 59'59	4.36019 AU	conjunction	-7409 Dec 24 j 04:23	10°ML11'40	-0°50'01
direct	-7414 Feb 24 j 01:01	5° 8 04'04		minimum elong	-7409 Dec 24 j 04:18	10°M11'38	0°50'17
	-7414 May 23 j 23:32	15° 8		max. Earth dist.	-7409 Dec 25 j 11:44	10°M30'12	6.04700 AU
evening set	-7414 Jul 01 j 20:44	23° 8 07'29		morning rise	-7408 Jan 06 j 14:16	13°M21'24	
max. Earth dist.	-7414 Jul 13 j 05:49	25° 8 38'28	6.36091 AU		-7408 Jan 13 j 15:25	15° M ₊	
					-7408 Mar 30 j 13:32	0° ∡ ¹	
conjunction	-7414 Jul 14 j 16:31	25° 8 57'42	1°09'55	retrograde	-7408 May 17 j 11:04	3° ҂ 27'27	
minimum elong	-7414 Jul 14 j 16:26	25° 8 57'40	1°10'18		-7408 Jul 04 j 08:50	30°RM	
morning rise	-7414 Jul 27 j 09:03	28° 8 46'24		opposition	-7408 Jul 16 j 13:31	28°M22'51	-1°46'53
	-7414 Aug 01 j 23:01	$\Pi^{\circ}0$		min. Earth dist.	-7408 Jul 15 j 13:36	28° M 30'57	4.04728 AU
retrograde	-7414 Nov 25 j 03:50	15° Ⅱ 59'39		direct	-7408 Sep 12 j 16:26	23° M 27'17	
opposition	-7413 Jan 24 j 18:37	11° Ⅲ 08′08	2°02'03		-7408 Nov 17 j 08:22	0° ∡ ¹	
min. Earth dist.	-7413 Jan 25 j 20:17	10° Ⅱ 59'57	4.35141 AU	evening set	-7407 Jan 15 j 11:49	12° ∡ ³35′27	
direct	-7413 Mar 28 j 07:38	6° Ⅱ 07'53					
evening set	-7413 Aug 02 j 03:49	24° Ⅱ 10′18		conjunction	-7407 Jan 29 j 00:51	15° ∡ ¹45'28	-1°25'16
max. Earth dist.	-7413 Aug 13 j 04:33	26° Ⅲ 38′32	6.32806 AU	minimum elong	-7407 Jan 29 j 00:48	15° ∡ ¹45'26	1°25'44
				max. Earth dist.	-7407 Jan 30 j 16:42	16° ₹ °08'48	6.05943 AU
conjunction	-7413 Aug 14 j 16:08	26° ∏ 58'32	1°31'26	morning rise	-7407 Feb 11 j 16:31	18° ∡ 56'45	
minimum elong	-7413 Aug 14 j 16:06	26° Ⅱ 58'31	1°31'55		-7407 Apr 03 j 17:26	ರ°0	
morning rise	-7413 Aug 27 j 02:30	29° ∏ 45'54		retrograde	-7407 Jun 22 j 04:10	8° る 46'15	

•	ical year style is used: Th		_	. //	r 7408 BCE in historical c	, .	ge 44
opposition	-7407 Aug 20 j 17:17	16 year -7407 1 3° 石 41'16		evening set	-7401 Aug 06 j 12:06	28° ∏ 38'48	
min. Earth dist.	-7407 Aug 20 j 17:17		4.08668 AU	evening set	-7401 Aug 12 j 13:07	0°95	
iiiii. Lattii dist.	-7407 Sep 20 j 07:21	30°R. ✓	4.00000 AC		-/401 Aug 12 j 13.07	0 3	
direct	-7407 Oct 18 j 00:35	28° ∡ ′42'21		conjunction	-7401 Aug 18 j 23:50	1°527'01	1°32'23
	-7407 Nov 15 j 00:50	0°ਰ		minimum elong	-7401 Aug 18 j 23:49	1°927'00	1°32'53
evening set	-7406 Feb 21 j 10:28	17° ට 47'41		max. Earth dist.	-7401 Aug 17 j 12:53	1° © 07'20	6.32122 AU
	-			morning rise	-7401 Aug 31 j 09:48	4° 5 014'28	
conjunction	-7406 Mar 07 j 03:26	20° る 56'35	-1°29'03	retrograde	-7400 Jan 01 j 08:46	21° © 56'19	
minimum elong	-7406 Mar 07 j 03:28	20° る 56'37	1°29'33	opposition	-7400 Mar 02 j 12:35	17° 5 04'07	2°14'18
max. Earth dist.	-7406 Mar 08 j 11:46		6.12143 AU	min. Earth dist.	-7400 Mar 03 j 10:57	16° © 57'01	4.28867 AU
morning rise	-7406 Mar 20 j 21:25	24° る 05'49		direct	-7400 May 03 j 12:03	12° © 07'13	
	-7406 Apr 16 j 10:55	0° ≈		_	-7400 Sep 04 j 12:20	$0^{\circ}\Omega$	
retrograde	-7406 Jul 26 j 10:25	13°≈11'18	1076146	evening set	-7400 Sep 05 j 18:48	0°Ω17'18	6 2 4 6 0 1 4 7 7
opposition	-7406 Sep 23 j 15:20	8°≈08'20		max. Earth dist.	-7400 Sep 17 j 04:42	2° Ω 53'47	6.24691 AU
min. Earth dist.	-7406 Sep 22 j 23:57	8°≈13'34 3°≈06'14	4.16475 AU	agniumation	7400 Cap 19: 05:22	3° Ω 07'56	1°23'25
direct	-7406 Nov 21 j 22:05 -7405 Feb 25 j 13:56	3 ≈00 14 15°≈		conjunction minimum elong	-7400 Sep 18 j 05:22 -7400 Sep 18 j 05:26	3° Ω 07'58	1°23'52
evening set	-7405 Mar 29 j 13:47	13 ≈ 21° ≈ 56'12		morning rise	-7400 Sep 30 j 16:00	5° Ω 58'46	1 23 32
evening set	-7405 Wai 27 j 15.47	21 ~30 12		morning rise	-7400 Nov 11 j 13:48	15° Ω	
conjunction	-7405 Apr 12 j 07:22	25° ≈ 01'40	-1°01'45	retrograde	-7399 Feb 03 j 14:44	24° Ω 23'21	
minimum elong	-7405 Apr 12 j 07:27	25° ≈ 01'42	1°02'05	opposition	-7399 Apr 05 j 22:15	19° Ω 28'41	1°41'23
max. Earth dist.	-7405 Apr 12 j 22:58	25° ≈ 10′27	6.20978 AU	min. Earth dist.	-7399 Apr 06 j 11:07	19° Ω 24'34	4.20248 AU
morning rise	-7405 Apr 25 j 23:34	28° ≈ 06'18			-7399 May 20 j 08:50	15°R Ω	
-	-7405 May 04 j 12:05	0°) €		direct	-7399 Jun 05 j 21:14	14° Ω 34'22	
retrograde	-7405 Aug 28 j 03:00	16° ∺ 19′09			-7399 Jun 22 j 07:18	15° Ω	
opposition	-7405 Oct 26 j 08:36	11° ∺ 19'49			-7399 Sep 24 j 21:04	0° m)	
min. Earth dist.	-7405 Oct 26 j 05:34		4.25417 AU	evening set	-7399 Oct 07 j 21:03	2° m 58'33	
direct	-7405 Dec 25 j 20:24	6° ∺ 15'58					
evening set	-7404 May 02 j 06:05	24°) 45′40		conjunction	-7399 Oct 20 j 12:20	5° m 55'01	0°48'05
	740434 15:10.56	270 1 45140	0015112	minimum elong	-7399 Oct 20 j 12:24	5° m 55'03	0°48'21
conjunction minimum elong	-7404 May 15 j 18:56 -7404 May 15 j 18:58	27°) 45'49 27°) 45'50		max. Earth dist. morning rise	-7399 Oct 20 j 04:39 -7399 Nov 02 j 05:36	5° m 50'32 8° m 52'40	6.15698 AU
behind sun begin	-7404 May 15 j 16:42	27°) 44'35	0 13 10	morning risc	-7399 NOV 02 J 03.30	0 Hy 32 40	
behind sun end	-7404 May 15 j 21:13	27°) 47'05					
max. Earth dist.	-7404 May 15 j 11:01	27°) (41'26	6.29415 AU				
	-7404 May 25 j 20:40	0° Υ					
morning rise	-7404 May 29 j 05:06	0° Υ '44'27					
asc. node	-7404 Sep 11 j 07:17	17° Ƴ 49'05					
retrograde	-7404 Sep 27 j 18:32	18° Ƴ 15'31					
opposition	-7404 Nov 26 j 07:28	13° Y 19'58	0°14'24				
min. Earth dist.	-7404 Nov 26 j 18:46	13° Y 16′15	4.32636 AU				
direct	-7403 Jan 27 j 00:07	8° Y 16′01					
evening set	-7403 Jun 04 j 08:53	26° Y ′28′33					
agniumation	-7403 Jun 17 j 13:12	29° Y °22'54	0024157				
conjunction minimum elong	-7403 Jun 17 j 13:12	29 Y 22 34 29° Y 22'52	0°34'57 0°35'08				
max. Earth dist.	-7403 Jun 16 j 12:41	29° Υ '09'20	6.34878 AU				
max. Dartii dist.	-7403 Jun 20 j 08:18	0°8	0.5 1070 110				
morning rise	-7403 Jun 30 j 13:49	2° 8 15'27					
S	-7403 Sep 04 j 04:36	15° 8					
retrograde	-7403 Oct 28 j 23:31	19° 8 26'23					
	-7403 Dec 24 j 16:35	15° ₹ 8					
opposition	-7403 Dec 28 j 02:12	14° 8 33'40	1°22'09				
min. Earth dist.	-7403 Dec 28 j 23:04	14° 8 26'55	4.36053 AU				
direct	-7402 Feb 28 j 11:35	9° 8 31'14					
	-7402 May 03 j 04:41	15° 8					
evening set	-7402 Jul 06 j 06:32	27° 8 34'20					
may Forth dist	-7402 Jul 17 j 05:38	0° П 0° П 04'23	6 25970 ATT				
max. Earth dist.	-7402 Jul 17 j 13:32	о щ04/23	6.35870 AU				
conjunction	-7402 Jul 19 j 00:57	0° Ⅲ 24'04	1°14'18				
minimum elong	-7402 Jul 19 j 00:53	0° Д 24'02	1°14'43				
morning rise	-7402 Jul 31 j 16:28	3° Ⅱ 12'23					
retrograde	-7402 Nov 29 j 16:28	20° Ⅲ 27'38					
opposition	-7401 Jan 29 j 07:59	15° Ⅲ 36′10	2°06'14				
min. Earth dist.	-7401 Jan 30 j 10:30	15° Ⅲ 27'43	4.34683 AU				
direct	-7401 Apr 01 i 21:34	10°∏36'16					

direct

-7401 Apr 01 j 21:34 10°**Ц**36'16