

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 1

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

conjunction	-8399 Apr 08 j 07:53	14° $\approx$ 47'41	-0°15'01	desc. node	-8394 Jan 15 j 06:50	2° $\underline{\text{A}}$ 16'26	
minimum elong	-8399 Apr 08 j 08:28	14° $\approx$ 48'37	0°15'27		-8394 Feb 22 j 07:54	0° $\mathbb{M}$	
behind sun begin	-8399 Apr 08 j 04:36	14° $\approx$ 42'27			-8394 Apr 07 j 23:50	0° $\text{A}$	
behind sun end	-8399 Apr 08 j 12:20	14° $\approx$ 54'47			-8394 Jun 02 j 17:06	0° $\text{Z}$	
max. Earth dist.	-8399 Apr 09 j 01:47	15° $\approx$ 16'15	2.66642 AU	retrograde	-8394 Jul 14 j 16:48	9° $\text{Z}$ 49'43	
	-8399 May 02 j 03:01	0° $\text{H}$		min. Earth dist.	-8394 Aug 18 j 12:33	1° $\text{Z}$ 51'38	0.60670 AU
asc. node	-8399 May 04 j 16:03	1° $\text{H}$ 37'35		opposition	-8394 Aug 23 j 08:32	29° $\text{A}$ 56'26	-4°22'49
morning rise	-8399 May 24 j 22:43	14° $\text{H}$ 37'12		greatest brilliancy	-8394 Aug 22 j 16:18	0° $\text{Z}$ 12'35	-1.6m
	-8399 Jun 17 j 19:37	0° $\text{Y}$			-8394 Aug 23 j 04:56	30° $\text{R}$ $\text{A}$	
	-8399 Aug 02 j 19:55	0° $\text{B}$		direct	-8394 Sep 29 j 19:41	21° $\text{A}$ 12'25	
	-8399 Sep 17 j 04:01	0° $\text{II}$			-8394 Nov 10 j 11:55	0° $\text{Z}$	
	-8399 Nov 01 j 06:09	0° $\text{E}$		asc. node	-8394 Dec 25 j 13:15	20° $\text{Z}$ 29'36	
	-8399 Dec 17 j 04:40	0° $\Omega$			-8393 Jan 12 j 08:31	0° $\approx$	
	-8398 Feb 06 j 01:55	0° $\mathbb{M}$			-8393 Mar 05 j 02:19	0° $\text{H}$	
retrograde	-8398 Apr 05 j 01:37	17° $\mathbb{M}$ 49'36			-8393 Apr 21 j 21:33	0° $\text{Y}$	
desc. node	-8398 Apr 12 j 07:55	17° $\mathbb{M}$ 28'17			-8393 Jun 05 j 18:05	0° $\text{B}$	
min. Earth dist.	-8398 May 02 j 18:15	13° $\mathbb{M}$ 15'28	0.38872 AU	evening set	-8393 Jun 20 j 17:05	10° $\text{B}$ 24'52	
opposition	-8398 May 07 j 01:13	12° $\mathbb{M}$ 03'28	-1°54'25	max. Earth dist.	-8393 Jul 06 j 10:21	21° $\text{B}$ 34'58	2.46945 AU
greatest brilliancy	-8398 May 06 j 16:15	12° $\mathbb{M}$ 09'45	-2.9m		-8393 Jul 18 j 01:51	0° $\text{II}$	
direct	-8398 Jun 06 j 06:35	6° $\mathbb{M}$ 52'02					
	-8398 Aug 15 j 02:05	0° $\underline{\text{A}}$		conjunction	-8393 Aug 13 j 03:30	19° $\text{II}$ 15'39	1°06'03
	-8398 Oct 05 j 10:44	0° $\mathbb{M}$		minimum elong	-8393 Aug 13 j 05:14	19° $\text{II}$ 18'54	1°06'33
	-8398 Nov 22 j 08:42	0° $\text{A}$			-8393 Aug 27 j 09:07	0° $\text{E}$	
	-8397 Jan 08 j 21:09	0° $\text{Z}$			-8393 Oct 05 j 08:40	0° $\Omega$	
	-8397 Feb 25 j 11:45	0° $\approx$		morning rise	-8393 Oct 10 j 12:49	4° $\Omega$ 01'31	
asc. node	-8397 Mar 22 j 10:39	15° $\approx$ 46'08			-8393 Nov 12 j 19:49	0° $\mathbb{M}$	
evening set	-8397 Mar 30 j 06:54	20° $\approx$ 44'36		desc. node	-8393 Dec 03 j 00:48	15° $\mathbb{M}$ 41'41	
	-8397 Apr 13 j 19:45	0° $\text{H}$			-8393 Dec 21 j 15:21	0° $\underline{\text{A}}$	
max. Earth dist.	-8397 May 03 j 13:25	12° $\text{H}$ 39'34	2.64961 AU		-8392 Jan 30 j 16:53	0° $\mathbb{M}$	
					-8392 Mar 12 j 23:41	0° $\text{A}$	
conjunction	-8397 May 16 j 18:10	21° $\text{H}$ 12'06	0°30'59		-8392 Apr 27 j 22:26	0° $\text{Z}$	
minimum elong	-8397 May 16 j 17:05	21° $\text{H}$ 10'20	0°30'49		-8392 Jun 21 j 03:43	0° $\approx$	
	-8397 May 30 j 05:48	0° $\text{Y}$		retrograde	-8392 Aug 18 j 15:19	16° $\approx$ 22'38	
morning rise	-8397 Jul 02 j 03:38	21° $\text{Y}$ 50'13		min. Earth dist.	-8392 Sep 26 j 11:53	7° $\approx$ 00'13	0.66226 AU
	-8397 Jul 14 j 05:43	0° $\text{B}$		opposition	-8392 Sep 27 j 14:09	6° $\approx$ 33'45	-1°43'02
	-8397 Aug 26 j 16:04	0° $\text{II}$		greatest brilliancy	-8392 Sep 27 j 13:03	6° $\approx$ 34'52	-1.4m
	-8397 Oct 07 j 17:07	0° $\text{E}$			-8392 Oct 15 j 20:37	30° $\text{R}$ $\text{Z}$	
	-8397 Nov 17 j 19:27	0° $\Omega$		direct	-8392 Nov 06 j 09:56	26° $\text{Z}$ 57'43	
	-8397 Dec 28 j 16:12	0° $\mathbb{M}$		asc. node	-8392 Nov 11 j 18:16	27° $\text{Z}$ 08'20	
	-8396 Feb 08 j 15:46	0° $\underline{\text{A}}$			-8392 Nov 29 j 18:32	0° $\approx$	
desc. node	-8396 Feb 28 j 08:54	13° $\underline{\text{A}}$ 19'45			-8391 Feb 08 j 04:58	0° $\text{H}$	
	-8396 Mar 26 j 05:10	0° $\mathbb{M}$			-8391 Mar 31 j 09:10	0° $\text{Y}$	
retrograde	-8396 Jun 02 j 06:01	24° $\mathbb{M}$ 00'56			-8391 May 16 j 06:29	0° $\text{B}$	
min. Earth dist.	-8396 Jul 01 j 19:46	18° $\mathbb{M}$ 05'14	0.49750 AU		-8391 Jun 27 j 19:14	0° $\text{II}$	
greatest brilliancy	-8396 Jul 08 j 05:24	15° $\mathbb{M}$ 46'07	-2.1m		-8391 Aug 06 j 23:18	0° $\text{E}$	
opposition	-8396 Jul 09 j 18:43	15° $\mathbb{M}$ 12'08	-5°50'06	evening set	-8391 Aug 13 j 00:02	4° $\text{E}$ 36'59	
direct	-8396 Aug 12 j 16:35	8° $\mathbb{M}$ 00'14			-8391 Sep 14 j 16:47	0° $\Omega$	
	-8396 Oct 22 j 03:54	0° $\text{A}$					
	-8396 Dec 16 j 03:48	0° $\text{Z}$		conjunction	-8391 Oct 13 j 17:59	22° $\Omega$ 48'34	0°04'37
	-8395 Feb 04 j 14:48	0° $\approx$		minimum elong	-8391 Oct 13 j 18:28	22° $\Omega$ 49'30	0°04'59
asc. node	-8395 Feb 06 j 10:02	1° $\approx$ 05'42		behind sun begin	-8391 Oct 12 j 16:04	21° $\Omega$ 57'41	
	-8395 Mar 25 j 03:10	0° $\text{H}$		behind sun end	-8391 Oct 14 j 20:52	23° $\Omega$ 41'20	
evening set	-8395 May 07 j 18:12	27° $\text{H}$ 59'04		desc. node	-8391 Oct 19 j 18:17	27° $\Omega$ 31'47	
	-8395 May 10 j 20:01	0° $\text{Y}$			-8391 Oct 22 j 21:51	0° $\mathbb{M}$	
max. Earth dist.	-8395 May 29 j 14:50	12° $\text{Y}$ 26'45	2.58083 AU	max. Earth dist.	-8391 Oct 28 j 02:09	4° $\mathbb{M}$ 03'31	2.38111 AU
	-8395 Jun 24 j 11:55	0° $\text{B}$			-8391 Nov 30 j 12:19	0° $\underline{\text{A}}$	
				morning rise	-8391 Dec 18 j 22:10	14° $\underline{\text{A}}$ 00'57	
conjunction	-8395 Jun 25 j 11:04	0° $\text{B}$ 39'48	1°05'53		-8390 Jan 09 j 08:13	0° $\mathbb{M}$	
minimum elong	-8395 Jun 25 j 09:46	0° $\text{B}$ 37'35	1°06'07		-8390 Feb 20 j 02:27	0° $\text{A}$	
	-8395 Aug 06 j 02:38	0° $\text{II}$			-8390 Apr 05 j 09:54	0° $\text{Z}$	
morning rise	-8395 Aug 14 j 01:51	5° $\text{II}$ 45'44			-8390 May 23 j 03:38	0° $\approx$	
	-8395 Sep 15 j 23:03	0° $\text{E}$			-8390 Jul 16 j 15:54	0° $\text{H}$	
	-8395 Oct 25 j 14:18	0° $\Omega$		retrograde	-8390 Sep 22 j 22:21	20° $\text{H}$ 22'24	
	-8395 Dec 03 j 17:26	0° $\mathbb{M}$		asc. node	-8390 Sep 29 j 22:08	20° $\text{H}$ 03'37	
	-8394 Jan 12 j 05:50	0° $\underline{\text{A}}$		opposition	-8390 Nov 01 j 01:16	11° $\text{H}$ 07'33	1°14'37

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 2

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

greatest brilliancy	-8390 Nov 01 j 03:22	11° $\text{X}$ 05'28	-1.4m	conjunction	-8384 Mar 23 j 23:55	0° $\approx$ 34'08	-0°32'25
min. Earth dist.	-8390 Nov 03 j 16:19	10° $\text{X}$ 05'00	0.65666 AU	minimum elong	-8384 Mar 24 j 01:08	0° $\approx$ 36'05	0°32'54
direct	-8390 Dec 12 j 00:47	1° $\text{X}$ 08'09			-8384 Mar 23 j 02:40	0° $\approx$	
	-8389 Mar 05 j 23:56	0° $\text{Y}$		max. Earth dist.	-8384 Mar 30 j 19:03	4° $\approx$ 55'52	2.65819 AU
	-8389 Apr 24 j 15:28	0° $\text{B}$			-8384 May 09 j 00:37	0° $\text{X}$	
	-8389 Jun 07 j 08:26	0° $\text{II}$		morning rise	-8384 May 10 j 10:56	0° $\text{X}$ 54'45	
	-8389 Jul 17 j 22:08	0° $\text{D}$		asc. node	-8384 May 21 j 10:37	7° $\text{X}$ 55'16	
	-8389 Aug 25 j 19:08	0° $\Omega$			-8384 Jun 25 j 00:09	0° $\text{Y}$	
desc. node	-8389 Sep 06 j 15:46	9° $\Omega$ 16'48			-8384 Aug 10 j 18:03	0° $\text{B}$	
	-8389 Oct 03 j 02:24	0° $\text{M}$			-8384 Sep 26 j 12:54	0° $\text{II}$	
evening set	-8389 Oct 17 j 23:01	11° $\text{M}$ 35'25			-8384 Nov 13 j 11:20	0° $\text{D}$	
	-8389 Nov 10 j 19:35	0° $\underline{\text{D}}$			-8383 Jan 05 j 19:11	0° $\Omega$	
				retrograde	-8383 Mar 05 j 19:28	17° $\Omega$ 22'47	
conjunction	-8389 Dec 19 j 09:13	28° $\underline{\text{D}}$ 58'28	-1°02'54	opposition	-8383 Apr 05 j 13:16	12° $\Omega$ 15'52	1°51'11
minimum elong	-8389 Dec 19 j 06:46	28° $\underline{\text{D}}$ 53'58	1°03'05	greatest brilliancy	-8383 Apr 05 j 17:28	12° $\Omega$ 13'02	-2.9m
	-8389 Dec 20 j 18:40	0° $\text{M}$		min. Earth dist.	-8383 Apr 06 j 11:03	12° $\Omega$ 01'14	0.38104 AU
max. Earth dist.	-8388 Jan 30 j 16:51	29° $\text{M}$ 22'55	2.49361 AU	desc. node	-8383 Apr 28 j 23:54	7° $\Omega$ 25'57	
	-8388 Jan 31 j 14:01	0° $\text{Z}$		direct	-8383 May 06 j 05:33	7° $\Omega$ 05'07	
morning rise	-8388 Feb 16 j 18:39	11° $\text{Z}$ 13'28			-8383 Jul 12 j 23:51	0° $\text{M}$	
	-8388 Mar 15 j 13:32	0° $\text{Z}$			-8383 Aug 31 j 10:20	0° $\underline{\text{D}}$	
	-8388 Apr 30 j 19:43	0° $\approx$			-8383 Oct 16 j 08:53	0° $\text{M}$	
	-8388 Jun 18 j 16:22	0° $\text{X}$			-8383 Dec 01 j 02:56	0° $\text{Z}$	
	-8388 Aug 11 j 07:42	0° $\text{Y}$			-8382 Jan 16 j 13:04	0° $\text{Z}$	
asc. node	-8388 Aug 16 j 22:14	2° $\text{Y}$ 50'19			-8382 Mar 04 j 14:05	0° $\approx$	
retrograde	-8388 Oct 31 j 16:15	26° $\text{Y}$ 36'06		evening set	-8382 Mar 15 j 03:02	6° $\approx$ 41'53	
opposition	-8388 Dec 07 j 19:46	18° $\text{Y}$ 21'04	4°12'46	asc. node	-8382 Apr 08 j 04:01	21° $\approx$ 59'59	
greatest brilliancy	-8388 Dec 08 j 15:34	18° $\text{Y}$ 02'18	-1.7m		-8382 Apr 20 j 16:41	0° $\text{X}$	
min. Earth dist.	-8388 Dec 14 j 01:20	15° $\text{Y}$ 59'15	0.58991 AU	max. Earth dist.	-8382 Apr 23 j 21:23	2° $\text{X}$ 02'45	2.66251 AU
direct	-8387 Jan 17 j 08:12	8° $\text{Y}$ 36'44					
	-8387 Mar 25 j 05:19	0° $\text{B}$		conjunction	-8382 May 01 j 19:08	7° $\text{X}$ 06'58	0°13'32
	-8387 May 13 j 09:13	0° $\text{II}$		minimum elong	-8382 May 01 j 18:39	7° $\text{X}$ 06'10	0°13'15
	-8387 Jun 24 j 18:18	0° $\text{D}$		behind sun begin	-8382 May 01 j 07:48	6° $\text{X}$ 48'46	
desc. node	-8387 Jul 24 j 16:28	22° $\text{D}$ 28'14		behind sun end	-8382 May 02 j 05:29	7° $\text{X}$ 23'33	
	-8387 Aug 03 j 12:51	0° $\Omega$			-8382 Jun 06 j 03:46	0° $\text{Y}$	
	-8387 Sep 11 j 11:14	0° $\text{M}$		morning rise	-8382 Jun 16 j 22:58	7° $\text{Y}$ 04'33	
	-8387 Oct 20 j 17:47	0° $\underline{\text{D}}$			-8382 Jul 21 j 10:58	0° $\text{B}$	
	-8387 Nov 30 j 05:25	0° $\text{M}$			-8382 Sep 03 j 10:57	0° $\text{II}$	
evening set	-8387 Dec 16 j 22:56	12° $\text{M}$ 02'43			-8382 Oct 16 j 08:04	0° $\text{D}$	
	-8386 Jan 11 j 11:18	0° $\text{Z}$			-8382 Nov 27 j 13:32	0° $\Omega$	
					-8381 Jan 09 j 01:06	0° $\text{M}$	
conjunction	-8386 Feb 09 j 21:47	20° $\text{Z}$ 07'32	-1°06'36		-8381 Feb 23 j 04:44	0° $\underline{\text{D}}$	
minimum elong	-8386 Feb 09 j 23:08	20° $\text{Z}$ 09'49	1°07'07	desc. node	-8381 Mar 17 j 02:58	12° $\underline{\text{D}}$ 47'14	
	-8386 Feb 24 j 15:57	0° $\text{Z}$			-8381 Apr 30 j 00:53	0° $\text{M}$	
max. Earth dist.	-8386 Mar 05 j 13:43	5° $\text{Z}$ 53'57	2.60024 AU	retrograde	-8381 May 13 j 22:58	1° $\text{M}$ 21'12	
morning rise	-8386 Apr 02 j 12:24	24° $\text{Z}$ 08'27			-8381 May 27 j 17:44	30° $\text{R}$ $\underline{\text{D}}$	
	-8386 Apr 11 j 14:36	0° $\approx$		min. Earth dist.	-8381 Jun 10 j 16:19	26° $\underline{\text{D}}$ 15'19	0.44773 AU
	-8386 May 28 j 22:16	0° $\text{X}$		greatest brilliancy	-8381 Jun 17 j 04:20	24° $\underline{\text{D}}$ 04'58	-2.4m
asc. node	-8386 Jul 04 j 17:20	22° $\text{X}$ 48'54		opposition	-8381 Jun 18 j 17:15	23° $\underline{\text{D}}$ 33'57	-5°22'08
	-8386 Jul 16 j 11:45	0° $\text{Y}$		direct	-8381 Jul 20 j 21:49	17° $\underline{\text{D}}$ 11'55	
	-8386 Sep 05 j 07:29	0° $\text{B}$			-8381 Sep 09 j 00:20	0° $\text{M}$	
	-8386 Nov 03 j 18:06	0° $\text{II}$			-8381 Nov 05 j 15:49	0° $\text{Z}$	
retrograde	-8386 Dec 22 j 16:11	11° $\text{II}$ 40'15			-8381 Dec 26 j 07:27	0° $\text{Z}$	
opposition	-8385 Jan 25 j 09:16	5° $\text{II}$ 04'01	6°11'14		-8380 Feb 13 j 07:29	0° $\approx$	
greatest brilliancy	-8385 Jan 27 j 03:44	4° $\text{II}$ 28'24	-2.2m	asc. node	-8380 Feb 24 j 01:17	6° $\approx$ 39'35	
min. Earth dist.	-8385 Feb 02 j 15:25	2° $\text{II}$ 18'58	0.47329 AU		-8380 Apr 01 j 05:57	0° $\text{X}$	
	-8385 Feb 10 j 09:39	30° $\text{R}$ $\text{B}$		evening set	-8380 Apr 22 j 03:34	13° $\text{X}$ 20'42	
direct	-8385 Mar 03 j 11:34	27° $\text{B}$ 00'10			-8380 May 17 j 18:46	0° $\text{Y}$	
	-8385 Mar 25 j 00:29	0° $\text{II}$		max. Earth dist.	-8380 May 18 j 12:04	0° $\text{Y}$ 28'25	2.61357 AU
	-8385 May 25 j 16:24	0° $\text{D}$					
desc. node	-8385 Jun 11 j 19:24	11° $\text{D}$ 11'37		conjunction	-8380 Jun 09 j 01:00	14° $\text{Y}$ 45'57	0°54'51
	-8385 Jul 08 j 20:21	0° $\Omega$		minimum elong	-8380 Jun 08 j 23:28	14° $\text{Y}$ 43'23	0°54'55
	-8385 Aug 19 j 02:05	0° $\text{M}$			-8380 Jul 01 j 12:37	0° $\text{B}$	
	-8385 Sep 28 j 23:41	0° $\underline{\text{D}}$		morning rise	-8380 Jul 26 j 20:53	17° $\text{B}$ 35'03	
	-8385 Nov 09 j 18:12	0° $\text{M}$			-8380 Aug 13 j 09:23	0° $\text{II}$	
	-8385 Dec 23 j 00:18	0° $\text{Z}$			-8380 Sep 23 j 14:38	0° $\text{D}$	
evening set	-8384 Feb 03 j 03:45	28° $\text{Z}$ 11'37			-8380 Nov 02 j 16:13	0° $\Omega$	
	-8384 Feb 05 j 21:38	0° $\text{Z}$			-8380 Dec 12 j 06:40	0° $\text{M}$	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 3

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8379 Jan 21 j 08:46	0°♎				-8374 Mar 16 j 15:15	0°♐	
desc. node	-8379 Feb 01 j 00:58	7°♎48'17				-8374 May 03 j 05:10	0°♐	
	-8379 Mar 04 j 10:43	0°♎				-8374 Jun 15 j 07:25	0°♐	
	-8379 Apr 21 j 00:59	0°♐				-8374 Jul 25 j 15:52	0°♐	
retrograde	-8379 Jun 29 j 09:32	23°♐46'53				-8374 Sep 02 j 10:29	0°♐	
min. Earth dist.	-8379 Aug 01 j 06:45	16°♐32'07	0.56926 AU	evening set		-8374 Sep 21 j 14:22	15°♐01'53	
greatest brilliancy	-8379 Aug 06 j 11:06	14°♐31'17	-1.8m	desc. node		-8374 Sep 23 j 09:53	16°♐27'21	
opposition	-8379 Aug 07 j 12:13	14°♐06'48	-5°12'05			-8374 Oct 10 j 16:02	0°♐	
direct	-8379 Sep 12 j 17:33	5°♐52'57				-8374 Nov 18 j 07:09	0°♎	
	-8379 Nov 27 j 17:10	0°♐						
asc. node	-8378 Jan 11 j 03:04	23°♐52'21		conjunction		-8374 Nov 24 j 11:02	4°♎42'50	-0°43'24
	-8378 Jan 21 j 19:23	0°♐		minimum elong		-8374 Nov 24 j 07:52	4°♎36'48	0°43'20
	-8378 Mar 12 j 21:13	0°♐				-8374 Dec 28 j 03:43	0°♎	
	-8378 Apr 29 j 03:25	0°♐		max. Earth dist.		-8373 Jan 10 j 04:10	9°♎31'23	2.44325 AU
evening set	-8378 Jun 02 j 16:37	23°♐01'19		morning rise		-8373 Jan 26 j 11:04	21°♎13'55	
	-8378 Jun 12 j 21:05	0°♐				-8373 Feb 07 j 21:02	0°♐	
max. Earth dist.	-8378 Jun 19 j 06:34	4°♐25'30	2.51696 AU			-8373 Mar 23 j 20:57	0°♐	
						-8373 May 09 j 11:16	0°♐	
conjunction	-8378 Jul 23 j 17:47	28°♐52'52	1°12'14			-8373 Jun 28 j 14:14	0°♐	
minimum elong	-8378 Jul 23 j 18:00	28°♐53'16	1°12'41			-8373 Aug 27 j 00:43	0°♐	
	-8378 Jul 25 j 06:50	0°♐		asc. node		-8373 Sep 03 j 13:32	2°♐58'02	
	-8378 Sep 03 j 18:16	0°♐		retrograde		-8373 Oct 16 j 07:40	12°♐06'02	
morning rise	-8378 Sep 15 j 23:04	9°♐15'39		opposition		-8373 Nov 23 j 09:11	3°♐23'53	3°05'11
	-8378 Oct 12 j 22:35	0°♐		greatest brilliancy		-8373 Nov 23 j 20:05	3°♐13'19	-1.5m
	-8378 Nov 20 j 14:18	0°♐		min. Earth dist.		-8373 Nov 28 j 05:59	1°♐30'31	0.62305 AU
desc. node	-8378 Dec 19 j 21:11	22°♐35'47				-8373 Dec 02 j 05:28	30°♐	
	-8378 Dec 29 j 14:02	0°♐		direct		-8372 Jan 03 j 07:47	23°♐27'01	
	-8377 Feb 07 j 21:00	0°♎				-8372 Feb 06 j 19:36	0°♐	
	-8377 Mar 22 j 15:56	0°♐				-8372 Apr 07 j 08:06	0°♐	
	-8377 May 09 j 05:33	0°♐				-8372 May 23 j 05:11	0°♐	
	-8377 Jul 14 j 20:16	0°♐				-8372 Jul 03 j 14:15	0°♐	
retrograde	-8377 Aug 06 j 01:31	2°♐57'12		desc. node		-8372 Aug 10 j 08:35	28°♐49'30	
	-8377 Aug 26 j 19:24	30°♐				-8372 Aug 11 j 21:01	0°♐	
min. Earth dist.	-8377 Sep 12 j 11:42	24°♐03'38	0.64773 AU			-8372 Sep 19 j 11:16	0°♐	
opposition	-8377 Sep 15 j 01:00	23°♐01'55	-2°48'19			-8372 Oct 28 j 10:44	0°♐	
greatest brilliancy	-8377 Sep 14 j 19:45	23°♐07'12	-1.4m	evening set		-8372 Nov 24 j 20:38	20°♐34'51	
direct	-8377 Oct 24 j 01:34	13°♐42'35				-8372 Dec 07 j 15:48	0°♎	
asc. node	-8377 Nov 29 j 07:18	20°♐29'31				-8371 Jan 18 j 16:07	0°♐	
	-8377 Dec 23 j 09:15	0°♐						
	-8376 Feb 19 j 00:06	0°♐		conjunction		-8371 Jan 21 j 16:46	2°♐06'30	-1°11'40
	-8376 Apr 08 j 09:37	0°♐		minimum elong		-8371 Jan 21 j 17:03	2°♐06'59	1°12'08
	-8376 May 23 j 18:27	0°♐		max. Earth dist.		-8371 Feb 21 j 14:02	23°♐13'20	2.56373 AU
	-8376 Jul 05 j 04:18	0°♐				-8371 Mar 03 j 17:04	0°♐	
evening set	-8376 Jul 21 j 04:17	11°♐46'38		morning rise		-8371 Mar 16 j 21:23	8°♐43'24	
	-8376 Aug 14 j 09:01	0°♐				-8371 Apr 18 j 16:21	0°♐	
max. Earth dist.	-8376 Aug 17 j 16:11	2°♐31'06	2.39872 AU			-8371 Jun 05 j 09:17	0°♐	
				asc. node		-8371 Jul 21 j 11:14	27°♐49'52	
conjunction	-8376 Sep 17 j 13:36	26°♐24'11	0°35'35			-8371 Jul 25 j 04:05	0°♐	
minimum elong	-8376 Sep 17 j 16:15	26°♐29'21	0°36'05			-8371 Sep 17 j 23:49	0°♐	
	-8376 Sep 22 j 04:10	0°♐		retrograde		-8371 Nov 30 j 06:50	22°♐37'16	
	-8376 Oct 30 j 10:46	0°♐		opposition		-8370 Jan 04 j 11:53	15°♐16'38	5°42'33
desc. node	-8376 Nov 05 j 15:21	4°♐50'40		greatest brilliancy		-8370 Jan 05 j 23:46	14°♐44'31	-2.0m
morning rise	-8376 Nov 21 j 06:54	17°♐02'10		min. Earth dist.		-8370 Jan 12 j 09:36	12°♐27'18	0.52290 AU
	-8376 Dec 08 j 02:00	0°♐		direct		-8370 Feb 12 j 10:14	6°♐18'08	
	-8375 Jan 16 j 22:17	0°♎				-8370 Apr 22 j 09:28	0°♐	
	-8375 Feb 27 j 18:28	0°♐				-8370 Jun 08 j 04:15	0°♐	
	-8375 Apr 13 j 10:15	0°♐		desc. node		-8370 Jun 28 j 11:37	14°♐27'05	
	-8375 Jun 01 j 11:26	0°♐				-8370 Jul 19 j 15:05	0°♐	
	-8375 Aug 02 j 15:17	0°♐				-8370 Aug 28 j 13:23	0°♐	
retrograde	-8375 Sep 09 j 00:52	7°♐21'31				-8370 Oct 07 j 13:56	0°♐	
	-8375 Oct 13 j 03:21	30°♐				-8370 Nov 17 j 16:23	0°♎	
asc. node	-8375 Oct 16 j 11:24	28°♐41'23				-8370 Dec 30 j 10:18	0°♐	
opposition	-8375 Oct 18 j 14:18	27°♐50'35	0°04'55	evening set		-8369 Jan 16 j 15:06	11°♐43'32	
greatest brilliancy	-8375 Oct 18 j 14:25	27°♐50'28	-1.4m			-8369 Feb 12 j 23:07	0°♐	
min. Earth dist.	-8375 Oct 19 j 18:28	27°♐22'24	0.66616 AU					
direct	-8375 Nov 28 j 06:24	17°♐56'52		conjunction		-8369 Mar 09 j 01:13	15°♐47'50	-0°48'08
	-8374 Jan 17 j 07:30	0°♐		minimum elong		-8369 Mar 09 j 02:51	15°♐50'28	0°48'39

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 4

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

max. Earth dist.	-8369 Mar 22 j 04:20	24° $\text{Z}$ 18'33	2.64196 AU		-8364 Mar 16 j 16:23	0° $\text{M}$	
	-8369 Mar 31 j 00:06	0° $\approx$			-8364 May 13 j 07:09	0° $\text{X}$	
morning rise	-8369 Apr 26 j 18:04	17° $\approx$ 07'38		retrograde	-8364 Jun 12 j 16:41	5° $\text{X}$ 48'16	
	-8369 May 16 j 23:49	0° $\text{H}$			-8364 Jul 11 j 18:04	30° $\text{R}$ $\text{M}$	
asc. node	-8369 Jun 08 j 04:33	14° $\text{H}$ 04'02		min. Earth dist.	-8364 Jul 13 j 10:20	29° $\text{M}$ 23'33	0.52425 AU
	-8369 Jul 03 j 09:46	0° $\text{Y}$		greatest brilliancy	-8364 Jul 19 j 11:46	27° $\text{M}$ 07'40	-2.0m
	-8369 Aug 20 j 05:09	0° $\text{B}$		opposition	-8364 Jul 20 j 21:35	26° $\text{M}$ 35'53	-5°44'41
	-8369 Oct 08 j 08:28	0° $\text{II}$		direct	-8364 Aug 24 j 16:41	18° $\text{M}$ 59'38	
	-8369 Dec 01 j 20:12	0° $\text{E}$			-8364 Oct 10 j 07:21	0° $\text{X}$	
retrograde	-8368 Feb 03 j 15:28	18° $\text{E}$ 50'44			-8364 Dec 09 j 14:27	0° $\text{Z}$	
opposition	-8368 Mar 05 j 19:53	13° $\text{E}$ 27'10	4°50'59	asc. node	-8363 Jan 27 j 16:32	28° $\text{Z}$ 25'52	
greatest brilliancy	-8368 Mar 06 j 23:33	13° $\text{E}$ 07'25	-2.7m		-8363 Jan 30 j 07:30	0° $\approx$	
min. Earth dist.	-8368 Mar 11 j 12:10	11° $\text{E}$ 50'08	0.40348 AU		-8363 Mar 20 j 07:37	0° $\text{H}$	
direct	-8368 Apr 07 j 20:14	7° $\text{E}$ 21'19			-8363 May 06 j 05:01	0° $\text{Y}$	
desc. node	-8368 May 15 j 15:07	15° $\text{E}$ 58'04		evening set	-8363 May 16 j 23:13	7° $\text{Y}$ 05'06	
	-8368 Jun 12 j 18:13	0° $\text{O}$		max. Earth dist.	-8363 Jun 05 j 15:55	20° $\text{Y}$ 16'31	2.55976 AU
	-8368 Jul 30 j 10:05	0° $\text{M}$			-8363 Jun 19 j 21:49	0° $\text{B}$	
	-8368 Sep 12 j 06:39	0° $\text{E}$					
	-8368 Oct 25 j 20:18	0° $\text{M}$		conjunction	-8363 Jul 05 j 07:52	10° $\text{B}$ 42'18	1°10'03
	-8368 Dec 09 j 07:01	0° $\text{X}$		minimum elong	-8363 Jul 05 j 06:57	10° $\text{B}$ 40'42	1°10'21
	-8367 Jan 23 j 22:42	0° $\text{Z}$			-8363 Aug 01 j 10:56	0° $\text{II}$	
evening set	-8367 Feb 27 j 17:10	22° $\text{Z}$ 24'34		morning rise	-8363 Aug 25 j 07:04	17° $\text{II}$ 25'20	
	-8367 Mar 11 j 13:45	0° $\approx$			-8363 Sep 11 j 04:18	0° $\text{E}$	
max. Earth dist.	-8367 Apr 14 j 12:38	21° $\approx$ 40'48	2.66739 AU		-8363 Oct 20 j 15:28	0° $\text{O}$	
					-8363 Nov 28 j 14:06	0° $\text{M}$	
conjunction	-8367 Apr 16 j 22:07	23° $\approx$ 12'34	-0°04'37	desc. node	-8362 Jan 05 j 17:10	29° $\text{M}$ 07'35	
minimum elong	-8367 Apr 16 j 22:19	23° $\approx$ 12'54	0°05'00		-8362 Jan 06 j 20:57	0° $\text{E}$	
behind sun begin	-8367 Apr 16 j 03:32	22° $\approx$ 42'56			-8362 Feb 16 j 13:40	0° $\text{M}$	
behind sun end	-8367 Apr 17 j 17:06	23° $\approx$ 42'52			-8362 Apr 01 j 06:48	0° $\text{X}$	
asc. node	-8367 Apr 24 j 21:35	28° $\approx$ 18'25			-8362 May 22 j 07:06	0° $\text{Z}$	
	-8367 Apr 27 j 13:07	0° $\text{H}$		retrograde	-8362 Jul 23 j 01:37	18° $\text{Z}$ 47'36	
morning rise	-8367 Jun 02 j 06:03	22° $\text{H}$ 56'48		min. Earth dist.	-8362 Aug 27 j 20:38	10° $\text{Z}$ 28'07	0.62361 AU
	-8367 Jun 13 j 03:23	0° $\text{Y}$		opposition	-8362 Aug 31 j 21:01	8° $\text{Z}$ 51'38	-3°50'02
	-8367 Jul 28 j 21:03	0° $\text{B}$		greatest brilliancy	-8362 Aug 31 j 09:16	9° $\text{Z}$ 03'24	-1.5m
	-8367 Sep 11 j 15:52	0° $\text{II}$			-8362 Oct 04 j 22:00	30° $\text{R}$ $\text{X}$	
	-8367 Oct 25 j 18:36	0° $\text{E}$		direct	-8362 Oct 08 j 22:13	29° $\text{X}$ 53'44	
	-8367 Dec 08 j 21:36	0° $\text{O}$			-8362 Oct 13 j 00:02	0° $\text{Z}$	
	-8366 Jan 23 j 21:04	0° $\text{M}$		asc. node	-8362 Dec 15 j 20:15	19° $\text{Z}$ 44'53	
	-8366 Mar 23 j 20:00	0° $\text{E}$			-8361 Jan 05 j 10:32	0° $\approx$	
desc. node	-8366 Apr 02 j 19:10	2° $\text{E}$ 46'53			-8361 Feb 27 j 17:23	0° $\text{H}$	
retrograde	-8366 Apr 20 j 08:21	4° $\text{E}$ 50'40			-8361 Apr 17 j 00:47	0° $\text{Y}$	
min. Earth dist.	-8366 May 17 j 09:09	0° $\text{E}$ 16'04	0.40474 AU		-8361 Jun 01 j 01:53	0° $\text{B}$	
	-8366 May 18 j 07:01	30° $\text{R}$ $\text{M}$		evening set	-8361 Jul 01 j 14:16	21° $\text{B}$ 26'12	
opposition	-8366 May 23 j 16:35	28° $\text{M}$ 22'50	-3°37'29		-8361 Jul 13 j 10:43	0° $\text{II}$	
greatest brilliancy	-8366 May 22 j 18:30	28° $\text{M}$ 39'27	-2.7m	max. Earth dist.	-8361 Jul 18 j 18:04	3° $\text{II}$ 52'29	2.44278 AU
direct	-8366 Jun 23 j 11:11	22° $\text{M}$ 50'54			-8361 Aug 22 j 17:17	0° $\text{E}$	
	-8366 Jul 28 j 21:47	0° $\text{E}$					
	-8366 Sep 27 j 07:42	0° $\text{M}$		conjunction	-8361 Aug 25 j 15:12	2° $\text{E}$ 13'06	0°58'02
	-8366 Nov 16 j 06:53	0° $\text{X}$		minimum elong	-8361 Aug 25 j 17:40	2° $\text{E}$ 17'49	0°58'33
	-8365 Jan 03 j 15:55	0° $\text{Z}$			-8361 Sep 30 j 15:03	0° $\text{O}$	
	-8365 Feb 20 j 16:33	0° $\approx$		morning rise	-8361 Oct 25 j 12:08	19° $\text{O}$ 26'32	
asc. node	-8365 Mar 12 j 16:57	12° $\approx$ 34'39			-8361 Nov 08 j 00:09	0° $\text{M}$	
evening set	-8365 Apr 07 j 22:55	29° $\approx$ 11'51		desc. node	-8361 Nov 23 j 10:38	12° $\text{M}$ 01'50	
	-8365 Apr 09 j 05:09	0° $\text{H}$			-8361 Dec 16 j 17:28	0° $\text{E}$	
max. Earth dist.	-8365 May 09 j 07:00	19° $\text{H}$ 19'16	2.63908 AU		-8360 Jan 25 j 15:55	0° $\text{M}$	
					-8360 Mar 07 j 17:03	0° $\text{X}$	
conjunction	-8365 May 25 j 10:54	29° $\text{H}$ 51'32	0°40'23		-8360 Apr 22 j 00:07	0° $\text{Z}$	
minimum elong	-8365 May 25 j 09:34	29° $\text{H}$ 49'21	0°40'18		-8360 Jun 12 j 11:49	0° $\approx$	
	-8365 May 25 j 16:04	0° $\text{Y}$		retrograde	-8360 Aug 26 j 10:56	24° $\approx$ 21'27	
	-8365 Jul 09 j 14:01	0° $\text{B}$		opposition	-8360 Oct 05 j 07:02	14° $\approx$ 38'03	-1°03'51
morning rise	-8365 Jul 11 j 04:17	1° $\text{B}$ 05'11		greatest brilliancy	-8360 Oct 05 j 07:08	14° $\approx$ 37'57	-1.4m
	-8365 Aug 21 j 19:29	0° $\text{II}$		min. Earth dist.	-8360 Oct 05 j 00:20	14° $\approx$ 44'48	0.66619 AU
	-8365 Oct 02 j 13:06	0° $\text{E}$		asc. node	-8360 Nov 02 j 01:23	5° $\approx$ 54'50	
	-8365 Nov 12 j 05:21	0° $\text{O}$		direct	-8360 Nov 14 j 10:49	4° $\approx$ 54'38	
	-8365 Dec 22 j 12:48	0° $\text{M}$			-8359 Jan 31 j 21:17	0° $\text{H}$	
	-8364 Feb 01 j 14:03	0° $\text{E}$			-8359 Mar 25 j 20:03	0° $\text{Y}$	
desc. node	-8364 Feb 18 j 21:09	12° $\text{E}$ 09'40			-8359 May 11 j 06:14	0° $\text{B}$	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 5

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8359 Jun 22 j 23:51	0°♊		max. Earth dist.	-8354 Mar 11 j 20:56	13°♊05'41	2.61744 AU
	-8359 Aug 02 j 05:48	0°♋			-8354 Apr 06 j 22:33	0°♋	
evening set	-8359 Aug 26 j 19:19	18°♋55'50		morning rise	-8354 Apr 11 j 13:25	2°♋58'11	
	-8359 Sep 09 j 23:39	0°♌			-8354 May 24 j 02:05	0°♌	
desc. node	-8359 Oct 10 j 05:22	23°♌44'47		asc. node	-8354 Jun 24 j 23:01	19°♌57'43	
	-8359 Oct 18 j 04:34	0°♍			-8354 Jul 11 j 03:24	0°♍	
					-8354 Aug 29 j 13:58	0°♎	
conjunction	-8359 Oct 28 j 21:17	8°♍22'35	-0°14'05		-8354 Oct 22 j 08:02	0°♏	
minimum elong	-8359 Oct 28 j 19:59	8°♍20'03	0°13'49	retrograde	-8353 Jan 05 j 20:53	24°♏12'45	
behind sun begin	-8359 Oct 28 j 05:12	7°♍51'10		opposition	-8353 Feb 07 j 17:38	18°♏03'13	6°05'33
behind sun end	-8359 Oct 29 j 10:46	8°♍48'56		greatest brilliancy	-8353 Feb 09 j 11:25	17°♏29'55	-2.4m
	-8359 Nov 25 j 18:33	0°♎		min. Earth dist.	-8353 Feb 15 j 17:00	15°♏32'04	0.44623 AU
max. Earth dist.	-8359 Dec 05 j 22:04	7°♎45'40	2.39649 AU	direct	-8353 Mar 15 j 11:53	10°♏38'35	
morning rise	-8358 Jan 02 j 13:26	28°♎31'06			-8353 May 14 j 08:24	0°♐	
	-8358 Jan 04 j 13:33	0°♏		desc. node	-8353 Jun 02 j 08:13	11°♐07'41	
	-8358 Feb 15 j 06:07	0°♐			-8353 Jul 01 j 03:25	0°♑	
	-8358 Mar 31 j 08:53	0°♑			-8353 Aug 12 j 15:28	0°♒	
	-8358 May 17 j 13:06	0°♒			-8353 Sep 23 j 06:07	0°♓	
	-8358 Jul 08 j 20:06	0°♓			-8353 Nov 04 j 11:41	0°♔	
asc. node	-8358 Sep 20 j 05:00	27°♓42'03			-8353 Dec 18 j 01:30	0°♕	
retrograde	-8358 Oct 01 j 05:50	28°♓25'38			-8352 Feb 01 j 03:48	0°♖	
opposition	-8358 Nov 09 j 00:26	19°♓21'22	1°55'21	evening set	-8352 Feb 12 j 17:33	7°♖33'18	
greatest brilliancy	-8358 Nov 09 j 04:56	19°♓16'56	-1.4m		-8352 Mar 18 j 11:36	0°♗	
min. Earth dist.	-8358 Nov 12 j 10:53	18°♓00'04	0.64717 AU				
direct	-8358 Dec 20 j 00:50	9°♓21'02		conjunction	-8352 Apr 01 j 20:52	9°♗13'10	-0°22'27
	-8357 Feb 25 j 19:22	0°♙		minimum elong	-8352 Apr 01 j 21:45	9°♗14'34	0°22'54
	-8357 Apr 18 j 16:56	0°♘		max. Earth dist.	-8352 Apr 05 j 07:51	11°♗25'50	2.66386 AU
	-8357 Jun 02 j 00:50	0°♏			-8352 May 04 j 09:27	0°♘	
	-8357 Jul 12 j 20:45	0°♐		asc. node	-8352 May 11 j 15:12	4°♘37'32	
	-8357 Aug 20 j 20:52	0°♑		morning rise	-8352 May 18 j 19:05	9°♘12'21	
desc. node	-8357 Aug 28 j 02:19	5°♑38'09			-8352 Jun 20 j 05:00	0°♙	
	-8357 Sep 28 j 06:14	0°♒			-8352 Aug 05 j 12:53	0°♚	
evening set	-8357 Nov 01 j 12:25	26°♒32'09			-8352 Sep 20 j 10:47	0°♛	
	-8357 Nov 06 j 01:04	0°♓			-8352 Nov 05 j 13:51	0°♜	
	-8357 Dec 16 j 01:17	0°♔			-8352 Dec 23 j 16:34	0°♝	
					-8351 Feb 22 j 18:22	0°♞	
conjunction	-8356 Jan 01 j 10:27	11°♔55'12	-1°08'54	retrograde	-8351 Mar 23 j 06:32	4°♞54'02	
minimum elong	-8356 Jan 01 j 09:01	11°♔52'38	1°09'12	desc. node	-8351 Apr 19 j 12:38	0°♞35'50	
	-8356 Jan 26 j 21:18	0°♕		min. Earth dist.	-8351 Apr 21 j 08:03	0°♞06'45	0.38150 AU
max. Earth dist.	-8356 Feb 08 j 19:13	8°♕58'17	2.52007 AU		-8351 Apr 21 j 18:03	30°♞00'00	
morning rise	-8356 Feb 27 j 20:08	21°♕57'25		opposition	-8351 Apr 23 j 10:28	29°♞32'43	-0°18'40
	-8356 Mar 10 j 19:56	0°♖		greatest brilliancy	-8351 Apr 23 j 09:37	29°♞33'17	-3.0m
	-8356 Apr 25 j 22:03	0°♗		direct	-8351 May 23 j 13:21	24°♞28'43	
	-8356 Jun 13 j 05:35	0°♘			-8351 Jun 23 j 00:41	0°♙	
	-8356 Aug 04 j 00:07	0°♙			-8351 Aug 22 j 10:37	0°♚	
asc. node	-8356 Aug 07 j 04:22	1°♙43'44			-8351 Oct 09 j 18:36	0°♛	
	-8356 Oct 08 j 11:15	0°♚			-8351 Nov 25 j 13:45	0°♜	
retrograde	-8356 Nov 10 j 18:43	5°♚50'14			-8350 Jan 11 j 12:46	0°♝	
	-8356 Dec 11 j 10:38	30°♚00'00			-8350 Feb 27 j 20:43	0°♞	
opposition	-8356 Dec 17 j 07:02	27°♚52'40	4°48'49	evening set	-8350 Mar 23 j 20:41	15°♞12'25	
greatest brilliancy	-8356 Dec 18 j 08:40	27°♚28'45	-1.8m	asc. node	-8350 Mar 29 j 09:08	18°♞42'45	
min. Earth dist.	-8356 Dec 24 j 05:04	25°♚17'47	0.56796 AU		-8350 Apr 16 j 02:21	0°♗	
direct	-8355 Jan 26 j 09:03	18°♚20'02		max. Earth dist.	-8350 Apr 29 j 11:29	8°♗34'17	2.65648 AU
	-8355 Mar 13 j 19:51	0°♘					
	-8355 May 06 j 10:03	0°♏		conjunction	-8350 May 10 j 08:55	15°♗35'13	0°23'46
	-8355 Jun 18 j 19:45	0°♐		minimum elong	-8350 May 10 j 08:03	15°♗33'50	0°23'34
desc. node	-8355 Jul 15 j 03:11	19°♐28'50			-8350 Jun 01 j 13:17	0°♙	
	-8355 Jul 29 j 00:47	0°♑		morning rise	-8350 Jun 25 j 14:06	15°♙50'42	
	-8355 Sep 06 j 05:37	0°♒			-8350 Jul 16 j 17:10	0°♚	
	-8355 Oct 15 j 17:03	0°♓			-8350 Aug 29 j 09:52	0°♛	
	-8355 Nov 25 j 08:32	0°♔			-8350 Oct 10 j 19:48	0°♜	
evening set	-8355 Dec 28 j 15:13	23°♔40'18			-8350 Nov 21 j 08:59	0°♝	
	-8354 Jan 06 j 17:35	0°♕			-8349 Jan 01 j 19:57	0°♞	
	-8354 Feb 19 j 24:00	0°♖			-8349 Feb 13 j 19:02	0°♗	
				desc. node	-8349 Mar 07 j 14:08	14°♗05'28	
conjunction	-8354 Feb 20 j 03:41	0°♗06'08	-1°01'01		-8349 Apr 04 j 14:52	0°♘	
minimum elong	-8354 Feb 20 j 05:18	0°♗08'49	1°01'34	retrograde	-8349 May 25 j 20:55	15°♘02'34	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 6

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

min. Earth dist.	-8349 Jun 23 j 12:10	9° $\mathbb{M}$ 30'25	0.47505 AU			-8344 Jun 30 j 10:56	0° $\mathbb{I}$	
greatest brilliancy	-8349 Jun 30 j 01:43	7° $\mathbb{M}$ 12'25	-2.3m	evening set		-8344 Aug 02 j 20:14	24° $\mathbb{I}$ 48'36	
opposition	-8349 Jul 01 j 16:12	6° $\mathbb{M}$ 38'29	-5°45'36			-8344 Aug 09 j 16:09	0° $\mathfrak{S}$	
	-8349 Jul 29 j 08:52	30° $\mathbb{R}$ $\underline{\mathfrak{A}}$				-8344 Sep 17 j 10:41	0° $\Omega$	
direct	-8349 Aug 03 j 20:21	29° $\underline{\mathfrak{A}}$ 48'03		max. Earth dist.		-8344 Sep 18 j 15:15	0° $\Omega$ 55'53	2.38241 AU
	-8349 Aug 09 j 09:59	0° $\mathbb{M}$						
	-8349 Oct 28 j 17:09	0° $\mathfrak{J}$		conjunction		-8344 Oct 02 j 04:19	11° $\Omega$ 32'59	0°18'40
	-8349 Dec 20 j 11:34	0° $\mathfrak{Z}$		minimum elong		-8344 Oct 02 j 06:00	11° $\Omega$ 36'17	0°19'06
	-8348 Feb 08 j 06:09	0° $\approx$				-8344 Oct 25 j 16:19	0° $\mathbb{M}$	
asc. node	-8348 Feb 14 j 07:38	3° $\approx$ 43'14		desc. node		-8344 Oct 26 j 23:56	1° $\mathbb{M}$ 01'56	
	-8348 Mar 27 j 12:34	0° $\mathfrak{H}$				-8344 Dec 03 j 06:39	0° $\underline{\mathfrak{A}}$	
evening set	-8348 May 01 j 01:12	22° $\mathfrak{H}$ 05'10		morning rise		-8344 Dec 07 j 02:27	2° $\underline{\mathfrak{A}}$ 56'00	
	-8348 May 13 j 04:20	0° $\mathbb{Y}$				-8343 Jan 12 j 01:40	0° $\mathbb{M}$	
max. Earth dist.	-8348 May 24 j 22:07	7° $\mathbb{Y}$ 44'32	2.59648 AU			-8343 Feb 22 j 19:17	0° $\mathfrak{J}$	
						-8343 Apr 08 j 04:08	0° $\mathfrak{Z}$	
conjunction	-8348 Jun 18 j 07:45	24° $\mathbb{Y}$ 07'34	1°01'43			-8343 May 26 j 07:07	0° $\approx$	
minimum elong	-8348 Jun 18 j 06:18	24° $\mathbb{Y}$ 05'06	1°01'52			-8343 Jul 21 j 20:40	0° $\mathfrak{H}$	
	-8348 Jun 26 j 22:13	0° $\mathfrak{B}$		retrograde		-8343 Sep 16 j 23:51	15° $\mathfrak{H}$ 14'19	
morning rise	-8348 Aug 06 j 00:27	28° $\mathfrak{B}$ 05'19		asc. node		-8343 Oct 06 j 19:10	12° $\mathfrak{H}$ 39'24	
	-8348 Aug 08 j 16:30	0° $\mathbb{I}$		opposition		-8343 Oct 26 j 07:27	5° $\mathfrak{H}$ 51'53	0°45'17
	-8348 Sep 18 j 17:35	0° $\mathfrak{S}$		greatest brilliancy		-8343 Oct 26 j 08:20	5° $\mathfrak{H}$ 51'00	-1.4m
	-8348 Oct 28 j 13:34	0° $\Omega$		min. Earth dist.		-8343 Oct 28 j 06:51	5° $\mathfrak{H}$ 04'37	0.66214 AU
	-8348 Dec 06 j 21:18	0° $\mathbb{M}$				-8343 Nov 11 j 01:26	30° $\mathbb{R}$ $\approx$	
	-8347 Jan 15 j 14:30	0° $\underline{\mathfrak{A}}$		direct		-8343 Dec 06 j 03:45	25° $\approx$ 54'21	
desc. node	-8347 Jan 22 j 12:32	5° $\underline{\mathfrak{A}}$ 08'04				-8342 Jan 02 j 10:12	0° $\mathfrak{H}$	
	-8347 Feb 25 j 23:44	0° $\mathbb{M}$				-8342 Mar 10 j 01:48	0° $\mathbb{Y}$	
	-8347 Apr 12 j 12:03	0° $\mathfrak{J}$				-8342 Apr 27 j 19:35	0° $\mathfrak{B}$	
	-8347 Jun 14 j 09:20	0° $\mathfrak{Z}$				-8342 Jun 10 j 07:02	0° $\mathbb{I}$	
retrograde	-8347 Jul 08 j 08:29	3° $\mathfrak{Z}$ 34'12				-8342 Jul 20 j 19:17	0° $\mathfrak{S}$	
	-8347 Jul 30 j 19:39	30° $\mathbb{R}$ $\mathfrak{J}$				-8342 Aug 28 j 15:26	0° $\Omega$	
min. Earth dist.	-8347 Aug 11 j 07:46	25° $\mathfrak{J}$ 54'18	0.59086 AU	desc. node		-8342 Sep 13 j 20:51	12° $\Omega$ 42'47	
opposition	-8347 Aug 16 j 18:35	23° $\mathfrak{J}$ 45'14	-4°45'19			-8342 Oct 05 j 21:37	0° $\mathbb{M}$	
greatest brilliancy	-8347 Aug 15 j 22:32	24° $\mathfrak{J}$ 05'03	-1.7m	evening set		-8342 Oct 06 j 12:37	0° $\mathbb{M}$ 29'22	
direct	-8347 Sep 22 j 16:26	15° $\mathfrak{J}$ 13'54				-8342 Nov 13 j 13:09	0° $\underline{\mathfrak{A}}$	
	-8347 Nov 18 j 01:05	0° $\mathfrak{Z}$						
asc. node	-8346 Jan 01 j 10:04	22° $\mathfrak{Z}$ 03'35		conjunction		-8342 Dec 08 j 20:49	19° $\underline{\mathfrak{A}}$ 11'37	-0°55'52
	-8346 Jan 15 j 18:54	0° $\approx$		minimum elong		-8342 Dec 08 j 17:48	19° $\underline{\mathfrak{A}}$ 05'57	0°55'58
	-8346 Mar 07 j 18:49	0° $\mathfrak{H}$				-8342 Dec 23 j 09:53	0° $\mathbb{M}$	
	-8346 Apr 24 j 09:07	0° $\mathbb{Y}$		max. Earth dist.		-8341 Jan 22 j 16:54	21° $\mathbb{M}$ 56'13	2.47125 AU
	-8346 Jun 08 j 05:38	0° $\mathfrak{B}$				-8341 Feb 03 j 02:56	0° $\mathfrak{J}$	
evening set	-8346 Jun 12 j 19:24	3° $\mathfrak{B}$ 09'32		morning rise		-8341 Feb 07 j 21:57	3° $\mathfrak{J}$ 21'04	
max. Earth dist.	-8346 Jun 28 j 15:31	14° $\mathfrak{B}$ 14'27	2.49110 AU			-8341 Mar 19 j 01:02	0° $\mathfrak{Z}$	
	-8346 Jul 20 j 15:20	0° $\mathbb{I}$				-8341 May 04 j 08:56	0° $\approx$	
						-8341 Jun 22 j 15:10	0° $\mathfrak{H}$	
conjunction	-8346 Aug 04 j 01:55	10° $\mathbb{I}$ 34'19	1°09'51			-8341 Aug 16 j 23:48	0° $\mathbb{Y}$	
minimum elong	-8346 Aug 04 j 02:59	10° $\mathbb{I}$ 36'17	1°10'21	asc. node		-8341 Aug 24 j 20:12	3° $\mathbb{Y}$ 41'05	
	-8346 Aug 30 j 01:24	0° $\mathfrak{S}$		retrograde		-8341 Oct 25 j 12:21	20° $\mathbb{Y}$ 42'14	
morning rise	-8346 Sep 29 j 12:10	23° $\mathfrak{S}$ 18'37		opposition		-8341 Dec 02 j 01:51	12° $\mathbb{Y}$ 14'27	3°44'25
	-8346 Oct 08 j 03:30	0° $\Omega$		greatest brilliancy		-8341 Dec 02 j 17:31	11° $\mathbb{Y}$ 59'25	-1.6m
	-8346 Nov 15 j 16:38	0° $\mathbb{M}$		min. Earth dist.		-8341 Dec 07 j 16:45	10° $\mathbb{Y}$ 04'54	0.60590 AU
desc. node	-8346 Dec 10 j 07:01	19° $\mathbb{M}$ 03'34		direct		-8340 Jan 11 j 19:20	2° $\mathbb{Y}$ 23'07	
	-8346 Dec 24 j 13:30	0° $\underline{\mathfrak{A}}$				-8340 Mar 30 j 16:08	0° $\mathfrak{B}$	
	-8345 Feb 02 j 16:01	0° $\mathbb{M}$				-8340 May 17 j 05:23	0° $\mathbb{I}$	
	-8345 Mar 17 j 01:42	0° $\mathfrak{J}$				-8340 Jun 28 j 04:00	0° $\mathfrak{S}$	
	-8345 May 02 j 11:25	0° $\mathfrak{Z}$		desc. node		-8340 Jul 31 j 21:02	25° $\mathfrak{S}$ 30'17	
	-8345 Jun 28 j 11:02	0° $\approx$				-8340 Aug 06 j 17:16	0° $\Omega$	
retrograde	-8345 Aug 13 j 22:37	11° $\approx$ 08'56				-8340 Sep 14 j 11:32	0° $\mathbb{M}$	
min. Earth dist.	-8345 Sep 21 j 03:42	1° $\approx$ 58'48	0.65686 AU			-8340 Oct 23 j 14:04	0° $\underline{\mathfrak{A}}$	
opposition	-8345 Sep 22 j 21:36	1° $\approx$ 16'33	-2°10'46			-8340 Dec 02 j 21:25	0° $\mathbb{M}$	
greatest brilliancy	-8345 Sep 22 j 18:59	1° $\approx$ 19'11	-1.4m	evening set		-8340 Dec 07 j 16:09	3° $\mathbb{M}$ 28'43	
	-8345 Sep 26 j 01:52	30° $\mathbb{R}$ $\mathfrak{Z}$				-8339 Jan 13 j 23:22	0° $\mathfrak{J}$	
direct	-8345 Nov 01 j 08:46	21° $\mathfrak{Z}$ 47'27						
asc. node	-8345 Nov 19 j 14:59	23° $\mathfrak{Z}$ 41'58		conjunction		-8339 Feb 01 j 21:15	13° $\mathfrak{J}$ 02'27	-1°09'30
	-8345 Dec 11 j 18:37	0° $\approx$		minimum elong		-8339 Feb 01 j 22:14	13° $\mathfrak{J}$ 04'08	1°10'01
	-8344 Feb 12 j 19:33	0° $\mathfrak{H}$				-8339 Feb 27 j 00:56	0° $\mathfrak{Z}$	
	-8344 Apr 03 j 05:15	0° $\mathbb{Y}$		max. Earth dist.		-8339 Feb 28 j 16:36	1° $\mathfrak{Z}$ 06'02	2.58476 AU
	-8344 May 18 j 22:24	0° $\mathfrak{B}$		morning rise		-8339 Mar 26 j 13:54	18° $\mathfrak{Z}$ 07'44	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 7

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8339 Apr 13 j 22:40	0°♊	retrograde	-8334 May 04 j 03:53	20°♊41'25	
	-8339 May 31 j 09:03	0°♋	min. Earth dist.	-8334 May 31 j 08:23	15°♊53'40	0.42688 AU
asc. node	-8339 Jul 11 j 15:51	25°♋21'21	opposition	-8334 Jun 07 j 22:01	13°♊28'52	-4°48'32
	-8339 Jul 19 j 09:03	0°♌	greatest brilliancy	-8334 Jun 06 j 13:34	13°♊54'52	-2.6m
	-8339 Sep 09 j 12:42	0°♍	direct	-8334 Jul 09 j 09:11	7°♊30'17	
	-8339 Nov 17 j 07:25	0°♎		-8334 Sep 17 j 10:04	0°♌	
retrograde	-8339 Dec 12 j 13:10	3°♎31'41		-8334 Nov 09 j 17:44	0°♍	
	-8338 Jan 05 j 06:52	30°♏♏		-8334 Dec 29 j 06:13	0°♎	
opposition	-8338 Jan 15 j 23:08	26°♏34'35	6°02'46	-8333 Feb 15 j 19:12	0°♏	
greatest brilliancy	-8338 Jan 17 j 15:25	25°♏59'38	-2.1m	asc. node	-8333 Mar 02 j 23:01	9°♏27'37
min. Earth dist.	-8338 Jan 24 j 04:16	23°♏44'40	0.49580 AU		-8333 Apr 04 j 13:22	0°♋
direct	-8338 Feb 22 j 22:48	18°♏03'38		evening set	-8333 Apr 16 j 15:34	7°♋42'22
	-8338 Apr 09 j 18:10	0°♐	max. Earth dist.	-8333 May 15 j 04:13	26°♋08'04	2.62594 AU
	-8338 May 31 j 11:44	0°♑		-8333 May 21 j 01:59	0°♌	
desc. node	-8338 Jun 18 j 23:31	12°♑38'21				
	-8338 Jul 13 j 05:36	0°♒	conjunction	-8333 Jun 03 j 07:36	8°♌43'39	0°49'05
	-8338 Aug 22 j 19:04	0°♓	minimum elong	-8333 Jun 03 j 06:07	8°♌41'11	0°49'05
	-8338 Oct 02 j 05:44	0°♈		-8333 Jul 04 j 22:30	0°♍	
	-8338 Nov 12 j 15:26	0°♉	morning rise	-8333 Jul 20 j 13:35	10°♍45'00	
	-8338 Dec 25 j 14:36	0°♊		-8333 Aug 16 j 23:46	0°♎	
evening set	-8337 Jan 26 j 19:25	21°♊43'52		-8333 Sep 27 j 10:54	0°♏	
	-8337 Feb 08 j 06:47	0°♋		-8333 Nov 06 j 18:56	0°♐	
				-8333 Dec 16 j 16:03	0°♑	
conjunction	-8337 Mar 18 j 07:21	24°♋47'47	-0°39'16	-8332 Jan 26 j 02:20	0°♒	
minimum elong	-8337 Mar 18 j 08:46	24°♋50'06	0°39'46	desc. node	-8332 Feb 09 j 06:38	10°♒14'02
	-8337 Mar 26 j 09:09	0°♌		-8332 Mar 08 j 19:00	0°♓	
max. Earth dist.	-8337 Mar 27 j 22:42	1°♌00'24	2.65194 AU	-8332 Apr 27 j 16:56	0°♈	
morning rise	-8337 May 05 j 06:19	25°♌31'01		retrograde	-8332 Jun 22 j 11:42	16°♈44'51
	-8337 May 12 j 07:14	0°♋	min. Earth dist.	-8332 Jul 24 j 10:16	9°♈51'13	0.54995 AU
asc. node	-8337 May 29 j 09:02	10°♋51'52	greatest brilliancy	-8332 Jul 30 j 00:09	7°♈42'55	-1.9m
	-8337 Jun 28 j 11:01	0°♌	opposition	-8332 Jul 31 j 05:15	7°♈14'53	-5°28'52
	-8337 Aug 14 j 15:11	0°♍		-8332 Aug 25 j 11:18	30°♉♌	
	-8337 Oct 01 j 06:57	0°♎	direct	-8332 Sep 04 j 19:26	29°♌16'48	
	-8337 Nov 20 j 06:29	0°♏		-8332 Sep 15 j 13:09	0°♍	
	-8336 Jan 22 j 19:19	0°♐		-8332 Dec 02 j 08:28	0°♎	
retrograde	-8336 Feb 21 j 00:24	4°♐52'55	asc. node	-8331 Jan 18 j 00:00	26°♎01'13	
	-8336 Mar 21 j 19:24	30°♑♑		-8331 Jan 24 j 19:20	0°♏	
opposition	-8336 Mar 22 j 18:19	29°♑44'21	3°21'22	-8331 Mar 15 j 09:54	0°♋	
greatest brilliancy	-8336 Mar 23 j 08:07	29°♑34'54	-2.9m	-8331 May 01 j 13:09	0°♌	
min. Earth dist.	-8336 Mar 26 j 00:39	28°♑50'49	0.38768 AU	evening set	-8331 May 26 j 09:17	16°♌26'56
direct	-8336 Apr 23 j 08:20	24°♑14'31		max. Earth dist.	-8331 Jun 13 j 06:21	28°♌35'19
desc. node	-8336 May 06 j 03:46	25°♑20'01		-8331 Jun 15 j 07:39	0°♍	2.53687 AU
	-8336 May 23 j 21:33	0°♒				
	-8336 Jul 21 j 01:20	0°♓	conjunction	-8331 Jul 15 j 14:19	21°♍12'48	1°12'10
	-8336 Sep 05 j 06:48	0°♈	minimum elong	-8331 Jul 15 j 13:59	21°♍12'11	1°12'33
	-8336 Oct 19 j 23:21	0°♉		-8331 Jul 27 j 19:53	0°♎	
	-8336 Dec 04 j 01:07	0°♊	morning rise	-8331 Sep 06 j 05:45	29°♎50'42	
	-8335 Jan 19 j 01:41	0°♋		-8331 Sep 06 j 10:42	0°♏	
	-8335 Mar 06 j 21:39	0°♌		-8331 Oct 15 j 18:21	0°♐	
evening set	-8335 Mar 08 j 15:11	1°♌06'11		-8331 Nov 23 j 12:47	0°♑	
asc. node	-8335 Apr 15 j 02:26	24°♌59'23	desc. node	-8331 Dec 27 j 02:48	25°♑49'11	
max. Earth dist.	-8335 Apr 19 j 23:54	28°♌07'02	2.66566 AU	-8330 Jan 01 j 14:50	0°♒	
	-8335 Apr 22 j 22:33	0°♋		-8330 Feb 11 j 00:21	0°♓	
				-8330 Mar 26 j 01:21	0°♈	
conjunction	-8335 Apr 25 j 12:00	1°♋38'16	0°06'00	-8330 May 13 j 14:17	0°♉	
minimum elong	-8335 Apr 25 j 11:46	1°♋37'55	0°05'41	retrograde	-8330 Jul 31 j 05:15	27°♉27'22
behind sun begin	-8335 Apr 24 j 17:21	1°♋08'27		min. Earth dist.	-8330 Sep 05 j 22:06	18°♉48'15
behind sun end	-8335 Apr 26 j 06:12	2°♋07'22		opposition	-8330 Sep 09 j 03:05	17°♉30'48
	-8335 Jun 08 j 11:17	0°♌	greatest brilliancy	-8330 Sep 08 j 19:15	17°♉38'42	-1.5m
morning rise	-8335 Jun 10 j 16:07	1°♌26'03	direct	-8330 Oct 17 j 17:11	8°♉20'27	
	-8335 Jul 23 j 23:27	0°♍	asc. node	-8330 Dec 06 j 03:55	20°♉00'48	
	-8335 Sep 06 j 07:43	0°♎		-8330 Dec 28 j 13:40	0°♏	
	-8335 Oct 19 j 17:12	0°♏		-8329 Feb 22 j 02:36	0°♋	
	-8335 Dec 01 j 15:51	0°♐		-8329 Apr 12 j 01:34	0°♌	
	-8334 Jan 14 j 07:05	0°♑		-8329 May 27 j 08:26	0°♍	
	-8334 Mar 03 j 08:11	0°♒		-8329 Jul 08 j 19:02	0°♎	
desc. node	-8334 Mar 24 j 07:45	10°♒33'05	evening set	-8329 Jul 13 j 00:13	3°♎04'32	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 8

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

max. Earth dist.	-8329 Aug 02 j 21:41	18° $\Pi$ 32'58	2.41733 AU		-8324 Apr 21 j 02:19	0° $\approx$	
	-8329 Aug 18 j 01:32	0° $\ominus$			-8324 Jun 07 j 23:47	0° $\text{H}$	
				asc. node	-8324 Jul 28 j 09:49	29° $\text{H}$ 58'27	
conjunction	-8329 Sep 07 j 20:05	15° $\ominus$ 56'30	0°46'35		-8324 Jul 28 j 10:53	0° $\Upsilon$	
minimum elong	-8329 Sep 07 j 22:54	16° $\ominus$ 01'57	0°47'05		-8324 Sep 24 j 02:26	0° $\text{B}$	
	-8329 Sep 25 j 22:19	0° $\Omega$		retrograde	-8324 Nov 21 j 13:40	15° $\text{B}$ 35'27	
	-8329 Nov 03 j 05:50	0° $\text{M}$		opposition	-8324 Dec 27 j 09:13	7° $\text{B}$ 57'14	5°21'09
morning rise	-8329 Nov 10 j 00:50	5° $\text{M}$ 18'38		greatest brilliancy	-8324 Dec 28 j 16:39	7° $\text{B}$ 28'27	-1.9m
desc. node	-8329 Nov 13 j 21:20	8° $\text{M}$ 19'07		min. Earth dist.	-8323 Jan 03 j 21:04	5° $\text{B}$ 13'00	0.54397 AU
	-8329 Dec 11 j 21:19	0° $\underline{\text{A}}$			-8323 Jan 22 j 01:57	30° $\text{R}$ $\Upsilon$	
	-8328 Jan 20 j 17:20	0° $\text{M}$		direct	-8323 Feb 04 j 21:14	28° $\Upsilon$ 41'10	
	-8328 Mar 02 j 13:42	0° $\text{A}$			-8323 Feb 19 j 03:50	0° $\text{B}$	
	-8328 Apr 16 j 09:11	0° $\text{B}$			-8323 Apr 28 j 11:10	0° $\Pi$	
	-8328 Jun 05 j 03:33	0° $\approx$			-8323 Jun 12 j 11:49	0° $\ominus$	
	-8328 Aug 14 j 12:33	0° $\text{H}$		desc. node	-8323 Jul 05 j 15:58	16° $\ominus$ 49'00	
retrograde	-8328 Sep 03 j 06:53	2° $\text{H}$ 16'30			-8323 Jul 23 j 08:16	0° $\Omega$	
	-8328 Sep 21 j 17:55	30° $\text{R}$ $\approx$			-8323 Aug 31 j 21:39	0° $\text{M}$	
opposition	-8328 Oct 12 j 23:14	22° $\approx$ 39'29	-0°24'01		-8323 Oct 10 j 15:08	0° $\underline{\text{A}}$	
greatest brilliancy	-8328 Oct 12 j 23:37	22° $\approx$ 39'06	-1.4m		-8323 Nov 20 j 11:17	0° $\text{M}$	
min. Earth dist.	-8328 Oct 13 j 11:41	22° $\approx$ 26'59	0.66740 AU		-8322 Jan 01 j 23:42	0° $\text{A}$	
asc. node	-8328 Oct 23 j 08:32	18° $\approx$ 37'07		evening set	-8322 Jan 08 j 16:02	4° $\text{A}$ 35'49	
direct	-8328 Nov 22 j 09:54	12° $\approx$ 49'47			-8322 Feb 15 j 08:24	0° $\text{B}$	
	-8327 Jan 23 j 08:17	0° $\text{H}$					
	-8327 Mar 20 j 00:36	0° $\Upsilon$		conjunction	-8322 Mar 01 j 23:08	9° $\text{B}$ 38'26	-0°53'58
	-8327 May 06 j 03:20	0° $\text{B}$		minimum elong	-8322 Mar 02 j 00:49	9° $\text{B}$ 41'12	0°54'31
	-8327 Jun 18 j 02:54	0° $\Pi$		max. Earth dist.	-8322 Mar 17 j 22:50	20° $\text{B}$ 04'26	2.63197 AU
	-8327 Jul 28 j 11:08	0° $\ominus$			-8322 Apr 02 j 07:15	0° $\approx$	
	-8327 Sep 05 j 05:52	0° $\Omega$		morning rise	-8322 Apr 20 j 08:41	11° $\approx$ 35'00	
evening set	-8327 Sep 10 j 04:18	3° $\Omega$ 51'57			-8322 May 19 j 07:51	0° $\text{H}$	
desc. node	-8327 Sep 30 j 15:51	19° $\Omega$ 57'00		asc. node	-8322 Jun 15 j 03:35	16° $\text{H}$ 55'31	
	-8327 Oct 13 j 10:58	0° $\text{M}$			-8322 Jul 05 j 23:42	0° $\Upsilon$	
					-8322 Aug 23 j 09:37	0° $\text{B}$	
conjunction	-8327 Nov 12 j 23:58	23° $\text{M}$ 48'12	-0°31'36		-8322 Oct 13 j 01:36	0° $\Pi$	
minimum elong	-8327 Nov 12 j 21:18	23° $\text{M}$ 43'03	0°31'27		-8322 Dec 13 j 11:52	0° $\ominus$	
	-8327 Nov 21 j 01:01	0° $\underline{\text{A}}$		retrograde	-8321 Jan 21 j 14:44	8° $\ominus$ 01'42	
max. Earth dist.	-8327 Dec 28 j 22:11	28° $\underline{\text{A}}$ 35'33	2.42099 AU	opposition	-8321 Feb 22 j 11:51	2° $\ominus$ 19'13	5°35'06
	-8327 Dec 30 j 19:52	0° $\text{M}$		greatest brilliancy	-8321 Feb 24 j 00:03	1° $\ominus$ 52'06	-2.6m
morning rise	-8326 Jan 16 j 10:16	12° $\text{M}$ 08'32		min. Earth dist.	-8321 Mar 01 j 12:46	0° $\ominus$ 13'20	0.42093 AU
	-8326 Feb 10 j 11:18	0° $\text{A}$			-8321 Mar 02 j 07:10	30° $\text{R}$ $\Pi$	
	-8326 Mar 26 j 10:43	0° $\text{B}$		direct	-8321 Mar 28 j 19:01	25° $\Pi$ 38'23	
	-8326 May 12 j 04:27	0° $\approx$			-8321 Apr 23 j 21:10	0° $\ominus$	
	-8326 Jul 01 j 23:36	0° $\text{H}$		desc. node	-8321 May 23 j 19:43	12° $\ominus$ 59'12	
	-8326 Sep 04 j 03:35	0° $\Upsilon$			-8321 Jun 21 j 19:55	0° $\Omega$	
asc. node	-8326 Sep 10 j 11:13	1° $\Upsilon$ 58'20			-8321 Aug 05 j 13:09	0° $\text{M}$	
retrograde	-8326 Oct 09 j 18:50	6° $\Upsilon$ 37'00			-8321 Sep 17 j 04:54	0° $\underline{\text{A}}$	
	-8326 Nov 11 j 06:33	30° $\text{R}$ $\text{H}$			-8321 Oct 30 j 01:48	0° $\text{M}$	
opposition	-8326 Nov 17 j 04:08	27° $\text{H}$ 44'22	2°35'47		-8321 Dec 13 j 01:16	0° $\text{A}$	
greatest brilliancy	-8326 Nov 17 j 11:55	27° $\text{H}$ 36'44	-1.5m		-8320 Jan 27 j 09:44	0° $\text{B}$	
min. Earth dist.	-8326 Nov 21 j 09:17	26° $\text{H}$ 05'17	0.63510 AU	evening set	-8320 Feb 21 j 23:16	16° $\text{B}$ 34'23	
direct	-8326 Dec 28 j 03:54	17° $\text{H}$ 44'53			-8320 Mar 13 j 20:44	0° $\approx$	
	-8325 Feb 15 j 14:07	0° $\Upsilon$					
	-8325 Apr 12 j 09:08	0° $\text{B}$		conjunction	-8320 Apr 10 j 13:04	17° $\approx$ 41'59	-0°12'11
	-8325 May 27 j 13:47	0° $\Pi$		minimum elong	-8320 Apr 10 j 13:33	17° $\approx$ 42'45	0°12'35
	-8325 Jul 07 j 17:34	0° $\ominus$		behind sun begin	-8320 Apr 10 j 01:30	17° $\approx$ 23'31	
	-8325 Aug 15 j 21:34	0° $\Omega$		behind sun end	-8320 Apr 11 j 01:37	18° $\approx$ 01'59	
desc. node	-8325 Aug 18 j 13:43	2° $\Omega$ 04'37		max. Earth dist.	-8320 Apr 10 j 19:02	17° $\approx$ 51'30	2.66685 AU
	-8325 Sep 23 j 09:13	0° $\text{M}$			-8320 Apr 29 j 19:07	0° $\text{H}$	
	-8325 Nov 01 j 05:50	0° $\underline{\text{A}}$		asc. node	-8320 May 01 j 20:33	1° $\text{H}$ 19'01	
evening set	-8325 Nov 15 j 12:56	10° $\underline{\text{A}}$ 50'05		morning rise	-8320 May 27 j 01:59	17° $\text{H}$ 29'11	
	-8325 Dec 11 j 07:38	0° $\text{M}$			-8320 Jun 15 j 11:53	0° $\Upsilon$	
					-8320 Jul 31 j 11:44	0° $\text{B}$	
conjunction	-8324 Jan 13 j 18:56	24° $\text{M}$ 05'36	-1°11'33		-8320 Sep 14 j 17:47	0° $\Pi$	
minimum elong	-8324 Jan 13 j 18:33	24° $\text{M}$ 04'55	1°11'58		-8320 Oct 29 j 14:55	0° $\ominus$	
	-8324 Jan 22 j 04:38	0° $\text{A}$			-8320 Dec 14 j 01:46	0° $\Omega$	
max. Earth dist.	-8324 Feb 17 j 00:13	17° $\text{A}$ 47'51	2.54500 AU		-8319 Feb 01 j 06:32	0° $\text{M}$	
	-8324 Mar 06 j 03:16	0° $\text{B}$		retrograde	-8319 Apr 08 j 16:50	22° $\text{M}$ 28'53	
morning rise	-8324 Mar 09 j 08:37	2° $\text{B}$ 08'48		desc. node	-8319 Apr 09 j 23:37	22° $\text{M}$ 28'12	



## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 9

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

min. Earth dist.	-8319 May 06 j 05:28	17° $\mathbb{M}$ 55'32	0.39105 AU		-8314 Jul 16 j 00:09	0° $\mathbb{I}$	
opposition	-8319 May 10 j 22:29	16° $\mathbb{M}$ 35'18	-2°21'21				
greatest brilliancy	-8319 May 10 j 10:39	16° $\mathbb{M}$ 43'44	-2.9m	conjunction	-8314 Aug 15 j 23:53	22° $\mathbb{I}$ 54'58	1°04'24
direct	-8319 Jun 10 j 06:50	11° $\mathbb{M}$ 20'43		minimum elong	-8314 Aug 16 j 01:48	22° $\mathbb{I}$ 58'34	1°04'55
	-8319 Aug 10 j 12:37	0° $\mathbb{L}$			-8314 Aug 25 j 09:00	0° $\mathbb{G}$	
	-8319 Oct 02 j 09:44	0° $\mathbb{M}$			-8314 Oct 03 j 09:08	0° $\mathbb{Q}$	
	-8319 Nov 19 j 17:24	0° $\mathbb{J}$		morning rise	-8314 Oct 13 j 20:28	8° $\mathbb{Q}$ 09'26	
	-8318 Jan 06 j 09:38	0° $\mathbb{Z}$			-8314 Nov 10 j 19:53	0° $\mathbb{M}$	
	-8318 Feb 23 j 02:10	0° $\approx$		desc. node	-8314 Nov 30 j 16:39	15° $\mathbb{M}$ 26'52	
asc. node	-8318 Mar 19 j 15:29	15° $\approx$ 29'45			-8314 Dec 19 j 14:06	0° $\mathbb{L}$	
evening set	-8318 Apr 01 j 12:35	23° $\approx$ 39'33			-8313 Jan 28 j 13:14	0° $\mathbb{M}$	
	-8318 Apr 11 j 11:38	0° $\mathbb{H}$			-8313 Mar 11 j 15:55	0° $\mathbb{J}$	
max. Earth dist.	-8318 May 05 j 02:51	15° $\mathbb{H}$ 09'21	2.64795 AU		-8313 Apr 26 j 06:26	0° $\mathbb{Z}$	
					-8313 Jun 18 j 06:21	0° $\approx$	
conjunction	-8318 May 18 j 23:25	24° $\mathbb{H}$ 08'00	0°33'34	retrograde	-8313 Aug 21 j 18:21	19° $\approx$ 13'05	
minimum elong	-8318 May 18 j 22:15	24° $\mathbb{H}$ 06'07	0°33'27	opposition	-8313 Sep 30 j 15:46	9° $\approx$ 25'05	-1°32'08
	-8318 May 27 j 23:10	0° $\mathbb{Y}$		min. Earth dist.	-8313 Sep 29 j 17:11	9° $\approx$ 47'52	0.66316 AU
morning rise	-8318 Jul 04 j 09:31	24° $\mathbb{Y}$ 50'59		greatest brilliancy	-8313 Sep 30 j 14:59	9° $\approx$ 25'52	-1.4m
	-8318 Jul 12 j 00:26	0° $\mathbb{B}$			-8313 Nov 03 j 20:29	30° $\mathbb{R}$ $\mathbb{Z}$	
	-8318 Aug 24 j 11:35	0° $\mathbb{I}$		direct	-8313 Nov 09 j 12:04	29° $\mathbb{Z}$ 47'39	
	-8318 Oct 05 j 12:37	0° $\mathbb{G}$		asc. node	-8313 Nov 09 j 22:13	29° $\mathbb{Z}$ 47'43	
	-8318 Nov 15 j 13:45	0° $\mathbb{Q}$			-8313 Nov 15 j 07:19	0° $\approx$	
	-8318 Dec 26 j 07:27	0° $\mathbb{M}$			-8312 Feb 06 j 00:22	0° $\mathbb{H}$	
	-8317 Feb 05 j 23:51	0° $\mathbb{L}$			-8312 Mar 28 j 19:59	0° $\mathbb{Y}$	
desc. node	-8317 Feb 26 j 02:20	13° $\mathbb{L}$ 46'02			-8312 May 13 j 23:59	0° $\mathbb{B}$	
	-8317 Mar 23 j 14:42	0° $\mathbb{M}$			-8312 Jun 25 j 16:45	0° $\mathbb{I}$	
retrograde	-8317 Jun 05 j 22:33	27° $\mathbb{M}$ 38'56			-8312 Aug 04 j 23:16	0° $\mathbb{G}$	
min. Earth dist.	-8317 Jul 05 j 16:36	21° $\mathbb{M}$ 37'34	0.50244 AU	evening set	-8312 Aug 16 j 02:35	8° $\mathbb{G}$ 31'46	
greatest brilliancy	-8317 Jul 12 j 00:42	19° $\mathbb{M}$ 18'59	-2.1m		-8312 Sep 12 j 17:55	0° $\mathbb{Q}$	
opposition	-8317 Jul 13 j 13:23	18° $\mathbb{M}$ 45'19	-5°50'34				
direct	-8317 Aug 16 j 15:43	11° $\mathbb{M}$ 28'29		conjunction	-8312 Oct 17 j 03:20	27° $\mathbb{Q}$ 00'08	0°00'15
	-8317 Oct 19 j 00:40	0° $\mathbb{J}$		minimum elong	-8312 Oct 17 j 03:20	27° $\mathbb{Q}$ 00'08	0°00'37
	-8317 Dec 14 j 05:54	0° $\mathbb{Z}$		behind sun begin	-8312 Oct 16 j 00:00	26° $\mathbb{Q}$ 06'30	
	-8316 Feb 03 j 01:03	0° $\approx$		behind sun end	-8312 Oct 18 j 06:40	27° $\mathbb{Q}$ 53'46	
asc. node	-8316 Feb 04 j 14:04	0° $\approx$ 56'00		desc. node	-8312 Oct 17 j 11:19	27° $\mathbb{Q}$ 15'47	
	-8316 Mar 22 j 17:33	0° $\mathbb{H}$			-8312 Oct 20 j 22:59	0° $\mathbb{M}$	
	-8316 May 08 j 13:22	0° $\mathbb{Y}$		max. Earth dist.	-8312 Nov 07 j 06:45	13° $\mathbb{M}$ 33'08	2.38267 AU
evening set	-8316 May 10 j 02:09	1° $\mathbb{Y}$ 00'15			-8312 Nov 28 j 12:25	0° $\mathbb{L}$	
max. Earth dist.	-8316 May 31 j 14:27	15° $\mathbb{Y}$ 16'00	2.57708 AU	morning rise	-8312 Dec 22 j 07:35	18° $\mathbb{L}$ 06'23	
	-8316 Jun 22 j 07:38	0° $\mathbb{B}$			-8311 Jan 07 j 06:23	0° $\mathbb{M}$	
					-8311 Feb 17 j 21:49	0° $\mathbb{J}$	
conjunction	-8316 Jun 27 j 21:16	3° $\mathbb{B}$ 50'01	1°07'08		-8311 Apr 03 j 01:15	0° $\mathbb{Z}$	
minimum elong	-8316 Jun 27 j 20:04	3° $\mathbb{B}$ 47'57	1°07'22		-8311 May 20 j 11:45	0° $\approx$	
	-8316 Aug 04 j 00:03	0° $\mathbb{I}$			-8311 Jul 13 j 00:59	0° $\mathbb{H}$	
morning rise	-8316 Aug 16 j 16:59	9° $\mathbb{I}$ 11'51		retrograde	-8311 Sep 25 j 03:22	23° $\mathbb{H}$ 12'26	
	-8316 Sep 13 j 21:29	0° $\mathbb{G}$		asc. node	-8311 Sep 27 j 02:17	23° $\mathbb{H}$ 11'00	
	-8316 Oct 23 j 12:58	0° $\mathbb{Q}$		opposition	-8311 Nov 03 j 03:42	13° $\mathbb{H}$ 59'35	1°25'53
	-8316 Dec 01 j 15:24	0° $\mathbb{M}$		greatest brilliancy	-8311 Nov 03 j 06:17	13° $\mathbb{H}$ 57'02	-1.4m
	-8315 Jan 10 j 01:50	0° $\mathbb{L}$		min. Earth dist.	-8311 Nov 05 j 22:14	12° $\mathbb{H}$ 53'33	0.65501 AU
desc. node	-8315 Jan 12 j 23:12	2° $\mathbb{L}$ 10'02		direct	-8311 Dec 14 j 02:15	3° $\mathbb{H}$ 59'50	
	-8315 Feb 19 j 23:36	0° $\mathbb{M}$			-8310 Mar 02 j 16:32	0° $\mathbb{Y}$	
	-8315 Apr 05 j 05:07	0° $\mathbb{J}$			-8310 Apr 22 j 02:39	0° $\mathbb{B}$	
	-8315 May 28 j 20:04	0° $\mathbb{Z}$			-8310 Jun 05 j 02:37	0° $\mathbb{I}$	
retrograde	-8315 Jul 16 j 22:23	12° $\mathbb{Z}$ 52'21			-8310 Jul 15 j 19:58	0° $\mathbb{G}$	
min. Earth dist.	-8315 Aug 20 j 22:11	4° $\mathbb{Z}$ 49'47	0.60989 AU		-8310 Aug 23 j 18:50	0° $\mathbb{Q}$	
opposition	-8315 Aug 25 j 14:03	2° $\mathbb{Z}$ 58'17	-4°14'31	desc. node	-8310 Sep 04 j 07:44	9° $\mathbb{Q}$ 01'05	
greatest brilliancy	-8315 Aug 24 j 22:49	3° $\mathbb{Z}$ 13'29	-1.6m		-8310 Oct 01 j 02:39	0° $\mathbb{M}$	
	-8315 Sep 02 j 07:08	30° $\mathbb{R}$ $\mathbb{J}$		evening set	-8310 Oct 21 j 08:22	15° $\mathbb{M}$ 46'11	
direct	-8315 Oct 02 j 02:55	24° $\mathbb{J}$ 11'41			-8310 Nov 08 j 19:19	0° $\mathbb{L}$	
	-8315 Nov 04 j 03:51	0° $\mathbb{Z}$			-8310 Dec 18 j 16:57	0° $\mathbb{M}$	
asc. node	-8315 Dec 22 j 16:57	20° $\mathbb{Z}$ 47'37					
	-8314 Jan 09 j 06:23	0° $\approx$		conjunction	-8310 Dec 22 j 12:06	2° $\mathbb{M}$ 47'28	-1°04'37
	-8314 Mar 02 j 12:24	0° $\mathbb{H}$		minimum elong	-8310 Dec 22 j 09:52	2° $\mathbb{M}$ 43'22	1°04'51
	-8314 Apr 19 j 13:23	0° $\mathbb{Y}$			-8309 Jan 29 j 10:10	0° $\mathbb{J}$	
	-8314 Jun 03 j 13:44	0° $\mathbb{B}$		max. Earth dist.	-8309 Feb 01 j 23:47	2° $\mathbb{J}$ 29'51	2.49862 AU
evening set	-8314 Jun 23 j 07:04	13° $\mathbb{B}$ 44'11		morning rise	-8309 Feb 19 j 12:18	14° $\mathbb{J}$ 36'37	
max. Earth dist.	-8314 Jul 09 j 05:42	25° $\mathbb{B}$ 06'12	2.46450 AU		-8309 Mar 14 j 07:05	0° $\mathbb{Z}$	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 10

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8309 Apr 29 j 09:58	0°♊			-8304 Nov 28 j 15:29	0°♊	
	-8309 Jun 17 j 00:48	0°♋			-8303 Jan 14 j 03:05	0°♋	
	-8309 Aug 08 j 22:58	0°♌			-8303 Mar 02 j 04:55	0°♌	
asc. node	-8309 Aug 15 j 02:19	3°♌11'18		evening set	-8303 Mar 17 j 10:31	9°♌40'30	
retrograde	-8309 Nov 04 j 04:03	29°♌36'54		asc. node	-8303 Apr 05 j 07:14	21°♌40'24	
opposition	-8309 Dec 11 j 03:50	21°♌24'59	4°22'02		-8303 Apr 18 j 08:27	0°♋	
greatest brilliancy	-8309 Dec 12 j 00:53	21°♌05'02	-1.7m	max. Earth dist.	-8303 Apr 25 j 12:22	4°♋35'02	2.66166 AU
min. Earth dist.	-8309 Dec 17 j 12:03	19°♌00'46	0.58591 AU				
direct	-8308 Jan 20 j 13:28	11°♌42'20		conjunction	-8303 May 04 j 01:19	10°♋03'44	0°16'24
	-8308 Mar 21 j 09:49	0°♌		minimum elong	-8303 May 04 j 00:43	10°♋02'46	0°16'09
	-8308 May 10 j 18:03	0°♍			-8303 Jun 03 j 20:35	0°♌	
	-8308 Jun 22 j 11:09	0°♎		morning rise	-8303 Jun 19 j 04:09	10°♌02'21	
desc. node	-8308 Jul 22 j 07:27	22°♎19'33			-8303 Jul 19 j 04:32	0°♍	
	-8308 Aug 01 j 09:00	0°♏			-8303 Sep 01 j 04:28	0°♍	
	-8308 Sep 09 j 08:35	0°♐			-8303 Oct 14 j 00:19	0°♎	
	-8308 Oct 18 j 15:07	0°♑			-8303 Nov 25 j 02:47	0°♏	
	-8308 Nov 28 j 01:56	0°♒			-8302 Jan 06 j 07:58	0°♐	
evening set	-8308 Dec 19 j 20:45	15°♒39'37			-8302 Feb 19 j 18:14	0°♑	
	-8307 Jan 09 j 06:28	0°♓		desc. node	-8302 Mar 14 j 19:04	13°♑53'49	
					-8302 Apr 18 j 04:11	0°♒	
conjunction	-8307 Feb 12 j 12:20	23°♓23'30	-1°05'14	retrograde	-8302 May 16 j 22:19	5°♒21'42	
minimum elong	-8307 Feb 12 j 13:46	23°♓25'55	1°05'45	min. Earth dist.	-8302 Jun 13 j 17:43	0°♒11'43	0.45280 AU
	-8307 Feb 22 j 09:32	0°♋			-8302 Jun 14 j 07:58	30°♒♎	
max. Earth dist.	-8307 Mar 07 j 06:00	8°♋30'41	2.60383 AU	greatest brilliancy	-8302 Jun 20 j 07:17	27°♎59'08	-2.4m
morning rise	-8307 Apr 04 j 20:37	27°♋09'23		opposition	-8302 Jun 21 j 20:56	27°♎27'14	-5°30'31
	-8307 Apr 09 j 06:31	0°♌		direct	-8302 Jul 24 j 06:58	20°♎59'43	
	-8307 May 26 j 12:07	0°♋			-8302 Sep 03 j 04:08	0°♍	
asc. node	-8307 Jul 01 j 21:33	22°♋38'07			-8302 Nov 02 j 11:51	0°♓	
	-8307 Jul 13 j 21:46	0°♌			-8302 Dec 23 j 14:55	0°♋	
	-8307 Sep 02 j 07:07	0°♍			-8301 Feb 10 j 19:22	0°♌	
	-8307 Oct 29 j 15:15	0°♍		asc. node	-8301 Feb 21 j 05:03	6°♌25'59	
retrograde	-8307 Dec 25 j 18:35	15°♍14'15			-8301 Mar 30 j 20:32	0°♋	
opposition	-8306 Jan 28 j 09:06	8°♍42'42	6°10'30	evening set	-8301 Apr 25 j 10:46	16°♋20'01	
greatest brilliancy	-8306 Jan 30 j 03:39	8°♍07'21	-2.3m		-8301 May 16 j 11:42	0°♌	
min. Earth dist.	-8306 Feb 05 j 15:58	5°♍58'53	0.46825 AU	max. Earth dist.	-8301 May 21 j 08:26	3°♌11'39	2.61071 AU
direct	-8306 Mar 06 j 05:23	0°♍45'45					
	-8306 May 22 j 07:34	0°♎		conjunction	-8301 Jun 12 j 09:19	17°♌50'43	0°56'48
desc. node	-8306 Jun 09 j 11:56	11°♎37'49		minimum elong	-8301 Jun 12 j 07:48	17°♌48'11	0°56'54
	-8306 Jul 06 j 05:25	0°♏			-8301 Jun 30 j 07:41	0°♍	
	-8306 Aug 16 j 16:57	0°♐		morning rise	-8301 Jul 30 j 07:52	20°♍50'02	
	-8306 Sep 26 j 16:39	0°♑			-8301 Aug 12 j 06:04	0°♍	
	-8306 Nov 07 j 11:36	0°♒			-8301 Sep 22 j 12:08	0°♎	
	-8306 Dec 20 j 17:15	0°♓			-8301 Nov 01 j 13:36	0°♏	
	-8305 Feb 03 j 13:55	0°♋			-8301 Dec 11 j 02:44	0°♐	
evening set	-8305 Feb 05 j 15:34	1°♋21'34			-8300 Jan 20 j 01:44	0°♑	
	-8305 Mar 21 j 18:26	0°♌		desc. node	-8300 Jan 30 j 17:53	7°♑50'30	
					-8300 Mar 01 j 20:47	0°♒	
conjunction	-8305 Mar 27 j 08:01	3°♌34'29	-0°29'40		-8300 Apr 17 j 13:58	0°♓	
minimum elong	-8305 Mar 27 j 09:09	3°♌36'18	0°30'10	retrograde	-8300 Jul 01 j 18:33	27°♓01'20	
max. Earth dist.	-8305 Apr 02 j 13:10	7°♌33'32	2.65969 AU	min. Earth dist.	-8300 Aug 03 j 20:37	19°♓41'00	0.57345 AU
	-8305 May 07 j 16:05	0°♋		opposition	-8300 Aug 09 j 22:00	17°♓18'53	-5°05'50
morning rise	-8305 May 13 j 15:39	3°♋49'03		greatest brilliancy	-8300 Aug 08 j 21:55	17°♓42'28	-1.8m
asc. node	-8305 May 19 j 13:52	7°♋35'53		direct	-8300 Sep 15 j 05:42	9°♓01'33	
	-8305 Jun 23 j 15:05	0°♌			-8300 Nov 23 j 21:41	0°♋	
	-8305 Aug 09 j 07:15	0°♍		asc. node	-8299 Jan 08 j 06:41	23°♋55'01	
	-8305 Sep 24 j 21:33	0°♍			-8299 Jan 18 j 23:40	0°♌	
	-8305 Nov 11 j 08:37	0°♎			-8299 Mar 10 j 08:56	0°♋	
	-8304 Jan 01 j 23:02	0°♏			-8299 Apr 26 j 19:21	0°♌	
retrograde	-8304 Mar 09 j 17:34	21°♏55'50		evening set	-8299 Jun 05 j 04:46	26°♌15'03	
opposition	-8304 Apr 09 j 11:39	16°♏47'44	1°22'10		-8299 Jun 10 j 16:05	0°♍	
greatest brilliancy	-8304 Apr 09 j 14:08	16°♏46'05	-3.0m	max. Earth dist.	-8299 Jun 21 j 18:33	7°♍41'06	2.51218 AU
min. Earth dist.	-8304 Apr 09 j 19:49	16°♏42'17	0.38043 AU		-8299 Jul 23 j 04:09	0°♍	
desc. node	-8304 Apr 26 j 16:56	12°♏47'58					
direct	-8304 May 09 j 22:31	11°♏39'44		conjunction	-8299 Jul 26 j 10:51	2°♍22'43	1°11'53
	-8304 Jul 08 j 09:10	0°♐		minimum elong	-8299 Jul 26 j 11:16	2°♍23'28	1°12'20
	-8304 Aug 28 j 09:19	0°♑			-8299 Sep 01 j 17:10	0°♎	
	-8304 Oct 13 j 17:50	0°♒		morning rise	-8299 Sep 19 j 01:33	13°♎10'47	

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8299 Oct 10 j 22:14	0°♏		greatest brilliancy	-8294 Nov 26 j 02:11	6°♑09'30	-1.5m
	-8299 Nov 18 j 13:45	0°♐		min. Earth dist.	-8294 Nov 30 j 13:49	4°♑25'02	0.62022 AU
desc. node	-8299 Dec 17 j 13:06	22°♐23'00			-8294 Dec 13 j 04:30	30°♐♐	
	-8299 Dec 27 j 12:10	0°♑		direct	-8293 Jan 05 j 10:58	26°♐24'57	
	-8298 Feb 05 j 16:20	0°♒			-8293 Jan 30 j 08:19	0°♑	
	-8298 Mar 20 j 05:50	0°♓			-8293 Apr 05 j 09:17	0°♒	
	-8298 May 06 j 06:15	0°♓			-8293 May 21 j 20:13	0°♒	
	-8298 Jul 07 j 00:41	0°♓			-8293 Jul 02 j 10:47	0°♓	
retrograde	-8298 Aug 08 j 04:19	5°♓50'13		desc. node	-8293 Aug 09 j 01:59	28°♓38'41	
	-8298 Sep 06 j 17:23	30°♐♓			-8293 Aug 10 j 20:04	0°♏	
min. Earth dist.	-8298 Sep 14 j 17:17	26°♓53'30	0.64959 AU		-8293 Sep 18 j 11:04	0°♐	
opposition	-8298 Sep 17 j 03:07	25°♓55'11	-2°38'05		-8293 Oct 27 j 10:00	0°♑	
greatest brilliancy	-8298 Sep 16 j 22:28	25°♓59'52	-1.4m	evening set	-8293 Nov 28 j 22:06	24°♑22'41	
direct	-8298 Oct 26 j 05:04	16°♓34'00			-8293 Dec 06 j 13:38	0°♒	
asc. node	-8298 Nov 26 j 11:29	21°♓45'14			-8292 Jan 17 j 11:58	0°♓	
	-8298 Dec 19 j 00:02	0°♓					
	-8297 Feb 16 j 03:52	0°♐		conjunction	-8292 Jan 25 j 11:47	5°♓33'40	-1°11'16
	-8297 Apr 06 j 23:02	0°♑		minimum elong	-8292 Jan 25 j 12:17	5°♓34'32	1°11'44
	-8297 May 22 j 12:51	0°♒		max. Earth dist.	-8292 Feb 24 j 14:25	26°♓05'09	2.56779 AU
	-8297 Jul 04 j 01:49	0°♒			-8292 Mar 01 j 10:48	0°♓	
evening set	-8297 Jul 25 j 03:24	15°♒31'09		morning rise	-8292 Mar 19 j 09:42	11°♓52'57	
	-8297 Aug 13 j 08:22	0°♓			-8292 Apr 16 j 07:50	0°♓	
max. Earth dist.	-8297 Aug 24 j 12:27	8°♓32'40	2.39462 AU		-8292 Jun 02 j 21:45	0°♐	
				asc. node	-8292 Jul 18 j 14:31	27°♐44'52	
conjunction	-8297 Sep 21 j 22:07	0°♏34'44	0°31'45		-8292 Jul 22 j 10:02	0°♑	
minimum elong	-8297 Sep 22 j 00:36	0°♏39'35	0°32'12		-8292 Sep 14 j 07:01	0°♒	
	-8297 Sep 21 j 04:20	0°♏		retrograde	-8292 Dec 03 j 01:58	25°♒55'00	
	-8297 Oct 29 j 10:48	0°♐		opposition	-8291 Jan 07 j 04:09	18°♒38'25	5°47'34
desc. node	-8297 Nov 04 j 05:57	4°♐32'26		greatest brilliancy	-8291 Jan 08 j 16:56	18°♒05'37	-2.0m
morning rise	-8297 Nov 25 j 22:51	21°♐26'34		min. Earth dist.	-8291 Jan 15 j 03:28	15°♒48'45	0.51797 AU
	-8297 Dec 07 j 01:03	0°♑		direct	-8291 Feb 14 j 21:40	9°♒44'49	
	-8296 Jan 15 j 19:30	0°♒			-8291 Apr 18 j 14:36	0°♒	
	-8296 Feb 26 j 12:46	0°♓			-8291 Jun 05 j 12:24	0°♓	
	-8296 Apr 10 j 23:45	0°♓		desc. node	-8291 Jun 26 j 03:56	14°♓33'19	
	-8296 May 29 j 14:14	0°♓			-8291 Jul 17 j 07:04	0°♏	
	-8296 Jul 28 j 04:48	0°♐			-8291 Aug 26 j 08:31	0°♐	
retrograde	-8296 Sep 11 j 03:34	10°♐08'58			-8291 Oct 05 j 10:04	0°♑	
asc. node	-8296 Oct 13 j 16:22	3°♐23'17			-8291 Nov 15 j 12:17	0°♒	
opposition	-8296 Oct 20 j 15:12	0°♐39'31	0°16'05		-8291 Dec 28 j 05:11	0°♓	
greatest brilliancy	-8296 Oct 20 j 15:25	0°♐39'18	-1.4m	evening set	-8290 Jan 19 j 04:57	14°♓58'35	
min. Earth dist.	-8296 Oct 21 j 22:43	0°♐07'56	0.66572 AU		-8290 Feb 10 j 16:41	0°♓	
	-8296 Oct 22 j 06:39	30°♐♓					
direct	-8296 Nov 30 j 07:23	20°♓44'57		conjunction	-8290 Mar 11 j 10:53	18°♓51'13	-0°45'46
	-8295 Jan 12 j 07:18	0°♐		minimum elong	-8290 Mar 11 j 12:28	18°♓53'47	0°46'17
	-8295 Mar 13 j 19:30	0°♑		max. Earth dist.	-8290 Mar 23 j 20:46	26°♓53'28	2.64397 AU
	-8295 Apr 30 j 20:36	0°♒			-8290 Mar 28 j 16:26	0°♓	
	-8295 Jun 13 j 04:04	0°♒		morning rise	-8290 Apr 28 j 23:45	20°♓03'01	
	-8295 Jul 23 j 15:16	0°♓			-8290 May 14 j 15:04	0°♐	
	-8295 Aug 31 j 11:06	0°♏		asc. node	-8290 Jun 05 j 07:55	13°♐46'08	
desc. node	-8295 Sep 21 j 02:18	16°♏11'05			-8290 Jun 30 j 23:30	0°♑	
evening set	-8295 Sep 24 j 23:53	19°♏14'54			-8290 Aug 17 j 15:18	0°♒	
	-8295 Oct 08 j 16:35	0°♐			-8290 Oct 05 j 09:08	0°♒	
	-8295 Nov 16 j 06:39	0°♑			-8290 Nov 27 j 09:36	0°♓	
				retrograde	-8289 Feb 07 j 09:19	23°♓02'09	
conjunction	-8295 Nov 27 j 21:06	8°♑52'02	-0°46'41	opposition	-8289 Mar 10 j 11:35	17°♓42'10	4°33'01
minimum elong	-8295 Nov 27 j 17:54	8°♑45'56	0°46'40	greatest brilliancy	-8289 Mar 11 j 12:35	17°♓24'26	-2.7m
	-8295 Dec 26 j 01:28	0°♒		min. Earth dist.	-8289 Mar 15 j 17:53	16°♓12'47	0.39987 AU
max. Earth dist.	-8294 Jan 13 j 06:59	13°♒19'29	2.44853 AU	direct	-8289 Apr 12 j 05:48	11°♓43'35	
morning rise	-8294 Jan 29 j 13:18	24°♒58'03		desc. node	-8289 May 14 j 08:06	18°♓07'00	
	-8294 Feb 05 j 16:27	0°♓			-8289 Jun 09 j 05:52	0°♏	
	-8294 Mar 21 j 13:30	0°♓			-8289 Jul 28 j 10:11	0°♐	
	-8294 May 06 j 23:38	0°♓			-8289 Sep 10 j 16:39	0°♑	
	-8294 Jun 25 j 17:44	0°♐			-8289 Oct 24 j 10:07	0°♒	
	-8294 Aug 22 j 11:32	0°♑			-8289 Dec 07 j 22:12	0°♓	
asc. node	-8294 Aug 31 j 18:05	3°♑54'18			-8288 Jan 22 j 14:15	0°♓	
retrograde	-8294 Oct 18 j 15:43	15°♑00'39		evening set	-8288 Mar 02 j 00:34	25°♓23'31	
opposition	-8294 Nov 25 j 14:18	6°♑21'02	3°15'28		-8288 Mar 09 j 05:26	0°♓	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 12

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

max. Earth dist.	-8288 Apr 16 j 06:03	24°≈16'32	2.66719 AU			-8284 Oct 18 j 14:18	0°♈	
						-8284 Nov 26 j 12:03	0°♐	
conjunction	-8288 Apr 19 j 04:06	26°≈08'22	-0°01'41	desc. node		-8283 Jan 03 j 08:24	28°♐58'36	
minimum elong	-8288 Apr 19 j 04:08	26°≈08'26	0°02'03			-8283 Jan 04 j 16:51	0°♊	
behind sun begin	-8288 Apr 18 j 08:43	25°≈37'27				-8283 Feb 14 j 05:47	0°♌	
behind sun end	-8288 Apr 19 j 23:33	26°≈39'25				-8283 Mar 29 j 15:03	0°♌	
asc. node	-8288 Apr 22 j 01:23	27°≈59'02				-8283 May 18 j 13:11	0°♊	
	-8288 Apr 25 j 05:03	0°♋		retrograde		-8283 Jul 25 j 05:48	21°♊47'46	
morning rise	-8288 Jun 04 j 10:42	25°♋52'15		min. Earth dist.		-8283 Aug 30 j 04:40	13°♊24'23	0.62668 AU
	-8288 Jun 10 j 19:36	0°♐		opposition		-8283 Sep 03 j 01:34	11°♊51'12	-3°40'44
	-8288 Jul 26 j 13:09	0°♋		greatest brilliancy		-8283 Sep 02 j 14:41	12°♊02'07	-1.5m
	-8288 Sep 09 j 06:49	0°♌		direct		-8283 Oct 11 j 04:38	2°♊50'55	
	-8288 Oct 23 j 06:35	0°♍		asc. node		-8283 Dec 13 j 00:44	20°♊18'40	
	-8288 Dec 06 j 03:16	0°♈				-8282 Jan 02 j 01:22	0°≈	
	-8287 Jan 20 j 10:23	0°♐				-8282 Feb 25 j 01:26	0°♋	
	-8287 Mar 15 j 16:27	0°♊				-8282 Apr 14 j 15:37	0°♐	
desc. node	-8287 Mar 31 j 12:36	5°♊41'30				-8282 May 29 j 20:55	0°♋	
retrograde	-8287 Apr 23 j 13:39	9°♊11'39		evening set		-8282 Jul 04 j 05:51	24°♋51'15	
min. Earth dist.	-8287 May 20 j 14:28	4°♊35'53	0.40847 AU			-8282 Jul 11 j 08:44	0°♌	
greatest brilliancy	-8287 May 26 j 04:34	2°♊54'26	-2.7m	max. Earth dist.		-8282 Jul 21 j 18:47	7°♌36'54	2.43810 AU
opposition	-8287 May 27 j 05:19	2°♊35'37	-3°57'00			-8282 Aug 20 j 17:12	0°♍	
	-8287 Jun 05 j 07:37	30°♌						
direct	-8287 Jun 27 j 00:56	26°♐59'12		conjunction		-8282 Aug 28 j 14:05	5°♍59'48	0°55'36
	-8287 Jul 19 j 08:21	0°♊		minimum elong		-8282 Aug 28 j 16:40	6°♍04'44	0°56'09
	-8287 Sep 23 j 21:42	0°♌				-8282 Sep 28 j 15:50	0°♈	
	-8287 Nov 13 j 12:51	0°♌		morning rise		-8282 Oct 28 j 22:26	23°♈40'06	
	-8286 Jan 01 j 03:09	0°♊				-8282 Nov 06 j 00:42	0°♐	
	-8286 Feb 18 j 06:16	0°≈		desc. node		-8282 Nov 21 j 03:27	11°♐47'35	
asc. node	-8286 Mar 09 j 21:10	12°≈18'27				-8282 Dec 14 j 16:40	0°♊	
	-8286 Apr 06 j 20:42	0°♋				-8281 Jan 23 j 12:40	0°♌	
evening set	-8286 Apr 10 j 04:33	2°♋07'07				-8281 Mar 06 j 09:53	0°♌	
max. Earth dist.	-8286 May 10 j 20:58	21°♋50'30	2.63675 AU			-8281 Apr 20 j 10:03	0°♊	
	-8286 May 23 j 09:18	0°♐				-8281 Jun 10 j 02:48	0°≈	
				retrograde		-8281 Aug 29 j 13:36	27°≈11'52	
conjunction	-8286 May 27 j 17:16	2°♐50'28	0°42'48	opposition		-8281 Oct 08 j 08:28	17°≈29'18	-0°52'41
minimum elong	-8286 May 27 j 15:52	2°♐48'11	0°42'46	greatest brilliancy		-8281 Oct 08 j 08:40	17°≈29'06	-1.4m
	-8286 Jul 07 j 08:38	0°♋		min. Earth dist.		-8281 Oct 08 j 04:52	17°≈32'56	0.66677 AU
morning rise	-8286 Jul 13 j 12:35	4°♋12'19		asc. node		-8281 Oct 31 j 05:42	9°≈42'48	
	-8286 Aug 19 j 14:53	0°♌		direct		-8281 Nov 17 j 13:06	7°≈44'36	
	-8286 Sep 30 j 08:29	0°♍				-8280 Jan 29 j 08:05	0°♋	
	-8286 Nov 09 j 23:49	0°♈				-8280 Mar 23 j 04:51	0°♐	
	-8286 Dec 20 j 05:07	0°♐				-8280 May 08 j 22:48	0°♋	
	-8285 Jan 30 j 01:38	0°♊				-8280 Jun 20 j 20:40	0°♌	
desc. node	-8285 Feb 16 j 12:14	12°♊21'50				-8280 Jul 31 j 05:06	0°♍	
	-8285 Mar 14 j 15:28	0°♌		evening set		-8280 Aug 30 j 00:25	22°♍58'44	
	-8285 May 07 j 19:36	0°♌				-8280 Sep 08 j 00:12	0°♈	
retrograde	-8285 Jun 16 j 05:13	9°♌14'40		desc. node		-8280 Oct 07 j 21:44	23°♈28'16	
min. Earth dist.	-8285 Jul 17 j 04:35	2°♌43'21	0.52929 AU			-8280 Oct 16 j 05:18	0°♐	
greatest brilliancy	-8285 Jul 23 j 02:52	0°♌29'26	-2.0m					
opposition	-8285 Jul 24 j 11:42	29°♌58'21	-5°41'59	conjunction		-8280 Nov 01 j 07:21	12°♐35'25	-0°18'18
	-8285 Jul 24 j 09:57	30°♌		minimum elong		-8280 Nov 01 j 05:40	12°♐32'09	0°18'03
direct	-8285 Aug 28 j 09:51	22°♌17'43				-8280 Nov 23 j 18:29	0°♊	
	-8285 Oct 05 j 10:38	0°♌		max. Earth dist.		-8280 Dec 11 j 23:54	13°♊54'33	2.40064 AU
	-8285 Dec 07 j 11:57	0°♊				-8279 Jan 02 j 11:49	0°♌	
asc. node	-8284 Jan 25 j 21:17	28°♊20'23		morning rise		-8279 Jan 05 j 20:21	2°♌28'40	
	-8284 Jan 28 j 16:18	0°≈				-8279 Feb 13 j 01:49	0°♌	
	-8284 Mar 17 j 21:23	0°♋				-8279 Mar 29 j 00:55	0°♊	
	-8284 May 03 j 22:09	0°♐				-8279 May 14 j 23:05	0°≈	
evening set	-8284 May 19 j 07:10	10°♐07'30				-8279 Jul 05 j 14:31	0°♋	
max. Earth dist.	-8284 Jun 07 j 17:04	23°♐09'24	2.55566 AU	asc. node		-8279 Sep 17 j 08:37	29°♋46'52	
	-8284 Jun 17 j 17:37	0°♋				-8279 Sep 18 j 14:56	0°♐	
				retrograde		-8279 Oct 03 j 11:00	1°♐17'04	
conjunction	-8284 Jul 07 j 19:12	13°♋56'21	1°10'47			-8279 Oct 17 j 11:40	30°♋	
minimum elong	-8284 Jul 07 j 18:26	13°♋55'01	1°11'07	opposition		-8279 Nov 11 j 03:18	22°♋14'47	2°06'21
	-8284 Jul 30 j 08:40	0°♌		greatest brilliancy		-8279 Nov 11 j 08:28	22°♋09'40	-1.4m
morning rise	-8284 Aug 28 j 01:24	20°♌59'48		min. Earth dist.		-8279 Nov 14 j 16:33	20°♋50'39	0.64526 AU
	-8284 Sep 09 j 03:03	0°♍		direct		-8279 Dec 22 j 02:59	12°♋14'21	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 13

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8278 Feb 21 j 23:47	0°♈		minimum elong	-8273 Apr 05 j 03:45	12°♏09'57	0°20'05
	-8278 Apr 16 j 02:06	0°♉		max. Earth dist.	-8273 Apr 08 j 01:40	14°♏01'41	2.66469 AU
	-8278 May 30 j 18:39	0°♊			-8273 May 03 j 01:42	0°♋	
	-8278 Jul 10 j 18:33	0°♋		asc. node	-8273 May 09 j 18:58	4°♋17'34	
	-8278 Aug 18 j 20:27	0°♌		morning rise	-8273 May 21 j 22:58	12°♋04'33	
desc. node	-8278 Aug 25 j 18:50	5°♌24'02			-8273 Jun 18 j 21:08	0°♈	
	-8278 Sep 26 j 06:11	0°♍			-8273 Aug 04 j 04:03	0°♉	
evening set	-8278 Nov 04 j 19:20	0°♎36'23			-8273 Sep 18 j 22:56	0°♊	
	-8278 Nov 04 j 00:18	0°♏			-8273 Nov 03 j 18:48	0°♋	
	-8278 Dec 13 j 23:05	0°♐			-8273 Dec 21 j 02:50	0°♌	
					-8272 Feb 15 j 01:36	0°♍	
conjunction	-8277 Jan 04 j 10:30	15°♐36'41	-1°09'47	retrograde	-8272 Mar 27 j 03:46	9°♍37'39	
minimum elong	-8277 Jan 04 j 09:19	15°♐34'34	1°10'08	desc. node	-8272 Apr 17 j 03:46	6°♍53'08	
	-8277 Jan 24 j 17:09	0°♑		min. Earth dist.	-8272 Apr 24 j 20:22	4°♍54'14	0.38250 AU
max. Earth dist.	-8277 Feb 11 j 01:15	12°♑02'24	2.52490 AU	opposition	-8272 Apr 27 j 11:17	4°♍11'23	-0°49'01
morning rise	-8277 Mar 02 j 11:54	25°♑15'47		greatest brilliancy	-8272 Apr 27 j 08:33	4°♍13'15	-2.9m
	-8277 Mar 09 j 13:28	0°♒			-8272 May 15 j 19:54	30°♒♏	
	-8277 Apr 24 j 12:43	0°♓		direct	-8272 May 27 j 15:25	29°♏06'39	
	-8277 Jun 11 j 15:35	0°♈			-8272 Jun 08 j 09:58	0°♍	
	-8277 Aug 01 j 22:12	0°♈			-8272 Aug 18 j 18:19	0°♎	
asc. node	-8277 Aug 05 j 07:48	1°♈52'49			-8272 Oct 06 j 22:39	0°♐	
	-8277 Oct 02 j 23:52	0°♉			-8272 Nov 23 j 00:34	0°♑	
retrograde	-8277 Nov 14 j 09:06	8°♉58'03			-8271 Jan 09 j 02:21	0°♒	
opposition	-8277 Dec 20 j 18:07	1°♉03'43	4°56'56		-8271 Feb 25 j 11:43	0°♓	
greatest brilliancy	-8277 Dec 21 j 20:52	0°♉38'46	-1.8m	evening set	-8271 Mar 26 j 02:59	18°♓08'04	
	-8277 Dec 23 j 14:19	30°♒♈		asc. node	-8271 Mar 26 j 13:28	18°♓24'42	
min. Earth dist.	-8277 Dec 27 j 18:00	28°♈27'32	0.56378 AU		-8271 Apr 13 j 18:31	0°♈	
direct	-8276 Jan 29 j 17:00	21°♈33'51		max. Earth dist.	-8271 May 01 j 01:40	11°♈04'44	2.65513 AU
	-8276 Mar 08 j 09:36	0°♉					
	-8276 May 03 j 13:41	0°♊		conjunction	-8271 May 12 j 14:17	18°♈30'29	0°26'30
	-8276 Jun 16 j 11:13	0°♋		minimum elong	-8271 May 12 j 13:20	18°♈28'57	0°26'18
desc. node	-8276 Jul 12 j 20:08	19°♋25'16			-8271 May 30 j 06:40	0°♈	
	-8276 Jul 26 j 20:48	0°♌		morning rise	-8271 Jun 27 j 19:18	18°♈49'04	
	-8276 Sep 04 j 03:18	0°♍			-8271 Jul 14 j 11:37	0°♉	
	-8276 Oct 13 j 14:48	0°♎			-8271 Aug 27 j 04:51	0°♊	
	-8276 Nov 23 j 05:21	0°♏			-8271 Oct 08 j 14:20	0°♋	
evening set	-8276 Dec 31 j 08:54	27°♏06'17			-8271 Nov 19 j 01:41	0°♌	
	-8275 Jan 04 j 12:54	0°♑			-8271 Dec 30 j 08:31	0°♍	
	-8275 Feb 17 j 17:42	0°♒			-8270 Feb 10 j 21:32	0°♎	
				desc. node	-8270 Mar 05 j 06:58	14°♎44'57	
conjunction	-8275 Feb 22 j 15:52	3°♒16'03	-0°59'13		-8270 Mar 31 j 01:52	0°♏	
minimum elong	-8275 Feb 22 j 17:31	3°♒18'47	0°59'45	retrograde	-8270 May 28 j 17:22	18°♏51'52	
max. Earth dist.	-8275 Mar 13 j 13:05	15°♒41'16	2.62035 AU	min. Earth dist.	-8270 Jun 26 j 12:32	13°♏14'00	0.48009 AU
	-8275 Apr 04 j 14:45	0°♓		greatest brilliancy	-8270 Jul 03 j 00:57	10°♏55'52	-2.2m
morning rise	-8275 Apr 13 j 20:41	5°♓56'39		opposition	-8270 Jul 04 j 15:18	10°♏21'42	-5°49'08
	-8275 May 21 j 16:39	0°♈		direct	-8270 Aug 07 j 00:16	3°♏26'02	
asc. node	-8275 Jun 22 j 02:13	19°♈42'37			-8270 Oct 25 j 02:01	0°♑	
	-8275 Jul 08 j 15:02	0°♈			-8270 Dec 17 j 16:02	0°♒	
	-8275 Aug 26 j 18:16	0°♉			-8269 Feb 05 j 17:05	0°♓	
	-8275 Oct 18 j 11:41	0°♊		asc. node	-8269 Feb 11 j 11:23	3°♓31'25	
retrograde	-8274 Jan 09 j 10:10	28°♊04'48			-8269 Mar 26 j 03:03	0°♈	
opposition	-8274 Feb 11 j 01:42	22°♊00'39	5°59'33	evening set	-8269 May 04 j 08:27	25°♈04'49	
greatest brilliancy	-8274 Feb 12 j 18:48	21°♊28'21	-2.4m		-8269 May 11 j 21:28	0°♈	
min. Earth dist.	-8274 Feb 18 j 22:33	19°♊33'10	0.44122 AU	max. Earth dist.	-8269 May 27 j 17:51	10°♈27'00	2.59311 AU
direct	-8274 Mar 18 j 14:34	14°♊44'14					
	-8274 May 09 j 15:17	0°♋		conjunction	-8269 Jun 21 j 16:38	27°♈14'28	1°03'16
desc. node	-8274 May 30 j 23:59	11°♋56'01		minimum elong	-8269 Jun 21 j 15:14	27°♈12'06	1°03'28
	-8274 Jun 28 j 04:17	0°♌			-8269 Jun 25 j 17:32	0°♉	
	-8274 Aug 10 j 03:02	0°♍			-8269 Aug 07 j 13:27	0°♊	
	-8274 Sep 20 j 21:54	0°♎		morning rise	-8269 Aug 09 j 13:21	1°♊25'49	
	-8274 Nov 02 j 04:55	0°♏			-8269 Sep 17 j 15:30	0°♋	
	-8274 Dec 15 j 18:49	0°♑			-8269 Oct 27 j 11:37	0°♌	
	-8273 Jan 29 j 20:37	0°♒			-8269 Dec 05 j 18:31	0°♍	
evening set	-8273 Feb 15 j 02:21	10°♒35'35			-8268 Jan 14 j 09:25	0°♎	
	-8273 Mar 17 j 03:58	0°♓		desc. node	-8268 Jan 21 j 04:52	5°♎04'23	
					-8268 Feb 24 j 13:32	0°♏	
conjunction	-8273 Apr 05 j 02:59	12°♓08'43	-0°19'38		-8268 Apr 09 j 12:28	0°♑	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 14

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8268 Jun 06 j 21:10	0°♂				-8263 Mar 06 j 23:03	0°♂	
retrograde	-8268 Jul 10 j 14:41	6°♂42'16				-8263 Apr 25 j 07:53	0°♂	
	-8268 Aug 11 j 02:23	30°♂♂				-8263 Jun 08 j 01:39	0°♂	
min. Earth dist.	-8268 Aug 13 j 18:32	28°♂57'56	0.59451 AU			-8263 Jul 18 j 17:21	0°♂	
greatest brilliancy	-8268 Aug 18 j 06:50	27°♂10'44	-1.7m			-8263 Aug 26 j 15:17	0°♂	
opposition	-8268 Aug 19 j 01:53	26°♂51'51	-4°37'38	desc. node		-8263 Sep 11 j 13:19	12°♂27'35	
direct	-8268 Sep 25 j 01:44	18°♂17'43				-8263 Oct 03 j 21:58	0°♂	
	-8268 Nov 13 j 05:48	0°♂		evening set		-8263 Oct 09 j 21:54	4°♂41'35	
asc. node	-8268 Dec 29 j 13:27	22°♂14'10				-8263 Nov 11 j 12:53	0°♂	
	-8267 Jan 12 j 19:24	0°♂						
	-8267 Mar 05 j 05:27	0°♂		conjunction		-8263 Dec 12 j 01:48	23°♂07'29	-0°58'15
	-8267 Apr 22 j 00:55	0°♂		minimum elong		-8263 Dec 11 j 22:56	23°♂02'08	0°58'22
	-8267 Jun 06 j 00:59	0°♂				-8263 Dec 21 j 08:05	0°♂	
evening set	-8267 Jun 15 j 08:03	6°♂25'17		max. Earth dist.		-8262 Jan 25 j 07:25	25°♂18'36	2.47634 AU
max. Earth dist.	-8267 Jul 01 j 03:46	17°♂31'44	2.48623 AU			-8262 Jan 31 j 22:54	0°♂	
	-8267 Jul 18 j 13:11	0°♂		morning rise		-8262 Feb 10 j 18:03	6°♂50'52	
						-8262 Mar 16 j 18:12	0°♂	
conjunction	-8267 Aug 06 j 20:07	14°♂08'02	1°08'48			-8262 May 01 j 22:26	0°♂	
minimum elong	-8267 Aug 06 j 21:23	14°♂10'23	1°09'17			-8262 Jun 19 j 21:48	0°♂	
	-8267 Aug 28 j 00:46	0°♂				-8262 Aug 13 j 07:12	0°♂	
morning rise	-8267 Oct 02 j 17:14	27°♂20'46		asc. node		-8262 Aug 22 j 00:07	4°♂14'08	
	-8267 Oct 06 j 03:24	0°♂		retrograde		-8262 Oct 27 j 22:05	23°♂40'33	
	-8267 Nov 13 j 16:10	0°♂		opposition		-8262 Dec 04 j 08:27	15°♂15'26	3°54'08
desc. node	-8267 Dec 07 j 22:43	18°♂49'52		greatest brilliancy		-8262 Dec 05 j 01:12	14°♂59'21	-1.6m
	-8267 Dec 22 j 11:42	0°♂		min. Earth dist.		-8262 Dec 10 j 01:57	13°♂03'32	0.60233 AU
	-8266 Jan 31 j 11:39	0°♂		direct		-8261 Jan 13 j 23:49	5°♂25'28	
	-8266 Mar 14 j 16:49	0°♂				-8261 Mar 28 j 07:09	0°♂	
	-8266 Apr 29 j 16:42	0°♂				-8261 May 15 j 16:33	0°♂	
	-8266 Jun 23 j 20:51	0°♂				-8261 Jun 26 j 21:55	0°♂	
retrograde	-8266 Aug 16 j 01:02	14°♂01'28		desc. node		-8261 Jul 30 j 12:07	25°♂19'47	
min. Earth dist.	-8266 Sep 23 j 08:41	4°♂48'48	0.65822 AU			-8261 Aug 05 j 14:08	0°♂	
opposition	-8266 Sep 24 j 23:28	4°♂09'39	-2°00'02			-8261 Sep 13 j 09:31	0°♂	
greatest brilliancy	-8266 Sep 24 j 21:17	4°♂11'51	-1.4m			-8261 Oct 22 j 11:59	0°♂	
	-8266 Oct 05 j 18:29	30°♂♂				-8261 Dec 01 j 18:26	0°♂	
direct	-8266 Nov 03 j 11:55	24°♂39'09		evening set		-8261 Dec 11 j 15:45	7°♂11'00	
asc. node	-8266 Nov 16 j 18:44	25°♂41'03				-8260 Jan 12 j 18:58	0°♂	
	-8266 Dec 05 j 07:49	0°♂						
	-8265 Feb 09 j 18:12	0°♂		conjunction		-8260 Feb 05 j 13:19	16°♂22'19	-1°08'32
	-8265 Apr 01 j 16:46	0°♂		minimum elong		-8260 Feb 05 j 14:28	16°♂24'16	1°09'02
	-8265 May 17 j 16:04	0°♂				-8260 Feb 25 j 18:48	0°♂	
	-8265 Jun 29 j 08:26	0°♂		max. Earth dist.		-8260 Mar 02 j 12:08	3°♂48'30	2.58867 AU
evening set	-8265 Aug 06 j 20:26	28°♂37'12		morning rise		-8260 Mar 28 j 23:15	21°♂10'56	
	-8265 Aug 08 j 15:59	0°♂				-8260 Apr 11 j 14:41	0°♂	
	-8265 Sep 16 j 11:33	0°♂				-8260 May 28 j 22:39	0°♂	
max. Earth dist.	-8265 Sep 28 j 07:54	9°♂16'53	2.38074 AU	asc. node		-8260 Jul 08 j 20:09	25°♂12'51	
						-8260 Jul 16 j 17:55	0°♂	
conjunction	-8265 Oct 06 j 12:21	15°♂42'28	0°14'30			-8260 Sep 06 j 07:42	0°♂	
minimum elong	-8265 Oct 06 j 13:41	15°♂45'05	0°14'54			-8260 Nov 09 j 00:35	0°♂	
behind sun begin	-8265 Oct 06 j 02:29	15°♂23'04		retrograde		-8260 Dec 15 j 10:46	6°♂56'17	
behind sun end	-8265 Oct 07 j 00:54	16°♂07'06		opposition		-8259 Jan 18 j 18:37	0°♂03'38	6°04'57
	-8265 Oct 24 j 17:04	0°♂				-8259 Jan 18 j 22:51	30°♂♂	
desc. node	-8265 Oct 25 j 16:52	0°♂46'41		greatest brilliancy		-8259 Jan 20 j 11:37	29°♂28'23	-2.1m
	-8265 Dec 02 j 06:13	0°♂		min. Earth dist.		-8259 Jan 27 j 01:53	27°♂13'32	0.49072 AU
morning rise	-8265 Dec 11 j 13:53	7°♂08'38		direct		-8259 Feb 25 j 13:38	21°♂38'34	
	-8264 Jan 10 j 23:11	0°♂				-8259 Apr 04 j 01:31	0°♂	
	-8264 Feb 21 j 13:51	0°♂				-8259 May 28 j 12:37	0°♂	
	-8264 Apr 05 j 18:19	0°♂		desc. node		-8259 Jun 16 j 15:48	12°♂53'36	
	-8264 May 23 j 12:53	0°♂				-8259 Jul 10 j 18:16	0°♂	
	-8264 Jul 17 j 18:44	0°♂				-8259 Aug 20 j 11:58	0°♂	
retrograde	-8264 Sep 19 j 03:56	18°♂04'34				-8259 Sep 30 j 00:07	0°♂	
asc. node	-8264 Oct 03 j 23:31	16°♂37'34				-8259 Nov 10 j 09:54	0°♂	
opposition	-8264 Oct 28 j 09:25	8°♂43'49	0°56'34			-8259 Dec 23 j 08:28	0°♂	
greatest brilliancy	-8264 Oct 28 j 10:37	8°♂42'37	-1.4m	evening set		-8258 Jan 29 j 08:23	24°♂56'18	
min. Earth dist.	-8264 Oct 30 j 11:52	7°♂53'29	0.66095 AU			-8258 Feb 05 j 23:48	0°♂	
	-8264 Nov 24 j 12:45	30°♂♂						
direct	-8264 Dec 08 j 05:28	28°♂45'54		conjunction		-8258 Mar 20 j 15:56	27°♂48'44	-0°36'40
	-8264 Dec 22 j 17:19	0°♂		minimum elong		-8258 Mar 20 j 17:17	27°♂50'55	0°37'10

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8258 Mar 24 j 01:27	0°♊				-8253 Mar 07 j 01:58	0°♊	
max. Earth dist.	-8258 Mar 29 j 13:29	3°♊32'19	2.65379 AU			-8253 Apr 24 j 16:15	0°♊	
morning rise	-8258 May 07 j 10:55	28°♊24'22		retrograde		-8253 Jun 25 j 21:10	20°♊03'54	
	-8258 May 09 j 22:58	0°♋		min. Earth dist.		-8253 Jul 28 j 01:21	13°♊04'36	0.55449 AU
asc. node	-8258 May 26 j 13:04	10°♋33'40		opposition		-8253 Aug 03 j 16:44	10°♊30'49	-5°23'56
	-8258 Jun 26 j 01:50	0°♌		greatest brilliancy		-8253 Aug 02 j 12:35	10°♊58'02	-1.9m
	-8258 Aug 12 j 03:35	0°♍		direct		-8253 Sep 08 j 09:22	2°♊29'01	
	-8258 Sep 28 j 13:13	0°♎				-8253 Nov 29 j 21:52	0°♋	
	-8258 Nov 16 j 19:33	0°♏		asc. node		-8252 Jan 16 j 03:51	25°♋59'13	
	-8257 Jan 14 j 09:41	0°♐				-8252 Jan 23 j 01:49	0°♌	
retrograde	-8257 Feb 24 j 20:24	9°♐16'34				-8252 Mar 12 j 22:36	0°♍	
opposition	-8257 Mar 27 j 14:15	4°♐09'19	2°56'08			-8252 Apr 29 j 05:35	0°♌	
greatest brilliancy	-8257 Mar 28 j 01:13	4°♐01'53	-2.9m	evening set		-8252 May 28 j 20:16	19°♌36'38	
min. Earth dist.	-8257 Mar 30 j 08:17	3°♐24'38	0.38568 AU			-8252 Jun 13 j 02:57	0°♍	
	-8257 Apr 14 j 00:43	30°♑♌		max. Earth dist.		-8252 Jun 15 j 12:44	1°♍39'17	2.53237 AU
direct	-8257 Apr 27 j 20:45	28°♑44'50						
desc. node	-8257 May 04 j 21:25	29°♑04'35		conjunction		-8252 Jul 18 j 05:13	24°♍36'10	1°12'19
	-8257 May 11 j 17:20	0°♒		minimum elong		-8252 Jul 18 j 05:04	24°♍35'54	1°12'44
	-8257 Jul 18 j 11:25	0°♓				-8252 Jul 25 j 17:23	0°♎	
	-8257 Sep 03 j 12:11	0°♑				-8252 Sep 04 j 09:40	0°♏	
	-8257 Oct 18 j 11:09	0°♒		morning rise		-8252 Sep 09 j 04:31	3°♏36'19	
	-8257 Dec 02 j 15:18	0°♓				-8252 Oct 13 j 17:55	0°♐	
	-8256 Jan 17 j 16:43	0°♑				-8252 Nov 21 j 12:02	0°♓	
	-8256 Mar 04 j 13:13	0°♒		desc. node		-8252 Dec 24 j 19:14	25°♓38'26	
evening set	-8256 Mar 10 j 22:23	4°♒03'57				-8252 Dec 30 j 12:37	0°♑	
asc. node	-8256 Apr 12 j 06:02	24°♒39'23				-8251 Feb 08 j 19:01	0°♒	
	-8256 Apr 20 j 14:51	0°♋				-8251 Mar 23 j 13:52	0°♓	
max. Earth dist.	-8256 Apr 21 j 17:17	0°♋42'15	2.66522 AU			-8251 May 10 j 10:08	0°♑	
						-8251 Jul 25 j 17:05	0°♒	
conjunction	-8256 Apr 27 j 17:38	4°♋33'06	0°08'54	retrograde		-8251 Aug 02 j 07:44	0°♒22'37	
minimum elong	-8256 Apr 27 j 17:19	4°♋32'36	0°08'35			-8251 Aug 09 j 17:11	30°♑♋	
behind sun begin	-8256 Apr 27 j 00:42	4°♋06'00		min. Earth dist.		-8251 Sep 08 j 04:03	21°♋40'30	0.64041 AU
behind sun end	-8256 Apr 28 j 09:56	4°♋59'11		opposition		-8251 Sep 11 j 06:02	20°♋26'00	-3°04'56
	-8256 Jun 06 j 04:24	0°♌		greatest brilliancy		-8251 Sep 10 j 22:53	20°♋33'11	-1.5m
morning rise	-8256 Jun 12 j 20:30	4°♌20'56		direct		-8251 Oct 19 j 22:24	11°♋13'46	
	-8256 Jul 21 j 17:00	0°♍		asc. node		-8251 Dec 03 j 08:19	20°♋55'18	
	-8256 Sep 04 j 00:46	0°♎				-8251 Dec 24 j 17:10	0°♌	
	-8256 Oct 17 j 08:19	0°♏				-8250 Feb 19 j 08:13	0°♍	
	-8256 Nov 29 j 02:48	0°♐				-8250 Apr 09 j 15:22	0°♌	
	-8255 Jan 11 j 08:54	0°♑				-8250 May 25 j 02:45	0°♍	
	-8255 Feb 27 j 03:56	0°♑				-8250 Jul 06 j 16:17	0°♎	
desc. node	-8255 Mar 22 j 00:07	12°♑13'19		evening set		-8250 Jul 15 j 20:47	6°♎42'24	
retrograde	-8255 May 07 j 07:07	24°♑51'11		max. Earth dist.		-8250 Aug 06 j 18:11	22°♎59'27	2.41251 AU
min. Earth dist.	-8255 Jun 03 j 11:44	20°♑00'13	0.43163 AU			-8250 Aug 16 j 00:37	0°♏	
greatest brilliancy	-8255 Jun 09 j 19:53	17°♑58'02	-2.5m					
opposition	-8255 Jun 11 j 05:52	17°♑30'33	-5°01'24	conjunction		-8250 Sep 11 j 01:40	20°♏00'06	0°43'16
direct	-8255 Jul 12 j 21:36	11°♑26'28		minimum elong		-8250 Sep 11 j 04:28	20°♏05'31	0°43'47
	-8255 Sep 13 j 03:32	0°♒				-8250 Sep 23 j 22:14	0°♐	
	-8255 Nov 06 j 19:15	0°♓				-8250 Nov 01 j 05:41	0°♑	
	-8255 Dec 26 j 15:54	0°♑		desc. node		-8250 Nov 11 j 12:24	8°♑02'15	
	-8254 Feb 13 j 08:21	0°♒		morning rise		-8250 Nov 13 j 16:15	9°♑43'24	
asc. node	-8254 Feb 28 j 02:56	9°♒12'01				-8250 Dec 09 j 20:14	0°♑	
	-8254 Apr 02 j 04:47	0°♋				-8249 Jan 18 j 14:20	0°♒	
evening set	-8254 Apr 18 j 22:04	10°♋39'08				-8249 Mar 01 j 07:35	0°♓	
max. Earth dist.	-8254 May 16 j 20:28	28°♋43'06	2.62344 AU			-8249 Apr 14 j 21:37	0°♑	
	-8254 May 18 j 19:29	0°♌				-8249 Jun 03 j 02:56	0°♒	
						-8249 Aug 06 j 22:57	0°♋	
conjunction	-8254 Jun 05 j 14:49	11°♌44'34	0°51'15	retrograde		-8249 Sep 06 j 08:42	5°♋04'32	
minimum elong	-8254 Jun 05 j 13:19	11°♌42'04	0°51'16			-8249 Oct 04 j 04:13	30°♑♌	
	-8254 Jul 02 j 17:56	0°♍		opposition		-8249 Oct 15 j 23:57	25°♌28'38	-0°12'51
morning rise	-8254 Jul 22 j 22:55	13°♍54'33		greatest brilliancy		-8249 Oct 16 j 00:14	25°♌28'22	-1.4m
	-8254 Aug 14 j 20:34	0°♎		min. Earth dist.		-8249 Oct 16 j 15:20	25°♌13'11	0.66741 AU
	-8254 Sep 25 j 08:17	0°♏		asc. node		-8249 Oct 21 j 13:35	23°♌15'34	
	-8254 Nov 04 j 15:53	0°♐		direct		-8249 Nov 25 j 11:32	15°♌38'04	
	-8254 Dec 14 j 11:20	0°♑				-8248 Jan 20 j 03:40	0°♋	
	-8253 Jan 23 j 17:55	0°♑				-8248 Mar 17 j 06:46	0°♌	
desc. node	-8253 Feb 06 j 23:08	10°♑19'29				-8248 May 03 j 19:05	0°♍	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 16

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8248 Jun 15 j 23:23	0°♊		morning rise	-8243 Apr 22 j 15:25	14°♊32'46	
	-8248 Jul 26 j 10:14	0°♋			-8243 May 16 j 22:31	0°♋	
	-8248 Sep 03 j 06:03	0°♌		asc. node	-8243 Jun 12 j 06:33	16°♋38'36	
evening set	-8248 Sep 13 j 13:04	8°♌03'59			-8243 Jul 03 j 12:22	0°♌	
desc. node	-8248 Sep 28 j 07:37	19°♌40'18			-8243 Aug 20 j 17:36	0°♍	
	-8248 Oct 11 j 11:05	0°♎			-8243 Oct 09 j 20:02	0°♎	
					-8243 Dec 07 j 00:52	0°♏	
conjunction	-8248 Nov 16 j 12:11	28°♎04'36	-0°35'28	retrograde	-8242 Jan 25 j 07:33	12°♏03'19	
minimum elong	-8248 Nov 16 j 09:17	27°♎59'00	0°35'21	opposition	-8242 Feb 25 j 23:48	6°♏25'28	5°22'47
	-8248 Nov 19 j 00:09	0°♐		greatest brilliancy	-8242 Feb 27 j 10:06	5°♏59'57	-2.6m
	-8248 Dec 28 j 17:16	0°♑		min. Earth dist.	-8242 Mar 04 j 17:27	4°♏25'48	0.41651 AU
max. Earth dist.	-8247 Jan 01 j 18:37	2°♑59'44	2.42616 AU		-8242 Mar 27 j 17:48	30°♑♊	
morning rise	-8247 Jan 19 j 16:09	16°♑02'27		direct	-8242 Apr 01 j 00:49	29°♑52'25	
	-8247 Feb 08 j 06:23	0°♒			-8242 Apr 05 j 07:40	0°♒	
	-8247 Mar 24 j 02:44	0°♓		desc. node	-8242 May 21 j 12:09	14°♒22'59	
	-8247 May 09 j 15:44	0°♈			-8242 Jun 18 j 06:34	0°♌	
	-8247 Jun 28 j 23:57	0°♋			-8242 Aug 02 j 19:07	0°♎	
	-8247 Aug 29 j 07:00	0°♌			-8242 Sep 14 j 17:28	0°♐	
asc. node	-8247 Sep 07 j 15:40	3°♌18'23			-8242 Oct 27 j 16:57	0°♑	
retrograde	-8247 Oct 12 j 01:15	9°♌30'19			-8242 Dec 10 j 17:12	0°♒	
opposition	-8247 Nov 19 j 08:03	0°♌39'53	2°46'22		-8241 Jan 25 j 01:38	0°♓	
greatest brilliancy	-8247 Nov 19 j 16:40	0°♌31'27	-1.5m	evening set	-8241 Feb 24 j 07:40	19°♓35'45	
	-8247 Nov 21 j 00:45	30°♋♋			-8241 Mar 12 j 12:31	0°♈	
min. Earth dist.	-8247 Nov 23 j 15:53	28°♋58'15	0.63268 AU				
direct	-8247 Dec 30 j 06:40	20°♋41'00		conjunction	-8241 Apr 13 j 19:43	20°♈38'56	-0°09'16
	-8246 Feb 10 j 12:57	0°♌		minimum elong	-8241 Apr 13 j 20:05	20°♈39'32	0°09'39
	-8246 Apr 09 j 13:48	0°♍		behind sun begin	-8241 Apr 13 j 04:18	20°♈14'20	
	-8246 May 25 j 05:48	0°♎		behind sun end	-8241 Apr 14 j 11:53	21°♈04'44	
	-8246 Jul 05 j 14:32	0°♏		max. Earth dist.	-8241 Apr 13 j 13:33	20°♈29'06	2.66710 AU
	-8246 Aug 13 j 20:47	0°♌			-8241 Apr 28 j 10:57	0°♋	
desc. node	-8246 Aug 16 j 06:49	1°♌52'35		asc. node	-8241 Apr 29 j 23:50	0°♋58'58	
	-8246 Sep 21 j 09:00	0°♎		morning rise	-8241 May 30 j 07:03	20°♋24'43	
	-8246 Oct 30 j 04:58	0°♐			-8241 Jun 14 j 03:48	0°♌	
evening set	-8246 Nov 18 j 17:21	14°♐46'42			-8241 Jul 30 j 03:15	0°♍	
	-8246 Dec 09 j 05:11	0°♑			-8241 Sep 13 j 07:35	0°♎	
					-8241 Oct 28 j 00:35	0°♏	
conjunction	-8245 Jan 16 j 16:40	27°♑40'36	-1°11'40		-8241 Dec 12 j 01:59	0°♌	
minimum elong	-8245 Jan 16 j 16:31	27°♑40'19	1°12'05		-8240 Jan 29 j 00:59	0°♎	
	-8245 Jan 20 j 00:05	0°♒		desc. node	-8240 Apr 07 j 16:51	26°♎50'39	
max. Earth dist.	-8245 Feb 19 j 06:35	20°♒51'45	2.54935 AU	retrograde	-8240 Apr 12 j 02:40	26°♎58'42	
	-8245 Mar 04 j 20:24	0°♓		min. Earth dist.	-8240 May 09 j 12:32	22°♎26'32	0.39368 AU
morning rise	-8245 Mar 12 j 22:45	5°♓23'33		opposition	-8240 May 14 j 15:52	20°♎57'49	-2°46'14
	-8245 Apr 19 j 16:58	0°♈		greatest brilliancy	-8240 May 14 j 01:07	21°♎08'28	-2.8m
	-8245 Jun 06 j 10:50	0°♋		direct	-8240 Jun 14 j 00:31	15°♎39'58	
asc. node	-8245 Jul 26 j 12:51	29°♋58'40			-8240 Aug 05 j 12:00	0°♐	
	-8245 Jul 26 j 13:46	0°♌			-8240 Sep 29 j 07:35	0°♑	
	-8245 Sep 20 j 19:05	0°♍			-8240 Nov 17 j 01:52	0°♒	
retrograde	-8245 Nov 25 j 05:44	18°♍48'40			-8239 Jan 03 j 22:01	0°♓	
opposition	-8245 Dec 30 j 22:59	11°♍14'09	5°27'38		-8239 Feb 20 j 16:31	0°♈	
greatest brilliancy	-8244 Jan 01 j 07:30	10°♍44'32	-1.9m	asc. node	-8239 Mar 16 j 18:52	15°♈11'10	
min. Earth dist.	-8244 Jan 07 j 13:18	8°♍28'42	0.53926 AU	evening set	-8239 Apr 03 j 18:55	26°♈35'29	
direct	-8244 Feb 08 j 07:15	2°♍02'13			-8239 Apr 09 j 03:30	0°♋	
	-8244 Apr 25 j 04:22	0°♎		max. Earth dist.	-8239 May 06 j 17:12	17°♋40'35	2.64590 AU
	-8244 Jun 09 j 23:10	0°♏					
desc. node	-8244 Jul 03 j 08:20	16°♏50'39		conjunction	-8239 May 21 j 05:52	27°♋06'05	0°36'10
	-8244 Jul 21 j 01:47	0°♌		minimum elong	-8239 May 21 j 04:38	27°♋04'05	0°36'03
	-8244 Aug 29 j 17:39	0°♎			-8239 May 25 j 16:25	0°♌	
	-8244 Oct 08 j 11:47	0°♐		morning rise	-8239 Jul 06 j 17:04	27°♌55'18	
	-8244 Nov 18 j 07:24	0°♑			-8239 Jul 09 j 18:49	0°♍	
	-8244 Dec 30 j 18:34	0°♒			-8239 Aug 22 j 06:32	0°♎	
evening set	-8243 Jan 11 j 07:33	7°♒56'00			-8239 Oct 03 j 07:20	0°♏	
	-8243 Feb 13 j 01:46	0°♓			-8239 Nov 13 j 07:17	0°♌	
					-8239 Dec 23 j 22:19	0°♎	
conjunction	-8243 Mar 04 j 10:13	12°♓45'36	-0°51'48		-8238 Feb 03 j 08:41	0°♐	
minimum elong	-8243 Mar 04 j 11:53	12°♓48'21	0°52'20	desc. node	-8238 Feb 23 j 17:27	14°♐05'59	
max. Earth dist.	-8243 Mar 19 j 15:03	22°♓40'02	2.63435 AU		-8238 Mar 20 j 05:23	0°♑	
	-8243 Mar 30 j 23:13	0°♈			-8238 May 26 j 04:39	0°♒	



## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 17

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

retrograde	-8238 Jun 08 j 13:21	1°♂13'22		evening set	-8233 Aug 20 j 05:32	12°♂28'23	
	-8238 Jun 21 j 10:33	30°♂♂			-8233 Sep 11 j 18:44	0°♂	
min. Earth dist.	-8238 Jul 08 j 13:30	25°♂05'24	0.50761 AU	desc. node	-8233 Oct 16 j 03:39	26°♂58'52	
greatest brilliancy	-8238 Jul 14 j 18:49	22°♂48'06	-2.1m		-8233 Oct 19 j 23:54	0°♂	
opposition	-8238 Jul 16 j 06:50	22°♂14'45	-5°50'07				
direct	-8238 Aug 19 j 12:08	14°♂53'17		conjunction	-8233 Oct 21 j 12:47	1°♂12'22	-0°04'08
	-8238 Oct 14 j 14:07	0°♂		minimum elong	-8233 Oct 21 j 12:25	1°♂11'38	0°03'48
	-8238 Dec 11 j 07:20	0°♂		behind sun begin	-8233 Oct 20 j 09:26	0°♂18'43	
	-8237 Jan 31 j 11:13	0°♂		behind sun end	-8233 Oct 22 j 15:23	2°♂04'33	
asc. node	-8237 Feb 01 j 18:19	0°♂46'50		max. Earth dist.	-8233 Nov 16 j 18:56	21°♂42'24	2.38505 AU
	-8237 Mar 21 j 07:56	0°♂			-8233 Nov 27 j 12:27	0°♂	
	-8237 May 07 j 06:47	0°♂		morning rise	-8233 Dec 26 j 16:44	22°♂10'54	
evening set	-8237 May 13 j 09:25	4°♂00'13			-8232 Jan 06 j 04:34	0°♂	
max. Earth dist.	-8237 Jun 03 j 11:06	18°♂00'07	2.57327 AU		-8232 Feb 16 j 17:12	0°♂	
	-8237 Jun 21 j 03:30	0°♂			-8232 Mar 31 j 16:38	0°♂	
					-8232 May 17 j 20:14	0°♂	
conjunction	-8237 Jul 01 j 07:19	6°♂59'56	1°08'14		-8232 Jul 09 j 13:32	0°♂	
minimum elong	-8237 Jul 01 j 06:12	6°♂58'01	1°08'30	asc. node	-8232 Sep 24 j 05:54	25°♂59'44	
	-8237 Aug 02 j 21:40	0°♂		retrograde	-8232 Sep 27 j 07:18	26°♂03'13	
morning rise	-8237 Aug 20 j 09:06	12°♂39'56		opposition	-8232 Nov 05 j 06:01	16°♂52'03	1°37'04
	-8237 Sep 12 j 19:59	0°♂		greatest brilliancy	-8232 Nov 05 j 09:06	16°♂49'00	-1.4m
	-8237 Oct 22 j 11:27	0°♂		min. Earth dist.	-8232 Nov 08 j 03:16	15°♂43'20	0.65352 AU
	-8237 Nov 30 j 12:52	0°♂		direct	-8232 Dec 16 j 04:50	6°♂52'10	
	-8236 Jan 08 j 21:09	0°♂			-8231 Feb 27 j 05:57	0°♂	
desc. node	-8236 Jan 11 j 13:46	2°♂01'32			-8231 Apr 19 j 13:31	0°♂	
	-8236 Feb 18 j 14:44	0°♂			-8231 Jun 02 j 20:55	0°♂	
	-8236 Apr 02 j 10:55	0°♂			-8231 Jul 13 j 17:53	0°♂	
	-8236 May 24 j 10:51	0°♂			-8231 Aug 21 j 18:25	0°♂	
retrograde	-8236 Jul 19 j 02:50	15°♂55'31		desc. node	-8231 Sep 01 j 23:59	8°♂46'18	
min. Earth dist.	-8236 Aug 23 j 07:08	7°♂49'02	0.61345 AU		-8231 Sep 29 j 02:33	0°♂	
opposition	-8236 Aug 27 j 19:54	6°♂00'27	-4°05'42	evening set	-8231 Oct 24 j 16:29	19°♂55'04	
greatest brilliancy	-8236 Aug 27 j 05:36	6°♂14'43	-1.6m		-8231 Nov 06 j 18:33	0°♂	
	-8236 Sep 13 j 23:22	30°♂♂			-8231 Dec 16 j 14:45	0°♂	
direct	-8236 Oct 04 j 11:32	27°♂11'14					
	-8236 Oct 26 j 19:03	0°♂		conjunction	-8231 Dec 25 j 14:32	6°♂36'06	-1°06'09
asc. node	-8236 Dec 19 j 21:17	21°♂09'44		minimum elong	-8231 Dec 25 j 12:33	6°♂32'29	1°06'24
	-8235 Jan 06 j 02:21	0°♂			-8230 Jan 27 j 05:57	0°♂	
	-8235 Feb 27 j 21:57	0°♂		max. Earth dist.	-8230 Feb 04 j 12:40	5°♂47'34	2.50368 AU
	-8235 Apr 17 j 04:57	0°♂		morning rise	-8230 Feb 22 j 06:11	18°♂00'37	
	-8235 Jun 01 j 09:13	0°♂			-8230 Mar 12 j 00:22	0°♂	
evening set	-8235 Jun 25 j 20:57	17°♂03'35			-8230 Apr 26 j 24:00	0°♂	
max. Earth dist.	-8235 Jul 11 j 22:01	28°♂32'20	2.45976 AU		-8230 Jun 14 j 09:17	0°♂	
	-8235 Jul 13 j 22:27	0°♂			-8230 Aug 05 j 16:10	0°♂	
				asc. node	-8230 Aug 12 j 05:35	3°♂28'55	
conjunction	-8235 Aug 18 j 20:21	26°♂34'27	1°02'35		-8230 Oct 15 j 18:21	0°♂	
minimum elong	-8235 Aug 18 j 22:27	26°♂38'24	1°03'06	retrograde	-8230 Nov 06 j 15:21	2°♂40'43	
	-8235 Aug 23 j 09:09	0°♂			-8230 Nov 27 j 00:17	30°♂♂	
	-8235 Oct 01 j 10:03	0°♂		opposition	-8230 Dec 13 j 12:39	24°♂31'38	4°30'51
morning rise	-8235 Oct 17 j 04:47	12°♂18'01		greatest brilliancy	-8230 Dec 14 j 10:49	24°♂10'39	-1.7m
	-8235 Nov 08 j 20:26	0°♂		min. Earth dist.	-8230 Dec 19 j 23:16	22°♂05'37	0.58218 AU
desc. node	-8235 Nov 28 j 09:26	15°♂12'57		direct	-8229 Jan 22 j 20:09	14°♂51'11	
	-8235 Dec 17 j 13:13	0°♂			-8229 Mar 18 j 05:55	0°♂	
	-8234 Jan 26 j 09:42	0°♂			-8229 May 09 j 01:41	0°♂	
	-8234 Mar 09 j 08:08	0°♂			-8229 Jun 21 j 04:05	0°♂	
	-8234 Apr 23 j 14:45	0°♂		desc. node	-8229 Jul 21 j 00:27	22°♂13'48	
	-8234 Jun 14 j 13:43	0°♂			-8229 Jul 31 j 05:43	0°♂	
retrograde	-8234 Aug 23 j 20:19	22°♂04'28			-8229 Sep 08 j 06:35	0°♂	
opposition	-8234 Oct 02 j 17:30	12°♂17'05	-1°21'01		-8229 Oct 17 j 12:59	0°♂	
min. Earth dist.	-8234 Oct 01 j 21:41	12°♂37'04	0.66422 AU		-8229 Nov 26 j 22:42	0°♂	
greatest brilliancy	-8234 Oct 02 j 16:58	12°♂17'37	-1.4m	evening set	-8229 Dec 23 j 16:26	19°♂12'00	
asc. node	-8234 Nov 07 j 02:25	2°♂46'13			-8228 Jan 08 j 01:38	0°♂	
direct	-8234 Nov 11 j 15:47	2°♂38'18					
	-8233 Feb 02 j 17:14	0°♂		conjunction	-8228 Feb 16 j 02:12	26°♂38'10	-1°03'44
	-8233 Mar 27 j 06:11	0°♂		minimum elong	-8228 Feb 16 j 03:44	26°♂40'45	1°04'16
	-8233 May 12 j 17:09	0°♂			-8228 Feb 21 j 03:01	0°♂	
	-8233 Jun 24 j 13:54	0°♂		max. Earth dist.	-8228 Mar 09 j 01:29	11°♂12'52	2.60714 AU
	-8233 Aug 03 j 22:52	0°♂			-8228 Apr 06 j 22:21	0°♂	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 18

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

morning rise	-8228 Apr 07 j 05:06	0° $\approx$ 10'53	direct	-8223 Jul 27 j 15:10	24° $\underline{\text{A}}$ 46'41	
	-8228 May 24 j 01:57	0° $\text{H}$		-8223 Aug 26 j 18:37	0° $\text{M}$	
asc. node	-8228 Jun 29 j 00:59	22° $\text{H}$ 25'54		-8223 Oct 30 j 05:02	0° $\text{J}$	
	-8228 Jul 11 j 07:54	0° $\text{Y}$		-8223 Dec 20 j 21:51	0° $\text{Z}$	
	-8228 Aug 30 j 07:40	0° $\text{B}$		-8222 Feb 08 j 07:28	0° $\approx$	
	-8228 Oct 24 j 23:41	0° $\text{II}$	asc. node	-8222 Feb 18 j 09:13	6° $\approx$ 12'34	
retrograde	-8228 Dec 29 j 01:44	18° $\text{II}$ 55'28		-8222 Mar 28 j 11:37	0° $\text{H}$	
opposition	-8227 Jan 31 j 11:54	12° $\text{II}$ 29'13	6°08'40	evening set	-8222 Apr 27 j 17:09	19° $\text{H}$ 17'04
greatest brilliancy	-8227 Feb 02 j 06:36	11° $\text{II}$ 54'11	-2.3m		-8222 May 14 j 05:10	0° $\text{Y}$
min. Earth dist.	-8227 Feb 08 j 18:35	9° $\text{II}$ 47'17	0.46307 AU	max. Earth dist.	-8222 May 23 j 00:25	5° $\text{Y}$ 46'47 2.60771 AU
direct	-8227 Mar 09 j 04:03	4° $\text{II}$ 39'40				
	-8227 May 18 j 15:36	0° $\text{G}$	conjunction	-8222 Jun 14 j 16:50	20° $\text{Y}$ 53'31	0°58'37
desc. node	-8227 Jun 07 j 04:19	12° $\text{G}$ 09'44	minimum elong	-8222 Jun 14 j 15:21	20° $\text{Y}$ 51'01	0°58'44
	-8227 Jul 03 j 12:21	0° $\Omega$		-8222 Jun 28 j 03:10	0° $\text{B}$	
	-8227 Aug 14 j 07:17	0° $\text{M}$	morning rise	-8222 Aug 01 j 18:46	24° $\text{B}$ 04'27	
	-8227 Sep 24 j 09:54	0° $\underline{\text{A}}$		-8222 Aug 10 j 03:06	0° $\text{II}$	
	-8227 Nov 05 j 05:39	0° $\text{M}$		-8222 Sep 20 j 10:01	0° $\text{G}$	
	-8227 Dec 18 j 10:56	0° $\text{J}$		-8222 Oct 30 j 11:32	0° $\Omega$	
	-8226 Feb 01 j 06:48	0° $\text{Z}$		-8222 Dec 08 j 23:36	0° $\text{M}$	
evening set	-8226 Feb 08 j 01:11	4° $\text{Z}$ 26'42		-8221 Jan 17 j 19:52	0° $\underline{\text{A}}$	
	-8226 Mar 19 j 10:38	0° $\approx$	desc. node	-8221 Jan 28 j 10:32	7° $\underline{\text{A}}$ 49'53	
				-8221 Feb 28 j 08:44	0° $\text{M}$	
conjunction	-8226 Mar 29 j 14:26	6° $\approx$ 31'20	-0°26'58	-8221 Apr 15 j 08:02	0° $\text{J}$	
minimum elong	-8226 Mar 29 j 15:28	6° $\approx$ 32'59	0°27'25	-8221 Jun 29 j 10:15	0° $\text{Z}$	
max. Earth dist.	-8226 Apr 04 j 04:01	10° $\approx$ 05'21	2.66085 AU	retrograde	-8221 Jul 05 j 01:00	0° $\text{Z}$ 13'06
	-8226 May 05 j 07:53	0° $\text{H}$		-8221 Jul 10 j 13:25	30° $\text{R}$ $\text{J}$	
morning rise	-8226 May 15 j 19:23	6° $\text{H}$ 41'18		-8221 Aug 07 j 08:06	22° $\text{J}$ 48'30	0.57743 AU
asc. node	-8226 May 16 j 18:00	7° $\text{H}$ 17'23		-8221 Aug 12 j 07:38	20° $\text{J}$ 51'19	-1.7m
	-8226 Jun 21 j 06:26	0° $\text{Y}$		-8221 Aug 13 j 06:44	20° $\text{J}$ 28'39	-4°59'11
	-8226 Aug 06 j 21:03	0° $\text{B}$		opposition	-8221 Sep 18 j 16:58	12° $\text{J}$ 08'15
	-8226 Sep 22 j 07:08	0° $\text{II}$		direct	-8221 Nov 20 j 20:44	0° $\text{Z}$
	-8226 Nov 08 j 07:51	0° $\text{G}$		asc. node	-8220 Jan 06 j 10:36	23° $\text{Z}$ 59'24
	-8226 Dec 28 j 13:04	0° $\Omega$		-8220 Jan 17 j 03:18	0° $\approx$	
retrograde	-8225 Mar 14 j 20:02	26° $\Omega$ 38'03		-8220 Mar 07 j 20:57	0° $\text{H}$	
opposition	-8225 Apr 14 j 13:30	21° $\Omega$ 28'10	0°51'34	-8220 Apr 24 j 11:58	0° $\text{Y}$	
min. Earth dist.	-8225 Apr 14 j 08:34	21° $\Omega$ 31'28	0.37997 AU	evening set	-8220 Jun 07 j 16:09	29° $\text{Y}$ 26'06
greatest brilliancy	-8225 Apr 14 j 14:40	21° $\Omega$ 27'23	-3.0m		-8220 Jun 08 j 11:56	0° $\text{B}$
desc. node	-8225 Apr 25 j 08:11	18° $\Omega$ 44'30		max. Earth dist.	-8220 Jun 24 j 00:27	10° $\text{B}$ 44'49 2.50743 AU
direct	-8225 May 14 j 22:42	16° $\Omega$ 22'27			-8220 Jul 21 j 02:18	0° $\text{II}$
	-8225 Jul 03 j 22:53	0° $\text{M}$				
	-8225 Aug 26 j 04:22	0° $\underline{\text{A}}$	conjunction	-8220 Jul 29 j 02:42	5° $\text{II}$ 49'19	1°11'22
	-8225 Oct 12 j 01:30	0° $\text{M}$	minimum elong	-8220 Jul 29 j 03:19	5° $\text{II}$ 50'27	1°11'51
	-8225 Nov 27 j 03:52	0° $\text{J}$		-8220 Aug 30 j 16:40	0° $\text{G}$	
	-8224 Jan 12 j 17:22	0° $\text{Z}$	morning rise	-8220 Sep 22 j 02:57	17° $\text{G}$ 03'26	
	-8224 Feb 28 j 20:11	0° $\approx$		-8220 Oct 08 j 22:15	0° $\Omega$	
evening set	-8224 Mar 19 j 16:12	12° $\approx$ 35'24		-8220 Nov 16 j 13:22	0° $\text{M}$	
asc. node	-8224 Apr 02 j 12:05	21° $\approx$ 22'49	desc. node	-8220 Dec 15 j 05:07	22° $\text{M}$ 10'08	
	-8224 Apr 16 j 00:37	0° $\text{H}$		-8220 Dec 25 j 10:26	0° $\underline{\text{A}}$	
max. Earth dist.	-8224 Apr 27 j 04:53	7° $\text{H}$ 09'03	2.66072 AU	-8219 Feb 03 j 11:58	0° $\text{M}$	
				-8219 Mar 17 j 20:29	0° $\text{J}$	
conjunction	-8224 May 06 j 05:51	12° $\text{H}$ 57'15	0°19'11	-8219 May 03 j 09:10	0° $\text{Z}$	
minimum elong	-8224 May 06 j 05:09	12° $\text{H}$ 56'07	0°18'57	-8219 Jul 01 j 01:03	0° $\approx$	
	-8224 Jun 01 j 13:50	0° $\text{Y}$	retrograde	-8219 Aug 10 j 06:15	8° $\approx$ 43'16	
morning rise	-8224 Jun 21 j 08:20	12° $\text{Y}$ 57'57		-8219 Sep 16 j 06:36	30° $\text{R}$ $\text{Z}$	
	-8224 Jul 16 j 22:40	0° $\text{B}$	min. Earth dist.	-8219 Sep 16 j 22:24	29° $\text{Z}$ 44'06	0.65136 AU
	-8224 Aug 29 j 22:48	0° $\text{II}$	opposition	-8219 Sep 19 j 05:27	28° $\text{Z}$ 48'35	-2°27'37
	-8224 Oct 11 j 17:41	0° $\text{G}$	greatest brilliancy	-8219 Sep 19 j 01:23	28° $\text{Z}$ 52'41	-1.4m
	-8224 Nov 22 j 17:31	0° $\Omega$	direct	-8219 Oct 28 j 09:45	19° $\text{Z}$ 25'51	
	-8223 Jan 03 j 16:55	0° $\text{M}$	asc. node	-8219 Nov 23 j 15:35	23° $\text{Z}$ 11'32	
	-8223 Feb 16 j 12:17	0° $\underline{\text{A}}$		-8219 Dec 14 j 03:35	0° $\approx$	
desc. node	-8223 Mar 12 j 11:36	14° $\underline{\text{A}}$ 53'10		-8218 Feb 13 j 06:06	0° $\text{H}$	
	-8223 Apr 10 j 19:49	0° $\text{M}$		-8218 Apr 04 j 11:59	0° $\text{Y}$	
retrograde	-8223 May 19 j 22:10	9° $\text{M}$ 21'41		-8218 May 20 j 07:20	0° $\text{B}$	
min. Earth dist.	-8223 Jun 16 j 20:38	4° $\text{M}$ 06'18	0.45782 AU	-8218 Jul 01 j 23:51	0° $\text{II}$	
greatest brilliancy	-8223 Jun 23 j 10:03	1° $\text{M}$ 52'32	-2.4m	evening set	-8218 Jul 28 j 00:42	19° $\text{II}$ 11'18
opposition	-8223 Jun 25 j 00:09	1° $\text{M}$ 19'49	-5°37'41		-8218 Aug 11 j 08:35	0° $\text{G}$
	-8223 Jun 28 j 23:01	30° $\text{R}$ $\underline{\text{A}}$		max. Earth dist.	-8218 Aug 30 j 06:56	14° $\text{G}$ 30'24 2.39119 AU

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8218 Sep 19 j 05:30	0°♈		asc. node	-8213 Jul 16 j 18:30	27°♋39'35	
					-8213 Jul 20 j 16:53	0°♐	
conjunction	-8218 Sep 25 j 03:54	4°♈38'16	0°27'55		-8213 Sep 11 j 18:38	0°♈	
minimum elong	-8218 Sep 25 j 06:10	4°♈42'43	0°28'23	retrograde	-8213 Dec 06 j 20:39	29°♈13'32	
	-8218 Oct 27 j 11:47	0°♐		opposition	-8212 Jan 10 j 20:41	22°♈01'13	5°51'52
desc. node	-8218 Nov 01 j 23:03	4°♐17'14		greatest brilliancy	-8212 Jan 12 j 10:30	21°♈27'46	-2.0m
morning rise	-8218 Nov 29 j 11:28	25°♐42'48		min. Earth dist.	-8212 Jan 18 j 23:17	19°♈10'09	0.51291 AU
	-8218 Dec 05 j 00:51	0°♑		direct	-8212 Feb 18 j 10:57	13°♈12'39	
	-8217 Jan 13 j 17:14	0°♐			-8212 Apr 14 j 11:45	0°♐	
	-8217 Feb 24 j 07:26	0°♐			-8212 Jun 02 j 18:32	0°♐	
	-8217 Apr 09 j 13:41	0°♐		desc. node	-8212 Jun 23 j 19:45	14°♐41'15	
	-8217 May 27 j 18:18	0°♐			-8212 Jul 14 j 21:43	0°♈	
	-8217 Jul 24 j 10:00	0°♋			-8212 Aug 24 j 02:22	0°♐	
retrograde	-8217 Sep 14 j 06:26	12°♋58'14			-8212 Oct 03 j 04:55	0°♑	
asc. node	-8217 Oct 11 j 20:40	8°♋00'04			-8212 Nov 13 j 06:58	0°♐	
opposition	-8217 Oct 23 j 16:46	3°♋30'10	0°27'26		-8212 Dec 25 j 23:03	0°♐	
greatest brilliancy	-8217 Oct 23 j 17:08	3°♋29'48	-1.4m	evening set	-8211 Jan 21 j 19:20	18°♐15'36	
min. Earth dist.	-8217 Oct 25 j 03:06	2°♋55'48	0.66503 AU		-8211 Feb 08 j 09:34	0°♐	
	-8217 Nov 01 j 15:32	30°♋					
direct	-8217 Dec 03 j 09:49	23°♋35'07		conjunction	-8211 Mar 13 j 20:32	21°♐55'13	-0°43'20
	-8216 Jan 07 j 09:30	0°♋		minimum elong	-8211 Mar 13 j 22:04	21°♐57'42	0°43'50
	-8216 Mar 10 j 20:49	0°♐		max. Earth dist.	-8211 Mar 25 j 10:16	29°♐24'19	2.64620 AU
	-8216 Apr 28 j 10:20	0°♈			-8211 Mar 26 j 08:24	0°♐	
	-8216 Jun 10 j 23:34	0°♐		morning rise	-8211 May 01 j 05:07	22°♐58'15	
	-8216 Jul 21 j 14:01	0°♐			-8211 May 12 j 06:11	0°♋	
	-8216 Aug 29 j 11:33	0°♈		asc. node	-8211 Jun 02 j 11:59	13°♋29'23	
desc. node	-8216 Sep 18 j 18:46	15°♈54'38			-8211 Jun 28 j 13:16	0°♐	
evening set	-8216 Sep 28 j 08:47	23°♈26'14			-8211 Aug 15 j 01:49	0°♈	
	-8216 Oct 06 j 17:28	0°♐			-8211 Oct 02 j 11:11	0°♐	
	-8216 Nov 14 j 06:52	0°♑			-8211 Nov 23 j 07:15	0°♐	
				retrograde	-8210 Feb 11 j 02:44	27°♐16'47	
conjunction	-8216 Dec 01 j 04:27	12°♑54'13	-0°49'42	opposition	-8210 Mar 14 j 04:12	21°♐59'48	4°13'13
minimum elong	-8216 Dec 01 j 01:14	12°♑48'07	0°49'43	greatest brilliancy	-8210 Mar 15 j 02:11	21°♐44'19	-2.8m
	-8216 Dec 24 j 00:04	0°♐		min. Earth dist.	-8210 Mar 19 j 00:03	20°♐38'35	0.39671 AU
max. Earth dist.	-8215 Jan 16 j 07:58	17°♐02'17	2.45361 AU	direct	-8210 Apr 15 j 14:04	16°♐08'09	
morning rise	-8215 Feb 01 j 12:31	28°♐35'02		desc. node	-8210 May 12 j 01:27	20°♐33'57	
	-8215 Feb 03 j 12:42	0°♐			-8210 Jun 04 j 02:20	0°♈	
	-8215 Mar 19 j 06:46	0°♐			-8210 Jul 25 j 07:30	0°♐	
	-8215 May 04 j 12:44	0°♐			-8210 Sep 08 j 01:27	0°♑	
	-8215 Jun 22 j 22:32	0°♋			-8210 Oct 21 j 23:09	0°♐	
	-8215 Aug 18 j 07:18	0°♐			-8210 Dec 05 j 12:42	0°♐	
asc. node	-8215 Aug 28 j 21:47	4°♐42'50			-8209 Jan 20 j 05:10	0°♐	
retrograde	-8215 Oct 20 j 23:29	17°♐56'37		evening set	-8209 Mar 05 j 08:43	28°♐24'17	
opposition	-8215 Nov 27 j 19:41	9°♐19'27	3°25'43		-8209 Mar 07 j 20:36	0°♐	
greatest brilliancy	-8215 Nov 28 j 08:33	9°♐06'58	-1.6m	max. Earth dist.	-8209 Apr 19 j 00:23	26°♐54'07	2.66720 AU
min. Earth dist.	-8215 Dec 02 j 22:01	7°♐20'56	0.61700 AU	asc. node	-8209 Apr 20 j 04:26	27°♐38'56	
	-8215 Dec 29 j 05:14	30°♋					
direct	-8214 Jan 07 j 15:16	29°♋24'31		conjunction	-8209 Apr 22 j 10:18	29°♐04'58	0°01'19
	-8214 Jan 17 j 09:16	0°♐		minimum elong	-8209 Apr 22 j 10:15	29°♐04'52	0°00'59
	-8214 Apr 02 j 06:52	0°♈		behind sun begin	-8209 Apr 21 j 14:51	28°♐33'54	
	-8214 May 19 j 09:12	0°♐		behind sun end	-8209 Apr 23 j 05:39	29°♐35'51	
	-8214 Jun 30 j 05:38	0°♐			-8209 Apr 23 j 20:45	0°♋	
desc. node	-8214 Aug 06 j 16:59	28°♐26'11		morning rise	-8209 Jun 07 j 15:23	28°♋47'49	
	-8214 Aug 08 j 17:39	0°♈			-8209 Jun 09 j 11:55	0°♐	
	-8214 Sep 16 j 09:40	0°♐			-8209 Jul 25 j 05:35	0°♈	
	-8214 Oct 25 j 08:27	0°♑			-8209 Sep 07 j 22:17	0°♐	
evening set	-8214 Dec 02 j 00:07	28°♑11'47			-8209 Oct 21 j 19:17	0°♐	
	-8214 Dec 04 j 11:05	0°♐			-8209 Dec 04 j 10:07	0°♈	
	-8213 Jan 15 j 07:46	0°♐			-8208 Jan 18 j 03:07	0°♐	
					-8208 Mar 09 j 11:09	0°♑	
conjunction	-8213 Jan 28 j 05:43	8°♐58'37	-1°10'43	desc. node	-8208 Mar 29 j 04:42	8°♑16'23	
minimum elong	-8213 Jan 28 j 06:24	8°♐59'47	1°11'12	retrograde	-8208 Apr 26 j 21:13	13°♑33'05	
max. Earth dist.	-8213 Feb 26 j 15:01	28°♐57'03	2.57192 AU	min. Earth dist.	-8208 May 23 j 19:35	8°♑56'01	0.41252 AU
	-8213 Feb 28 j 04:39	0°♐		opposition	-8208 May 30 j 18:06	6°♑48'53	-4°15'22
morning rise	-8213 Mar 22 j 20:12	14°♐59'11		greatest brilliancy	-8208 May 29 j 14:54	7°♑09'44	-2.7m
	-8213 Apr 14 j 23:30	0°♐		direct	-8208 Jun 30 j 17:04	1°♑07'34	
	-8213 Jun 01 j 10:31	0°♋			-8208 Sep 20 j 06:56	0°♐	

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8208 Nov 10 j 17:19	0°♊	morning rise	-8203 Nov 01 j 12:37	28°♏02'17	
	-8208 Dec 29 j 13:39	0°♋		-8203 Nov 04 j 00:49	0°♐	
	-8207 Feb 15 j 19:28	0°♌	desc. node	-8203 Nov 18 j 18:42	11°♐30'52	
asc. node	-8207 Mar 07 j 00:18	12°♌01'20		-8203 Dec 12 j 15:49	0°♑	
	-8207 Apr 04 j 11:51	0°♍		-8202 Jan 21 j 09:50	0°♒	
evening set	-8207 Apr 12 j 11:26	5°♍04'51		-8202 Mar 04 j 03:38	0°♊	
max. Earth dist.	-8207 May 12 j 12:55	24°♍25'20	2.63453 AU	-8202 Apr 17 j 21:37	0°♋	
	-8207 May 21 j 02:20	0°♎		-8202 Jun 06 j 22:04	0°♌	
				-8202 Aug 30 j 22:39	0°♍	
conjunction	-8207 May 30 j 00:05	5°♎50'34	0°45'11	retrograde	-8202 Aug 31 j 14:39	0°♍00'10
minimum elong	-8207 May 29 j 22:40	5°♎48'14	0°45'09		-8202 Sep 01 j 06:35	30°♎
	-8207 Jul 05 j 03:22	0°♏	opposition	-8202 Oct 10 j 09:18	20°♎18'32	-0°41'32
morning rise	-8207 Jul 15 j 20:42	7°♏19'03	greatest brilliancy	-8202 Oct 10 j 09:34	20°♎18'17	-1.4m
	-8207 Aug 17 j 10:49	0°♐	min. Earth dist.	-8202 Oct 10 j 08:36	20°♎19'15	0.66718 AU
	-8207 Sep 28 j 04:44	0°♑	asc. node	-8202 Oct 28 j 10:11	13°♎46'54	
	-8207 Nov 07 j 19:23	0°♒	direct	-8202 Nov 19 j 15:53	10°♎32'47	
	-8207 Dec 17 j 22:35	0°♓		-8201 Jan 25 j 15:02	0°♍	
	-8206 Jan 27 j 14:34	0°♑		-8201 Mar 21 j 13:09	0°♎	
desc. node	-8206 Feb 14 j 04:11	12°♑33'00		-8201 May 07 j 15:23	0°♏	
	-8206 Mar 11 j 17:03	0°♒		-8201 Jun 19 j 17:38	0°♐	
	-8206 May 02 j 11:29	0°♊		-8201 Jul 30 j 04:27	0°♑	
retrograde	-8206 Jun 18 j 16:14	12°♊42'03	evening set	-8201 Sep 03 j 08:07	27°♑07'09	
min. Earth dist.	-8206 Jul 19 j 21:52	6°♊05'10	0.53414 AU	-8201 Sep 07 j 00:37	0°♒	
greatest brilliancy	-8206 Jul 25 j 18:11	3°♊52'13	-2.0m	desc. node	-8201 Oct 06 j 12:53	23°♒10'01
opposition	-8206 Jul 27 j 02:15	3°♊21'42	-5°38'40		-8201 Oct 15 j 05:38	0°♓
	-8206 Aug 05 j 12:02	30°♋				
direct	-8206 Aug 31 j 03:01	25°♋37'01	conjunction	-8201 Nov 05 j 20:29	16°♓54'57	-0°22'34
	-8206 Sep 28 j 00:16	0°♌	minimum elong	-8201 Nov 05 j 18:27	16°♓50'59	0°22'22
	-8206 Dec 04 j 06:36	0°♍		-8201 Nov 22 j 17:51	0°♑	
asc. node	-8205 Jan 23 j 00:44	28°♍14'59	max. Earth dist.	-8201 Dec 18 j 16:12	19°♑45'04	2.40521 AU
	-8205 Jan 25 j 23:50	0°♎		-8200 Jan 01 j 09:29	0°♒	
	-8205 Mar 16 j 10:12	0°♏	morning rise	-8200 Jan 10 j 05:02	6°♒30'02	
	-8205 May 02 j 14:25	0°♎		-8200 Feb 11 j 21:07	0°♊	
evening set	-8205 May 22 j 17:06	13°♎14'36		-8200 Mar 26 j 16:59	0°♋	
max. Earth dist.	-8205 Jun 10 j 17:53	26°♎03'07	2.55154 AU	-8200 May 12 j 09:51	0°♌	
	-8205 Jun 16 j 12:38	0°♏		-8200 Jul 02 j 11:52	0°♍	
				-8200 Sep 08 j 03:14	0°♎	
conjunction	-8205 Jul 11 j 08:11	17°♏14'44	1°11'23	asc. node	-8200 Sep 14 j 13:00	1°♎36'55
minimum elong	-8205 Jul 11 j 07:33	17°♏13'38	1°11'44	retrograde	-8200 Oct 05 j 15:52	4°♎08'12
	-8205 Jul 29 j 05:55	0°♐		-8200 Oct 30 j 22:14	30°♎	
morning rise	-8205 Aug 31 j 21:05	24°♐37'39	opposition	-8200 Nov 13 j 06:25	25°♏07'50	2°17'12
	-8205 Sep 08 j 01:44	0°♑	greatest brilliancy	-8200 Nov 13 j 12:15	25°♏02'05	-1.5m
	-8205 Oct 17 j 13:34	0°♒	min. Earth dist.	-8200 Nov 16 j 22:31	23°♏41'03	0.64327 AU
	-8205 Nov 25 j 10:53	0°♓	direct	-8200 Dec 24 j 06:04	15°♏07'49	
desc. node	-8204 Jan 02 j 01:00	28°♐49'49		-8199 Feb 17 j 21:20	0°♎	
	-8204 Jan 03 j 14:00	0°♑		-8199 Apr 13 j 10:07	0°♏	
	-8204 Feb 12 j 23:30	0°♒		-8199 May 28 j 12:08	0°♐	
	-8204 Mar 27 j 01:31	0°♊		-8199 Jul 08 j 16:22	0°♑	
	-8204 May 15 j 01:28	0°♋		-8199 Aug 16 j 20:16	0°♒	
retrograde	-8204 Jul 27 j 08:35	24°♋46'29	desc. node	-8199 Aug 23 j 11:32	5°♒09'50	
min. Earth dist.	-8204 Sep 01 j 11:43	16°♋19'55	0.62943 AU	-8199 Sep 24 j 06:27	0°♓	
opposition	-8204 Sep 05 j 05:46	14°♋49'33	-3°31'11		-8199 Nov 01 j 23:48	0°♑
greatest brilliancy	-8204 Sep 04 j 19:43	14°♋59'37	-1.5m	evening set	-8199 Nov 08 j 01:57	4°♑39'09
direct	-8204 Oct 13 j 12:06	5°♋47'02			-8199 Dec 11 j 21:00	0°♒
asc. node	-8204 Dec 10 j 04:45	20°♋56'58				
	-8204 Dec 29 j 12:49	0°♌	conjunction	-8198 Jan 07 j 11:00	19°♒18'30	-1°10'29
	-8203 Feb 22 j 08:32	0°♍	minimum elong	-8198 Jan 07 j 10:06	19°♒16'53	1°10'50
	-8203 Apr 12 j 05:53	0°♎		-8198 Jan 22 j 12:56	0°♊	
	-8203 May 27 j 15:22	0°♏	max. Earth dist.	-8198 Feb 13 j 13:16	15°♊16'44	2.52963 AU
evening set	-8203 Jul 07 j 00:39	28°♏23'27	morning rise	-8198 Mar 05 j 04:09	28°♊35'00	
	-8203 Jul 09 j 06:02	0°♐		-8198 Mar 07 j 06:53	0°♋	
max. Earth dist.	-8203 Jul 24 j 23:12	11°♐29'52	2.43303 AU	-8198 Apr 22 j 03:26	0°♌	
	-8203 Aug 18 j 16:21	0°♑		-8198 Jun 09 j 02:09	0°♍	
				-8198 Jul 29 j 22:32	0°♎	
conjunction	-8203 Aug 31 j 17:08	9°♑56'12	0°52'54	asc. node	-8198 Aug 02 j 11:03	1°♎58'32
minimum elong	-8203 Aug 31 j 19:49	10°♑01'21	0°53'25		-8198 Sep 27 j 14:54	0°♏
	-8203 Sep 26 j 15:55	0°♒	retrograde	-8198 Nov 16 j 22:25	12°♏05'39	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 21

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

opposition	-8198 Dec 23 j 05:24	4° $\text{♁}$ 14'41	5°04'31			-8192 Feb 24 j 02:07	0° $\text{♁}$	
greatest brilliancy	-8198 Dec 24 j 09:19	3° $\text{♁}$ 48'46	-1.8m	asc. node		-8192 Mar 23 j 17:12	18° $\text{♁}$ 06'36	
min. Earth dist.	-8198 Dec 30 j 08:35	1° $\text{♁}$ 36'22	0.55945 AU	evening set		-8192 Mar 28 j 08:52	21° $\text{♁}$ 03'44	
	-8197 Jan 03 j 22:08	30° $\text{♁}$				-8192 Apr 11 j 10:09	0° $\text{♁}$	
direct	-8197 Feb 01 j 01:55	24° $\text{♁}$ 48'07		max. Earth dist.		-8192 May 02 j 18:23	13° $\text{♁}$ 40'00	2.65350 AU
	-8197 Mar 02 j 17:29	0° $\text{♁}$						
	-8197 May 01 j 14:40	0° $\text{♁}$		conjunction		-8192 May 14 j 19:57	21° $\text{♁}$ 27'09	0°29'11
	-8197 Jun 15 j 01:26	0° $\text{♁}$		minimum elong		-8192 May 14 j 18:55	21° $\text{♁}$ 25'29	0°29'02
desc. node	-8197 Jul 11 j 12:50	19° $\text{♁}$ 23'00				-8192 May 27 j 23:29	0° $\text{♁}$	
	-8197 Jul 25 j 16:00	0° $\text{♁}$		morning rise		-8192 Jun 30 j 01:43	21° $\text{♁}$ 50'42	
	-8197 Sep 03 j 00:32	0° $\text{♁}$				-8192 Jul 12 j 05:22	0° $\text{♁}$	
	-8197 Oct 12 j 12:21	0° $\text{♁}$				-8192 Aug 24 j 22:58	0° $\text{♁}$	
	-8197 Nov 22 j 02:09	0° $\text{♁}$				-8192 Oct 06 j 07:57	0° $\text{♁}$	
	-8196 Jan 03 j 08:17	0° $\text{♁}$				-8192 Nov 16 j 17:43	0° $\text{♁}$	
evening set	-8196 Jan 04 j 02:11	0° $\text{♁}$ 31'04				-8192 Dec 27 j 21:05	0° $\text{♁}$	
	-8196 Feb 16 j 11:27	0° $\text{♁}$				-8191 Feb 08 j 01:54	0° $\text{♁}$	
				desc. node		-8191 Mar 02 j 22:50	15° $\text{♁}$ 18'04	
conjunction	-8196 Feb 26 j 04:21	6° $\text{♁}$ 26'14	-0°57'17			-8191 Mar 27 j 00:29	0° $\text{♁}$	
minimum elong	-8196 Feb 26 j 06:02	6° $\text{♁}$ 29'01	0°57'50	retrograde		-8191 May 31 j 09:50	22° $\text{♁}$ 34'49	
max. Earth dist.	-8196 Mar 15 j 08:25	18° $\text{♁}$ 21'57	2.62312 AU	min. Earth dist.		-8191 Jun 29 j 11:18	16° $\text{♁}$ 50'31	0.48530 AU
	-8196 Apr 02 j 06:57	0° $\text{♁}$		greatest brilliancy		-8191 Jul 05 j 21:33	14° $\text{♁}$ 32'51	-2.2m
morning rise	-8196 Apr 16 j 04:25	8° $\text{♁}$ 55'56		opposition		-8191 Jul 07 j 11:38	13° $\text{♁}$ 58'35	-5°51'20
	-8196 May 19 j 07:18	0° $\text{♁}$		direct		-8191 Aug 09 j 23:25	6° $\text{♁}$ 57'56	
asc. node	-8196 Jun 19 j 05:20	19° $\text{♁}$ 26'50				-8191 Oct 21 j 07:21	0° $\text{♁}$	
	-8196 Jul 06 j 03:08	0° $\text{♁}$				-8191 Dec 14 j 20:03	0° $\text{♁}$	
	-8196 Aug 24 j 00:10	0° $\text{♁}$				-8190 Feb 03 j 03:55	0° $\text{♁}$	
	-8196 Oct 14 j 21:41	0° $\text{♁}$		asc. node		-8190 Feb 08 j 15:49	3° $\text{♁}$ 20'52	
	-8196 Dec 25 j 18:23	0° $\text{♁}$				-8190 Mar 23 j 17:28	0° $\text{♁}$	
retrograde	-8195 Jan 12 j 22:54	1° $\text{♁}$ 54'36		evening set		-8190 May 06 j 14:56	28° $\text{♁}$ 03'09	
	-8195 Jan 30 j 10:02	30° $\text{♁}$				-8190 May 09 j 14:37	0° $\text{♁}$	
opposition	-8195 Feb 14 j 08:43	25° $\text{♁}$ 55'44	5°52'32	max. Earth dist.		-8190 May 29 j 10:18	13° $\text{♁}$ 03'56	2.58957 AU
greatest brilliancy	-8195 Feb 16 j 01:00	25° $\text{♁}$ 24'21	-2.5m			-8190 Jun 23 j 12:56	0° $\text{♁}$	
min. Earth dist.	-8195 Feb 22 j 01:24	23° $\text{♁}$ 32'35	0.43622 AU					
direct	-8195 Mar 21 j 16:08	18° $\text{♁}$ 47'05		conjunction		-8190 Jun 24 j 01:23	0° $\text{♁}$ 21'18	1°04'43
	-8195 May 04 j 05:53	0° $\text{♁}$		minimum elong		-8190 Jun 24 j 00:04	0° $\text{♁}$ 19'02	1°04'55
desc. node	-8195 May 28 j 16:21	12° $\text{♁}$ 50'43				-8190 Aug 05 j 10:28	0° $\text{♁}$	
	-8195 Jun 25 j 02:33	0° $\text{♁}$		morning rise		-8190 Aug 12 j 03:24	4° $\text{♁}$ 48'43	
	-8195 Aug 07 j 13:15	0° $\text{♁}$				-8190 Sep 15 j 13:15	0° $\text{♁}$	
	-8195 Sep 18 j 12:39	0° $\text{♁}$				-8190 Oct 25 j 09:14	0° $\text{♁}$	
	-8195 Oct 30 j 21:23	0° $\text{♁}$				-8190 Dec 03 j 15:04	0° $\text{♁}$	
	-8195 Dec 13 j 11:33	0° $\text{♁}$				-8189 Jan 12 j 03:35	0° $\text{♁}$	
evening set	-8194 Jan 27 j 12:59	0° $\text{♁}$		desc. node		-8189 Jan 18 j 19:32	4° $\text{♁}$ 58'58	
	-8194 Feb 17 j 11:22	13° $\text{♁}$ 38'45				-8189 Feb 22 j 02:59	0° $\text{♁}$	
	-8194 Mar 14 j 19:52	0° $\text{♁}$				-8189 Apr 07 j 14:18	0° $\text{♁}$	
						-8189 Jun 02 j 01:25	0° $\text{♁}$	
conjunction	-8194 Apr 07 j 09:34	15° $\text{♁}$ 05'49	-0°16'47	retrograde		-8189 Jul 13 j 19:08	9° $\text{♁}$ 48'31	
minimum elong	-8194 Apr 07 j 10:14	15° $\text{♁}$ 06'52	0°17'12	min. Earth dist.		-8189 Aug 17 j 04:01	2° $\text{♁}$ 00'19	0.59843 AU
max. Earth dist.	-8194 Apr 09 j 17:19	16° $\text{♁}$ 34'54	2.66534 AU	opposition		-8189 Aug 22 j 08:37	29° $\text{♁}$ 56'50	-4°29'38
	-8194 Apr 30 j 17:24	0° $\text{♁}$		greatest brilliancy		-8189 Aug 21 j 14:34	0° $\text{♁}$ 14'43	-1.6m
asc. node	-8194 May 06 j 22:49	3° $\text{♁}$ 58'40				-8189 Aug 22 j 05:25	30° $\text{♁}$	
morning rise	-8194 May 24 j 03:31	14° $\text{♁}$ 58'54		direct		-8189 Sep 28 j 12:13	21° $\text{♁}$ 19'49	
	-8194 Jun 16 j 12:39	0° $\text{♁}$				-8189 Nov 08 j 20:21	0° $\text{♁}$	
	-8194 Aug 01 j 18:46	0° $\text{♁}$		asc. node		-8189 Dec 27 j 18:28	22° $\text{♁}$ 28'43	
	-8194 Sep 16 j 11:13	0° $\text{♁}$				-8188 Jan 10 j 18:57	0° $\text{♁}$	
	-8194 Nov 01 j 01:14	0° $\text{♁}$				-8188 Mar 02 j 15:58	0° $\text{♁}$	
	-8194 Dec 17 j 18:30	0° $\text{♁}$				-8188 Apr 19 j 16:47	0° $\text{♁}$	
	-8193 Feb 08 j 17:20	0° $\text{♁}$				-8188 Jun 03 j 20:30	0° $\text{♁}$	
retrograde	-8193 Mar 31 j 18:35	14° $\text{♁}$ 12'38		evening set		-8188 Jun 17 j 20:13	9° $\text{♁}$ 39'54	
desc. node	-8193 Apr 15 j 21:08	12° $\text{♁}$ 44'11		max. Earth dist.		-8188 Jul 03 j 11:31	20° $\text{♁}$ 40'45	2.48146 AU
min. Earth dist.	-8193 Apr 29 j 04:56	9° $\text{♁}$ 32'51	0.38377 AU			-8188 Jul 16 j 11:22	0° $\text{♁}$	
opposition	-8193 May 02 j 08:05	8° $\text{♁}$ 41'04	-1°17'40					
greatest brilliancy	-8193 May 02 j 03:10	8° $\text{♁}$ 44'28	-2.9m	conjunction		-8188 Aug 09 j 13:49	17° $\text{♁}$ 40'30	1°07'34
direct	-8193 Jun 01 j 12:19	3° $\text{♁}$ 35'04		minimum elong		-8188 Aug 09 j 15:18	17° $\text{♁}$ 43'14	1°08'05
	-8193 Aug 15 j 21:21	0° $\text{♁}$				-8188 Aug 26 j 00:37	0° $\text{♁}$	
	-8193 Oct 05 j 01:29	0° $\text{♁}$				-8188 Oct 04 j 03:52	0° $\text{♁}$	
	-8193 Nov 21 j 10:39	0° $\text{♁}$		morning rise		-8188 Oct 05 j 22:01	1° $\text{♁}$ 21'44	
	-8192 Jan 07 j 15:17	0° $\text{♁}$				-8188 Nov 11 j 16:13	0° $\text{♁}$	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 22

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

desc. node	-8188 Dec 05 j 15:37	18° $\mathbb{M}$ 37'42		direct	-8182 Jan 16 j 05:42	8° $\mathbb{Y}$ 29'04	
	-8188 Dec 20 j 10:12	0° $\underline{\mathbf{a}}$			-8182 Mar 24 j 18:16	0° $\mathbf{B}$	
	-8187 Jan 29 j 07:26	0° $\mathbb{M}$			-8182 May 13 j 03:39	0° $\mathbb{I}$	
	-8187 Mar 12 j 08:03	0° $\mathbf{A}$			-8182 Jun 24 j 16:36	0° $\mathfrak{C}$	
	-8187 Apr 26 j 22:52	0° $\mathfrak{Z}$		desc. node	-8182 Jul 28 j 05:00	25° $\mathfrak{C}$ 10'54	
	-8187 Jun 19 j 16:15	0° $\approx$			-8182 Aug 03 j 11:59	0° $\mathcal{O}$	
retrograde	-8187 Aug 18 j 02:23	16° $\approx$ 53'49			-8182 Sep 11 j 08:25	0° $\mathbb{M}$	
min. Earth dist.	-8187 Sep 25 j 13:40	7° $\approx$ 38'42	0.65973 AU		-8182 Oct 20 j 10:35	0° $\underline{\mathbf{a}}$	
opposition	-8187 Sep 27 j 01:34	7° $\approx$ 02'29	-1°49'09		-8182 Nov 29 j 15:50	0° $\mathbb{M}$	
greatest brilliancy	-8187 Sep 26 j 23:48	7° $\approx$ 04'17	-1.4m	evening set	-8182 Dec 14 j 13:56	10° $\mathbb{M}$ 49'35	
	-8187 Oct 17 j 05:05	30° $\mathbf{R}\mathfrak{Z}$			-8181 Jan 10 j 14:42	0° $\mathbf{A}$	
direct	-8187 Nov 05 j 17:01	27° $\mathfrak{Z}$ 30'25					
asc. node	-8187 Nov 13 j 23:21	27° $\mathfrak{Z}$ 54'59		conjunction	-8181 Feb 08 j 04:56	19° $\mathbf{A}$ 40'57	-1°07'23
	-8187 Nov 26 j 18:24	0° $\approx$		minimum elong	-8181 Feb 08 j 06:12	19° $\mathbf{A}$ 43'06	1°07'54
	-8186 Feb 06 j 15:30	0° $\mathbf{H}$			-8181 Feb 23 j 12:42	0° $\mathfrak{Z}$	
	-8186 Mar 30 j 04:05	0° $\mathbb{Y}$		max. Earth dist.	-8181 Mar 05 j 12:01	6° $\mathfrak{Z}$ 38'04	2.59231 AU
	-8186 May 15 j 09:38	0° $\mathbf{B}$		morning rise	-8181 Apr 01 j 08:48	24° $\mathfrak{Z}$ 14'20	
	-8186 Jun 27 j 05:48	0° $\mathbb{I}$			-8181 Apr 10 j 06:43	0° $\approx$	
	-8186 Aug 06 j 15:45	0° $\mathfrak{C}$			-8181 May 27 j 12:19	0° $\mathbf{H}$	
evening set	-8186 Aug 09 j 20:16	2° $\mathfrak{C}$ 25'35		asc. node	-8181 Jul 06 j 23:35	25° $\mathbf{H}$ 02'40	
	-8186 Sep 14 j 12:32	0° $\mathcal{O}$			-8181 Jul 15 j 03:00	0° $\mathbb{Y}$	
max. Earth dist.	-8186 Oct 07 j 19:47	18° $\mathcal{O}$ 16'09	2.38000 AU		-8181 Sep 04 j 04:10	0° $\mathbf{B}$	
					-8181 Nov 03 j 14:22	0° $\mathbb{I}$	
conjunction	-8186 Oct 09 j 20:05	19° $\mathcal{O}$ 51'03	0°10'18	retrograde	-8181 Dec 19 j 13:35	10° $\mathbb{I}$ 27'47	
minimum elong	-8186 Oct 09 j 21:04	19° $\mathcal{O}$ 52'59	0°10'42	opposition	-8180 Jan 22 j 17:20	3° $\mathbb{I}$ 40'12	6°06'10
behind sun begin	-8186 Oct 09 j 00:11	19° $\mathcal{O}$ 11'58		greatest brilliancy	-8180 Jan 24 j 11:00	3° $\mathbb{I}$ 04'45	-2.2m
behind sun end	-8186 Oct 10 j 17:57	20° $\mathcal{O}$ 33'59		min. Earth dist.	-8180 Jan 31 j 02:00	0° $\mathbb{I}$ 50'29	0.48551 AU
	-8186 Oct 22 j 18:12	0° $\mathbb{M}$			-8180 Feb 02 j 16:33	30° $\mathbf{R}\mathbf{B}$	
desc. node	-8186 Oct 23 j 09:53	0° $\mathbb{M}$ 30'46		direct	-8180 Feb 29 j 09:12	25° $\mathbf{B}$ 21'30	
	-8186 Nov 30 j 06:25	0° $\underline{\mathbf{a}}$			-8180 Mar 27 j 13:14	0° $\mathbb{I}$	
morning rise	-8186 Dec 15 j 00:44	11° $\underline{\mathbf{a}}$ 18'34			-8180 May 25 j 09:28	0° $\mathfrak{C}$	
	-8185 Jan 08 j 21:26	0° $\mathbb{M}$		desc. node	-8180 Jun 14 j 08:39	13° $\mathfrak{C}$ 13'27	
	-8185 Feb 19 j 09:10	0° $\mathbf{A}$			-8180 Jul 08 j 05:47	0° $\mathcal{O}$	
	-8185 Apr 04 j 09:17	0° $\mathfrak{Z}$			-8180 Aug 18 j 04:48	0° $\mathbb{M}$	
	-8185 May 21 j 19:59	0° $\approx$			-8180 Sep 27 j 18:56	0° $\underline{\mathbf{a}}$	
	-8185 Jul 14 j 23:27	0° $\mathbf{H}$			-8180 Nov 08 j 04:58	0° $\mathbb{M}$	
retrograde	-8185 Sep 22 j 06:23	20° $\mathbf{H}$ 54'05			-8180 Dec 21 j 02:50	0° $\mathbf{A}$	
asc. node	-8185 Oct 02 j 03:08	20° $\mathbf{H}$ 15'44		evening set	-8179 Jan 31 j 19:18	28° $\mathbf{A}$ 04'27	
opposition	-8185 Oct 31 j 11:06	11° $\mathbf{H}$ 34'43	1°07'48		-8179 Feb 03 j 17:09	0° $\mathfrak{Z}$	
greatest brilliancy	-8185 Oct 31 j 12:38	11° $\mathbf{H}$ 33'11	-1.4m		-8179 Mar 21 j 17:56	0° $\approx$	
min. Earth dist.	-8185 Nov 02 j 16:32	10° $\mathbf{H}$ 41'29	0.65994 AU				
direct	-8185 Dec 11 j 08:24	1° $\mathbf{H}$ 36'24		conjunction	-8179 Mar 22 j 23:24	0° $\approx$ 47'28	-0°34'03
	-8184 Mar 03 j 18:51	0° $\mathbb{Y}$		minimum elong	-8179 Mar 23 j 00:41	0° $\approx$ 49'31	0°34'32
	-8184 Apr 22 j 20:25	0° $\mathbf{B}$		max. Earth dist.	-8179 Mar 31 j 03:11	6° $\approx$ 02'14	2.65530 AU
	-8184 Jun 05 j 20:45	0° $\mathbb{I}$			-8179 May 07 j 14:50	0° $\mathbf{H}$	
	-8184 Jul 16 j 15:48	0° $\mathfrak{C}$		morning rise	-8179 May 09 j 15:28	1° $\mathbf{H}$ 17'29	
	-8184 Aug 24 j 15:20	0° $\mathcal{O}$		asc. node	-8179 May 23 j 16:46	10° $\mathbf{H}$ 14'40	
desc. node	-8184 Sep 09 j 05:14	12° $\mathcal{O}$ 11'03			-8179 Jun 23 j 16:48	0° $\mathbb{Y}$	
	-8184 Oct 01 j 22:24	0° $\mathbb{M}$			-8179 Aug 09 j 16:19	0° $\mathbf{B}$	
evening set	-8184 Oct 13 j 06:50	8° $\mathbb{M}$ 52'45			-8179 Sep 25 j 20:09	0° $\mathbb{I}$	
	-8184 Nov 09 j 12:43	0° $\underline{\mathbf{a}}$			-8179 Nov 13 j 11:04	0° $\mathfrak{C}$	
					-8178 Jan 07 j 20:51	0° $\mathcal{O}$	
conjunction	-8184 Dec 15 j 06:52	27° $\underline{\mathbf{a}}$ 02'42	-1°00'26	retrograde	-8178 Feb 28 j 23:47	13° $\mathcal{O}$ 51'54	
minimum elong	-8184 Dec 15 j 04:10	26° $\underline{\mathbf{a}}$ 57'40	1°00'36	opposition	-8178 Mar 31 j 14:46	8° $\mathcal{O}$ 45'44	2°28'35
	-8184 Dec 19 j 06:30	0° $\mathbb{M}$		greatest brilliancy	-8178 Mar 31 j 23:03	8° $\mathcal{O}$ 40'10	-2.9m
max. Earth dist.	-8183 Jan 28 j 03:30	28° $\mathbb{M}$ 49'54	2.48155 AU	min. Earth dist.	-8178 Apr 02 j 20:24	8° $\mathcal{O}$ 09'46	0.38384 AU
	-8183 Jan 29 j 19:16	0° $\mathbf{A}$		direct	-8178 May 01 j 15:32	3° $\mathcal{O}$ 26'30	
morning rise	-8183 Feb 13 j 14:32	10° $\mathbf{A}$ 20'23		desc. node	-8178 May 02 j 12:23	3° $\mathcal{O}$ 26'48	
	-8183 Mar 14 j 11:53	0° $\mathfrak{Z}$			-8178 Jul 14 j 12:24	0° $\mathbb{M}$	
	-8183 Apr 29 j 12:29	0° $\approx$			-8178 Aug 31 j 14:34	0° $\underline{\mathbf{a}}$	
	-8183 Jun 17 j 05:19	0° $\mathbf{H}$			-8178 Oct 15 j 21:44	0° $\mathbb{M}$	
	-8183 Aug 09 j 18:41	0° $\mathbb{Y}$			-8178 Nov 30 j 05:05	0° $\mathbf{A}$	
asc. node	-8183 Aug 19 j 03:19	4° $\mathbb{Y}$ 41'44			-8177 Jan 15 j 07:39	0° $\mathfrak{Z}$	
retrograde	-8183 Oct 30 j 06:44	26° $\mathbb{Y}$ 39'55			-8177 Mar 03 j 04:44	0° $\approx$	
opposition	-8183 Dec 06 j 15:24	18° $\mathbb{Y}$ 17'21	4°03'38	evening set	-8177 Mar 14 j 04:41	7° $\approx$ 00'10	
greatest brilliancy	-8183 Dec 07 j 09:13	18° $\mathbb{Y}$ 00'17	-1.6m	asc. node	-8177 Apr 10 j 10:13	24° $\approx$ 20'27	
min. Earth dist.	-8183 Dec 12 j 12:00	16° $\mathbb{Y}$ 02'58	0.59896 AU		-8177 Apr 19 j 07:03	0° $\mathbf{H}$	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 23

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

max. Earth dist.	-8177 Apr 24 j 11:26	3° $\text{H}$ 18'42	2.66470 AU		-8172 May 07 j 08:19	0° $\text{Z}$	
					-8172 Jul 11 j 21:27	0° $\approx$	
conjunction	-8177 Apr 30 j 22:32	7° $\text{H}$ 26'56	0°11'44	retrograde	-8172 Aug 04 j 09:53	3° $\approx$ 18'50	
minimum elong	-8177 Apr 30 j 22:06	7° $\text{H}$ 26'15	0°11'28		-8172 Aug 26 j 09:08	30° $\text{R}$ $\text{Z}$	
behind sun begin	-8177 Apr 30 j 08:29	7° $\text{H}$ 04'26		min. Earth dist.	-8172 Sep 10 j 10:02	24° $\text{Z}$ 34'02	0.64265 AU
behind sun end	-8177 May 01 j 11:44	7° $\text{H}$ 48'04		opposition	-8172 Sep 13 j 09:10	23° $\text{Z}$ 22'28	-2°54'46
	-8177 Jun 04 j 21:27	0° $\text{Y}$		greatest brilliancy	-8172 Sep 13 j 02:45	23° $\text{Z}$ 28'55	-1.5m
morning rise	-8177 Jun 16 j 00:50	7° $\text{Y}$ 15'55		direct	-8172 Oct 22 j 04:44	14° $\text{Z}$ 08'18	
	-8177 Jul 20 j 10:40	0° $\text{B}$		asc. node	-8172 Nov 30 j 11:56	21° $\text{Z}$ 58'07	
	-8177 Sep 02 j 18:12	0° $\text{II}$			-8172 Dec 20 j 13:14	0° $\approx$	
	-8177 Oct 16 j 00:06	0° $\text{G}$			-8171 Feb 16 j 12:04	0° $\text{H}$	
	-8177 Nov 27 j 14:45	0° $\text{O}$			-8171 Apr 07 j 04:29	0° $\text{Y}$	
	-8176 Jan 09 j 12:32	0° $\text{M}$			-8171 May 22 j 20:59	0° $\text{B}$	
	-8176 Feb 24 j 06:46	0° $\text{L}$			-8171 Jul 04 j 13:53	0° $\text{II}$	
desc. node	-8176 Mar 19 j 15:48	13° $\text{L}$ 43'22		evening set	-8171 Jul 18 j 16:20	10° $\text{II}$ 17'57	
retrograde	-8176 May 10 j 11:16	29° $\text{L}$ 04'16		max. Earth dist.	-8171 Aug 11 j 03:27	27° $\text{II}$ 49'36	2.40810 AU
min. Earth dist.	-8176 Jun 06 j 17:31	24° $\text{L}$ 08'59	0.43636 AU		-8171 Aug 14 j 00:18	0° $\text{G}$	
greatest brilliancy	-8176 Jun 13 j 03:06	22° $\text{L}$ 04'17	-2.5m				
opposition	-8176 Jun 14 j 14:25	21° $\text{L}$ 35'19	-5°13'22	conjunction	-8171 Sep 14 j 05:44	23° $\text{G}$ 59'51	0°39'54
direct	-8176 Jul 16 j 11:49	15° $\text{L}$ 25'36		minimum elong	-8171 Sep 14 j 08:29	24° $\text{G}$ 05'09	0°40'23
	-8176 Sep 08 j 07:13	0° $\text{M}$			-8171 Sep 21 j 22:49	0° $\text{O}$	
	-8176 Nov 03 j 17:42	0° $\text{J}$			-8171 Oct 30 j 06:06	0° $\text{M}$	
	-8176 Dec 24 j 00:19	0° $\text{Z}$		desc. node	-8171 Nov 09 j 04:52	7° $\text{M}$ 47'11	
	-8175 Feb 10 j 20:51	0° $\approx$		morning rise	-8171 Nov 17 j 05:48	14° $\text{M}$ 03'39	
asc. node	-8175 Feb 25 j 06:33	8° $\approx$ 56'51			-8171 Dec 07 j 19:28	0° $\text{L}$	
	-8175 Mar 30 j 19:47	0° $\text{H}$			-8170 Jan 16 j 11:26	0° $\text{M}$	
evening set	-8175 Apr 21 j 04:37	13° $\text{H}$ 36'31			-8170 Feb 27 j 01:28	0° $\text{J}$	
	-8175 May 16 j 12:33	0° $\text{Y}$			-8170 Apr 12 j 10:13	0° $\text{Z}$	
max. Earth dist.	-8175 May 18 j 12:21	1° $\text{Y}$ 18'10	2.62071 AU		-8170 May 31 j 03:38	0° $\approx$	
					-8170 Jul 31 j 13:18	0° $\text{H}$	
conjunction	-8175 Jun 07 j 21:42	14° $\text{Y}$ 45'51	0°53'18	retrograde	-8170 Sep 08 j 10:37	7° $\text{H}$ 54'44	
minimum elong	-8175 Jun 07 j 20:12	14° $\text{Y}$ 43'21	0°53'22		-8170 Oct 13 j 21:19	30° $\text{R}$ $\approx$	
	-8175 Jun 30 j 12:50	0° $\text{B}$		opposition	-8170 Oct 18 j 01:29	28° $\approx$ 20'07	-0°01'31
morning rise	-8175 Jul 25 j 08:18	17° $\text{B}$ 05'19		greatest brilliancy	-8170 Oct 18 j 01:36	28° $\approx$ 20'00	-1.4m
	-8175 Aug 12 j 16:53	0° $\text{II}$		asc. node	-8170 Oct 18 j 17:09	28° $\approx$ 04'24	
	-8175 Sep 23 j 05:21	0° $\text{G}$		min. Earth dist.	-8170 Oct 18 j 19:53	28° $\approx$ 01'40	0.66719 AU
	-8175 Nov 02 j 12:48	0° $\text{O}$		direct	-8170 Nov 27 j 14:57	18° $\approx$ 28'49	
	-8175 Dec 12 j 06:56	0° $\text{M}$			-8169 Jan 15 j 11:46	0° $\text{H}$	
	-8174 Jan 21 j 10:13	0° $\text{L}$			-8169 Mar 15 j 10:27	0° $\text{Y}$	
desc. node	-8174 Feb 04 j 15:56	10° $\text{L}$ 23'53			-8169 May 02 j 09:30	0° $\text{B}$	
	-8174 Mar 04 j 10:28	0° $\text{M}$			-8169 Jun 14 j 19:09	0° $\text{II}$	
	-8174 Apr 20 j 22:32	0° $\text{J}$			-8169 Jul 25 j 09:07	0° $\text{G}$	
retrograde	-8174 Jun 28 j 05:32	23° $\text{J}$ 23'16			-8169 Sep 02 j 06:31	0° $\text{O}$	
min. Earth dist.	-8174 Jul 30 j 14:57	16° $\text{J}$ 19'48	0.55881 AU	evening set	-8169 Sep 17 j 21:18	12° $\text{O}$ 14'11	
greatest brilliancy	-8174 Aug 05 j 00:59	14° $\text{J}$ 13'59	-1.8m	desc. node	-8169 Sep 27 j 00:01	19° $\text{O}$ 23'44	
opposition	-8174 Aug 06 j 04:14	13° $\text{J}$ 47'35	-5°18'25		-8169 Oct 10 j 11:53	0° $\text{M}$	
direct	-8174 Sep 11 j 00:11	5° $\text{J}$ 42'24			-8169 Nov 18 j 00:10	0° $\text{L}$	
	-8174 Nov 26 j 06:23	0° $\text{Z}$					
asc. node	-8173 Jan 13 j 07:27	25° $\text{Z}$ 59'27		conjunction	-8169 Nov 20 j 21:10	2° $\text{L}$ 12'43	-0°39'03
	-8173 Jan 20 j 06:43	0° $\approx$		minimum elong	-8169 Nov 20 j 18:07	2° $\text{L}$ 06'51	0°38'58
	-8173 Mar 11 j 10:33	0° $\text{H}$			-8169 Dec 27 j 15:32	0° $\text{M}$	
	-8173 Apr 27 j 21:41	0° $\text{Y}$		max. Earth dist.	-8168 Jan 06 j 07:13	7° $\text{M}$ 07'19	2.43103 AU
evening set	-8173 Jun 01 j 06:41	22° $\text{Y}$ 45'43		morning rise	-8168 Jan 23 j 18:06	19° $\text{M}$ 47'28	
	-8173 Jun 11 j 22:06	0° $\text{B}$			-8168 Feb 07 j 02:12	0° $\text{J}$	
max. Earth dist.	-8173 Jun 18 j 13:29	4° $\text{B}$ 33'56	2.52785 AU		-8168 Mar 21 j 19:23	0° $\text{Z}$	
					-8168 May 07 j 03:47	0° $\approx$	
conjunction	-8173 Jul 21 j 19:19	27° $\text{B}$ 58'45	1°12'19		-8168 Jun 26 j 02:03	0° $\text{H}$	
minimum elong	-8173 Jul 21 j 19:20	27° $\text{B}$ 58'48	1°12'44		-8168 Aug 24 j 05:52	0° $\text{Y}$	
	-8173 Jul 24 j 14:43	0° $\text{II}$		asc. node	-8168 Sep 04 j 19:15	4° $\text{Y}$ 28'16	
	-8173 Sep 03 j 08:23	0° $\text{G}$		retrograde	-8168 Oct 14 j 07:21	12° $\text{Y}$ 24'59	
morning rise	-8173 Sep 13 j 03:03	7° $\text{G}$ 22'30		opposition	-8168 Nov 21 j 12:43	3° $\text{Y}$ 36'48	2°56'58
	-8173 Oct 12 j 17:09	0° $\text{O}$		greatest brilliancy	-8168 Nov 21 j 22:11	3° $\text{Y}$ 27'33	-1.5m
	-8173 Nov 20 j 10:55	0° $\text{M}$		min. Earth dist.	-8168 Nov 25 j 23:49	1° $\text{Y}$ 52'16	0.62986 AU
desc. node	-8173 Dec 23 j 11:06	25° $\text{M}$ 27'09			-8168 Nov 30 j 22:23	30° $\text{R}$ $\text{H}$	
	-8173 Dec 29 j 10:07	0° $\text{L}$		direct	-8167 Jan 01 j 11:19	23° $\text{H}$ 38'48	
	-8172 Feb 07 j 13:39	0° $\text{M}$			-8167 Feb 04 j 13:29	0° $\text{Y}$	
	-8172 Mar 21 j 02:49	0° $\text{J}$			-8167 Apr 06 j 15:44	0° $\text{B}$	

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8167 May 22 j 20:08	0°♐				-8162 Apr 26 j 03:07	0°♐		
	-8167 Jul 03 j 10:06	0°♑		asc. node		-8162 Apr 27 j 03:26	0°♐38'51		
	-8167 Aug 11 j 18:53	0°♒		morning rise		-8162 Jun 01 j 11:05	23°♐17'55		
desc. node	-8167 Aug 13 j 21:54	1°♒38'49				-8162 Jun 11 j 20:18	0°♑		
	-8167 Sep 19 j 08:05	0°♓				-8162 Jul 27 j 19:32	0°♒		
	-8167 Oct 28 j 03:54	0°♑				-8162 Sep 10 j 22:18	0°♐		
evening set	-8167 Nov 21 j 21:32	18°♑42'12				-8162 Oct 25 j 11:30	0°♑		
	-8167 Dec 07 j 03:01	0°♒				-8162 Dec 09 j 04:30	0°♒		
	-8166 Jan 17 j 20:13	0°♓				-8161 Jan 25 j 03:30	0°♓		
						-8161 Apr 01 j 19:34	0°♑		
conjunction	-8166 Jan 19 j 12:48	1°♓11'10	-1°11'37	desc. node		-8161 Apr 06 j 09:25	0°♑45'26		
minimum elong	-8166 Jan 19 j 12:54	1°♓11'20	1°12'03	retrograde		-8161 Apr 16 j 14:20	1°♑27'40		
max. Earth dist.	-8166 Feb 21 j 10:52	23°♓50'37	2.55379 AU			-8161 May 01 j 10:06	30°♒♓		
	-8166 Mar 02 j 14:25	0°♒		min. Earth dist.		-8161 May 13 j 18:56	26°♓56'28	0.39669 AU	
morning rise	-8166 Mar 15 j 10:50	8°♒33'17		opposition		-8161 May 19 j 08:55	25°♓19'21	-3°09'50	
	-8166 Apr 17 j 08:36	0°♓		greatest brilliancy		-8161 May 18 j 15:15	25°♓32'11	-2.8m	
	-8166 Jun 03 j 23:07	0°♐		direct		-8161 Jun 18 j 18:15	19°♓57'53		
asc. node	-8166 Jul 23 j 16:46	29°♐57'06				-8161 Jul 31 j 14:27	0°♑		
	-8166 Jul 23 j 18:46	0°♑				-8161 Sep 27 j 02:51	0°♒		
	-8166 Sep 16 j 20:22	0°♒				-8161 Nov 15 j 09:27	0°♓		
retrograde	-8166 Nov 27 j 21:35	22°♒00'51				-8160 Jan 02 j 09:58	0°♒		
opposition	-8165 Jan 02 j 12:39	14°♒30'19	5°33'37			-8160 Feb 19 j 06:36	0°♓		
greatest brilliancy	-8165 Jan 03 j 22:25	13°♒59'45	-1.9m	asc. node		-8160 Mar 13 j 22:20	14°♓53'07		
min. Earth dist.	-8165 Jan 10 j 07:00	11°♒42'26	0.53441 AU	evening set		-8160 Apr 06 j 01:12	29°♓31'21		
direct	-8165 Feb 10 j 18:59	5°♒22'22				-8160 Apr 06 j 19:13	0°♐		
	-8165 Apr 22 j 17:43	0°♐		max. Earth dist.		-8160 May 08 j 10:46	20°♐16'57	2.64410 AU	
	-8165 Jun 08 j 09:15	0°♑							
desc. node	-8165 Jul 01 j 23:48	16°♑52'30		conjunction		-8160 May 23 j 11:41	0°♑03'03	0°38'40	
	-8165 Jul 19 j 18:21	0°♒		minimum elong		-8160 May 23 j 10:24	0°♑00'58	0°38'36	
	-8165 Aug 28 j 12:46	0°♓				-8160 May 23 j 09:49	0°♑		
	-8165 Oct 07 j 07:38	0°♑				-8160 Jul 07 j 13:44	0°♒		
	-8165 Nov 17 j 02:56	0°♒		morning rise		-8160 Jul 08 j 23:46	0°♒57'34		
	-8165 Dec 29 j 13:15	0°♓				-8160 Aug 20 j 02:20	0°♐		
evening set	-8164 Jan 14 j 23:32	11°♓16'45				-8160 Oct 01 j 03:10	0°♑		
	-8164 Feb 11 j 19:22	0°♒				-8160 Nov 11 j 02:01	0°♒		
						-8160 Dec 21 j 14:26	0°♓		
conjunction	-8164 Mar 06 j 20:57	15°♒51'26	-0°49'34			-8159 Jan 31 j 19:05	0°♑		
minimum elong	-8164 Mar 06 j 22:36	15°♒54'08	0°50'05	desc. node		-8159 Feb 21 j 09:37	14°♑24'40		
max. Earth dist.	-8164 Mar 21 j 06:56	25°♒14'11	2.63697 AU			-8159 Mar 16 j 23:59	0°♒		
	-8164 Mar 28 j 15:47	0°♓				-8159 May 14 j 19:04	0°♓		
morning rise	-8164 Apr 24 j 21:28	17°♓28'22		retrograde		-8159 Jun 11 j 01:44	4°♓47'03		
	-8164 May 14 j 13:57	0°♐				-8159 Jul 07 j 05:49	30°♒♓		
asc. node	-8164 Jun 09 j 10:55	16°♐22'27		min. Earth dist.		-8159 Jul 11 j 08:23	28°♒33'33	0.51268 AU	
	-8164 Jul 01 j 02:01	0°♑		opposition		-8159 Jul 18 j 23:45	25°♒43'33	-5°48'46	
	-8164 Aug 18 j 03:01	0°♒		greatest brilliancy		-8159 Jul 17 j 12:16	26°♒16'33	-2.1m	
	-8164 Oct 06 j 17:46	0°♐		direct		-8159 Aug 22 j 08:01	18°♒17'37		
	-8164 Dec 01 j 16:24	0°♑				-8159 Oct 09 j 14:56	0°♓		
retrograde	-8163 Jan 28 j 21:03	16°♑04'54				-8159 Dec 08 j 06:38	0°♒		
opposition	-8163 Mar 01 j 11:36	10°♑31'10	5°09'04			-8158 Jan 28 j 20:18	0°♓		
greatest brilliancy	-8163 Mar 02 j 19:37	10°♑07'33	-2.6m	asc. node		-8158 Jan 29 j 22:08	0°♓38'42		
min. Earth dist.	-8163 Mar 07 j 21:44	8°♑38'10	0.41239 AU			-8158 Mar 18 j 21:27	0°♐		
direct	-8163 Apr 04 j 04:38	4°♑05'54				-8158 May 04 j 23:24	0°♑		
desc. node	-8163 May 19 j 05:25	15°♑57'13		evening set		-8158 May 15 j 18:06	7°♑03'40		
	-8163 Jun 14 j 12:07	0°♒		max. Earth dist.		-8158 Jun 05 j 07:17	20°♑44'38	2.56951 AU	
	-8163 Jul 30 j 23:56	0°♓				-8158 Jun 18 j 22:46	0°♒		
	-8163 Sep 12 j 05:37	0°♑							
	-8163 Oct 25 j 07:52	0°♒		conjunction		-8158 Jul 03 j 18:19	10°♒12'42	1°09'13	
	-8163 Dec 08 j 08:58	0°♓		minimum elong		-8158 Jul 03 j 17:20	10°♒10'59	1°09'31	
	-8162 Jan 22 j 17:28	0°♒				-8158 Jul 31 j 19:00	0°♐		
evening set	-8162 Feb 26 j 16:22	22°♒37'16		morning rise		-8158 Aug 23 j 01:45	16°♐09'36		
	-8162 Mar 10 j 04:24	0°♓				-8158 Sep 10 j 18:42	0°♑		
max. Earth dist.	-8162 Apr 15 j 04:36	23°♓00'45	2.66754 AU			-8158 Oct 20 j 10:34	0°♒		
						-8158 Nov 28 j 11:22	0°♓		
conjunction	-8162 Apr 16 j 01:44	23°♓34'30	-0°06'22			-8157 Jan 06 j 17:44	0°♑		
minimum elong	-8162 Apr 16 j 02:00	23°♓34'54	0°06'44	desc. node		-8157 Jan 09 j 06:59	1°♑55'30		
behind sun begin	-8162 Apr 15 j 08:01	23°♓06'13				-8157 Feb 16 j 07:21	0°♒		
behind sun end	-8162 Apr 16 j 19:58	24°♓03'35				-8157 Mar 31 j 18:53	0°♓		



## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 25

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8157 May 21 j 11:14	0°♊			-8152 Sep 27 j 02:41	0°♐	
retrograde	-8157 Jul 22 j 05:58	18°♊56'58		evening set	-8152 Oct 28 j 01:07	24°♐04'20	
min. Earth dist.	-8157 Aug 26 j 14:58	10°♊47'09	0.61662 AU		-8152 Nov 04 j 17:54	0°♑	
greatest brilliancy	-8157 Aug 30 j 11:39	9°♊14'38	-1.6m		-8152 Dec 14 j 12:30	0°♒	
opposition	-8157 Aug 31 j 00:59	9°♊01'20	-3°56'44				
direct	-8157 Oct 07 j 20:33	0°♊09'30		conjunction	-8152 Dec 28 j 18:07	10°♒26'33	-1°07'28
asc. node	-8157 Dec 18 j 01:47	21°♊36'20		minimum elong	-8152 Dec 28 j 16:23	10°♒23'23	1°07'46
	-8156 Jan 03 j 19:32	0°♋			-8151 Jan 25 j 01:33	0°♌	
	-8156 Feb 26 j 06:21	0°♋		max. Earth dist.	-8151 Feb 07 j 04:35	9°♌10'39	2.50872 AU
	-8156 Apr 14 j 19:34	0°♌		morning rise	-8151 Feb 25 j 00:57	21°♌26'10	
	-8156 May 30 j 03:42	0°♍			-8151 Mar 09 j 17:31	0°♍	
evening set	-8156 Jun 28 j 13:34	20°♍29'54			-8151 Apr 24 j 14:08	0°♎	
	-8156 Jul 11 j 19:37	0°♎			-8151 Jun 11 j 18:31	0°♏	
max. Earth dist.	-8156 Jul 14 j 15:32	2°♎03'01	2.45460 AU		-8151 Aug 02 j 12:19	0°♐	
				asc. node	-8151 Aug 09 j 09:20	3°♐43'12	
conjunction	-8156 Aug 21 j 19:55	0°♏22'17	1°00'31		-8151 Oct 07 j 02:50	0°♑	
minimum elong	-8156 Aug 21 j 22:11	0°♏26'34	1°01'03	retrograde	-8151 Nov 09 j 01:59	5°♑44'15	
	-8156 Aug 21 j 08:08	0°♏			-8151 Dec 09 j 10:47	30°♑	
	-8156 Sep 29 j 09:56	0°♐		opposition	-8151 Dec 15 j 21:48	27°♑38'18	4°39'20
morning rise	-8156 Oct 20 j 15:25	16°♐33'04		greatest brilliancy	-8151 Dec 16 j 21:08	27°♑16'20	-1.7m
	-8156 Nov 06 j 20:20	0°♐		min. Earth dist.	-8151 Dec 22 j 12:18	25°♑09'27	0.57823 AU
desc. node	-8156 Nov 26 j 01:19	14°♐58'05		direct	-8150 Jan 25 j 04:17	18°♑00'25	
	-8156 Dec 15 j 12:10	0°♑			-8150 Mar 13 j 15:16	0°♒	
	-8155 Jan 24 j 06:32	0°♒			-8150 May 06 j 07:31	0°♓	
	-8155 Mar 07 j 01:16	0°♓			-8150 Jun 18 j 20:15	0°♑	
	-8155 Apr 21 j 00:48	0°♓		desc. node	-8150 Jul 18 j 17:34	22°♑09'06	
	-8155 Jun 11 j 02:42	0°♔			-8150 Jul 29 j 02:05	0°♒	
retrograde	-8155 Aug 25 j 20:53	24°♔53'40			-8150 Sep 06 j 04:35	0°♓	
opposition	-8155 Oct 04 j 18:30	15°♔07'11	-1°10'02		-8150 Oct 15 j 11:04	0°♑	
min. Earth dist.	-8155 Oct 04 j 01:51	15°♔23'57	0.66503 AU		-8150 Nov 24 j 19:48	0°♒	
greatest brilliancy	-8155 Oct 04 j 18:12	15°♔07'29	-1.4m	evening set	-8150 Dec 26 j 11:47	22°♒42'47	
asc. node	-8155 Nov 04 j 07:00	6°♔01'58			-8149 Jan 05 j 21:07	0°♓	
direct	-8155 Nov 13 j 19:23	5°♔27'05					
	-8154 Jan 30 j 07:09	0°♏		conjunction	-8149 Feb 18 j 16:03	29°♓52'16	-1°02'07
	-8154 Mar 24 j 15:32	0°♐		minimum elong	-8149 Feb 18 j 17:38	29°♓54'56	1°02'38
	-8154 May 10 j 09:48	0°♑			-8149 Feb 18 j 20:40	0°♓	
	-8154 Jun 22 j 10:32	0°♒		max. Earth dist.	-8149 Mar 12 j 01:13	14°♓01'41	2.61025 AU
	-8154 Aug 01 j 21:49	0°♓			-8149 Apr 05 j 14:16	0°♔	
evening set	-8154 Aug 23 j 10:43	16°♓31'03		morning rise	-8149 Apr 10 j 13:40	3°♔12'21	
	-8154 Sep 09 j 18:43	0°♑			-8149 May 22 j 16:01	0°♏	
desc. node	-8154 Oct 13 j 18:38	26°♑41'08		asc. node	-8149 Jun 27 j 04:07	22°♏12'11	
	-8154 Oct 17 j 23:53	0°♒			-8149 Jul 09 j 18:49	0°♐	
					-8149 Aug 28 j 10:31	0°♑	
conjunction	-8154 Oct 25 j 01:26	5°♒32'38	-0°08'35		-8149 Oct 21 j 19:26	0°♒	
minimum elong	-8154 Oct 25 j 00:39	5°♒31'05	0°08'17	retrograde	-8148 Jan 02 j 10:40	22°♒35'34	
behind sun begin	-8154 Oct 24 j 00:29	4°♒43'45		opposition	-8148 Feb 04 j 14:49	16°♒14'43	6°05'45
behind sun end	-8154 Oct 26 j 00:48	6°♒18'25		greatest brilliancy	-8148 Feb 06 j 09:29	15°♒40'00	-2.3m
max. Earth dist.	-8154 Nov 24 j 22:43	29°♒35'17	2.38799 AU	min. Earth dist.	-8148 Feb 12 j 19:28	13°♒35'33	0.45776 AU
	-8154 Nov 25 j 11:33	0°♑		direct	-8148 Mar 12 j 01:52	8°♒32'19	
morning rise	-8154 Dec 30 j 03:47	26°♑20'00			-8148 May 14 j 17:23	0°♓	
	-8153 Jan 04 j 02:00	0°♒		desc. node	-8148 Jun 04 j 20:42	12°♓45'21	
	-8153 Feb 14 j 12:12	0°♓			-8148 Jun 30 j 17:34	0°♑	
	-8153 Mar 30 j 08:10	0°♓			-8148 Aug 11 j 20:36	0°♒	
	-8153 May 16 j 05:42	0°♔			-8148 Sep 22 j 02:27	0°♑	
	-8153 Jul 07 j 06:02	0°♏			-8148 Nov 02 j 23:15	0°♒	
asc. node	-8153 Sep 22 j 10:21	28°♏29'31			-8148 Dec 16 j 04:25	0°♓	
retrograde	-8153 Sep 30 j 10:13	28°♏52'57			-8147 Jan 29 j 23:39	0°♓	
opposition	-8153 Nov 08 j 07:59	19°♏43'32	1°47'58	evening set	-8147 Feb 10 j 11:19	7°♓32'24	
greatest brilliancy	-8153 Nov 08 j 11:36	19°♏39'57	-1.4m		-8147 Mar 17 j 02:49	0°♔	
min. Earth dist.	-8153 Nov 11 j 08:33	18°♏31'44	0.65202 AU				
direct	-8153 Dec 19 j 07:52	9°♏43'38		conjunction	-8147 Mar 31 j 21:46	9°♔29'42	-0°24'10
	-8152 Feb 24 j 15:08	0°♐		minimum elong	-8147 Mar 31 j 22:42	9°♔31'13	0°24'37
	-8152 Apr 16 j 23:29	0°♑		max. Earth dist.	-8147 Apr 05 j 17:53	12°♔35'41	2.66185 AU
	-8152 May 31 j 14:59	0°♒			-8147 May 02 j 23:38	0°♏	
	-8152 Jul 11 j 15:52	0°♓		asc. node	-8147 May 13 j 21:28	6°♏57'54	
	-8152 Aug 19 j 18:12	0°♑		morning rise	-8147 May 18 j 00:23	9°♏35'47	
desc. node	-8152 Aug 30 j 16:22	8°♑31'24			-8147 Jun 18 j 21:45	0°♐	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 26

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8147 Aug 04 j 11:08	0°♄	opposition	-8142 Aug 15 j 15:30	23°♄37'45	-4°51'59
	-8147 Sep 19 j 17:48	0°♅	greatest brilliancy	-8142 Aug 14 j 17:29	23°♄59'21	-1.7m
	-8147 Nov 05 j 10:09	0°♆	direct	-8142 Sep 21 j 06:10	15°♄14'08	
	-8147 Dec 24 j 14:09	0°♇		-8142 Nov 16 j 12:25	0°♄	
	-8146 Mar 04 j 19:40	0°♈	asc. node	-8141 Jan 03 j 15:17	24°♄06'51	
retrograde	-8146 Mar 18 j 15:05	1°♈12'41		-8141 Jan 14 j 05:43	0°♈	
	-8146 Apr 01 j 09:37	30°♈00'15		-8141 Mar 06 j 08:19	0°♈	
opposition	-8146 Apr 18 j 11:56	26°♈00'15	0°21'49	-8141 Apr 23 j 04:05	0°♈	
min. Earth dist.	-8146 Apr 17 j 17:48	26°♈12'26	0.37978 AU	-8141 Jun 07 j 07:27	0°♈	
greatest brilliancy	-8146 Apr 18 j 12:17	26°♈00'01	-3.0m	-8141 Jun 11 j 03:07	2°♈37'03	
desc. node	-8146 Apr 23 j 01:02	24°♈47'43		-8141 Jun 27 j 02:18	13°♈42'01	2.50275 AU
direct	-8146 May 18 j 20:14	20°♈55'53		-8141 Jul 20 j 00:18	0°♈	
	-8146 Jun 27 j 13:06	0°♈				
	-8146 Aug 22 j 21:09	0°♉	conjunction	-8141 Aug 01 j 18:41	9°♈16'39	1°10'42
	-8146 Oct 09 j 08:24	0°♊	minimum elong	-8141 Aug 01 j 19:30	9°♈18'09	1°11'10
	-8146 Nov 24 j 15:45	0°♊		-8141 Aug 29 j 16:13	0°♈	
	-8145 Jan 10 j 07:16	0°♋	morning rise	-8141 Sep 26 j 05:13	20°♈58'09	
	-8145 Feb 26 j 11:11	0°♋		-8141 Oct 07 j 22:19	0°♈	
evening set	-8145 Mar 22 j 22:47	15°♋31'53		-8141 Nov 15 j 12:53	0°♈	
asc. node	-8145 Mar 31 j 15:09	21°♋02'46	desc. node	-8141 Dec 13 j 21:04	21°♈57'35	
	-8145 Apr 14 j 16:34	0°♋		-8141 Dec 24 j 08:23	0°♈	
max. Earth dist.	-8145 Apr 29 j 23:39	9°♋46'56	2.65950 AU	-8140 Feb 02 j 07:07	0°♈	
				-8140 Mar 15 j 10:42	0°♈	
conjunction	-8145 May 09 j 11:54	15°♋53'39	0°21'59	-8140 Apr 30 j 12:39	0°♈	
minimum elong	-8145 May 09 j 11:06	15°♋52'22	0°21'47	-8140 Jun 25 j 22:08	0°♈	
	-8145 May 31 j 06:45	0°♈	retrograde	-8140 Aug 12 j 07:47	11°♈37'17	
morning rise	-8145 Jun 24 j 14:46	15°♈58'05	min. Earth dist.	-8140 Sep 19 j 04:27	2°♈35'10	0.65336 AU
	-8145 Jul 15 j 16:18	0°♈	opposition	-8140 Sep 21 j 08:08	1°♈43'07	-2°16'55
	-8145 Aug 28 j 16:31	0°♈	greatest brilliancy	-8140 Sep 21 j 04:39	1°♈46'38	-1.4m
	-8145 Oct 10 j 10:33	0°♈		-8140 Sep 25 j 15:38	30°♈	
	-8145 Nov 21 j 08:11	0°♈	direct	-8140 Oct 30 j 15:53	22°♈18'26	
	-8144 Jan 02 j 02:55	0°♈	asc. node	-8140 Nov 20 j 19:43	24°♈50'02	
	-8144 Feb 14 j 10:20	0°♈		-8140 Dec 08 j 14:19	0°♈	
desc. node	-8144 Mar 10 j 03:43	15°♈43'12		-8139 Feb 10 j 06:30	0°♈	
	-8144 Apr 05 j 04:04	0°♈		-8139 Apr 02 j 00:02	0°♈	
retrograde	-8144 May 22 j 17:33	13°♈14'29		-8139 May 18 j 01:04	0°♈	
min. Earth dist.	-8144 Jun 19 j 22:11	7°♈53'05	0.46288 AU	-8139 Jun 29 j 21:11	0°♈	
greatest brilliancy	-8144 Jun 26 j 10:08	5°♈38'53	-2.3m	-8139 Jul 30 j 22:35	22°♈54'00	
opposition	-8144 Jun 28 j 00:38	5°♈05'27	-5°43'28	-8139 Aug 09 j 08:16	0°♈	
	-8144 Jul 15 j 15:19	30°♈	max. Earth dist.	-8139 Sep 04 j 16:35	20°♈13'05	2.38820 AU
direct	-8144 Jul 30 j 18:47	28°♈27'03		-8139 Sep 17 j 06:24	0°♈	
	-8144 Aug 15 j 13:32	0°♈				
	-8144 Oct 26 j 20:16	0°♈	conjunction	-8139 Sep 28 j 10:26	8°♈44'04	0°23'58
	-8144 Dec 18 j 04:26	0°♈	minimum elong	-8139 Sep 28 j 12:27	8°♈48'02	0°24'24
	-8143 Feb 05 j 19:24	0°♈		-8139 Oct 25 j 12:45	0°♈	
asc. node	-8143 Feb 15 j 12:52	5°♈58'43	desc. node	-8139 Oct 30 j 15:38	4°♈00'57	
	-8143 Mar 26 j 02:32	0°♈	morning rise	-8139 Dec 03 j 00:23	29°♈59'12	
evening set	-8143 Apr 29 j 23:51	22°♈14'49		-8139 Dec 03 j 00:47	0°♈	
	-8143 May 11 j 22:27	0°♈		-8138 Jan 11 j 15:07	0°♈	
max. Earth dist.	-8143 May 24 j 16:41	8°♈22'39	2.60436 AU	-8138 Feb 22 j 02:07	0°♈	
				-8138 Apr 07 j 03:37	0°♈	
conjunction	-8143 Jun 17 j 01:03	23°♈58'02	1°00'21	-8138 May 24 j 22:58	0°♈	
minimum elong	-8143 Jun 16 j 23:35	23°♈55'35	1°00'30	-8138 Jul 20 j 01:15	0°♈	
	-8143 Jun 25 j 22:25	0°♈	retrograde	-8138 Sep 16 j 08:07	15°♈48'14	
morning rise	-8143 Aug 04 j 07:18	27°♈22'50	asc. node	-8138 Oct 08 j 23:47	12°♈25'33	
	-8143 Aug 07 j 23:44	0°♈	opposition	-8138 Oct 25 j 18:22	6°♈21'32	0°38'45
	-8143 Sep 18 j 07:17	0°♈	greatest brilliancy	-8138 Oct 25 j 18:55	6°♈20'59	-1.4m
	-8143 Oct 28 j 08:34	0°♈	min. Earth dist.	-8138 Oct 27 j 08:10	5°♈43'47	0.66447 AU
	-8143 Dec 06 j 19:29	0°♈		-8138 Nov 12 j 03:32	30°♈	
	-8142 Jan 15 j 13:13	0°♈	direct	-8138 Dec 05 j 13:26	26°♈25'46	
desc. node	-8142 Jan 26 j 01:07	7°♈46'41		-8138 Dec 30 j 22:23	0°♈	
	-8142 Feb 25 j 20:36	0°♈		-8137 Mar 08 j 20:23	0°♈	
	-8142 Apr 12 j 04:45	0°♈		-8137 Apr 26 j 23:37	0°♈	
	-8142 Jun 14 j 03:07	0°♈		-8137 Jun 09 j 18:44	0°♈	
retrograde	-8142 Jul 07 j 07:08	3°♈23'47		-8137 Jul 20 j 12:20	0°♈	
	-8142 Jul 29 j 05:37	30°♈		-8137 Aug 28 j 11:25	0°♈	
min. Earth dist.	-8142 Aug 09 j 19:33	25°♈55'05	0.58170 AU	desc. node	-8137 Sep 17 j 10:24	15°♈37'54

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 27

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

evening set	-8137 Oct 02 j 18:10	27°Ω39'44			-8132 Aug 12 j 12:53	0°♄	
	-8137 Oct 05 j 17:40	0°♍			-8132 Sep 29 j 14:24	0°♊	
	-8137 Nov 13 j 06:25	0°♎			-8132 Nov 19 j 10:19	0°♏	
					-8131 Jan 29 j 08:14	0°♏	
conjunction	-8137 Dec 05 j 11:41	16°♊56'55	-0°52'33	retrograde	-8131 Feb 15 j 02:34	1°♏41'02	
minimum elong	-8137 Dec 05 j 08:32	16°♊50'59	0°52'36		-8131 Mar 03 j 18:09	30°♏	
	-8137 Dec 22 j 22:10	0°♌		opposition	-8131 Mar 18 j 00:55	26°♏27'18	3°51'05
max. Earth dist.	-8136 Jan 20 j 12:58	20°♌52'38	2.45887 AU	greatest brilliancy	-8131 Mar 18 j 19:54	26°♏14'08	-2.8m
	-8136 Feb 02 j 08:35	0°♌		min. Earth dist.	-8131 Mar 22 j 10:48	25°♏14'09	0.39363 AU
morning rise	-8136 Feb 05 j 11:28	2°♌11'58		direct	-8131 Apr 19 j 02:49	20°♏43'13	
	-8136 Mar 16 j 23:46	0°♍		desc. node	-8131 May 09 j 16:40	23°♏26'04	
	-8136 May 02 j 01:41	0°♎			-8131 May 28 j 17:18	0°♏	
	-8136 Jun 20 j 03:46	0°♏			-8131 Jul 22 j 00:11	0°♍	
	-8136 Aug 14 j 09:03	0°♐			-8131 Sep 05 j 08:49	0°♎	
asc. node	-8136 Aug 26 j 00:55	5°♐25'16			-8131 Oct 19 j 12:01	0°♌	
retrograde	-8136 Oct 23 j 06:23	20°♐54'04			-8131 Dec 03 j 03:37	0°♌	
opposition	-8136 Nov 30 j 01:28	12°♐19'19	3°35'40		-8130 Jan 17 j 20:42	0°♌	
greatest brilliancy	-8136 Nov 30 j 15:21	12°♐05'54	-1.6m		-8130 Mar 05 j 12:23	0°♎	
min. Earth dist.	-8136 Dec 05 j 07:38	10°♐17'37	0.61401 AU	evening set	-8130 Mar 07 j 15:17	1°♎21'16	
direct	-8135 Jan 09 j 21:07	2°♐25'32		asc. node	-8130 Apr 17 j 08:50	27°♎20'06	
	-8135 Mar 30 j 01:49	0°♑		max. Earth dist.	-8130 Apr 20 j 15:53	29°♎26'19	2.66707 AU
	-8135 May 16 j 21:58	0°♒			-8130 Apr 21 j 12:59	0°♑	
	-8135 Jun 28 j 00:46	0°♓					
desc. node	-8135 Aug 04 j 09:31	28°♓16'04		conjunction	-8130 Apr 24 j 14:48	1°♑57'58	0°04'12
	-8135 Aug 06 j 15:32	0°♏		minimum elong	-8130 Apr 24 j 14:39	1°♑57'44	0°03'53
	-8135 Sep 14 j 08:23	0°♍		behind sun begin	-8130 Apr 23 j 19:37	1°♑27'19	
	-8135 Oct 23 j 06:48	0°♎		behind sun end	-8130 Apr 25 j 09:42	2°♑28'09	
	-8135 Dec 02 j 08:13	0°♌			-8130 Jun 07 j 04:48	0°♐	
evening set	-8135 Dec 05 j 01:04	1°♌58'52		morning rise	-8130 Jun 09 j 18:59	1°♐40'49	
	-8134 Jan 13 j 03:11	0°♌			-8130 Jul 22 j 22:46	0°♑	
					-8130 Sep 05 j 14:48	0°♒	
conjunction	-8134 Jan 30 j 23:36	12°♌23'47	-1°10'00		-8130 Oct 19 j 09:20	0°♓	
minimum elong	-8134 Jan 31 j 00:29	12°♌25'18	1°10'29		-8130 Dec 01 j 18:47	0°♏	
	-8134 Feb 25 j 22:09	0°♑			-8129 Jan 14 j 23:17	0°♍	
max. Earth dist.	-8134 Feb 28 j 17:19	1°♑52'19	2.57600 AU		-8129 Mar 05 j 05:14	0°♎	
morning rise	-8134 Mar 25 j 07:17	18°♑06'48		desc. node	-8129 Mar 27 j 20:08	10°♎34'38	
	-8134 Apr 12 j 14:54	0°♎		retrograde	-8129 May 01 j 06:30	17°♎57'45	
	-8134 May 29 j 23:08	0°♏		min. Earth dist.	-8129 May 28 j 03:42	13°♎17'56	0.41667 AU
asc. node	-8134 Jul 13 j 22:03	27°♏33'22		greatest brilliancy	-8129 Jun 03 j 02:35	11°♎27'43	-2.6m
	-8134 Jul 17 j 23:56	0°♐		opposition	-8129 Jun 04 j 07:59	11°♎04'50	-4°32'37
	-8134 Sep 08 j 08:41	0°♑		direct	-8129 Jul 05 j 12:08	5°♎18'19	
	-8134 Nov 18 j 07:00	0°♒			-8129 Sep 17 j 09:30	0°♌	
retrograde	-8134 Dec 09 j 18:57	2°♒37'08			-8129 Nov 08 j 20:13	0°♌	
	-8134 Dec 30 j 04:25	30°♒			-8129 Dec 27 j 23:53	0°♑	
opposition	-8133 Jan 13 j 15:18	25°♒29'27	5°55'28		-8128 Feb 14 j 08:57	0°♎	
greatest brilliancy	-8133 Jan 15 j 06:13	24°♒55'19	-2.1m	asc. node	-8128 Mar 04 j 04:33	11°♎45'27	
min. Earth dist.	-8133 Jan 21 j 20:12	22°♒37'36	0.50792 AU		-8128 Apr 02 j 03:26	0°♏	
direct	-8133 Feb 21 j 03:07	16°♒45'54		evening set	-8128 Apr 14 j 17:15	7°♏59'58	
	-8133 Apr 10 j 20:03	0°♒		max. Earth dist.	-8128 May 14 j 06:29	27°♏01'57	2.63223 AU
	-8133 May 31 j 22:30	0°♓			-8128 May 18 j 19:48	0°♐	
desc. node	-8133 Jun 22 j 12:49	14°♓53'12					
	-8133 Jul 13 j 11:59	0°♏		conjunction	-8128 Jun 01 j 05:48	8°♐48'13	0°47'26
	-8133 Aug 22 j 20:32	0°♍		minimum elong	-8128 Jun 01 j 04:21	8°♐45'49	0°47'26
	-8133 Oct 02 j 00:23	0°♎			-8128 Jul 02 j 22:32	0°♑	
	-8133 Nov 12 j 02:18	0°♌		morning rise	-8128 Jul 18 j 04:20	10°♑24'28	
	-8133 Dec 24 j 17:28	0°♌			-8128 Aug 15 j 07:16	0°♒	
evening set	-8132 Jan 25 j 08:00	21°♌28'39			-8128 Sep 26 j 01:43	0°♓	
	-8132 Feb 07 j 02:50	0°♑			-8128 Nov 05 j 16:00	0°♏	
					-8128 Dec 15 j 17:30	0°♍	
conjunction	-8132 Mar 16 j 05:15	24°♑57'07	-0°40'50		-8127 Jan 25 j 05:25	0°♎	
minimum elong	-8132 Mar 16 j 06:44	24°♑59'30	0°41'20	desc. node	-8127 Feb 11 j 21:33	12°♎42'53	
	-8132 Mar 24 j 00:40	0°♎			-8127 Mar 08 j 21:50	0°♌	
max. Earth dist.	-8132 Mar 27 j 02:28	1°♎58'58	2.64810 AU		-8127 Apr 27 j 21:15	0°♌	
morning rise	-8132 May 03 j 10:29	25°♎53'05		retrograde	-8127 Jun 21 j 02:21	16°♎06'42	
	-8132 May 09 j 21:36	0°♏		min. Earth dist.	-8127 Jul 22 j 13:09	9°♌25'31	0.53877 AU
asc. node	-8132 May 30 j 15:32	13°♏11'16		greatest brilliancy	-8127 Jul 28 j 08:39	7°♌12'52	-1.9m
	-8132 Jun 26 j 03:26	0°♐		opposition	-8127 Jul 29 j 15:55	6°♌43'05	-5°34'39

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 28

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8127 Aug 21 j 03:41	30° $\mathbb{R}\mathbb{M}$		conjunction	-8122 Nov 09 j 06:01	21° $\mathbb{M}$ 05'34	-0°26'35
direct	-8127 Sep 02 j 20:43	28° $\mathbb{M}$ 54'35		minimum elong	-8122 Nov 09 j 03:40	21° $\mathbb{M}$ 01'00	0°26'24
	-8127 Sep 16 j 05:50	0° $\mathcal{A}$			-8122 Nov 20 j 18:03	0° $\mathcal{A}$	
	-8127 Nov 30 j 22:51	0° $\mathcal{B}$		max. Earth dist.	-8122 Dec 22 j 23:57	24° $\mathcal{A}$ 31'53	2.40958 AU
asc. node	-8126 Jan 20 j 04:46	28° $\mathcal{B}$ 11'00			-8122 Dec 30 j 07:53	0° $\mathbb{M}$	
	-8126 Jan 23 j 07:05	0° $\approx$		morning rise	-8121 Jan 13 j 09:41	10° $\mathbb{M}$ 22'22	
	-8126 Mar 13 j 23:21	0° $\mathcal{H}$			-8121 Feb 09 j 16:59	0° $\mathcal{A}$	
	-8126 Apr 30 j 07:17	0° $\mathcal{Y}$			-8121 Mar 25 j 09:32	0° $\mathcal{B}$	
evening set	-8126 May 25 j 02:14	16° $\mathcal{Y}$ 19'15			-8121 May 10 j 21:13	0° $\approx$	
max. Earth dist.	-8126 Jun 12 j 14:45	28° $\mathcal{Y}$ 49'05	2.54730 AU		-8121 Jun 30 j 11:07	0° $\mathcal{H}$	
	-8126 Jun 14 j 08:18	0° $\mathcal{B}$			-8121 Sep 02 j 02:09	0° $\mathcal{Y}$	
				asc. node	-8121 Sep 12 j 16:50	3° $\mathcal{Y}$ 14'30	
conjunction	-8126 Jul 13 j 20:20	20° $\mathcal{B}$ 30'59	1°11'49	retrograde	-8121 Oct 08 j 20:03	7° $\mathcal{Y}$ 00'34	
minimum elong	-8126 Jul 13 j 19:52	20° $\mathcal{B}$ 30'09	1°12'11		-8121 Nov 11 j 08:20	30° $\mathcal{R}\mathcal{H}$	
	-8126 Jul 27 j 03:39	0° $\mathbb{I}$		opposition	-8121 Nov 16 j 09:51	28° $\mathcal{H}$ 02'22	2°27'59
morning rise	-8126 Sep 03 j 16:27	28° $\mathbb{I}$ 14'42		greatest brilliancy	-8121 Nov 16 j 16:26	27° $\mathcal{H}$ 55'54	-1.5m
	-8126 Sep 06 j 00:46	0° $\mathcal{E}$		min. Earth dist.	-8121 Nov 20 j 05:49	26° $\mathcal{H}$ 32'05	0.64093 AU
	-8126 Oct 15 j 13:07	0° $\mathcal{Q}$		direct	-8121 Dec 27 j 10:23	18° $\mathcal{H}$ 02'46	
	-8126 Nov 23 j 10:02	0° $\mathbb{M}$			-8120 Feb 14 j 08:00	0° $\mathcal{Y}$	
desc. node	-8126 Dec 30 j 17:23	28° $\mathbb{M}$ 39'38			-8120 Apr 10 j 15:24	0° $\mathcal{B}$	
	-8125 Jan 01 j 11:39	0° $\mathcal{A}$			-8120 May 26 j 03:45	0° $\mathbb{I}$	
	-8125 Feb 10 j 18:02	0° $\mathbb{M}$			-8120 Jul 06 j 12:39	0° $\mathcal{E}$	
	-8125 Mar 25 j 13:27	0° $\mathcal{A}$			-8120 Aug 14 j 18:58	0° $\mathcal{Q}$	
	-8125 May 12 j 18:24	0° $\mathcal{B}$		desc. node	-8120 Aug 21 j 03:08	4° $\mathcal{Q}$ 55'32	
retrograde	-8125 Jul 30 j 11:04	27° $\mathcal{B}$ 43'30			-8120 Sep 22 j 06:03	0° $\mathbb{M}$	
min. Earth dist.	-8125 Sep 04 j 18:28	19° $\mathcal{B}$ 13'51	0.63206 AU		-8120 Oct 30 j 23:10	0° $\mathcal{A}$	
opposition	-8125 Sep 08 j 09:25	17° $\mathcal{B}$ 46'42	-3°21'25	evening set	-8120 Nov 11 j 08:07	8° $\mathcal{A}$ 40'38	
greatest brilliancy	-8125 Sep 08 j 00:15	17° $\mathcal{B}$ 55'54	-1.5m		-8120 Dec 09 j 19:11	0° $\mathbb{M}$	
direct	-8125 Oct 16 j 19:17	8° $\mathcal{B}$ 41'49					
asc. node	-8125 Dec 08 j 08:52	21° $\mathcal{B}$ 40'52		conjunction	-8119 Jan 10 j 09:34	22° $\mathbb{M}$ 55'35	-1°10'58
	-8125 Dec 26 j 20:24	0° $\approx$		minimum elong	-8119 Jan 10 j 08:54	22° $\mathbb{M}$ 54'24	1°11'22
	-8124 Feb 20 j 15:04	0° $\mathcal{H}$			-8119 Jan 20 j 09:14	0° $\mathcal{A}$	
	-8124 Apr 09 j 20:20	0° $\mathcal{Y}$		max. Earth dist.	-8119 Feb 15 j 18:41	18° $\mathcal{A}$ 18'44	2.53430 AU
	-8124 May 25 j 10:24	0° $\mathcal{B}$			-8119 Mar 05 j 00:52	0° $\mathcal{B}$	
	-8124 Jul 07 j 04:08	0° $\mathbb{I}$		morning rise	-8119 Mar 07 j 18:08	1° $\mathcal{B}$ 49'18	
evening set	-8124 Jul 09 j 17:47	1° $\mathbb{I}$ 51'33			-8119 Apr 19 j 18:40	0° $\approx$	
max. Earth dist.	-8124 Jul 28 j 06:14	15° $\mathbb{I}$ 26'39	2.42813 AU		-8119 Jun 06 j 13:24	0° $\mathcal{H}$	
	-8124 Aug 16 j 16:19	0° $\mathcal{E}$			-8119 Jul 27 j 00:36	0° $\mathcal{Y}$	
				asc. node	-8119 Jul 30 j 15:13	2° $\mathcal{Y}$ 03'01	
conjunction	-8124 Sep 03 j 18:00	13° $\mathcal{E}$ 47'21	0°50'06		-8119 Sep 22 j 21:24	0° $\mathcal{B}$	
minimum elong	-8124 Sep 03 j 20:44	13° $\mathcal{E}$ 52'36	0°50'37	retrograde	-8119 Nov 19 j 11:42	15° $\mathcal{B}$ 13'24	
	-8124 Sep 24 j 16:41	0° $\mathcal{Q}$		opposition	-8119 Dec 25 j 16:45	7° $\mathcal{B}$ 26'14	5°11'45
	-8124 Nov 02 j 01:21	0° $\mathbb{M}$		greatest brilliancy	-8119 Dec 26 j 22:02	6° $\mathcal{B}$ 59'13	-1.8m
morning rise	-8124 Nov 05 j 00:28	2° $\mathbb{M}$ 19'08		min. Earth dist.	-8118 Jan 02 j 00:11	4° $\mathcal{B}$ 44'57	0.55484 AU
desc. node	-8124 Nov 16 j 11:02	11° $\mathbb{M}$ 15'31			-8118 Jan 17 j 12:34	30° $\mathcal{R}\mathcal{Y}$	
	-8124 Dec 10 j 15:13	0° $\mathcal{A}$		direct	-8118 Feb 03 j 12:10	28° $\mathcal{Y}$ 02'46	
	-8123 Jan 19 j 07:09	0° $\mathbb{M}$			-8118 Feb 21 j 02:50	0° $\mathcal{B}$	
	-8123 Mar 01 j 21:37	0° $\mathcal{A}$			-8118 Apr 28 j 12:26	0° $\mathbb{I}$	
	-8123 Apr 15 j 09:49	0° $\mathcal{B}$			-8118 Jun 12 j 13:56	0° $\mathcal{E}$	
	-8123 Jun 03 j 19:44	0° $\approx$		desc. node	-8118 Jul 09 j 04:13	19° $\mathcal{E}$ 21'07	
	-8123 Aug 11 j 14:26	0° $\mathcal{H}$			-8118 Jul 23 j 09:44	0° $\mathcal{Q}$	
retrograde	-8123 Sep 02 j 15:51	2° $\mathcal{H}$ 49'31			-8118 Aug 31 j 20:21	0° $\mathbb{M}$	
	-8123 Sep 23 j 06:01	30° $\mathcal{R}\approx$			-8118 Oct 10 j 08:39	0° $\mathcal{A}$	
opposition	-8123 Oct 12 j 10:44	23° $\approx$ 09'11	-0°30'16		-8118 Nov 19 j 21:58	0° $\mathbb{M}$	
greatest brilliancy	-8123 Oct 12 j 11:01	23° $\approx$ 08'54	-1.4m		-8117 Jan 01 j 03:02	0° $\mathcal{A}$	
min. Earth dist.	-8123 Oct 12 j 13:26	23° $\approx$ 06'28	0.66741 AU	evening set	-8117 Jan 06 j 19:38	3° $\mathcal{A}$ 56'50	
asc. node	-8123 Oct 25 j 13:54	18° $\approx$ 09'47			-8117 Feb 14 j 04:54	0° $\mathcal{B}$	
direct	-8123 Nov 21 j 19:41	13° $\approx$ 22'24					
	-8122 Jan 21 j 15:09	0° $\mathcal{H}$		conjunction	-8117 Feb 28 j 15:50	9° $\mathcal{B}$ 35'02	-0°55'18
	-8122 Mar 18 j 19:31	0° $\mathcal{Y}$		minimum elong	-8117 Feb 28 j 17:32	9° $\mathcal{B}$ 37'50	0°55'49
	-8122 May 05 j 06:58	0° $\mathcal{B}$		max. Earth dist.	-8117 Mar 18 j 04:02	21° $\mathcal{B}$ 03'20	2.62605 AU
	-8122 Jun 17 j 14:07	0° $\mathbb{I}$			-8117 Mar 31 j 23:03	0° $\approx$	
	-8122 Jul 28 j 03:51	0° $\mathcal{E}$		morning rise	-8117 Apr 19 j 10:51	11° $\approx$ 53'14	
	-8122 Sep 05 j 01:29	0° $\mathcal{Q}$			-8117 May 17 j 21:59	0° $\mathcal{H}$	
evening set	-8122 Sep 06 j 13:59	1° $\mathcal{Q}$ 11'17		asc. node	-8117 Jun 17 j 09:49	19° $\mathcal{H}$ 12'54	
desc. node	-8122 Oct 04 j 05:42	22° $\mathcal{Q}$ 53'38			-8117 Jul 04 j 15:29	0° $\mathcal{Y}$	
	-8122 Oct 13 j 06:44	0° $\mathbb{M}$			-8117 Aug 22 j 07:02	0° $\mathcal{B}$	

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8117 Oct 12 j 11:45	0°♊			-8112 Dec 11 j 22:31	0°♊		
	-8117 Dec 15 j 17:52	0°♋			-8111 Jan 31 j 13:58	0°♋		
retrograde	-8116 Jan 17 j 09:32	5°♋45'56		asc. node	-8111 Feb 05 j 19:11	3°♋09'54		
opposition	-8116 Feb 18 j 16:07	29°♊51'43	5°44'06		-8111 Mar 21 j 07:17	0°♋		
	-8116 Feb 18 j 05:21	30°♋♊			-8111 May 07 j 07:14	0°♋		
greatest brilliancy	-8116 Feb 20 j 06:59	29°♊21'38	-2.5m	evening set	-8111 May 08 j 23:14	1°♋05'11		
min. Earth dist.	-8116 Feb 26 j 03:38	27°♊33'44	0.43145 AU	max. Earth dist.	-8111 May 31 j 05:52	15°♋46'46	2.58606 AU	
direct	-8116 Mar 24 j 15:50	22°♊50'47			-8111 Jun 21 j 08:00	0°♋		
	-8116 Apr 27 j 15:48	0°♋						
desc. node	-8116 May 26 j 09:23	13°♋52'47		conjunction	-8111 Jun 26 j 11:12	3°♋30'40	1°06'03	
	-8116 Jun 21 j 21:49	0°♌		minimum elong	-8111 Jun 26 j 09:57	3°♋28'31	1°06'17	
	-8116 Aug 04 j 22:12	0°♍			-8111 Aug 03 j 07:30	0°♌		
	-8116 Sep 16 j 02:28	0°♌		morning rise	-8111 Aug 14 j 17:46	8°♌12'28		
	-8116 Oct 28 j 12:59	0°♍			-8111 Sep 13 j 11:30	0°♋		
	-8116 Dec 11 j 03:30	0°♎			-8111 Oct 23 j 07:47	0°♌		
	-8115 Jan 25 j 04:44	0°♊			-8111 Dec 01 j 12:52	0°♍		
evening set	-8115 Feb 19 j 21:06	16°♊43'31			-8110 Jan 09 j 23:15	0°♌		
	-8115 Mar 12 j 11:27	0°♋		desc. node	-8110 Jan 16 j 12:28	4°♌54'53		
					-8110 Feb 19 j 18:09	0°♍		
conjunction	-8115 Apr 09 j 16:11	18°♋03'15	-0°13'54		-8110 Apr 04 j 18:49	0°♎		
minimum elong	-8115 Apr 09 j 16:44	18°♋04'08	0°14'18		-8110 May 28 j 02:49	0°♊		
behind sun begin	-8115 Apr 09 j 08:20	17°♋50'43		retrograde	-8110 Jul 16 j 00:12	12°♊54'25		
behind sun end	-8115 Apr 10 j 01:08	18°♋17'33		min. Earth dist.	-8110 Aug 19 j 14:02	5°♊02'22	0.60204 AU	
max. Earth dist.	-8115 Apr 11 j 05:58	19°♋03'37	2.66612 AU	opposition	-8110 Aug 24 j 15:40	3°♊01'51	-4°21'13	
	-8115 Apr 28 j 09:02	0°♋		greatest brilliancy	-8110 Aug 23 j 22:44	3°♊18'38	-1.6m	
asc. node	-8115 May 04 j 02:09	3°♋39'02			-8110 Sep 01 j 14:02	30°♋♎		
morning rise	-8115 May 26 j 07:49	17°♋52'55		direct	-8110 Sep 30 j 23:19	24°♎21'45		
	-8115 Jun 14 j 04:18	0°♋			-8110 Nov 02 j 09:23	0°♊		
	-8115 Jul 30 j 09:47	0°♋		asc. node	-8110 Dec 24 j 22:23	22°♊45'18		
	-8115 Sep 14 j 00:02	0°♌			-8109 Jan 07 j 16:17	0°♋		
	-8115 Oct 29 j 08:44	0°♋			-8109 Mar 01 j 01:26	0°♋		
	-8115 Dec 14 j 13:18	0°♌			-8109 Apr 18 j 07:44	0°♋		
	-8114 Feb 03 j 09:56	0°♍			-8109 Jun 02 j 15:03	0°♋		
retrograde	-8114 Apr 04 j 09:18	18°♍46'53		evening set	-8109 Jun 21 j 11:16	13°♋01'22		
desc. node	-8114 Apr 13 j 13:44	18°♍13'41		max. Earth dist.	-8109 Jul 06 j 23:30	23°♋59'16	2.47639 AU	
min. Earth dist.	-8114 May 02 j 11:41	14°♍10'56	0.38553 AU		-8109 Jul 15 j 08:34	0°♌		
opposition	-8114 May 06 j 04:12	13°♍09'34	-1°45'31					
greatest brilliancy	-8114 May 05 j 20:46	13°♍14'43	-2.9m	conjunction	-8109 Aug 13 j 11:02	21°♌21'26	1°06'07	
direct	-8114 Jun 05 j 06:43	8°♍01'47		minimum elong	-8109 Aug 13 j 12:43	21°♌24'34	1°06'37	
	-8114 Aug 11 j 16:55	0°♌			-8109 Aug 24 j 23:37	0°♋		
	-8114 Oct 02 j 02:36	0°♍			-8109 Oct 03 j 03:49	0°♌		
	-8114 Nov 18 j 19:59	0°♎		morning rise	-8109 Oct 10 j 05:49	5°♌29'50		
	-8113 Jan 05 j 03:45	0°♊			-8109 Nov 10 j 16:11	0°♍		
	-8113 Feb 21 j 16:11	0°♋		desc. node	-8109 Dec 04 j 07:10	18°♍22'20		
asc. node	-8113 Mar 21 j 20:07	17°♋47'35			-8109 Dec 19 j 09:10	0°♌		
evening set	-8113 Mar 31 j 15:41	24°♋00'58			-8108 Jan 28 j 04:12	0°♍		
	-8113 Apr 10 j 01:39	0°♋			-8108 Mar 10 j 00:49	0°♎		
max. Earth dist.	-8113 May 05 j 13:33	16°♋19'09	2.65206 AU		-8108 Apr 24 j 07:26	0°♊		
					-8108 Jun 15 j 20:22	0°♋		
conjunction	-8113 May 18 j 01:59	24°♋24'24	0°31'51	retrograde	-8108 Aug 20 j 03:16	19°♋43'55		
minimum elong	-8113 May 18 j 00:52	24°♋22'36	0°31'43	min. Earth dist.	-8108 Sep 27 j 18:50	10°♋25'58	0.66096 AU	
	-8113 May 26 j 16:28	0°♋		opposition	-8108 Sep 29 j 03:04	9°♋53'32	-1°38'13	
morning rise	-8113 Jul 03 j 08:12	24°♋52'00		greatest brilliancy	-8108 Sep 29 j 01:42	9°♋54'55	-1.4m	
	-8113 Jul 10 j 23:37	0°♋		direct	-8108 Nov 07 j 21:14	0°♋19'43		
	-8113 Aug 23 j 17:50	0°♌		asc. node	-8108 Nov 11 j 03:15	0°♋23'37		
	-8113 Oct 05 j 02:27	0°♋			-8107 Feb 03 j 10:45	0°♋		
	-8113 Nov 15 j 10:41	0°♌			-8107 Mar 27 j 14:49	0°♋		
	-8113 Dec 26 j 10:42	0°♍			-8107 May 13 j 02:47	0°♋		
	-8112 Feb 06 j 07:58	0°♌			-8107 Jun 25 j 02:41	0°♌		
desc. node	-8112 Feb 29 j 14:38	15°♌47'30			-8107 Aug 04 j 14:49	0°♋		
	-8112 Mar 23 j 06:08	0°♍		evening set	-8107 Aug 12 j 23:56	6°♋22'58		
retrograde	-8112 Jun 03 j 00:50	26°♍17'41			-8107 Sep 12 j 12:40	0°♌		
min. Earth dist.	-8112 Jul 02 j 08:50	20°♍27'52	0.49048 AU					
greatest brilliancy	-8112 Jul 08 j 18:03	18°♍09'51	-2.2m	conjunction	-8107 Oct 13 j 08:37	24°♌10'53	0°05'51	
opposition	-8112 Jul 10 j 08:02	17°♍35'29	-5°52'40	minimum elong	-8107 Oct 13 j 09:10	24°♌11'58	0°06'11	
direct	-8112 Aug 12 j 23:01	10°♍30'00		behind sun begin	-8107 Oct 12 j 07:33	23°♌21'40		
	-8112 Oct 17 j 06:07	0°♎		behind sun end	-8107 Oct 14 j 10:47	25°♌02'17		

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 30

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

max. Earth dist.	-8107 Oct 18 j 08:44	28°Ω06'48	2.37978 AU	min. Earth dist.	-8101 Feb 03 j 00:06	4°Π27'58	0.48022 AU
	-8107 Oct 20 j 18:24	0°Π			-8101 Feb 20 j 11:00	30°R8	
desc. node	-8107 Oct 21 j 00:10	0°Π11'18		direct	-8101 Mar 04 j 03:09	29°803'43	
	-8107 Nov 28 j 05:48	0°Ω			-8101 Mar 15 j 21:59	0°Π	
morning rise	-8107 Dec 18 j 14:48	15°Ω35'33			-8101 May 23 j 02:26	0°Ω	
	-8106 Jan 06 j 19:10	0°Π		desc. node	-8101 Jun 13 j 00:55	13°Ω35'59	
	-8106 Feb 17 j 04:24	0°♂			-8101 Jul 06 j 15:32	0°Ω	
	-8106 Apr 02 j 00:43	0°Σ			-8101 Aug 16 j 20:20	0°Π	
	-8106 May 19 j 04:25	0°≈			-8101 Sep 26 j 12:43	0°Ω	
	-8106 Jul 11 j 09:46	0°K			-8101 Nov 06 j 23:16	0°Π	
retrograde	-8106 Sep 24 j 08:12	23°K42'31			-8101 Dec 19 j 20:42	0°♂	
asc. node	-8106 Sep 29 j 07:07	23°K32'59			-8100 Feb 02 j 10:06	0°Σ	
opposition	-8106 Nov 02 j 12:40	14°K24'53	1°18'55	evening set	-8100 Feb 04 j 07:02	1°Σ14'15	
greatest brilliancy	-8106 Nov 02 j 14:37	14°K22'57	-1.4m		-8100 Mar 19 j 10:01	0°≈	
min. Earth dist.	-8106 Nov 04 j 21:52	13°K28'05	0.65886 AU				
direct	-8106 Dec 13 j 11:45	4°K26'07		conjunction	-8100 Mar 25 j 07:46	3°≈48'15	-0°31'21
	-8105 Mar 01 j 11:52	0°Υ		minimum elong	-8100 Mar 25 j 08:57	3°≈50'10	0°31'48
	-8105 Apr 21 j 08:23	0°8		max. Earth dist.	-8100 Apr 01 j 19:01	8°≈36'11	2.65669 AU
	-8105 Jun 04 j 15:46	0°Π			-8100 May 05 j 06:16	0°K	
	-8105 Jul 15 j 14:17	0°Ω		morning rise	-8100 May 11 j 20:57	4°K12'52	
	-8105 Aug 23 j 15:22	0°Ω		asc. node	-8100 May 20 j 19:55	9°K55'26	
desc. node	-8105 Sep 07 j 21:06	11°Ω54'36			-8100 Jun 21 j 07:29	0°Υ	
	-8105 Sep 30 j 22:39	0°Π			-8100 Aug 07 j 05:11	0°8	
evening set	-8105 Oct 17 j 17:16	13°Π07'08			-8100 Sep 23 j 04:18	0°Π	
	-8105 Nov 08 j 12:06	0°Ω			-8100 Nov 10 j 06:49	0°Ω	
	-8105 Dec 18 j 04:16	0°Π			-8099 Jan 02 j 13:08	0°Ω	
conjunction	-8105 Dec 19 j 13:27	1°Π01'27	-1°02'27	retrograde	-8099 Mar 04 j 22:46	18°Ω21'49	
minimum elong	-8105 Dec 19 j 10:57	0°Π56'50	1°02'39	opposition	-8099 Apr 04 j 12:40	13°Ω16'07	2°00'53
	-8104 Jan 28 j 14:54	0°♂		greatest brilliancy	-8099 Apr 04 j 18:40	13°Ω12'05	-2.9m
max. Earth dist.	-8104 Feb 01 j 00:20	2°♂23'30	2.48690 AU	min. Earth dist.	-8099 Apr 06 j 06:09	12°Ω48'18	0.38216 AU
morning rise	-8104 Feb 17 j 11:58	13°♂52'28		desc. node	-8099 Apr 30 j 05:00	8°Ω11'49	
	-8104 Mar 12 j 04:59	0°Σ		direct	-8099 May 05 j 10:49	8°Ω01'04	
	-8104 Apr 27 j 02:21	0°≈			-8099 Jul 10 j 06:02	0°Π	
	-8104 Jun 14 j 13:29	0°K			-8099 Aug 28 j 15:01	0°Ω	
	-8104 Aug 06 j 09:50	0°Υ			-8099 Oct 13 j 07:09	0°Π	
asc. node	-8104 Aug 16 j 07:22	5°Υ05'47			-8099 Nov 27 j 17:57	0°♂	
retrograde	-8104 Nov 01 j 15:40	29°Υ40'00			-8098 Jan 12 j 21:51	0°Σ	
opposition	-8104 Dec 08 j 23:11	21°Υ20'27	4°12'46	evening set	-8098 Feb 28 j 19:37	0°≈	
greatest brilliancy	-8104 Dec 09 j 18:11	21°Υ02'20	-1.6m	asc. node	-8098 Mar 16 j 11:30	9°≈57'53	
min. Earth dist.	-8104 Dec 14 j 23:59	19°Υ02'44	0.59540 AU		-8098 Apr 07 j 13:31	24°≈01'10	
direct	-8103 Jan 18 j 13:32	11°Υ34'00		max. Earth dist.	-8098 Apr 16 j 22:36	0°K	
	-8103 Mar 20 j 23:08	0°8			-8098 Apr 26 j 03:42	5°K53'12	2.66392 AU
	-8103 May 10 j 13:02	0°Π		conjunction	-8098 May 03 j 04:08	10°K23'00	0°14'36
	-8103 Jun 22 j 10:22	0°Ω		minimum elong	-8098 May 03 j 03:35	10°K22'08	0°14'21
desc. node	-8103 Jul 25 j 22:07	25°Ω03'40		behind sun begin	-8098 May 02 j 19:15	10°K08'46	
	-8103 Aug 01 j 09:18	0°Ω		behind sun end	-8098 May 03 j 11:55	10°K35'29	
	-8103 Sep 09 j 07:03	0°Π			-8098 Jun 02 j 13:44	0°Υ	
	-8103 Oct 18 j 09:03	0°Ω		morning rise	-8098 Jun 18 j 06:17	10°Υ14'13	
	-8103 Nov 27 j 13:09	0°Π			-8098 Jul 18 j 03:30	0°8	
evening set	-8103 Dec 17 j 12:03	14°Π27'50			-8098 Aug 31 j 10:51	0°Π	
	-8102 Jan 08 j 10:15	0°♂			-8098 Oct 13 j 15:29	0°Ω	
					-8098 Nov 25 j 03:08	0°Ω	
conjunction	-8102 Feb 10 j 20:56	23°♂00'27	-1°06'06		-8097 Jan 06 j 18:16	0°Π	
minimum elong	-8102 Feb 10 j 22:20	23°♂02'48	1°06'37		-8097 Feb 20 j 17:22	0°Ω	
	-8102 Feb 21 j 06:18	0°Σ		desc. node	-8097 Mar 18 j 08:37	15°Ω00'57	
max. Earth dist.	-8102 Mar 07 j 14:05	9°Σ31'44	2.59588 AU		-8097 Apr 22 j 18:27	0°Π	
morning rise	-8102 Apr 03 j 18:51	27°Σ19'05		retrograde	-8097 May 14 j 10:36	3°Π08'28	
	-8102 Apr 07 j 22:25	0°≈			-8097 Jun 04 j 16:12	30°RΩ	
	-8102 May 25 j 01:52	0°K		min. Earth dist.	-8097 Jun 10 j 21:42	28°Ω07'57	0.44109 AU
asc. node	-8102 Jul 04 j 02:40	24°K51'14		greatest brilliancy	-8097 Jun 17 j 06:57	26°Ω01'43	-2.5m
	-8102 Jul 12 j 12:39	0°Υ		opposition	-8097 Jun 18 j 19:24	25°Ω31'23	-5°23'20
	-8102 Sep 01 j 03:10	0°8		direct	-8097 Jul 20 j 19:49	19°Ω16'20	
	-8102 Oct 29 j 06:15	0°Π			-8097 Sep 03 j 20:43	0°Π	
retrograde	-8102 Dec 22 j 17:31	13°Π58'46			-8097 Nov 01 j 14:50	0°♂	
opposition	-8101 Jan 25 j 15:54	7°Π16'20	6°06'35		-8097 Dec 22 j 08:17	0°Σ	
greatest brilliancy	-8101 Jan 27 j 10:12	6°Π40'36	-2.2m		-8096 Feb 09 j 09:04	0°≈	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 31

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

asc. node	-8096 Feb 23 j 10:30	8° $\approx$ 42'41			-8092 Dec 05 j 19:30	0° $\underline{\text{A}}$	
	-8096 Mar 28 j 10:36	0° $\text{H}$			-8091 Jan 14 j 09:19	0° $\text{M}$	
evening set	-8096 Apr 23 j 10:48	16° $\text{H}$ 33'21			-8091 Feb 24 j 20:05	0° $\text{A}$	
	-8096 May 14 j 05:29	0° $\text{Y}$			-8091 Apr 09 j 23:41	0° $\text{Z}$	
max. Earth dist.	-8096 May 20 j 06:14	3° $\text{Y}$ 56'38	2.61772 AU		-8091 May 28 j 06:16	0° $\approx$	
					-8091 Jul 26 j 05:40	0° $\text{H}$	
conjunction	-8096 Jun 10 j 04:55	17° $\text{Y}$ 48'03	0°55'18	retrograde	-8091 Sep 10 j 11:43	10° $\text{H}$ 43'41	
minimum elong	-8096 Jun 10 j 03:24	17° $\text{Y}$ 45'33	0°55'22	asc. node	-8091 Oct 15 j 20:47	2° $\text{H}$ 52'01	
	-8096 Jun 28 j 07:35	0° $\text{B}$		opposition	-8091 Oct 20 j 02:57	1° $\text{H}$ 10'27	0°09'50
morning rise	-8096 Jul 27 j 19:00	20° $\text{B}$ 19'16		greatest brilliancy	-8091 Oct 20 j 03:04	1° $\text{H}$ 10'20	-1.4m
	-8096 Aug 10 j 12:51	0° $\text{II}$		min. Earth dist.	-8091 Oct 21 j 01:20	0° $\text{H}$ 48'02	0.66708 AU
	-8096 Sep 21 j 01:50	0° $\text{E}$			-8091 Oct 23 j 01:28	30° $\text{R}$ $\approx$	
	-8096 Oct 31 j 08:58	0° $\Omega$		direct	-8091 Nov 29 j 18:36	21° $\approx$ 18'02	
	-8096 Dec 10 j 01:51	0° $\text{M}$			-8090 Jan 10 j 07:37	0° $\text{H}$	
	-8095 Jan 19 j 02:14	0° $\underline{\text{A}}$			-8090 Mar 12 j 13:43	0° $\text{Y}$	
desc. node	-8095 Feb 02 j 07:05	10° $\underline{\text{A}}$ 25'18			-8090 Apr 30 j 00:10	0° $\text{B}$	
	-8095 Mar 01 j 19:53	0° $\text{M}$			-8090 Jun 12 j 15:08	0° $\text{II}$	
	-8095 Apr 17 j 10:50	0° $\text{A}$			-8090 Jul 23 j 08:05	0° $\text{E}$	
retrograde	-8095 Jun 30 j 13:01	26° $\text{A}$ 38'12			-8090 Aug 31 j 07:00	0° $\Omega$	
min. Earth dist.	-8095 Aug 02 j 03:41	19° $\text{A}$ 30'21	0.56337 AU	evening set	-8090 Sep 21 j 05:11	16° $\Omega$ 23'42	
opposition	-8095 Aug 08 j 14:21	17° $\text{A}$ 00'30	-5°12'25	desc. node	-8090 Sep 24 j 16:16	19° $\Omega$ 06'52	
greatest brilliancy	-8095 Aug 07 j 12:16	17° $\text{A}$ 25'48	-1.8m		-8090 Oct 08 j 12:44	0° $\text{M}$	
direct	-8095 Sep 13 j 15:03	8° $\text{A}$ 51'39			-8090 Nov 16 j 00:23	0° $\underline{\text{A}}$	
	-8095 Nov 22 j 11:33	0° $\text{Z}$					
asc. node	-8094 Jan 10 j 12:24	26° $\text{Z}$ 02'03		conjunction	-8090 Nov 24 j 05:36	6° $\underline{\text{A}}$ 19'04	-0°42'29
	-8094 Jan 17 j 11:24	0° $\approx$		minimum elong	-8090 Nov 24 j 02:26	6° $\underline{\text{A}}$ 12'59	0°42'26
	-8094 Mar 08 j 22:41	0° $\text{H}$			-8090 Dec 25 j 14:14	0° $\text{M}$	
	-8094 Apr 25 j 14:03	0° $\text{Y}$		max. Earth dist.	-8089 Jan 10 j 01:47	11° $\text{M}$ 24'17	2.43612 AU
evening set	-8094 Jun 03 j 16:13	25° $\text{Y}$ 52'40		morning rise	-8089 Jan 26 j 19:27	23° $\text{M}$ 30'12	
	-8094 Jun 09 j 17:39	0° $\text{B}$			-8089 Feb 04 j 22:38	0° $\text{A}$	
max. Earth dist.	-8094 Jun 20 j 11:12	7° $\text{B}$ 22'40	2.52332 AU		-8089 Mar 20 j 12:44	0° $\text{Z}$	
	-8094 Jul 22 j 12:37	0° $\text{II}$			-8089 May 05 j 16:42	0° $\approx$	
					-8089 Jun 24 j 05:52	0° $\text{H}$	
conjunction	-8094 Jul 24 j 09:18	1° $\text{II}$ 20'25	1°12'08		-8089 Aug 20 j 17:56	0° $\text{Y}$	
minimum elong	-8094 Jul 24 j 09:31	1° $\text{II}$ 20'49	1°12'35	asc. node	-8089 Sep 02 j 22:42	5° $\text{Y}$ 28'33	
	-8094 Sep 01 j 07:41	0° $\text{E}$		retrograde	-8089 Oct 17 j 12:14	15° $\text{Y}$ 18'24	
morning rise	-8094 Sep 16 j 02:12	11° $\text{E}$ 09'24		opposition	-8089 Nov 24 j 16:53	6° $\text{Y}$ 32'34	3°07'16
	-8094 Oct 10 j 16:49	0° $\Omega$		greatest brilliancy	-8089 Nov 25 j 03:18	6° $\text{Y}$ 22'26	-1.5m
	-8094 Nov 18 j 09:59	0° $\text{M}$		min. Earth dist.	-8089 Nov 29 j 08:20	4° $\text{Y}$ 44'12	0.62731 AU
desc. node	-8094 Dec 21 j 02:46	25° $\text{M}$ 15'29			-8089 Dec 12 j 21:40	30° $\text{R}$ $\text{H}$	
	-8094 Dec 27 j 07:32	0° $\underline{\text{A}}$		direct	-8088 Jan 04 j 16:23	26° $\text{H}$ 35'04	
	-8093 Feb 05 j 08:06	0° $\text{M}$			-8088 Jan 28 j 23:24	0° $\text{Y}$	
	-8093 Mar 19 j 15:53	0° $\text{A}$			-8088 Apr 03 j 16:55	0° $\text{B}$	
	-8093 May 05 j 08:24	0° $\text{Z}$			-8088 May 20 j 11:06	0° $\text{II}$	
	-8093 Jul 05 j 08:09	0° $\approx$			-8088 Jul 01 j 06:30	0° $\text{E}$	
retrograde	-8093 Aug 07 j 11:39	6° $\approx$ 13'39			-8088 Aug 09 j 17:41	0° $\Omega$	
	-8093 Sep 07 j 02:31	30° $\text{R}$ $\text{Z}$		desc. node	-8088 Aug 11 j 14:29	1° $\Omega$ 26'36	
min. Earth dist.	-8093 Sep 13 j 16:58	27° $\text{Z}$ 25'11	0.64509 AU		-8088 Sep 17 j 07:38	0° $\text{M}$	
opposition	-8093 Sep 16 j 12:07	26° $\text{Z}$ 17'42	-2°44'24		-8088 Oct 26 j 03:02	0° $\underline{\text{A}}$	
greatest brilliancy	-8093 Sep 16 j 06:29	26° $\text{Z}$ 23'22	-1.5m	evening set	-8088 Nov 25 j 01:01	22° $\underline{\text{A}}$ 35'32	
direct	-8093 Oct 25 j 11:00	17° $\text{Z}$ 01'08			-8088 Dec 05 j 00:56	0° $\text{M}$	
asc. node	-8093 Nov 28 j 16:37	23° $\text{Z}$ 09'07			-8087 Jan 15 j 16:24	0° $\text{A}$	
	-8093 Dec 17 j 02:09	0° $\approx$					
	-8092 Feb 14 j 15:32	0° $\text{H}$		conjunction	-8087 Jan 22 j 09:01	4° $\text{A}$ 41'24	-1°11'22
	-8092 Apr 04 j 17:44	0° $\text{Y}$		minimum elong	-8087 Jan 22 j 09:19	4° $\text{A}$ 41'55	1°11'50
	-8092 May 20 j 15:23	0° $\text{B}$		max. Earth dist.	-8087 Feb 23 j 12:16	26° $\text{A}$ 44'24	2.55818 AU
	-8092 Jul 02 j 11:41	0° $\text{II}$			-8087 Feb 28 j 08:32	0° $\text{Z}$	
evening set	-8092 Jul 21 j 11:13	13° $\text{II}$ 52'11		morning rise	-8087 Mar 17 j 23:30	11° $\text{Z}$ 43'39	
	-8092 Aug 12 j 00:19	0° $\text{E}$			-8087 Apr 15 j 00:22	0° $\approx$	
max. Earth dist.	-8092 Aug 15 j 17:37	2° $\text{E}$ 49'22	2.40405 AU		-8087 Jun 01 j 11:33	0° $\text{H}$	
				asc. node	-8087 Jul 20 j 20:37	29° $\text{H}$ 54'34	
conjunction	-8092 Sep 17 j 09:03	27° $\text{E}$ 57'35	0°36'25		-8087 Jul 21 j 00:18	0° $\text{Y}$	
minimum elong	-8092 Sep 17 j 11:40	28° $\text{E}$ 02'41	0°36'54		-8087 Sep 13 j 02:17	0° $\text{B}$	
	-8092 Sep 19 j 23:55	0° $\Omega$		retrograde	-8087 Nov 30 j 16:10	25° $\text{B}$ 16'43	
	-8092 Oct 28 j 07:12	0° $\text{M}$		opposition	-8086 Jan 05 j 03:54	17° $\text{B}$ 50'24	5°38'56
desc. node	-8092 Nov 06 j 21:43	7° $\text{M}$ 31'23		greatest brilliancy	-8086 Jan 06 j 14:57	17° $\text{B}$ 18'54	-1.9m
morning rise	-8092 Nov 20 j 18:18	18° $\text{M}$ 20'24		min. Earth dist.	-8086 Jan 13 j 00:56	15° $\text{B}$ 01'01	0.52970 AU

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Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

direct	-8086 Feb 13 j 08:19	8°♄46'19	evening set	-8081 Apr 09 j 07:14	2°♄27'05	
	-8086 Apr 19 j 01:20	0°♄	max. Earth dist.	-8081 May 11 j 06:27	22°♄57'05	2.64216 AU
	-8086 Jun 05 j 18:35	0°♄		-8081 May 22 j 02:53	0°♄	
desc. node	-8086 Jun 29 j 17:10	16°♄57'44				
	-8086 Jul 17 j 11:19	0°♄	conjunction	-8081 May 26 j 17:20	3°♄00'21	0°41'07
	-8086 Aug 26 j 08:40	0°♄	minimum elong	-8081 May 26 j 16:00	2°♄58'10	0°41'04
	-8086 Oct 05 j 04:18	0°♄		-8081 Jul 06 j 08:19	0°♄	
	-8086 Nov 14 j 23:06	0°♄	morning rise	-8081 Jul 12 j 06:46	4°♄01'12	
	-8086 Dec 27 j 08:14	0°♄		-8081 Aug 18 j 21:57	0°♄	
evening set	-8085 Jan 17 j 13:36	14°♄33'30		-8081 Sep 29 j 23:02	0°♄	
	-8085 Feb 09 j 12:58	0°♄		-8081 Nov 09 j 21:05	0°♄	
				-8081 Dec 20 j 07:13	0°♄	
conjunction	-8085 Mar 10 j 06:28	18°♄55'16 -0°47'15		-8080 Jan 30 j 06:37	0°♄	
minimum elong	-8085 Mar 10 j 08:05	18°♄57'55 0°47'46	desc. node	-8080 Feb 20 j 02:32	14°♄42'15	
max. Earth dist.	-8085 Mar 24 j 02:52	27°♄55'03 2.63922 AU		-8080 Mar 13 j 21:37	0°♄	
	-8085 Mar 27 j 08:11	0°♄		-8080 May 07 j 14:54	0°♄	
morning rise	-8085 Apr 28 j 03:17	20°♄23'56	retrograde	-8080 Jun 13 j 14:47	8°♄21'00	
	-8085 May 13 j 05:14	0°♄	min. Earth dist.	-8080 Jul 14 j 02:24	2°♄03'05	0.51759 AU
asc. node	-8085 Jun 07 j 14:20	16°♄04'56		-8080 Jul 19 j 14:48	30°♄	
	-8085 Jun 29 j 15:33	0°♄	greatest brilliancy	-8080 Jul 20 j 05:52	29°♄45'52	-2.0m
	-8085 Aug 16 j 12:30	0°♄	opposition	-8080 Jul 21 j 16:44	29°♄13'20	-5°46'45
	-8085 Oct 04 j 16:25	0°♄	direct	-8080 Aug 25 j 05:23	21°♄43'08	
	-8085 Nov 27 j 20:28	0°♄		-8080 Oct 03 j 19:17	0°♄	
retrograde	-8084 Feb 02 j 16:08	20°♄17'19		-8080 Dec 05 j 03:17	0°♄	
opposition	-8084 Mar 05 j 03:57	14°♄47'57 4°52'57		-8079 Jan 26 j 04:24	0°♄	
greatest brilliancy	-8084 Mar 06 j 09:18	14°♄26'37 -2.7m	asc. node	-8079 Jan 27 j 01:50	0°♄31'56	
min. Earth dist.	-8084 Mar 11 j 06:31	13°♄02'07 0.40839 AU		-8079 Mar 16 j 10:32	0°♄	
direct	-8084 Apr 07 j 11:46	8°♄31'21		-8079 May 02 j 15:44	0°♄	
desc. node	-8084 May 16 j 21:05	17°♄48'07	evening set	-8079 May 18 j 02:37	10°♄07'14	
	-8084 Jun 10 j 06:52	0°♄	max. Earth dist.	-8079 Jun 07 j 03:57	23°♄30'26	2.56549 AU
	-8084 Jul 28 j 01:43	0°♄		-8079 Jun 16 j 17:41	0°♄	
	-8084 Sep 09 j 16:42	0°♄				
	-8084 Oct 22 j 22:35	0°♄	conjunction	-8079 Jul 06 j 05:09	13°♄26'01	1°10'04
	-8084 Dec 06 j 00:52	0°♄	minimum elong	-8079 Jul 06 j 04:16	13°♄24'29	1°10'23
	-8083 Jan 20 j 09:28	0°♄		-8079 Jul 29 j 15:54	0°♄	
evening set	-8083 Feb 28 j 23:40	25°♄36'04	morning rise	-8079 Aug 25 j 18:37	19°♄41'05	
	-8083 Mar 07 j 20:20	0°♄		-8079 Sep 08 j 16:52	0°♄	
max. Earth dist.	-8083 Apr 16 j 17:39	25°♄29'13 2.66770 AU		-8079 Oct 18 j 09:14	0°♄	
				-8079 Nov 26 j 09:36	0°♄	
conjunction	-8083 Apr 18 j 06:44	26°♄28'25 -0°03'30		-8078 Jan 04 j 14:23	0°♄	
minimum elong	-8083 Apr 18 j 06:51	26°♄28'36 0°03'50	desc. node	-8078 Jan 06 j 23:15	1°♄47'34	
behind sun begin	-8083 Apr 17 j 11:43	25°♄58'05		-8078 Feb 14 j 00:26	0°♄	
behind sun end	-8083 Apr 19 j 01:59	26°♄59'08		-8078 Mar 29 j 04:07	0°♄	
	-8083 Apr 23 j 19:14	0°♄		-8078 May 17 j 18:07	0°♄	
asc. node	-8083 Apr 24 j 07:16	0°♄19'14	retrograde	-8078 Jul 24 j 10:15	21°♄58'35	
morning rise	-8083 Jun 03 j 14:52	26°♄10'56	min. Earth dist.	-8078 Aug 28 j 23:48	13°♄45'00	0.61967 AU
	-8083 Jun 09 j 12:44	0°♄	opposition	-8078 Sep 02 j 06:14	12°♄02'49	-3°47'24
	-8083 Jul 25 j 11:54	0°♄	greatest brilliancy	-8078 Sep 01 j 17:56	12°♄15'06	-1.6m
	-8083 Sep 08 j 13:19	0°♄	direct	-8078 Oct 10 j 05:07	3°♄08'13	
	-8083 Oct 22 j 22:57	0°♄	asc. node	-8078 Dec 15 j 05:21	22°♄07'00	
	-8083 Dec 06 j 08:08	0°♄		-8078 Dec 31 j 09:13	0°♄	
	-8082 Jan 21 j 10:41	0°♄		-8077 Feb 23 j 13:42	0°♄	
	-8082 Mar 20 j 01:55	0°♄		-8077 Apr 13 j 09:52	0°♄	
desc. node	-8082 Apr 04 j 00:15	4°♄18'32		-8077 May 28 j 22:17	0°♄	
retrograde	-8082 Apr 20 j 04:58	6°♄02'40	evening set	-8077 Jul 02 j 05:08	23°♄54'08	
min. Earth dist.	-8082 May 17 j 04:13	1°♄31'14 0.40002 AU		-8077 Jul 10 j 17:05	0°♄	
greatest brilliancy	-8082 May 22 j 07:09	0°♄01'22 -2.8m	max. Earth dist.	-8077 Jul 18 j 12:03	5°♄38'52	2.44950 AU
	-8082 May 22 j 09:01	30°♄		-8077 Aug 20 j 07:24	0°♄	
opposition	-8082 May 23 j 03:39	29°♄46'17 -3°32'49				
direct	-8082 Jun 22 j 17:04	24°♄20'37	conjunction	-8077 Aug 25 j 18:42	4°♄08'29	0°58'18
	-8082 Jul 23 j 20:32	0°♄	minimum elong	-8077 Aug 25 j 21:06	4°♄13'03	0°58'48
	-8082 Sep 23 j 17:20	0°♄		-8077 Sep 28 j 09:58	0°♄	
	-8082 Nov 12 j 15:19	0°♄	morning rise	-8077 Oct 25 j 01:54	20°♄48'00	
	-8082 Dec 30 j 21:10	0°♄		-8077 Nov 05 j 20:11	0°♄	
	-8081 Feb 16 j 20:18	0°♄	desc. node	-8077 Nov 24 j 16:39	14°♄42'21	
asc. node	-8081 Mar 12 j 02:27	14°♄36'37		-8077 Dec 14 j 10:56	0°♄	
	-8081 Apr 05 j 10:39	0°♄		-8076 Jan 23 j 03:13	0°♄	



## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 33

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8076 Mar 04 j 18:27	0°♈				-8071 Mar 08 j 08:30	0°♉		
	-8076 Apr 18 j 11:26	0°♊				-8071 May 03 j 10:57	0°♋		
	-8076 Jun 07 j 18:56	0°♌				-8071 Jun 16 j 10:56	0°♍		
retrograde	-8076 Aug 27 j 22:10	27°♎44'12		desc. node		-8071 Jul 16 j 08:34	22°♏02'59		
opposition	-8076 Oct 06 j 20:06	17°♐59'04	-0°58'47			-8071 Jul 26 j 21:10	0°♑		
min. Earth dist.	-8076 Oct 06 j 07:30	18°♐11'44	0.66570 AU			-8071 Sep 04 j 01:27	0°♒		
greatest brilliancy	-8076 Oct 06 j 20:00	17°♐59'10	-1.4m			-8071 Oct 13 j 08:18	0°♓		
asc. node	-8076 Nov 01 j 10:11	9°♑39'45				-8071 Nov 22 j 16:26	0°♐		
direct	-8076 Nov 15 j 23:19	8°♑17'30		evening set		-8071 Dec 29 j 07:30	26°♑14'00		
	-8075 Jan 26 j 16:13	0°♒				-8070 Jan 03 j 16:34	0°♑		
	-8075 Mar 21 j 23:24	0°♓				-8070 Feb 16 j 14:39	0°♒		
	-8075 May 08 j 01:50	0°♉							
	-8075 Jun 20 j 07:10	0°♋		conjunction		-8070 Feb 21 j 05:05	3°♌04'20	-1°00'23	
	-8075 Jul 30 j 21:14	0°♍		minimum elong		-8070 Feb 21 j 06:44	3°♌07'05	1°00'55	
evening set	-8075 Aug 26 j 15:11	20°♎31'15		max. Earth dist.		-8070 Mar 13 j 22:24	16°♌45'37	2.61358 AU	
	-8075 Sep 07 j 19:30	0°♑				-8070 Apr 03 j 06:43	0°♒		
desc. node	-8075 Oct 11 j 11:08	26°♑24'30		morning rise		-8070 Apr 12 j 21:09	6°♒11'12		
	-8075 Oct 16 j 00:47	0°♒				-8070 May 20 j 06:46	0°♑		
				asc. node		-8070 Jun 24 j 08:16	21°♑58'38		
conjunction	-8075 Oct 28 j 12:03	9°♒46'55	-0°12'52			-8070 Jul 07 j 06:44	0°♓		
minimum elong	-8075 Oct 28 j 10:51	9°♒44'34	0°12'37			-8070 Aug 25 j 15:20	0°♉		
behind sun begin	-8075 Oct 27 j 17:04	9°♒09'46				-8070 Oct 17 j 23:04	0°♋		
behind sun end	-8075 Oct 29 j 04:38	10°♒19'22		retrograde		-8069 Jan 05 j 17:05	26°♌15'27		
	-8075 Nov 23 j 11:31	0°♍		opposition		-8069 Feb 07 j 17:23	19°♌59'21	6°01'49	
max. Earth dist.	-8075 Dec 02 j 20:28	7°♍12'39	2.39117 AU	greatest brilliancy		-8069 Feb 09 j 11:37	19°♌25'12	-2.4m	
morning rise	-8074 Jan 02 j 12:15	0°♎22'36		min. Earth dist.		-8069 Feb 15 j 19:15	17°♌23'34	0.45267 AU	
	-8074 Jan 02 j 00:06	0°♎		direct		-8069 Mar 15 j 21:34	12°♌23'58		
	-8074 Feb 12 j 07:41	0°♑				-8069 May 11 j 11:12	0°♍		
	-8074 Mar 28 j 00:05	0°♌		desc. node		-8069 Jun 03 j 13:03	13°♍24'30		
	-8074 May 13 j 15:47	0°♎				-8069 Jun 28 j 21:11	0°♑		
	-8074 Jul 04 j 01:00	0°♑				-8069 Aug 10 j 09:03	0°♒		
	-8074 Sep 15 j 06:59	0°♓				-8069 Sep 20 j 18:15	0°♍		
asc. node	-8074 Sep 19 j 13:51	0°♓44'00				-8069 Nov 01 j 16:10	0°♎		
retrograde	-8074 Oct 02 j 13:34	1°♓44'30				-8069 Dec 14 j 21:22	0°♑		
	-8074 Oct 18 j 22:08	30°♑♑				-8068 Jan 28 j 16:12	0°♌		
opposition	-8074 Nov 10 j 10:59	22°♑37'14	1°59'03	evening set		-8068 Feb 13 j 22:34	10°♌39'52		
greatest brilliancy	-8074 Nov 10 j 15:14	22°♑33'02	-1.4m			-8068 Mar 14 j 19:02	0°♎		
min. Earth dist.	-8074 Nov 13 j 15:54	21°♑21'19	0.65014 AU						
direct	-8074 Dec 21 j 12:08	12°♑37'12		conjunction		-8068 Apr 03 j 05:15	12°♑28'04	-0°21'20	
	-8073 Feb 20 j 17:35	0°♓		minimum elong		-8068 Apr 03 j 06:05	12°♑29'24	0°21'45	
	-8073 Apr 15 j 07:20	0°♉		max. Earth dist.		-8068 Apr 07 j 07:53	15°♑05'54	2.66301 AU	
	-8073 May 30 j 07:43	0°♋				-8068 Apr 30 j 15:39	0°♑		
	-8073 Jul 10 j 12:57	0°♍		asc. node		-8068 May 11 j 00:40	6°♑37'29		
	-8073 Aug 18 j 17:29	0°♑		morning rise		-8068 May 20 j 04:55	12°♑29'09		
desc. node	-8073 Aug 29 j 08:18	8°♑16'23				-8068 Jun 16 j 13:28	0°♓		
	-8073 Sep 26 j 02:44	0°♒				-8068 Aug 02 j 01:43	0°♉		
evening set	-8073 Nov 01 j 09:05	28°♒11'20				-8068 Sep 17 j 05:16	0°♋		
	-8073 Nov 03 j 17:36	0°♍				-8068 Nov 02 j 14:09	0°♍		
	-8073 Dec 13 j 10:53	0°♎				-8068 Dec 20 j 21:29	0°♑		
						-8067 Feb 19 j 03:50	0°♒		
conjunction	-8072 Jan 01 j 19:14	14°♎10'42	-1°08'35	retrograde		-8067 Mar 22 j 08:25	5°♒46'53		
minimum elong	-8072 Jan 01 j 17:46	14°♎08'02	1°08'54	desc. node		-8067 Apr 20 j 18:01	0°♒57'54		
	-8072 Jan 23 j 21:56	0°♑		min. Earth dist.		-8067 Apr 21 j 01:10	0°♒53'05	0.38008 AU	
max. Earth dist.	-8072 Feb 10 j 11:48	12°♑17'07	2.51365 AU	opposition		-8067 Apr 22 j 09:45	0°♒31'06	-0°07'56	
morning rise	-8072 Feb 28 j 17:14	24°♑45'56		greatest brilliancy		-8067 Apr 22 j 09:31	0°♒31'15	-3.0m	
	-8072 Mar 07 j 11:28	0°♌				-8067 Apr 24 j 07:59	30°♑♑		
	-8072 Apr 22 j 05:10	0°♎		direct		-8067 May 22 j 14:55	25°♑27'19		
	-8072 Jun 09 j 04:56	0°♑				-8067 Jun 18 j 22:59	0°♒		
	-8072 Jul 30 j 11:08	0°♓				-8067 Aug 19 j 10:20	0°♍		
asc. node	-8072 Aug 06 j 13:17	3°♓54'01				-8067 Oct 06 j 14:10	0°♑		
	-8072 Sep 30 j 16:39	0°♉				-8067 Nov 22 j 03:03	0°♑		
retrograde	-8072 Nov 11 j 14:01	8°♑48'25				-8066 Jan 07 j 20:45	0°♌		
opposition	-8072 Dec 18 j 07:47	0°♑46'02	4°47'33			-8066 Feb 24 j 01:50	0°♎		
greatest brilliancy	-8072 Dec 19 j 08:33	0°♑22'51	-1.7m	evening set		-8066 Mar 25 j 05:38	18°♑28'56		
	-8072 Dec 20 j 08:52	30°♑♑		asc. node		-8066 Mar 28 j 18:17	20°♑43'15		
min. Earth dist.	-8072 Dec 25 j 02:34	28°♑13'51	0.57391 AU			-8066 Apr 12 j 08:20	0°♑		
direct	-8071 Jan 27 j 13:29	21°♑10'26		max. Earth dist.		-8066 May 01 j 16:19	12°♑21'35	2.65850 AU	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 34

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

conjunction	-8066 May 11 j 17:21	18° $\text{H}$ 49'12	0°24'44	retrograde	-8061 Aug 15 j 09:13	14° $\approx$ 29'00	
minimum elong	-8066 May 11 j 16:28	18° $\text{H}$ 47'47	0°24'34	min. Earth dist.	-8061 Sep 22 j 10:23	5° $\approx$ 23'29	0.65498 AU
	-8066 May 28 j 23:46	0° $\text{Y}$		opposition	-8061 Sep 24 j 09:55	4° $\approx$ 35'39	-2°06'15
morning rise	-8066 Jun 26 j 20:06	18° $\text{Y}$ 56'14		greatest brilliancy	-8061 Sep 24 j 07:01	4° $\approx$ 38'35	-1.4m
	-8066 Jul 13 j 10:20	0° $\text{B}$			-8061 Oct 06 j 11:21	30° $\text{R}$ $\text{Z}$	
	-8066 Aug 26 j 10:50	0° $\text{II}$		direct	-8061 Nov 02 j 20:04	25° $\text{Z}$ 08'52	
	-8066 Oct 08 j 04:08	0° $\text{D}$		asc. node	-8061 Nov 19 j 00:01	26° $\text{Z}$ 40'10	
	-8066 Nov 18 j 23:38	0° $\text{Q}$			-8061 Dec 02 j 22:29	0° $\approx$	
	-8066 Dec 30 j 13:54	0° $\text{P}$			-8060 Feb 08 j 05:15	0° $\text{H}$	
	-8065 Feb 11 j 10:42	0° $\text{D}$			-8060 Mar 30 j 11:27	0° $\text{Y}$	
desc. node	-8065 Mar 08 j 19:46	16° $\text{D}$ 28'18			-8060 May 15 j 18:15	0° $\text{B}$	
	-8065 Apr 01 j 07:24	0° $\text{M}$			-8060 Jun 27 j 17:50	0° $\text{II}$	
retrograde	-8065 May 26 j 11:39	17° $\text{M}$ 06'50		evening set	-8060 Aug 02 j 23:08	26° $\text{II}$ 43'43	
min. Earth dist.	-8065 Jun 23 j 22:06	11° $\text{M}$ 40'23	0.46805 AU		-8060 Aug 07 j 07:02	0° $\text{D}$	
greatest brilliancy	-8065 Jun 30 j 10:01	9° $\text{M}$ 24'48	-2.3m	max. Earth dist.	-8060 Sep 12 j 08:11	27° $\text{D}$ 43'32	2.38523 AU
opposition	-8065 Jul 02 j 00:53	8° $\text{M}$ 50'46	-5°47'59		-8060 Sep 15 j 06:15	0° $\text{Q}$	
direct	-8065 Aug 03 j 21:54	2° $\text{M}$ 07'16					
	-8065 Oct 24 j 07:13	0° $\text{J}$		conjunction	-8060 Oct 01 j 20:06	12° $\text{Q}$ 58'16	0°19'47
	-8065 Dec 16 j 09:30	0° $\text{Z}$		minimum elong	-8060 Oct 01 j 21:50	13° $\text{Q}$ 01'40	0°20'12
	-8064 Feb 04 j 06:23	0° $\approx$			-8060 Oct 23 j 12:42	0° $\text{P}$	
asc. node	-8064 Feb 13 j 16:40	5° $\approx$ 46'31		desc. node	-8060 Oct 28 j 06:22	3° $\text{P}$ 42'59	
	-8064 Mar 23 j 16:44	0° $\text{H}$			-8060 Nov 30 j 23:59	0° $\text{D}$	
evening set	-8064 May 02 j 07:14	25° $\text{H}$ 14'23		morning rise	-8060 Dec 06 j 15:08	4° $\text{D}$ 20'15	
	-8064 May 09 j 15:14	0° $\text{Y}$			-8059 Jan 09 j 12:40	0° $\text{M}$	
max. Earth dist.	-8064 May 26 j 13:03	11° $\text{Y}$ 05'53	2.60124 AU		-8059 Feb 19 j 21:03	0° $\text{J}$	
					-8059 Apr 04 j 18:24	0° $\text{Z}$	
conjunction	-8064 Jun 19 j 09:24	27° $\text{Y}$ 03'22	1°01'59		-8059 May 22 j 05:35	0° $\approx$	
minimum elong	-8064 Jun 19 j 08:00	27° $\text{Y}$ 00'59	1°02'10		-8059 Jul 16 j 01:41	0° $\text{H}$	
	-8064 Jun 23 j 17:30	0° $\text{B}$		retrograde	-8059 Sep 18 j 09:16	18° $\text{H}$ 36'06	
	-8064 Aug 05 j 20:37	0° $\text{II}$		asc. node	-8059 Oct 06 j 04:16	16° $\text{H}$ 31'26	
morning rise	-8064 Aug 06 j 19:13	0° $\text{II}$ 40'13		opposition	-8059 Oct 27 j 19:30	9° $\text{H}$ 11'07	0°49'53
	-8064 Sep 16 j 05:11	0° $\text{D}$		greatest brilliancy	-8059 Oct 27 j 20:18	9° $\text{H}$ 10'19	-1.4m
	-8064 Oct 26 j 06:36	0° $\text{Q}$		min. Earth dist.	-8059 Oct 29 j 13:27	8° $\text{H}$ 29'18	0.66379 AU
	-8064 Dec 04 j 16:30	0° $\text{P}$			-8059 Nov 26 j 19:57	30° $\text{R}$ $\approx$	
	-8063 Jan 13 j 07:47	0° $\text{D}$		direct	-8059 Dec 07 j 16:20	29° $\approx$ 14'28	
desc. node	-8063 Jan 23 j 18:06	7° $\text{D}$ 45'39			-8059 Dec 18 j 22:04	0° $\text{H}$	
	-8063 Feb 23 j 09:52	0° $\text{M}$			-8058 Mar 05 j 18:17	0° $\text{Y}$	
	-8063 Apr 09 j 04:25	0° $\text{J}$			-8058 Apr 24 j 12:40	0° $\text{B}$	
	-8063 Jun 06 j 09:56	0° $\text{Z}$			-8058 Jun 07 j 14:00	0° $\text{II}$	
retrograde	-8063 Jul 09 j 13:47	6° $\text{Z}$ 33'49			-8058 Jul 18 j 10:49	0° $\text{D}$	
	-8063 Aug 09 j 17:19	30° $\text{R}$ $\text{J}$			-8058 Aug 26 j 11:21	0° $\text{Q}$	
min. Earth dist.	-8063 Aug 12 j 07:04	29° $\text{J}$ 00'44	0.58572 AU	desc. node	-8058 Sep 15 j 02:26	15° $\text{Q}$ 21'57	
opposition	-8063 Aug 17 j 23:48	26° $\text{J}$ 46'27	-4°44'29		-8058 Oct 03 j 17:45	0° $\text{P}$	
greatest brilliancy	-8063 Aug 17 j 03:01	27° $\text{J}$ 06'54	-1.7m	evening set	-8058 Oct 06 j 04:35	1° $\text{P}$ 55'26	
direct	-8063 Sep 23 j 18:28	18° $\text{J}$ 19'18			-8058 Nov 11 j 05:40	0° $\text{D}$	
	-8063 Nov 11 j 16:58	0° $\text{Z}$					
asc. node	-8063 Dec 31 j 19:14	24° $\text{Z}$ 16'26		conjunction	-8058 Dec 08 j 20:23	21° $\text{D}$ 02'43	-0°55'14
	-8062 Jan 11 j 06:07	0° $\approx$		minimum elong	-8058 Dec 08 j 17:19	20° $\text{D}$ 56'56	0°55'21
	-8062 Mar 03 j 18:31	0° $\text{H}$			-8058 Dec 20 j 19:49	0° $\text{M}$	
	-8062 Apr 20 j 19:11	0° $\text{Y}$		max. Earth dist.	-8057 Jan 23 j 17:17	24° $\text{M}$ 42'06	2.46438 AU
	-8062 Jun 05 j 01:59	0° $\text{B}$			-8057 Jan 31 j 04:07	0° $\text{J}$	
evening set	-8062 Jun 13 j 16:15	5° $\text{B}$ 53'30		morning rise	-8057 Feb 08 j 11:24	5° $\text{J}$ 50'51	
max. Earth dist.	-8062 Jun 29 j 10:03	16° $\text{B}$ 51'21	2.49790 AU		-8057 Mar 15 j 16:44	0° $\text{Z}$	
	-8062 Jul 17 j 21:25	0° $\text{II}$			-8057 Apr 30 j 15:07	0° $\approx$	
					-8057 Jun 18 j 10:30	0° $\text{H}$	
conjunction	-8062 Aug 04 j 13:05	12° $\text{II}$ 50'12	1°09'49		-8057 Aug 11 j 17:01	0° $\text{Y}$	
minimum elong	-8062 Aug 04 j 14:06	12° $\text{II}$ 52'05	1°10'19	asc. node	-8057 Aug 24 j 05:28	6° $\text{Y}$ 02'18	
	-8062 Aug 27 j 15:07	0° $\text{D}$		retrograde	-8057 Oct 26 j 13:19	23° $\text{Y}$ 50'22	
morning rise	-8062 Sep 29 j 09:07	24° $\text{D}$ 57'10		opposition	-8057 Dec 03 j 07:16	15° $\text{Y}$ 18'30	3°45'20
	-8062 Oct 05 j 22:07	0° $\text{Q}$		greatest brilliancy	-8057 Dec 03 j 22:17	15° $\text{Y}$ 04'03	-1.6m
	-8062 Nov 13 j 12:36	0° $\text{P}$		min. Earth dist.	-8057 Dec 08 j 17:45	13° $\text{Y}$ 13'04	0.61090 AU
desc. node	-8062 Dec 11 j 13:16	21° $\text{P}$ 44'30		direct	-8056 Jan 13 j 03:23	5° $\text{Y}$ 25'46	
	-8062 Dec 22 j 06:57	0° $\text{D}$			-8056 Mar 26 j 17:30	0° $\text{B}$	
	-8061 Jan 31 j 03:14	0° $\text{M}$			-8056 May 14 j 10:03	0° $\text{II}$	
	-8061 Mar 14 j 02:17	0° $\text{J}$			-8056 Jun 25 j 19:51	0° $\text{D}$	
	-8061 Apr 28 j 18:33	0° $\text{Z}$		desc. node	-8056 Aug 02 j 02:53	28° $\text{D}$ 06'59	
	-8061 Jun 22 j 10:18	0° $\approx$			-8056 Aug 04 j 13:45	0° $\text{Q}$	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 35

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8056 Sep 12 j 07:40	0°♎		behind sun begin	-8051 Apr 26 j 02:31	4°♎24'32	
	-8056 Oct 21 j 05:47	0°♏		behind sun end	-8051 Apr 27 j 14:10	5°♎21'30	
	-8056 Nov 30 j 05:57	0°♐			-8051 Jun 04 j 21:18	0°♑	
evening set	-8056 Dec 08 j 01:46	5°♐43'59		morning rise	-8051 Jun 12 j 00:13	4°♑37'22	
	-8055 Jan 10 j 23:02	0°♑			-8051 Jul 20 j 15:30	0°♒	
					-8051 Sep 03 j 07:00	0°♓	
conjunction	-8055 Feb 02 j 17:43	15°♑48'26	-1°09'06		-8051 Oct 16 j 23:36	0°♐	
minimum elong	-8055 Feb 02 j 18:44	15°♑50'11	1°09'37		-8051 Nov 29 j 04:47	0°♑	
	-8055 Feb 23 j 15:57	0°♒			-8050 Jan 11 j 23:23	0°♎	
max. Earth dist.	-8055 Mar 02 j 17:55	4°♒44'13	2.57991 AU		-8050 Feb 28 j 17:43	0°♏	
morning rise	-8055 Mar 27 j 18:39	21°♒14'22		desc. node	-8050 Mar 25 j 13:06	12°♏32'25	
	-8055 Apr 10 j 06:36	0°♓		retrograde	-8050 May 04 j 09:52	22°♏12'04	
	-8055 May 27 j 12:18	0°♎		min. Earth dist.	-8050 May 31 j 09:55	17°♏28'26	0.42087 AU
asc. node	-8055 Jul 11 j 01:25	27°♎25'00		greatest brilliancy	-8050 Jun 06 j 10:15	15°♏35'25	-2.6m
	-8055 Jul 15 j 08:16	0°♑		opposition	-8050 Jun 07 j 17:34	15°♏10'39	-4°47'45
	-8055 Sep 05 j 02:46	0°♒		direct	-8050 Jul 09 j 01:31	9°♏18'55	
	-8055 Nov 09 j 01:28	0°♓			-8050 Sep 13 j 06:45	0°♐	
retrograde	-8055 Dec 12 j 18:51	6°♓00'09			-8050 Nov 05 j 22:15	0°♑	
	-8054 Jan 13 j 08:58	30°♒♐			-8050 Dec 25 j 09:43	0°♒	
opposition	-8054 Jan 16 j 10:13	28°♒57'12	5°58'18		-8049 Feb 11 j 22:07	0°♓	
greatest brilliancy	-8054 Jan 18 j 02:05	28°♒22'26	-2.1m	asc. node	-8049 Mar 02 j 08:13	11°♓29'12	
min. Earth dist.	-8054 Jan 24 j 15:46	26°♒05'32	0.50276 AU		-8049 Mar 31 j 18:45	0°♎	
direct	-8054 Feb 23 j 18:04	20°♒18'39		evening set	-8049 Apr 17 j 23:44	10°♎56'23	
	-8054 Apr 05 j 12:06	0°♓		max. Earth dist.	-8049 May 17 j 02:16	29°♎42'32	2.62956 AU
	-8054 May 29 j 00:22	0°♐			-8049 May 17 j 12:59	0°♑	
desc. node	-8054 Jun 20 j 05:19	15°♐06'05					
	-8054 Jul 11 j 01:25	0°♑		conjunction	-8049 Jun 04 j 13:00	11°♑48'58	0°49'39
	-8054 Aug 20 j 14:20	0°♎		minimum elong	-8049 Jun 04 j 11:32	11°♑46'33	0°49'41
	-8054 Sep 29 j 19:46	0°♏			-8049 Jul 01 j 17:14	0°♒	
	-8054 Nov 09 j 21:47	0°♐		morning rise	-8049 Jul 21 j 14:09	13°♒35'01	
	-8054 Dec 22 j 12:08	0°♑			-8049 Aug 14 j 02:57	0°♓	
evening set	-8053 Jan 27 j 20:40	24°♑40'50			-8049 Sep 24 j 21:40	0°♐	
	-8053 Feb 04 j 20:21	0°♒			-8049 Nov 04 j 11:28	0°♑	
					-8049 Dec 14 j 11:24	0°♎	
conjunction	-8053 Mar 19 j 14:01	27°♒58'43	-0°38'17		-8048 Jan 23 j 19:54	0°♏	
minimum elong	-8053 Mar 19 j 15:25	28°♒01'00	0°38'46	desc. node	-8048 Feb 10 j 12:39	12°♏48'38	
	-8053 Mar 22 j 17:05	0°♓			-8048 Mar 06 j 03:55	0°♐	
max. Earth dist.	-8053 Mar 29 j 21:56	4°♓38'34	2.64984 AU		-8048 Apr 23 j 18:34	0°♑	
morning rise	-8053 May 06 j 16:01	28°♓48'06		retrograde	-8048 Jun 23 j 12:21	19°♑27'31	
	-8053 May 08 j 13:10	0°♎		min. Earth dist.	-8048 Jul 25 j 04:13	12°♑41'37	0.54361 AU
asc. node	-8053 May 28 j 18:32	12°♎51'55		greatest brilliancy	-8048 Jul 30 j 22:20	10°♑30'02	-1.9m
	-8053 Jun 24 j 17:55	0°♑		opposition	-8048 Aug 01 j 04:26	10°♑01'16	-5°30'04
	-8053 Aug 11 j 00:53	0°♒		direct	-8048 Sep 05 j 14:07	2°♑08'40	
	-8053 Sep 27 j 19:53	0°♓			-8048 Nov 27 j 12:38	0°♒	
	-8053 Nov 16 j 20:34	0°♐		asc. node	-8047 Jan 17 j 09:15	28°♒08'41	
	-8052 Jan 18 j 03:31	0°♑			-8047 Jan 20 j 13:43	0°♓	
retrograde	-8052 Feb 20 j 02:42	6°♑02'14			-8047 Mar 11 j 12:07	0°♎	
opposition	-8052 Mar 21 j 20:44	0°♑51'22	3°27'57		-8047 Apr 27 j 23:48	0°♑	
greatest brilliancy	-8052 Mar 22 j 12:56	0°♑40'15	-2.8m	evening set	-8047 May 27 j 10:59	19°♑23'45	
	-8052 Mar 24 j 23:33	30°♒♐			-8047 Jun 12 j 03:40	0°♒	
min. Earth dist.	-8052 Mar 25 j 20:28	29°♐45'44	0.39070 AU	max. Earth dist.	-8047 Jun 14 j 12:13	1°♒36'31	2.54288 AU
direct	-8052 Apr 22 j 17:33	25°♐13'56					
desc. node	-8052 May 07 j 09:06	26°♐38'08		conjunction	-8047 Jul 16 j 08:55	23°♒48'38	1°12'07
	-8052 May 20 j 07:46	0°♑		minimum elong	-8047 Jul 16 j 08:36	23°♒48'04	1°12'30
	-8052 Jul 18 j 13:29	0°♎			-8047 Jul 25 j 01:09	0°♓	
	-8052 Sep 02 j 15:00	0°♏			-8047 Sep 03 j 23:29	0°♐	
	-8052 Oct 17 j 00:13	0°♐		morning rise	-8047 Sep 06 j 13:09	1°♐55'26	
	-8052 Nov 30 j 18:07	0°♑			-8047 Oct 13 j 12:07	0°♑	
	-8051 Jan 15 j 12:01	0°♒			-8047 Nov 21 j 08:21	0°♎	
	-8051 Mar 03 j 04:00	0°♓		desc. node	-8047 Dec 28 j 08:10	28°♎28'17	
evening set	-8051 Mar 09 j 22:39	4°♓19'31			-8047 Dec 30 j 08:17	0°♏	
asc. node	-8051 Apr 14 j 11:59	26°♓59'40			-8046 Feb 08 j 11:32	0°♐	
	-8051 Apr 19 j 04:58	0°♎			-8046 Mar 23 j 00:51	0°♑	
max. Earth dist.	-8051 Apr 22 j 05:22	1°♎55'38	2.66663 AU		-8046 May 09 j 13:22	0°♒	
					-8046 Jul 22 j 06:40	0°♓	
conjunction	-8051 Apr 26 j 20:35	4°♎53'25	0°07'05	retrograde	-8046 Aug 01 j 14:33	0°♓41'19	
minimum elong	-8051 Apr 26 j 20:20	4°♎53'01	0°06'49		-8046 Aug 11 j 15:10	30°♒♒	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 36

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

min. Earth dist.	-8046 Sep 07 j 03:04	22° $\text{♁}$ 07'26	0.63495 AU		-8041 Sep 21 j 05:23	0° $\text{♁}$	
opposition	-8046 Sep 10 j 13:33	20° $\text{♁}$ 44'43	-3°11'26		-8041 Oct 29 j 22:01	0° $\text{♁}$	
greatest brilliancy	-8046 Sep 10 j 05:19	20° $\text{♁}$ 52'59	-1.5m	evening set	-8041 Nov 15 j 14:00	12° $\text{♁}$ 41'59	
direct	-8046 Oct 19 j 02:13	11° $\text{♁}$ 37'13			-8041 Dec 08 j 16:47	0° $\text{♁}$	
asc. node	-8046 Dec 05 j 13:06	22° $\text{♁}$ 31'44					
	-8046 Dec 22 j 22:31	0° $\text{♁}$		conjunction	-8040 Jan 14 j 08:17	26° $\text{♁}$ 33'29	-1°11'16
	-8045 Feb 17 j 20:11	0° $\text{♁}$		minimum elong	-8040 Jan 14 j 07:55	26° $\text{♁}$ 32'49	1°11'41
	-8045 Apr 08 j 09:54	0° $\text{♁}$			-8040 Jan 19 j 05:01	0° $\text{♁}$	
	-8045 May 24 j 04:43	0° $\text{♁}$		max. Earth dist.	-8040 Feb 18 j 19:33	21° $\text{♁}$ 13'40	2.53902 AU
	-8045 Jul 06 j 01:43	0° $\text{♁}$			-8040 Mar 02 j 18:28	0° $\text{♁}$	
evening set	-8045 Jul 13 j 10:40	5° $\text{♁}$ 20'25		morning rise	-8040 Mar 10 j 08:53	5° $\text{♁}$ 05'23	
max. Earth dist.	-8045 Aug 02 j 01:47	19° $\text{♁}$ 47'53	2.42350 AU		-8040 Apr 17 j 09:39	0° $\text{♁}$	
	-8045 Aug 15 j 15:59	0° $\text{♁}$			-8040 Jun 04 j 00:33	0° $\text{♁}$	
					-8040 Jul 24 j 03:13	0° $\text{♁}$	
conjunction	-8045 Sep 07 j 19:08	17° $\text{♁}$ 39'46	0°47'09	asc. node	-8040 Jul 27 j 18:40	2° $\text{♁}$ 05'37	
minimum elong	-8045 Sep 07 j 21:53	17° $\text{♁}$ 45'05	0°47'38		-8040 Sep 18 j 12:51	0° $\text{♁}$	
	-8045 Sep 23 j 17:22	0° $\text{♁}$		retrograde	-8040 Nov 22 j 04:05	18° $\text{♁}$ 24'51	
	-8045 Nov 01 j 01:56	0° $\text{♁}$		opposition	-8040 Dec 28 j 05:43	10° $\text{♁}$ 41'30	5°18'29
morning rise	-8045 Nov 09 j 12:58	6° $\text{♁}$ 37'23		greatest brilliancy	-8040 Dec 29 j 12:24	10° $\text{♁}$ 13'21	-1.8m
desc. node	-8045 Nov 15 j 03:15	10° $\text{♁}$ 59'48		min. Earth dist.	-8039 Jan 04 j 16:06	7° $\text{♁}$ 58'07	0.55044 AU
	-8045 Dec 09 j 14:37	0° $\text{♁}$		direct	-8039 Feb 05 j 23:20	1° $\text{♁}$ 20'54	
	-8044 Jan 18 j 04:20	0° $\text{♁}$			-8039 Apr 25 j 07:06	0° $\text{♁}$	
	-8044 Feb 28 j 15:20	0° $\text{♁}$			-8039 Jun 10 j 02:13	0° $\text{♁}$	
	-8044 Apr 12 j 21:50	0° $\text{♁}$		desc. node	-8039 Jul 06 j 21:11	19° $\text{♁}$ 21'32	
	-8044 May 31 j 18:36	0° $\text{♁}$			-8039 Jul 21 j 04:01	0° $\text{♁}$	
retrograde	-8044 Aug 03 j 13:33	0° $\text{♁}$			-8039 Aug 29 j 16:56	0° $\text{♁}$	
	-8044 Sep 04 j 17:27	5° $\text{♁}$ 39'45			-8039 Oct 08 j 05:37	0° $\text{♁}$	
	-8044 Oct 04 j 05:30	30° $\text{♁}$			-8039 Nov 17 j 18:15	0° $\text{♁}$	
opposition	-8044 Oct 14 j 12:22	26° $\text{♁}$ 00'50	-0°18'56		-8039 Dec 29 j 21:57	0° $\text{♁}$	
greatest brilliancy	-8044 Oct 14 j 12:38	26° $\text{♁}$ 00'34	-1.4m	evening set	-8038 Jan 09 j 12:04	7° $\text{♁}$ 20'06	
min. Earth dist.	-8044 Oct 14 j 19:33	25° $\text{♁}$ 53'38	0.66774 AU		-8038 Feb 11 j 22:19	0° $\text{♁}$	
asc. node	-8044 Oct 22 j 17:23	22° $\text{♁}$ 47'11					
direct	-8044 Nov 23 j 23:11	16° $\text{♁}$ 12'35		conjunction	-8038 Mar 03 j 03:01	12° $\text{♁}$ 43'14	-0°53'11
	-8043 Jan 17 j 07:39	0° $\text{♁}$		minimum elong	-8038 Mar 03 j 04:43	12° $\text{♁}$ 46'02	0°53'43
	-8043 Mar 16 j 00:36	0° $\text{♁}$		max. Earth dist.	-8038 Mar 20 j 01:39	23° $\text{♁}$ 47'58	2.62878 AU
	-8043 May 02 j 21:51	0° $\text{♁}$			-8038 Mar 29 j 15:07	0° $\text{♁}$	
	-8043 Jun 15 j 09:59	0° $\text{♁}$		morning rise	-8038 Apr 21 j 17:48	14° $\text{♁}$ 51'26	
	-8043 Jul 26 j 02:36	0° $\text{♁}$			-8038 May 15 j 12:43	0° $\text{♁}$	
	-8043 Sep 03 j 01:47	0° $\text{♁}$		asc. node	-8038 Jun 14 j 12:43	18° $\text{♁}$ 56'13	
evening set	-8043 Sep 09 j 20:58	5° $\text{♁}$ 18'52			-8038 Jul 02 j 04:01	0° $\text{♁}$	
desc. node	-8043 Oct 01 j 21:57	22° $\text{♁}$ 37'07			-8038 Aug 19 j 14:20	0° $\text{♁}$	
	-8043 Oct 11 j 07:22	0° $\text{♁}$			-8038 Oct 09 j 03:58	0° $\text{♁}$	
					-8038 Dec 08 j 06:21	0° $\text{♁}$	
conjunction	-8043 Nov 12 j 16:19	25° $\text{♁}$ 18'07	-0°30'31	retrograde	-8037 Jan 20 j 22:37	9° $\text{♁}$ 45'38	
minimum elong	-8043 Nov 12 j 13:42	25° $\text{♁}$ 13'03	0°30'22	opposition	-8037 Feb 22 j 02:56	3° $\text{♁}$ 56'13	5°33'48
	-8043 Nov 18 j 17:59	0° $\text{♁}$		greatest brilliancy	-8037 Feb 23 j 16:00	3° $\text{♁}$ 27'53	-2.5m
max. Earth dist.	-8043 Dec 27 j 11:01	29° $\text{♁}$ 24'18	2.41418 AU	min. Earth dist.	-8037 Mar 01 j 09:50	1° $\text{♁}$ 43'39	0.42686 AU
	-8043 Dec 28 j 06:11	0° $\text{♁}$			-8037 Mar 07 j 15:12	30° $\text{♁}$	
morning rise	-8042 Jan 16 j 14:33	14° $\text{♁}$ 14'59		direct	-8037 Mar 28 j 18:07	27° $\text{♁}$ 03'55	
	-8042 Feb 07 j 12:46	0° $\text{♁}$			-8037 Apr 18 j 23:59	0° $\text{♁}$	
	-8042 Mar 23 j 01:57	0° $\text{♁}$		desc. node	-8037 May 25 j 01:13	15° $\text{♁}$ 04'16	
	-8042 May 08 j 08:35	0° $\text{♁}$			-8037 Jun 19 j 12:05	0° $\text{♁}$	
	-8042 Jun 27 j 11:26	0° $\text{♁}$			-8037 Aug 03 j 05:50	0° $\text{♁}$	
	-8042 Aug 27 j 08:33	0° $\text{♁}$			-8037 Sep 14 j 16:16	0° $\text{♁}$	
asc. node	-8042 Sep 09 j 19:57	4° $\text{♁}$ 40'36			-8037 Oct 27 j 05:10	0° $\text{♁}$	
retrograde	-8042 Oct 11 j 00:22	9° $\text{♁}$ 53'29			-8037 Dec 09 j 20:15	0° $\text{♁}$	
opposition	-8042 Nov 18 j 13:22	0° $\text{♁}$ 57'36	2°38'38		-8036 Jan 23 j 21:16	0° $\text{♁}$	
greatest brilliancy	-8042 Nov 18 j 20:48	0° $\text{♁}$ 50'19	-1.5m	evening set	-8036 Feb 23 j 05:44	19° $\text{♁}$ 45'00	
	-8042 Nov 21 j 00:08	30° $\text{♁}$			-8036 Mar 10 j 03:40	0° $\text{♁}$	
min. Earth dist.	-8042 Nov 22 j 13:56	29° $\text{♁}$ 23'03	0.63877 AU				
direct	-8042 Dec 29 j 14:58	20° $\text{♁}$ 57'54		conjunction	-8036 Apr 11 j 21:59	20° $\text{♁}$ 58'23	-0°11'02
	-8041 Feb 09 j 05:21	0° $\text{♁}$		minimum elong	-8036 Apr 11 j 22:26	20° $\text{♁}$ 59'05	0°11'25
	-8041 Apr 08 j 19:47	0° $\text{♁}$		behind sun begin	-8036 Apr 11 j 08:37	20° $\text{♁}$ 37'02	
	-8041 May 24 j 19:27	0° $\text{♁}$		behind sun end	-8036 Apr 12 j 12:15	21° $\text{♁}$ 21'09	
	-8041 Jul 05 j 09:10	0° $\text{♁}$		max. Earth dist.	-8036 Apr 12 j 19:59	21° $\text{♁}$ 33'29	2.66661 AU
	-8041 Aug 13 j 17:40	0° $\text{♁}$			-8036 Apr 26 j 01:15	0° $\text{♁}$	
desc. node	-8041 Aug 19 j 19:24	4° $\text{♁}$ 42'38		asc. node	-8036 May 01 j 05:28	3° $\text{♁}$ 18'25	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 37

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

morning rise	-8036 May 28 j 11:46	20° $\text{H}$ 45'37		greatest brilliancy	-8031 Aug 26 j 06:07	6° $\text{Z}$ 21'10	-1.6m
	-8036 Jun 11 j 20:34	0° $\text{Y}$			-8031 Sep 13 j 11:23	30° $\text{R}$ 27	
	-8036 Jul 28 j 01:31	0° $\text{B}$		direct	-8031 Oct 03 j 08:42	27° $\text{A}$ 22'18	
	-8036 Sep 11 j 13:42	0° $\text{II}$			-8031 Oct 24 j 18:10	0° $\text{Z}$	
	-8036 Oct 26 j 17:21	0° $\text{G}$		asc. node	-8031 Dec 22 j 02:00	23° $\text{Z}$ 04'45	
	-8036 Dec 11 j 10:21	0° $\text{Q}$			-8030 Jan 04 j 11:35	0° $\approx$	
	-8035 Jan 29 j 16:08	0° $\text{P}$			-8030 Feb 26 j 10:34	0° $\text{H}$	
retrograde	-8035 Apr 08 j 05:06	23° $\text{P}$ 28'40			-8030 Apr 15 j 22:59	0° $\text{Y}$	
desc. node	-8035 Apr 11 j 04:31	23° $\text{P}$ 25'07			-8030 May 31 j 10:12	0° $\text{B}$	
min. Earth dist.	-8035 May 05 j 22:09	18° $\text{P}$ 55'20	0.38768 AU	evening set	-8030 Jun 24 j 00:59	16° $\text{B}$ 19'34	
opposition	-8035 May 10 j 03:12	17° $\text{P}$ 44'55	-2°13'25	max. Earth dist.	-8030 Jul 09 j 12:41	27° $\text{B}$ 18'52	2.47132 AU
greatest brilliancy	-8035 May 09 j 17:01	17° $\text{P}$ 52'01	-2.9m		-8030 Jul 13 j 06:27	0° $\text{II}$	
direct	-8035 Jun 09 j 06:35	12° $\text{P}$ 34'46					
	-8035 Aug 06 j 23:33	0° $\text{L}$		conjunction	-8030 Aug 16 j 07:07	24° $\text{II}$ 59'36	1°04'29
	-8035 Sep 29 j 01:09	0° $\text{M}$		minimum elong	-8030 Aug 16 j 08:58	25° $\text{II}$ 03'04	1°05'01
	-8035 Nov 16 j 04:48	0° $\text{A}$			-8030 Aug 22 j 23:09	0° $\text{G}$	
	-8034 Jan 02 j 16:26	0° $\text{Z}$			-8030 Oct 01 j 04:04	0° $\text{Q}$	
	-8034 Feb 19 j 06:43	0° $\approx$		morning rise	-8030 Oct 13 j 13:05	9° $\text{Q}$ 36'45	
asc. node	-8034 Mar 19 j 00:38	17° $\approx$ 30'26			-8030 Nov 08 j 16:14	0° $\text{P}$	
evening set	-8034 Apr 02 j 21:22	26° $\approx$ 55'26		desc. node	-8030 Dec 01 j 22:44	18° $\text{P}$ 07'02	
	-8034 Apr 07 j 17:35	0° $\text{H}$			-8030 Dec 17 j 08:05	0° $\text{L}$	
max. Earth dist.	-8034 May 07 j 07:10	18° $\text{H}$ 55'03	2.65057 AU		-8029 Jan 26 j 00:56	0° $\text{M}$	
					-8029 Mar 08 j 17:45	0° $\text{A}$	
conjunction	-8034 May 20 j 06:48	27° $\text{H}$ 19'02	0°34'24		-8029 Apr 22 j 16:51	0° $\text{Z}$	
minimum elong	-8034 May 20 j 05:38	27° $\text{H}$ 17'07	0°34'19		-8029 Jun 13 j 05:41	0° $\approx$	
	-8034 May 24 j 09:51	0° $\text{Y}$		retrograde	-8029 Aug 23 j 05:06	22° $\approx$ 34'25	
morning rise	-8034 Jul 05 j 13:45	27° $\text{Y}$ 51'18		min. Earth dist.	-8029 Oct 01 j 00:48	13° $\approx$ 13'14	0.66204 AU
	-8034 Jul 08 j 18:21	0° $\text{B}$		opposition	-8029 Oct 02 j 04:37	12° $\approx$ 45'15	-1°27'14
	-8034 Aug 21 j 13:24	0° $\text{II}$		greatest brilliancy	-8029 Oct 02 j 03:38	12° $\approx$ 46'15	-1.4m
	-8034 Oct 02 j 21:55	0° $\text{G}$		asc. node	-8029 Nov 09 j 07:00	3° $\approx$ 10'50	
	-8034 Nov 13 j 04:54	0° $\text{Q}$		direct	-8029 Nov 11 j 00:41	3° $\approx$ 09'42	
	-8034 Dec 24 j 01:48	0° $\text{P}$			-8028 Feb 01 j 02:41	0° $\text{H}$	
	-8033 Feb 03 j 16:06	0° $\text{L}$			-8028 Mar 25 j 00:32	0° $\text{Y}$	
desc. node	-8033 Feb 27 j 07:21	16° $\text{L}$ 14'27			-8028 May 10 j 19:41	0° $\text{B}$	
	-8033 Mar 20 j 17:37	0° $\text{M}$			-8028 Jun 22 j 23:48	0° $\text{II}$	
	-8033 Jun 05 j 13:53	0° $\text{A}$			-8028 Aug 02 j 14:30	0° $\text{G}$	
retrograde	-8033 Jun 06 j 17:10	0° $\text{A}$ 00'33		evening set	-8028 Aug 16 j 01:15	10° $\text{G}$ 14'54	
	-8033 Jun 07 j 20:24	30° $\text{R}$ $\text{M}$			-8028 Sep 10 j 13:34	0° $\text{Q}$	
min. Earth dist.	-8033 Jul 06 j 05:26	24° $\text{M}$ 06'26	0.49564 AU				
greatest brilliancy	-8033 Jul 12 j 15:11	21° $\text{M}$ 47'16	-2.2m	conjunction	-8028 Oct 16 j 17:35	28° $\text{Q}$ 22'17	0°01'32
opposition	-8033 Jul 14 j 04:48	21° $\text{M}$ 13'04	-5°53'01	minimum elong	-8028 Oct 16 j 17:47	28° $\text{Q}$ 22'41	0°01'52
direct	-8033 Aug 17 j 00:23	14° $\text{M}$ 02'45		behind sun begin	-8028 Oct 15 j 14:30	27° $\text{Q}$ 29'05	
	-8033 Oct 13 j 19:51	0° $\text{A}$		behind sun end	-8028 Oct 17 j 21:05	29° $\text{Q}$ 16'16	
	-8033 Dec 09 j 23:29	0° $\text{Z}$		desc. node	-8028 Oct 18 j 17:01	29° $\text{Q}$ 55'25	
	-8032 Jan 29 j 23:49	0° $\approx$			-8028 Oct 18 j 19:21	0° $\text{P}$	
asc. node	-8032 Feb 03 j 23:17	3° $\approx$ 00'21		max. Earth dist.	-8028 Oct 29 j 06:44	8° $\text{P}$ 13'15	2.38029 AU
	-8032 Mar 18 j 21:22	0° $\text{H}$			-8028 Nov 26 j 05:44	0° $\text{L}$	
	-8032 May 05 j 00:15	0° $\text{Y}$		morning rise	-8028 Dec 22 j 01:26	19° $\text{L}$ 44'49	
evening set	-8032 May 11 j 06:46	4° $\text{Y}$ 05'12			-8027 Jan 04 j 17:14	0° $\text{M}$	
max. Earth dist.	-8032 Jun 02 j 03:48	18° $\text{Y}$ 32'50	2.58242 AU		-8027 Feb 14 j 23:47	0° $\text{A}$	
	-8032 Jun 19 j 03:24	0° $\text{B}$			-8027 Mar 30 j 16:17	0° $\text{Z}$	
					-8027 May 16 j 13:20	0° $\approx$	
conjunction	-8032 Jun 28 j 20:26	6° $\text{B}$ 38'38	1°07'14		-8027 Jul 07 j 23:23	0° $\text{H}$	
minimum elong	-8032 Jun 28 j 19:17	6° $\text{B}$ 36'39	1°07'30	retrograde	-8027 Sep 26 j 11:21	26° $\text{H}$ 32'55	
	-8032 Aug 01 j 04:47	0° $\text{II}$		asc. node	-8027 Sep 26 j 11:10	26° $\text{H}$ 32'55	
morning rise	-8032 Aug 17 j 07:53	11° $\text{II}$ 35'51		opposition	-8027 Nov 04 j 15:06	17° $\text{H}$ 17'25	1°30'02
	-8032 Sep 11 j 09:59	0° $\text{G}$		greatest brilliancy	-8027 Nov 04 j 17:31	17° $\text{H}$ 15'01	-1.4m
	-8032 Oct 21 j 06:41	0° $\text{Q}$		min. Earth dist.	-8027 Nov 07 j 04:48	16° $\text{H}$ 16'14	0.65743 AU
	-8032 Nov 29 j 11:14	0° $\text{P}$		direct	-8027 Dec 15 j 15:05	7° $\text{H}$ 18'09	
	-8031 Jan 07 j 19:44	0° $\text{L}$			-8026 Feb 25 j 23:37	0° $\text{Y}$	
desc. node	-8031 Jan 14 j 05:11	4° $\text{L}$ 48'40			-8026 Apr 18 j 18:05	0° $\text{B}$	
	-8031 Feb 17 j 10:34	0° $\text{M}$			-8026 Jun 02 j 09:16	0° $\text{II}$	
	-8031 Apr 02 j 01:38	0° $\text{A}$			-8026 Jul 13 j 11:49	0° $\text{G}$	
	-8031 May 23 j 18:08	0° $\text{Z}$			-8026 Aug 21 j 15:01	0° $\text{Q}$	
retrograde	-8031 Jul 18 j 06:02	15° $\text{Z}$ 58'36		desc. node	-8026 Sep 05 j 13:51	11° $\text{Q}$ 40'15	
min. Earth dist.	-8031 Aug 22 j 00:21	8° $\text{Z}$ 02'08	0.60547 AU		-8026 Sep 28 j 23:00	0° $\text{P}$	
opposition	-8031 Aug 26 j 21:55	6° $\text{Z}$ 05'28	-4°12'35	evening set	-8026 Oct 21 j 01:33	17° $\text{P}$ 16'30	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 38

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8026 Nov 06 j 11:57	0°♎				-8021 Nov 08 j 05:03	0°♏		
	-8026 Dec 16 j 02:40	0°♌				-8021 Dec 29 j 20:38	0°♍		
				retrograde		-8020 Mar 08 j 18:02	22°♏52'57		
conjunction	-8026 Dec 22 j 16:29	4°♌51'54 -1°04'11		opposition		-8020 Apr 08 j 10:36	17°♏46'29	1°32'29	
minimum elong	-8026 Dec 22 j 14:11	4°♌47'40 1°04'26		greatest brilliancy		-8020 Apr 08 j 14:29	17°♏43'53	-2.9m	
	-8025 Jan 26 j 11:11	0°♈		min. Earth dist.		-8020 Apr 09 j 13:40	17°♏28'18	0.38102 AU	
max. Earth dist.	-8025 Feb 03 j 09:59	5°♈36'05 2.49196 AU		desc. node		-8020 Apr 27 j 22:18	13°♏24'04		
morning rise	-8025 Feb 20 j 06:24	17°♈18'00		direct		-8020 May 09 j 04:49	12°♏34'38		
	-8025 Mar 10 j 22:41	0°♊				-8020 Jul 05 j 12:47	0°♐		
	-8025 Apr 25 j 16:50	0°♋				-8020 Aug 25 j 13:30	0°♑		
	-8025 Jun 12 j 22:34	0°♌				-8020 Oct 10 j 15:56	0°♒		
	-8025 Aug 04 j 03:58	0°♍				-8020 Nov 25 j 06:32	0°♓		
asc. node	-8025 Aug 14 j 11:23	5°♍25'49				-8019 Jan 10 j 11:55	0°♊		
	-8025 Oct 14 j 06:35	0°♈				-8019 Feb 26 j 10:29	0°♋		
retrograde	-8025 Nov 05 j 02:05	2°♈40'46		evening set		-8019 Mar 18 j 18:40	12°♋55'50		
	-8025 Nov 25 j 13:03	30°♈♐		asc. node		-8019 Apr 04 j 16:43	23°♋41'29		
opposition	-8025 Dec 12 j 07:07	24°♐24'36 4°21'46				-8019 Apr 14 j 14:22	0°♌		
greatest brilliancy	-8025 Dec 13 j 03:28	24°♐05'17 -1.7m		max. Earth dist.		-8019 Apr 27 j 17:11	8°♌22'49	2.66326 AU	
min. Earth dist.	-8025 Dec 18 j 12:10	22°♐03'17 0.59143 AU							
direct	-8024 Jan 21 j 20:33	14°♐39'44		conjunction		-8019 May 05 j 09:36	13°♌18'22	0°17'26	
	-8024 Mar 16 j 19:36	0°♈		minimum elong		-8019 May 05 j 08:58	13°♌17'21	0°17'12	
	-8024 May 07 j 19:55	0°♊				-8019 May 31 j 06:29	0°♐		
	-8024 Jun 20 j 02:19	0°♋		morning rise		-8019 Jun 20 j 11:10	13°♐11'00		
desc. node	-8024 Jul 23 j 13:13	24°♋55'33				-8019 Jul 15 j 20:59	0°♈		
	-8024 Jul 30 j 05:06	0°♏				-8019 Aug 29 j 04:18	0°♊		
	-8024 Sep 07 j 04:30	0°♐				-8019 Oct 11 j 07:41	0°♋		
	-8024 Oct 16 j 06:45	0°♑				-8019 Nov 22 j 16:25	0°♌		
	-8024 Nov 25 j 10:10	0°♒				-8018 Jan 04 j 01:27	0°♐		
evening set	-8024 Dec 20 j 09:43	18°♒04'57				-8018 Feb 17 j 08:24	0°♑		
	-8023 Jan 06 j 05:54	0°♓		desc. node		-8018 Mar 16 j 00:37	16°♑09'05		
						-8018 Apr 13 j 15:54	0°♒		
conjunction	-8023 Feb 13 j 11:18	26°♓16'29 -1°04'43		retrograde		-8018 May 17 j 07:36	7°♒10'45		
minimum elong	-8023 Feb 13 j 12:46	26°♓18'58 1°05'14		min. Earth dist.		-8018 Jun 13 j 23:45	2°♒05'54	0.44602 AU	
	-8023 Feb 19 j 00:14	0°♊		greatest brilliancy		-8018 Jun 20 j 10:02	29°♒57'15	-2.4m	
max. Earth dist.	-8023 Mar 09 j 09:06	12°♊13'09 2.59946 AU				-8018 Jun 20 j 06:47	30°♒♑		
	-8023 Apr 05 j 14:32	0°♋		opposition		-8018 Jun 21 j 23:36	29°♒25'43	-5°32'01	
morning rise	-8023 Apr 06 j 02:58	0°♋20'05		direct		-8018 Jul 24 j 02:44	23°♒05'20		
	-8023 May 22 j 15:54	0°♌				-8018 Aug 28 j 07:16	0°♒		
asc. node	-8023 Jul 01 j 06:56	24°♌40'26				-8018 Oct 29 j 09:37	0°♓		
	-8023 Jul 09 j 23:05	0°♍				-8018 Dec 19 j 15:34	0°♊		
	-8023 Aug 29 j 04:16	0°♈				-8017 Feb 06 j 21:02	0°♋		
	-8023 Oct 24 j 13:37	0°♊		asc. node		-8017 Feb 20 j 14:15	8°♋28'33		
retrograde	-8023 Dec 25 j 20:25	17°♊30'18				-8017 Mar 27 j 01:21	0°♌		
opposition	-8022 Jan 28 j 14:20	10°♊52'28 6°06'04		evening set		-8017 Apr 26 j 18:01	19°♌31'38		
greatest brilliancy	-8022 Jan 30 j 08:49	10°♊16'45 -2.2m				-8017 May 12 j 22:34	0°♐		
min. Earth dist.	-8022 Feb 05 j 21:38	8°♊05'54 0.47496 AU		max. Earth dist.		-8017 May 23 j 03:56	6°♐40'58	2.61493 AU	
direct	-8022 Mar 06 j 19:27	2°♊46'00							
	-8022 May 19 j 15:12	0°♋		conjunction		-8017 Jun 13 j 12:45	20°♐50'54	0°57'12	
desc. node	-8022 Jun 10 j 16:49	14°♋01'00		minimum elong		-8017 Jun 13 j 11:16	20°♐48'25	0°57'19	
	-8022 Jul 03 j 23:47	0°♏				-8017 Jun 27 j 02:45	0°♈		
	-8022 Aug 14 j 10:50	0°♐		morning rise		-8017 Jul 31 j 05:24	23°♈31'58		
	-8022 Sep 24 j 05:36	0°♑				-8017 Aug 09 j 09:35	0°♊		
	-8022 Nov 04 j 16:45	0°♒				-8017 Sep 19 j 23:20	0°♋		
	-8022 Dec 17 j 13:55	0°♓				-8017 Oct 30 j 06:18	0°♌		
	-8021 Jan 31 j 02:42	0°♊				-8017 Dec 08 j 21:56	0°♐		
evening set	-8021 Feb 06 j 18:49	4°♊24'17				-8016 Jan 17 j 19:25	0°♑		
	-8021 Mar 18 j 02:01	0°♋		desc. node		-8016 Jan 31 j 23:20	10°♑26'33		
						-8016 Feb 28 j 06:45	0°♒		
conjunction	-8021 Mar 28 j 15:20	6°♋47'42 -0°28'37				-8016 Apr 14 j 03:23	0°♓		
minimum elong	-8021 Mar 28 j 16:26	6°♋49'28 0°29'05		retrograde		-8016 Jul 02 j 22:11	29°♓53'25		
max. Earth dist.	-8021 Apr 04 j 12:07	11°♋12'05 2.65822 AU		min. Earth dist.		-8016 Aug 04 j 17:48	22°♓40'21	0.56778 AU	
	-8021 May 03 j 21:51	0°♌		greatest brilliancy		-8016 Aug 09 j 23:59	20°♓37'52	-1.8m	
morning rise	-8021 May 15 j 01:14	7°♌06'16		opposition		-8016 Aug 11 j 00:48	20°♓13'43	-5°05'55	
asc. node	-8021 May 18 j 23:34	9°♌36'39		direct		-8016 Sep 16 j 05:26	12°♓00'54		
	-8021 Jun 19 j 22:27	0°♍				-8016 Nov 18 j 10:33	0°♊		
	-8021 Aug 05 j 18:31	0°♈		asc. node		-8015 Jan 07 j 15:55	26°♊04'51		
	-8021 Sep 21 j 13:22	0°♊				-8015 Jan 14 j 14:41	0°♋		

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 39

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-8015 Mar 06 j 09:58	0° $\text{H}$				-8011 Dec 23 j 11:58	0° $\text{M}$	
	-8015 Apr 23 j 05:40	0° $\text{Y}$		max. Earth dist.		-8010 Jan 13 j 20:10	15° $\text{M}$ 42'02	2.44158 AU
evening set	-8015 Jun 06 j 03:52	29° $\text{Y}$ 04'31		morning rise		-8010 Jan 29 j 22:42	27° $\text{M}$ 17'26	
	-8015 Jun 07 j 12:29	0° $\text{B}$				-8010 Feb 02 j 18:13	0° $\text{A}$	
max. Earth dist.	-8015 Jun 22 j 17:53	10° $\text{B}$ 28'06	2.51870 AU			-8010 Mar 18 j 05:32	0° $\text{Z}$	
	-8015 Jul 20 j 09:57	0° $\text{II}$				-8010 May 03 j 05:33	0° $\approx$	
						-8010 Jun 21 j 10:41	0° $\text{H}$	
conjunction	-8015 Jul 27 j 01:21	4° $\text{II}$ 47'05	1°11'48			-8010 Aug 16 j 14:41	0° $\text{Y}$	
minimum elong	-8015 Jul 27 j 01:46	4° $\text{II}$ 47'49	1°12'15	asc. node		-8010 Aug 31 j 02:55	6° $\text{Y}$ 21'59	
	-8015 Aug 30 j 06:44	0° $\text{E}$		retrograde		-8010 Oct 19 j 18:35	18° $\text{Y}$ 12'38	
morning rise	-8015 Sep 19 j 02:44	14° $\text{E}$ 59'30		opposition		-8010 Nov 26 j 21:39	9° $\text{Y}$ 29'32	3°17'20
	-8015 Oct 08 j 16:42	0° $\text{O}$		greatest brilliancy		-8010 Nov 27 j 09:06	9° $\text{Y}$ 18'25	-1.5m
	-8015 Nov 16 j 09:43	0° $\text{M}$		min. Earth dist.		-8010 Dec 01 j 17:20	7° $\text{Y}$ 37'17	0.62460 AU
desc. node	-8015 Dec 18 j 19:04	25° $\text{M}$ 03'04				-8010 Dec 29 j 12:44	30° $\text{R}$ $\text{H}$	
	-8015 Dec 25 j 06:01	0° $\text{A}$		direct		-8009 Jan 06 j 21:19	29° $\text{H}$ 32'29	
	-8014 Feb 03 j 03:54	0° $\text{M}$				-8009 Jan 15 j 10:09	0° $\text{Y}$	
	-8014 Mar 17 j 06:37	0° $\text{A}$				-8009 Apr 01 j 15:12	0° $\text{B}$	
	-8014 May 02 j 11:24	0° $\text{Z}$				-8009 May 19 j 01:03	0° $\text{II}$	
	-8014 Jun 29 j 11:52	0° $\approx$				-8009 Jun 30 j 02:27	0° $\text{E}$	
retrograde	-8014 Aug 09 j 14:58	9° $\approx$ 07'39				-8009 Aug 08 j 16:18	0° $\text{O}$	
min. Earth dist.	-8014 Sep 16 j 00:12	0° $\approx$ 15'23	0.64714 AU	desc. node		-8009 Aug 10 j 07:26	1° $\text{O}$ 15'31	
	-8014 Sep 16 j 15:31	30° $\text{R}$ $\text{Z}$				-8009 Sep 16 j 07:05	0° $\text{M}$	
opposition	-8014 Sep 18 j 15:01	29° $\text{Z}$ 12'12	-2°33'57			-8009 Oct 25 j 02:01	0° $\text{A}$	
greatest brilliancy	-8014 Sep 18 j 10:06	29° $\text{Z}$ 17'09	-1.5m	evening set		-8009 Nov 29 j 04:31	26° $\text{A}$ 29'02	
direct	-8014 Oct 27 j 15:50	19° $\text{Z}$ 53'19				-8009 Dec 03 j 22:30	0° $\text{M}$	
asc. node	-8014 Nov 25 j 20:24	24° $\text{Z}$ 28'56				-8008 Jan 14 j 12:01	0° $\text{A}$	
	-8014 Dec 12 j 03:27	0° $\approx$						
	-8013 Feb 11 j 17:20	0° $\text{H}$		conjunction		-8008 Jan 26 j 05:43	8° $\text{A}$ 13'13	-1°10'56
	-8013 Apr 03 j 06:05	0° $\text{Y}$		minimum elong		-8008 Jan 26 j 06:15	8° $\text{A}$ 14'08	1°11'25
	-8013 May 19 j 08:58	0° $\text{B}$		max. Earth dist.		-8008 Feb 26 j 12:28	29° $\text{A}$ 37'16	2.56249 AU
	-8013 Jul 01 j 08:34	0° $\text{II}$				-8008 Feb 27 j 01:59	0° $\text{Z}$	
evening set	-8013 Jul 25 j 09:36	17° $\text{II}$ 35'04		morning rise		-8008 Mar 20 j 12:53	14° $\text{Z}$ 56'14	
	-8013 Aug 10 j 23:17	0° $\text{E}$				-8008 Apr 12 j 15:35	0° $\approx$	
max. Earth dist.	-8013 Aug 21 j 08:18	7° $\text{E}$ 53'04	2.39985 AU			-8008 May 29 j 23:50	0° $\text{H}$	
	-8013 Sep 18 j 23:58	0° $\text{O}$		asc. node		-8008 Jul 17 j 23:37	29° $\text{H}$ 49'43	
						-8008 Jul 18 j 06:34	0° $\text{Y}$	
conjunction	-8013 Sep 21 j 16:29	2° $\text{O}$ 05'42	0°32'39			-8008 Sep 09 j 12:47	0° $\text{B}$	
minimum elong	-8013 Sep 21 j 18:58	2° $\text{O}$ 10'31	0°33'06	retrograde		-8008 Dec 03 j 13:16	28° $\text{B}$ 34'34	
	-8013 Oct 27 j 07:27	0° $\text{M}$		opposition		-8007 Jan 07 j 20:15	21° $\text{B}$ 12'35	5°43'44
desc. node	-8013 Nov 05 j 12:18	7° $\text{M}$ 12'38		greatest brilliancy		-8007 Jan 09 j 08:27	20° $\text{B}$ 40'10	-2.0m
morning rise	-8013 Nov 25 j 09:58	22° $\text{M}$ 44'21		min. Earth dist.		-8007 Jan 15 j 18:31	18° $\text{B}$ 22'38	0.52478 AU
	-8013 Dec 04 j 19:01	0° $\text{A}$		direct		-8007 Feb 15 j 20:46	12° $\text{B}$ 12'35	
	-8012 Jan 13 j 07:10	0° $\text{M}$				-8007 Apr 15 j 00:50	0° $\text{II}$	
	-8012 Feb 23 j 15:11	0° $\text{A}$				-8007 Jun 03 j 01:30	0° $\text{E}$	
	-8012 Apr 07 j 14:09	0° $\text{Z}$		desc. node		-8007 Jun 27 j 09:26	17° $\text{E}$ 04'01	
	-8012 May 25 j 11:04	0° $\approx$				-8007 Jul 15 j 02:51	0° $\text{O}$	
	-8012 Jul 21 j 14:08	0° $\text{H}$				-8007 Aug 24 j 03:36	0° $\text{M}$	
retrograde	-8012 Sep 12 j 13:28	13° $\text{H}$ 31'18				-8007 Oct 03 j 00:20	0° $\text{A}$	
asc. node	-8012 Oct 13 j 00:58	7° $\text{H}$ 32'16				-8007 Nov 12 j 18:51	0° $\text{M}$	
opposition	-8012 Oct 22 j 04:01	3° $\text{H}$ 59'45	0°21'01			-8007 Dec 25 j 02:54	0° $\text{A}$	
greatest brilliancy	-8012 Oct 22 j 04:13	3° $\text{H}$ 59'33	-1.4m	evening set		-8006 Jan 20 j 04:16	17° $\text{A}$ 51'23	
min. Earth dist.	-8012 Oct 23 j 06:44	3° $\text{H}$ 33'02	0.66676 AU			-8006 Feb 07 j 06:12	0° $\text{Z}$	
	-8012 Nov 01 j 10:49	30° $\text{R}$ $\approx$						
direct	-8012 Dec 01 j 20:57	24° $\approx$ 06'09		conjunction		-8006 Mar 12 j 16:39	22° $\text{Z}$ 00'47	-0°44'51
	-8011 Jan 04 j 06:11	0° $\text{H}$		minimum elong		-8006 Mar 12 j 18:14	22° $\text{Z}$ 03'21	0°45'21
	-8011 Mar 09 j 15:21	0° $\text{Y}$				-8006 Mar 25 j 00:09	0° $\approx$	
	-8011 Apr 27 j 14:16	0° $\text{B}$		max. Earth dist.		-8006 Mar 26 j 00:04	0° $\approx$ 38'39	2.64143 AU
	-8011 Jun 10 j 10:49	0° $\text{II}$		morning rise		-8006 Apr 30 j 09:42	23° $\approx$ 21'18	
	-8011 Jul 21 j 06:45	0° $\text{E}$				-8006 May 10 j 20:08	0° $\text{H}$	
	-8011 Aug 29 j 07:01	0° $\text{O}$		asc. node		-8006 Jun 04 j 16:45	15° $\text{H}$ 46'13	
desc. node	-8011 Sep 22 j 07:36	18° $\text{O}$ 49'23				-8006 Jun 27 j 05:01	0° $\text{Y}$	
evening set	-8011 Sep 24 j 16:06	20° $\text{O}$ 40'24				-8006 Aug 13 j 22:39	0° $\text{B}$	
	-8011 Oct 06 j 12:55	0° $\text{M}$				-8006 Oct 01 j 17:35	0° $\text{II}$	
	-8011 Nov 13 j 23:44	0° $\text{A}$				-8006 Nov 23 j 13:15	0° $\text{E}$	
				retrograde		-8005 Feb 06 j 13:02	24° $\text{E}$ 27'46	
conjunction	-8011 Nov 27 j 17:12	10° $\text{A}$ 32'47	-0°45'51	opposition		-8005 Mar 09 j 19:30	19° $\text{E}$ 02'59	4°35'39
minimum elong	-8011 Nov 27 j 13:58	10° $\text{A}$ 26'38	0°45'51	greatest brilliancy		-8005 Mar 10 j 22:31	18° $\text{E}$ 43'38	-2.7m

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 40

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

min. Earth dist.	-8005 Mar 15 j 15:15	17° $\mathfrak{D}$ 23'19	0.40443 AU		-8000 Mar 13 j 23:46	0° $\mathfrak{H}$	
direct	-8005 Apr 11 j 21:13	12° $\mathfrak{D}$ 54'38			-8000 Apr 30 j 08:22	0° $\mathfrak{Y}$	
desc. node	-8005 May 15 j 13:02	19° $\mathfrak{D}$ 52'43		evening set	-8000 May 20 j 10:30	13° $\mathfrak{Y}$ 09'11	
	-8005 Jun 06 j 14:36	0° $\mathfrak{Q}$		max. Earth dist.	-8000 Jun 09 j 02:31	26° $\mathfrak{Y}$ 18'44	2.56133 AU
	-8005 Jul 26 j 00:44	0° $\mathfrak{M}$			-8000 Jun 14 j 13:00	0° $\mathfrak{B}$	
	-8005 Sep 08 j 02:11	0° $\mathfrak{L}$					
	-8005 Oct 21 j 12:09	0° $\mathfrak{M}$		conjunction	-8000 Jul 08 j 16:18	16° $\mathfrak{B}$ 39'23	1°10'46
	-8005 Dec 04 j 15:58	0° $\mathfrak{J}$		minimum elong	-8000 Jul 08 j 15:34	16° $\mathfrak{B}$ 38'06	1°11'07
	-8004 Jan 19 j 00:54	0° $\mathfrak{Z}$			-8000 Jul 27 j 13:09	0° $\mathfrak{I}$	
evening set	-8004 Mar 03 j 08:12	28° $\mathfrak{Z}$ 37'22		morning rise	-8000 Aug 28 j 12:45	23° $\mathfrak{I}$ 14'51	
	-8004 Mar 05 j 11:47	0° $\mathfrak{A}$			-8000 Sep 06 j 15:16	0° $\mathfrak{D}$	
max. Earth dist.	-8004 Apr 18 j 07:38	28° $\mathfrak{A}$ 00'02	2.66761 AU		-8000 Oct 16 j 07:50	0° $\mathfrak{Q}$	
					-8000 Nov 24 j 07:32	0° $\mathfrak{M}$	
conjunction	-8004 Apr 20 j 13:08	29° $\mathfrak{A}$ 25'26	-0°00'31		-7999 Jan 02 j 10:34	0° $\mathfrak{L}$	
minimum elong	-8004 Apr 20 j 13:10	29° $\mathfrak{A}$ 25'29	0°00'51	desc. node	-7999 Jan 04 j 13:49	1° $\mathfrak{L}$ 37'12	
behind sun begin	-8004 Apr 19 j 17:44	28° $\mathfrak{A}$ 54'28			-7999 Feb 11 j 17:13	0° $\mathfrak{M}$	
behind sun end	-8004 Apr 21 j 08:36	29° $\mathfrak{A}$ 56'30			-7999 Mar 26 j 13:54	0° $\mathfrak{J}$	
asc. node	-8004 Apr 21 j 10:17	29° $\mathfrak{A}$ 59'11			-7999 May 14 j 06:08	0° $\mathfrak{Z}$	
	-8004 Apr 21 j 10:47	0° $\mathfrak{H}$		retrograde	-7999 Jul 26 j 14:57	24° $\mathfrak{Z}$ 58'17	
morning rise	-8004 Jun 05 j 19:51	29° $\mathfrak{H}$ 07'10		min. Earth dist.	-7999 Aug 31 j 09:12	16° $\mathfrak{Z}$ 40'00	0.62291 AU
	-8004 Jun 07 j 04:33	0° $\mathfrak{Y}$		opposition	-7999 Sep 04 j 10:56	15° $\mathfrak{Z}$ 02'18	-3°37'54
	-8004 Jul 23 j 03:42	0° $\mathfrak{B}$		greatest brilliancy	-7999 Sep 03 j 23:41	15° $\mathfrak{Z}$ 13'34	-1.5m
	-8004 Sep 06 j 04:08	0° $\mathfrak{I}$		direct	-7999 Oct 12 j 12:12	6° $\mathfrak{Z}$ 04'54	
	-8004 Oct 20 j 11:00	0° $\mathfrak{D}$		asc. node	-7999 Dec 12 j 09:42	22° $\mathfrak{Z}$ 42'08	
	-8004 Dec 03 j 13:58	0° $\mathfrak{Q}$			-7999 Dec 27 j 20:23	0° $\mathfrak{A}$	
	-8003 Jan 18 j 00:34	0° $\mathfrak{M}$			-7998 Feb 20 j 20:54	0° $\mathfrak{H}$	
	-8003 Mar 12 j 13:04	0° $\mathfrak{L}$			-7998 Apr 11 j 00:23	0° $\mathfrak{Y}$	
desc. node	-8003 Apr 01 j 17:25	7° $\mathfrak{L}$ 21'21			-7998 May 26 j 17:14	0° $\mathfrak{B}$	
retrograde	-8003 Apr 23 j 13:43	10° $\mathfrak{L}$ 28'31		evening set	-7998 Jul 04 j 19:56	27° $\mathfrak{B}$ 16'19	
min. Earth dist.	-8003 May 20 j 12:57	5° $\mathfrak{L}$ 55'03	0.40336 AU		-7998 Jul 08 j 15:07	0° $\mathfrak{I}$	
opposition	-8003 May 26 j 18:28	4° $\mathfrak{L}$ 03'58	-3°53'28	max. Earth dist.	-7998 Jul 21 j 15:02	9° $\mathfrak{I}$ 25'41	2.44466 AU
greatest brilliancy	-8003 May 25 j 19:24	4° $\mathfrak{L}$ 21'14	-2.7m		-7998 Aug 18 j 07:27	0° $\mathfrak{D}$	
	-8003 Jun 11 j 14:14	30° $\mathfrak{R}$ $\mathfrak{M}$					
direct	-8003 Jun 26 j 11:49	28° $\mathfrak{M}$ 33'54		conjunction	-7998 Aug 28 j 17:04	7° $\mathfrak{D}$ 52'51	0°55'55
	-8003 Jul 11 j 12:40	0° $\mathfrak{L}$		minimum elong	-7998 Aug 28 j 19:34	7° $\mathfrak{D}$ 57'38	0°56'27
	-8003 Sep 20 j 04:42	0° $\mathfrak{M}$			-7998 Sep 26 j 10:53	0° $\mathfrak{Q}$	
	-8003 Nov 09 j 20:14	0° $\mathfrak{J}$		morning rise	-7998 Oct 28 j 12:11	25° $\mathfrak{Q}$ 01'14	
	-8003 Dec 28 j 07:47	0° $\mathfrak{Z}$			-7998 Nov 03 j 20:52	0° $\mathfrak{M}$	
	-8002 Feb 14 j 09:32	0° $\mathfrak{A}$		desc. node	-7998 Nov 22 j 09:06	14° $\mathfrak{M}$ 27'19	
asc. node	-8002 Mar 09 j 06:09	14° $\mathfrak{A}$ 20'10			-7998 Dec 12 j 10:21	0° $\mathfrak{L}$	
	-8002 Apr 03 j 01:42	0° $\mathfrak{H}$			-7997 Jan 21 j 00:17	0° $\mathfrak{M}$	
evening set	-8002 Apr 11 j 13:27	5° $\mathfrak{H}$ 23'30			-7997 Mar 03 j 11:53	0° $\mathfrak{J}$	
max. Earth dist.	-8002 May 13 j 00:21	25° $\mathfrak{H}$ 34'57	2.63994 AU		-7997 Apr 16 j 22:34	0° $\mathfrak{Z}$	
	-8002 May 19 j 19:33	0° $\mathfrak{Y}$			-7997 Jun 05 j 14:00	0° $\mathfrak{A}$	
					-7997 Aug 21 j 11:16	0° $\mathfrak{H}$	
conjunction	-8002 May 28 j 23:49	5° $\mathfrak{Y}$ 59'42	0°43'31	retrograde	-7997 Aug 31 j 00:30	0° $\mathfrak{H}$ 33'54	
minimum elong	-8002 May 28 j 22:26	5° $\mathfrak{Y}$ 57'26	0°43'30		-7997 Sep 09 j 06:31	30° $\mathfrak{R}$ $\mathfrak{A}$	
	-8002 Jul 04 j 02:24	0° $\mathfrak{B}$		opposition	-7997 Oct 09 j 21:40	20° $\mathfrak{A}$ 50'00	-0°47'36
morning rise	-8002 Jul 14 j 15:02	7° $\mathfrak{B}$ 08'14		greatest brilliancy	-7997 Oct 09 j 21:43	20° $\mathfrak{A}$ 49'56	-1.4m
	-8002 Aug 16 j 16:53	0° $\mathfrak{I}$		min. Earth dist.	-7997 Oct 09 j 13:33	20° $\mathfrak{A}$ 58'09	0.66644 AU
	-8002 Sep 27 j 18:09	0° $\mathfrak{D}$		asc. node	-7997 Oct 30 j 14:27	13° $\mathfrak{A}$ 35'25	
	-8002 Nov 07 j 15:30	0° $\mathfrak{Q}$		direct	-7997 Nov 19 j 02:07	11° $\mathfrak{A}$ 06'45	
	-8002 Dec 17 j 23:43	0° $\mathfrak{M}$			-7996 Jan 23 j 21:37	0° $\mathfrak{H}$	
	-8001 Jan 27 j 18:49	0° $\mathfrak{L}$			-7996 Mar 19 j 07:02	0° $\mathfrak{Y}$	
desc. node	-8001 Feb 17 j 18:04	14° $\mathfrak{L}$ 55'06			-7996 May 05 j 17:56	0° $\mathfrak{B}$	
	-8001 Mar 11 j 22:29	0° $\mathfrak{M}$			-7996 Jun 18 j 03:48	0° $\mathfrak{I}$	
	-8001 May 03 j 01:11	0° $\mathfrak{J}$			-7996 Jul 28 j 20:39	0° $\mathfrak{D}$	
retrograde	-8001 Jun 17 j 03:35	11° $\mathfrak{J}$ 49'27		evening set	-7996 Aug 29 j 19:14	24° $\mathfrak{D}$ 30'42	
min. Earth dist.	-8001 Jul 17 j 19:54	5° $\mathfrak{J}$ 26'24	0.52267 AU		-7996 Sep 05 j 20:24	0° $\mathfrak{Q}$	
greatest brilliancy	-8001 Jul 23 j 22:16	3° $\mathfrak{J}$ 09'49	-2.0m	desc. node	-7996 Oct 09 j 04:01	26° $\mathfrak{Q}$ 08'04	
opposition	-8001 Jul 25 j 08:03	2° $\mathfrak{J}$ 38'08	-5°43'51		-7996 Oct 14 j 02:02	0° $\mathfrak{M}$	
	-8001 Aug 01 j 15:51	30° $\mathfrak{R}$ $\mathfrak{M}$					
direct	-8001 Aug 29 j 01:49	25° $\mathfrak{M}$ 03'18		conjunction	-7996 Oct 31 j 21:48	13° $\mathfrak{M}$ 58'39	-0°17'04
	-8001 Sep 27 j 17:18	0° $\mathfrak{J}$		minimum elong	-7996 Oct 31 j 20:14	13° $\mathfrak{M}$ 55'35	0°16'50
	-8001 Dec 02 j 22:44	0° $\mathfrak{Z}$			-7996 Nov 21 j 12:03	0° $\mathfrak{L}$	
	-8000 Jan 24 j 12:27	0° $\mathfrak{A}$		max. Earth dist.	-7996 Dec 08 j 09:41	12° $\mathfrak{L}$ 59'03	2.39482 AU
asc. node	-8000 Jan 25 j 06:16	0° $\mathfrak{A}$ 26'23			-7996 Dec 30 j 22:55	0° $\mathfrak{M}$	



## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 41

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

morning rise	-7995 Jan 05 j 19:32	4°♄21'23		greatest brilliancy	-7990 Feb 12 j 16:09	23°♄18'51	-2.4m
	-7995 Feb 10 j 03:54	0°♂		min. Earth dist.	-7990 Feb 18 j 22:33	21°♄19'46	0.44774 AU
	-7995 Mar 25 j 16:43	0°♂		direct	-7990 Mar 18 j 19:15	16°♄24'33	
	-7995 May 11 j 02:49	0°♂			-7990 May 06 j 13:29	0°♄	
	-7995 Jun 30 j 22:35	0°♂		desc. node	-7990 Jun 01 j 05:27	14°♄11'07	
	-7995 Sep 05 j 17:21	0°♂			-7990 Jun 25 j 21:52	0°♄	
asc. node	-7995 Sep 16 j 17:26	2°♂42'13			-7990 Aug 07 j 20:45	0°♄	
retrograde	-7995 Oct 04 j 17:44	4°♂34'56			-7990 Sep 18 j 10:10	0°♄	
	-7995 Oct 31 j 10:11	30°♂			-7990 Oct 30 j 09:29	0°♄	
opposition	-7995 Nov 12 j 13:45	25°♂29'50	2°09'50		-7990 Dec 12 j 14:42	0°♂	
greatest brilliancy	-7995 Nov 12 j 18:41	25°♂24'58	-1.4m		-7989 Jan 26 j 08:57	0°♂	
min. Earth dist.	-7995 Nov 15 j 22:58	24°♂09'47	0.64838 AU	evening set	-7989 Feb 16 j 07:31	13°♂43'05	
direct	-7995 Dec 23 j 15:21	15°♂29'21			-7989 Mar 13 j 11:14	0°♂	
	-7994 Feb 16 j 14:05	0°♂					
	-7994 Apr 12 j 14:59	0°♂		conjunction	-7989 Apr 06 j 11:10	15°♂23'56	-0°18'31
	-7994 May 28 j 00:46	0°♄		minimum elong	-7989 Apr 06 j 11:54	15°♂25'06	0°18'56
	-7994 Jul 08 j 10:19	0°♄		max. Earth dist.	-7989 Apr 10 j 01:00	17°♂41'10	2.66385 AU
	-7994 Aug 16 j 16:53	0°♄			-7989 Apr 29 j 07:34	0°♂	
desc. node	-7994 Aug 27 j 00:40	8°♄02'05		asc. node	-7989 May 09 j 04:15	6°♂17'51	
	-7994 Sep 24 j 02:45	0°♄		morning rise	-7989 May 23 j 08:40	15°♂21'37	
	-7994 Nov 01 j 17:11	0°♄			-7989 Jun 15 j 05:09	0°♂	
evening set	-7994 Nov 04 j 16:14	2°♄16'26			-7989 Jul 31 j 16:23	0°♂	
	-7994 Dec 11 j 09:11	0°♄			-7989 Sep 15 j 16:54	0°♄	
					-7989 Oct 31 j 18:39	0°♄	
conjunction	-7993 Jan 04 j 19:54	17°♄53'33	-1°09'29		-7989 Dec 18 j 07:42	0°♄	
minimum elong	-7993 Jan 04 j 18:41	17°♄51'21	1°09'50		-7988 Feb 11 j 23:04	0°♄	
	-7993 Jan 21 j 18:25	0°♂		retrograde	-7988 Mar 26 j 07:48	10°♄31'39	
max. Earth dist.	-7993 Feb 12 j 13:23	15°♂13'33	2.51859 AU	desc. node	-7988 Apr 18 j 09:02	7°♄20'03	
morning rise	-7993 Mar 03 j 09:45	28°♂05'32		min. Earth dist.	-7988 Apr 24 j 11:38	5°♄44'02	0.38090 AU
	-7993 Mar 06 j 05:38	0°♂		opposition	-7988 Apr 26 j 11:22	5°♄11'51	-0°38'35
	-7993 Apr 20 j 20:29	0°♂		greatest brilliancy	-7988 Apr 26 j 09:36	5°♄13'02	-3.0m
	-7993 Jun 07 j 15:48	0°♂		direct	-7988 May 26 j 13:35	0°♄08'16	
	-7993 Jul 28 j 11:28	0°♂			-7988 Aug 15 j 16:33	0°♄	
asc. node	-7993 Aug 04 j 16:43	4°♂01'51			-7988 Oct 03 j 17:51	0°♄	
	-7993 Sep 26 j 07:11	0°♂			-7988 Nov 19 j 13:43	0°♂	
retrograde	-7993 Nov 15 j 03:38	11°♂53'32			-7987 Jan 05 j 10:08	0°♂	
opposition	-7993 Dec 21 j 17:51	3°♂54'40	4°55'18		-7987 Feb 21 j 16:30	0°♂	
greatest brilliancy	-7993 Dec 22 j 19:57	3°♂30'18	-1.8m	asc. node	-7987 Mar 25 j 23:01	20°♂26'20	
min. Earth dist.	-7993 Dec 28 j 15:40	1°♂20'00	0.56984 AU	evening set	-7987 Mar 27 j 11:14	21°♂23'46	
	-7992 Jan 01 j 08:40	30°♂			-7987 Apr 10 j 00:05	0°♂	
direct	-7992 Jan 30 j 21:41	24°♂21'08		max. Earth dist.	-7987 May 03 j 06:28	14°♂52'15	2.65735 AU
	-7992 Mar 01 j 23:11	0°♂					
	-7992 Apr 30 j 12:59	0°♄		conjunction	-7987 May 13 j 21:54	21°♂43'21	0°27'25
	-7992 Jun 14 j 01:54	0°♄		minimum elong	-7987 May 13 j 20:56	21°♂41'47	0°27'16
desc. node	-7992 Jul 14 j 01:24	21°♄59'06			-7987 May 26 j 16:44	0°♂	
	-7992 Jul 24 j 16:58	0°♄		morning rise	-7987 Jun 29 j 00:54	21°♂53'48	
	-7992 Sep 01 j 23:04	0°♄			-7987 Jul 11 j 04:25	0°♂	
	-7992 Oct 11 j 06:07	0°♄			-7987 Aug 24 j 05:27	0°♄	
	-7992 Nov 20 j 13:23	0°♄			-7987 Oct 05 j 22:14	0°♄	
evening set	-7991 Jan 01 j 01:59	29°♄42'22			-7987 Nov 16 j 15:48	0°♄	
	-7991 Jan 01 j 12:04	0°♂			-7987 Dec 28 j 01:50	0°♄	
	-7991 Feb 14 j 08:30	0°♂			-7986 Feb 08 j 12:55	0°♄	
				desc. node	-7986 Mar 06 j 11:49	17°♄09'36	
conjunction	-7991 Feb 23 j 17:31	6°♂15'23	-0°58'33		-7986 Mar 27 j 22:23	0°♄	
minimum elong	-7991 Feb 23 j 19:12	6°♂18'11	0°59'05	retrograde	-7986 May 29 j 07:23	21°♄00'44	
max. Earth dist.	-7991 Mar 15 j 17:29	19°♂26'19	2.61665 AU	min. Earth dist.	-7986 Jun 26 j 21:21	15°♄30'09	0.47326 AU
	-7991 Mar 31 j 23:01	0°♂		greatest brilliancy	-7986 Jul 03 j 10:29	13°♄12'38	-2.3m
morning rise	-7991 Apr 15 j 04:33	9°♂10'18		opposition	-7986 Jul 05 j 01:34	12°♄38'14	-5°51'34
	-7991 May 17 j 21:20	0°♂		direct	-7986 Aug 07 j 03:25	5°♄49'32	
asc. node	-7991 Jun 21 j 11:30	21°♂43'50			-7986 Oct 20 j 12:15	0°♂	
	-7991 Jul 04 j 18:29	0°♂			-7986 Dec 13 j 13:01	0°♂	
	-7991 Aug 22 j 20:20	0°♂			-7985 Feb 01 j 16:54	0°♂	
	-7991 Oct 14 j 06:09	0°♄		asc. node	-7985 Feb 10 j 20:51	5°♂35'34	
	-7990 Jan 06 j 03:15	0°♄			-7985 Mar 22 j 06:50	0°♂	
retrograde	-7990 Jan 09 j 01:03	0°♄03'10		evening set	-7985 May 05 j 14:24	28°♂13'36	
	-7990 Jan 11 j 22:27	30°♂			-7985 May 08 j 07:57	0°♂	
opposition	-7990 Feb 10 j 22:53	23°♄51'53	5°56'17	max. Earth dist.	-7985 May 29 j 12:14	13°♂53'49	2.59794 AU

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

conjunction	-7985 Jun 22 j 17:47	0°♄09'04	1°03'30		-7980 Feb 18 j 16:17	0°♄	
minimum elong	-7985 Jun 22 j 16:26	0°♄06'46	1°03'43		-7980 Apr 02 j 09:33	0°♄	
	-7985 Jun 22 j 12:27	0°♄			-7980 May 19 j 13:04	0°♄	
	-7985 Aug 04 j 17:17	0°♄			-7980 Jul 12 j 07:34	0°♄	
morning rise	-7985 Aug 10 j 07:17	3°♄58'37		retrograde	-7980 Sep 20 j 12:58	21°♄26'06	
	-7985 Sep 15 j 02:57	0°♄		asc. node	-7980 Oct 03 j 07:56	20°♄22'05	
	-7985 Oct 25 j 04:38	0°♄		opposition	-7980 Oct 29 j 21:39	12°♄03'07	1°01'10
	-7985 Dec 03 j 13:48	0°♄		greatest brilliancy	-7980 Oct 29 j 22:47	12°♄02'00	-1.4m
	-7984 Jan 12 j 02:55	0°♄		min. Earth dist.	-7980 Oct 31 j 19:58	11°♄16'58	0.66277 AU
desc. node	-7984 Jan 22 j 10:47	7°♄42'49		direct	-7980 Dec 09 j 18:40	2°♄05'42	
	-7984 Feb 22 j 00:08	0°♄			-7979 Mar 02 j 12:20	0°♄	
	-7984 Apr 06 j 06:33	0°♄			-7979 Apr 22 j 00:05	0°♄	
	-7984 May 31 j 11:49	0°♄			-7979 Jun 05 j 08:25	0°♄	
retrograde	-7984 Jul 11 j 21:45	9°♄43'44			-7979 Jul 16 j 09:02	0°♄	
min. Earth dist.	-7984 Aug 14 j 19:37	2°♄05'32	0.58952 AU		-7979 Aug 24 j 11:35	0°♄	
opposition	-7984 Aug 20 j 07:58	29°♄55'08	-4°36'33	desc. node	-7979 Sep 12 j 19:05	15°♄06'10	
greatest brilliancy	-7984 Aug 19 j 12:21	0°♄14'29	-1.7m		-7979 Oct 01 j 18:34	0°♄	
	-7984 Aug 20 j 03:01	30°♄		evening set	-7979 Oct 09 j 13:47	6°♄07'07	
direct	-7984 Sep 26 j 05:28	21°♄24'41			-7979 Nov 09 j 05:55	0°♄	
	-7984 Nov 06 j 05:11	0°♄					
asc. node	-7984 Dec 28 j 22:33	24°♄28'04		conjunction	-7979 Dec 12 j 02:19	25°♄00'48	-0°57'40
	-7983 Jan 08 j 04:42	0°♄		minimum elong	-7979 Dec 11 j 23:23	24°♄55'19	0°57'48
	-7983 Mar 01 j 04:17	0°♄			-7979 Dec 18 j 18:32	0°♄	
	-7983 Apr 18 j 10:20	0°♄		max. Earth dist.	-7978 Jan 26 j 08:18	28°♄05'49	2.46947 AU
	-7983 Jun 02 j 20:46	0°♄			-7978 Jan 29 j 00:33	0°♄	
evening set	-7983 Jun 16 j 04:25	9°♄08'00		morning rise	-7978 Feb 11 j 08:46	9°♄23'21	
max. Earth dist.	-7983 Jul 01 j 20:15	20°♄04'37	2.49295 AU		-7978 Mar 13 j 10:26	0°♄	
	-7983 Jul 15 j 18:46	0°♄			-7978 Apr 28 j 05:14	0°♄	
					-7978 Jun 15 j 18:15	0°♄	
conjunction	-7983 Aug 07 j 06:46	16°♄22'30	1°08'47		-7978 Aug 08 j 05:09	0°♄	
minimum elong	-7983 Aug 07 j 08:00	16°♄24'46	1°09'16	asc. node	-7978 Aug 21 j 08:49	6°♄32'53	
	-7983 Aug 25 j 14:07	0°♄		retrograde	-7978 Oct 28 j 23:03	26°♄48'32	
morning rise	-7983 Oct 02 j 13:19	28°♄57'09		opposition	-7978 Dec 05 j 14:06	18°♄19'48	3°54'54
	-7983 Oct 03 j 21:52	0°♄		greatest brilliancy	-7978 Dec 06 j 06:22	18°♄04'11	-1.6m
	-7983 Nov 11 j 12:11	0°♄		min. Earth dist.	-7978 Dec 11 j 04:34	16°♄10'45	0.60728 AU
desc. node	-7983 Dec 09 j 04:52	21°♄30'24		direct	-7977 Jan 15 j 08:48	8°♄28'05	
	-7983 Dec 20 j 05:27	0°♄			-7977 Mar 24 j 03:41	0°♄	
	-7982 Jan 28 j 23:26	0°♄			-7977 May 12 j 19:57	0°♄	
	-7982 Mar 11 j 18:17	0°♄			-7977 Jun 24 j 13:20	0°♄	
	-7982 Apr 26 j 01:42	0°♄		desc. node	-7977 Jul 31 j 17:50	27°♄55'52	
	-7982 Jun 18 j 07:36	0°♄			-7977 Aug 03 j 10:39	0°♄	
retrograde	-7982 Aug 17 j 12:25	17°♄21'44			-7977 Sep 11 j 06:00	0°♄	
min. Earth dist.	-7982 Sep 24 j 16:59	8°♄12'42	0.65650 AU		-7977 Oct 20 j 04:17	0°♄	
opposition	-7982 Sep 26 j 12:08	7°♄29'13	-1°55'22		-7977 Nov 29 j 03:38	0°♄	
greatest brilliancy	-7982 Sep 26 j 09:45	7°♄31'37	-1.4m	evening set	-7977 Dec 12 j 01:40	9°♄27'06	
	-7982 Oct 18 j 13:36	30°♄			-7976 Jan 09 j 19:13	0°♄	
direct	-7982 Nov 04 j 23:37	28°♄00'31					
asc. node	-7982 Nov 16 j 03:25	28°♄45'15		conjunction	-7976 Feb 06 j 10:03	19°♄09'02	-1°08'06
	-7982 Nov 23 j 15:13	0°♄		minimum elong	-7976 Feb 06 j 11:14	19°♄11'03	1°08'36
	-7981 Feb 05 j 01:29	0°♄			-7976 Feb 22 j 10:17	0°♄	
	-7981 Mar 28 j 22:11	0°♄		max. Earth dist.	-7976 Mar 04 j 12:08	7°♄24'36	2.58381 AU
	-7981 May 14 j 11:29	0°♄		morning rise	-7976 Mar 30 j 04:19	24°♄18'16	
	-7981 Jun 26 j 15:01	0°♄			-7976 Apr 07 j 22:56	0°♄	
evening set	-7981 Aug 06 j 22:21	0°♄29'41			-7976 May 25 j 02:12	0°♄	
	-7981 Aug 06 j 06:39	0°♄		asc. node	-7976 Jul 08 j 04:58	27°♄15'10	
	-7981 Sep 14 j 07:00	0°♄			-7976 Jul 12 j 17:45	0°♄	
max. Earth dist.	-7981 Sep 20 j 23:17	5°♄12'49	2.38285 AU		-7976 Sep 01 j 23:49	0°♄	
					-7976 Nov 02 j 09:19	0°♄	
conjunction	-7981 Oct 06 j 03:59	17°♄07'21	0°15'39	retrograde	-7976 Dec 15 j 18:40	9°♄24'26	
minimum elong	-7981 Oct 06 j 05:24	17°♄10'07	0°16'01	opposition	-7975 Jan 19 j 05:41	2°♄25'52	6°00'32
behind sun begin	-7981 Oct 06 j 00:10	16°♄59'51		greatest brilliancy	-7975 Jan 20 j 22:13	1°♄50'39	-2.1m
behind sun end	-7981 Oct 06 j 10:38	17°♄20'24			-7975 Jan 26 j 05:49	30°♄	
	-7981 Oct 22 j 13:28	0°♄		min. Earth dist.	-7975 Jan 27 j 11:24	29°♄34'56	0.49751 AU
desc. node	-7981 Oct 26 j 22:43	3°♄26'35		direct	-7975 Feb 26 j 07:43	23°♄52'38	
	-7981 Nov 29 j 23:48	0°♄			-7975 Mar 29 j 23:31	0°♄	
morning rise	-7981 Dec 11 j 04:32	8°♄37'11			-7975 May 25 j 23:14	0°♄	
	-7980 Jan 08 j 10:39	0°♄		desc. node	-7975 Jun 17 j 20:24	15°♄19'45	

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-7975 Jul 08 j 13:13	0°♂	conjunction	-7970 Jun 06 j 19:53	14°♂49'42	0°51'47
	-7975 Aug 18 j 06:45	0°♍	minimum elong	-7970 Jun 06 j 18:24	14°♂47'14	0°51'50
	-7975 Sep 27 j 13:55	0°♊		-7970 Jun 29 j 11:54	0°♋	
	-7975 Nov 07 j 16:14	0°♌	morning rise	-7970 Jul 23 j 22:48	16°♋43'38	
	-7975 Dec 20 j 06:04	0°♎		-7970 Aug 11 j 23:02	0°♌	
evening set	-7974 Jan 30 j 10:02	27°♎54'31		-7970 Sep 22 j 18:18	0°♍	
	-7974 Feb 02 j 13:28	0°♏		-7970 Nov 02 j 07:41	0°♎	
	-7974 Mar 20 j 09:25	0°♐		-7970 Dec 12 j 06:02	0°♏	
				-7969 Jan 21 j 11:05	0°♑	
conjunction	-7974 Mar 21 j 22:44	1°♐00'14 -0°35'40	desc. node	-7969 Feb 08 j 04:29	12°♑54'23	
minimum elong	-7974 Mar 22 j 00:04	1°♐02'23 0°36'08		-7969 Mar 04 j 11:11	0°♒	
max. Earth dist.	-7974 Mar 31 j 16:46	7°♐17'11 2.65183 AU		-7969 Apr 20 j 22:43	0°♓	
	-7974 May 06 j 04:50	0°♈	retrograde	-7969 Jun 26 j 23:55	22°♓49'41	
morning rise	-7974 May 08 j 20:59	1°♈42'12	min. Earth dist.	-7969 Jul 28 j 20:50	15°♓57'49	0.54840 AU
asc. node	-7974 May 25 j 22:02	12°♈33'04	opposition	-7969 Aug 04 j 17:10	13°♓20'28	-5°24'50
	-7974 Jun 22 j 08:41	0°♉	greatest brilliancy	-7969 Aug 03 j 12:19	13°♓48'11	-1.9m
	-7974 Aug 08 j 13:23	0°♊	direct	-7969 Sep 09 j 06:42	5°♓23'30	
	-7974 Sep 25 j 02:37	0°♋		-7969 Nov 24 j 21:40	0°♌	
	-7974 Nov 13 j 11:04	0°♍	asc. node	-7968 Jan 15 j 12:39	28°♌07'29	
	-7973 Jan 10 j 11:43	0°♎		-7968 Jan 18 j 18:35	0°♍	
retrograde	-7973 Feb 23 j 23:08	10°♎24'21		-7968 Mar 08 j 23:40	0°♈	
opposition	-7973 Mar 26 j 16:14	5°♎15'22 3°03'37		-7968 Apr 25 j 15:18	0°♉	
greatest brilliancy	-7973 Mar 27 j 05:35	5°♎06'13 -2.9m	evening set	-7968 May 29 j 21:17	22°♉32'27	
min. Earth dist.	-7973 Mar 30 j 03:48	4°♎18'11 0.38813 AU		-7968 Jun 09 j 22:14	0°♊	
	-7973 Apr 20 j 22:09	30°♎00'00	max. Earth dist.	-7968 Jun 16 j 18:24	4°♊40'13 2.53860 AU	
direct	-7973 Apr 27 j 08:34	29°♎43'33				
	-7973 May 03 j 17:42	0°♏	conjunction	-7968 Jul 18 j 22:51	27°♊09'54	1°12'15
desc. node	-7973 May 06 j 02:12	0°♏14'18	minimum elong	-7968 Jul 18 j 22:43	27°♊09'39	1°12'40
	-7973 Jul 15 j 21:49	0°♐		-7968 Jul 22 j 22:10	0°♋	
	-7973 Aug 31 j 19:28	0°♑		-7968 Sep 01 j 22:11	0°♌	
	-7973 Oct 15 j 11:23	0°♒	morning rise	-7968 Sep 09 j 10:23	5°♌37'32	
	-7973 Nov 29 j 07:51	0°♓		-7968 Oct 11 j 11:36	0°♍	
	-7972 Jan 14 j 02:42	0°♔		-7968 Nov 19 j 07:34	0°♎	
	-7972 Feb 29 j 19:11	0°♕	desc. node	-7968 Dec 26 j 00:52	28°♎18'24	
evening set	-7972 Mar 12 j 06:51	7°♕19'29		-7968 Dec 28 j 06:04	0°♏	
asc. node	-7972 Apr 11 j 14:56	26°♕39'17		-7967 Feb 06 j 06:20	0°♐	
	-7972 Apr 16 j 20:46	0°♈		-7967 Mar 20 j 13:48	0°♑	
max. Earth dist.	-7972 Apr 23 j 18:37	4°♈24'51 2.66629 AU		-7967 May 06 j 11:37	0°♒	
				-7967 Jul 10 j 02:06	0°♓	
conjunction	-7972 Apr 29 j 02:36	7°♈49'26 0°10'00	retrograde	-7967 Aug 03 j 18:56	3°♓38'23	
minimum elong	-7972 Apr 29 j 02:14	7°♈48'50 0°09'43		-7967 Aug 26 j 18:17	30°♓00'00	
behind sun begin	-7972 Apr 28 j 10:37	7°♈23'52	min. Earth dist.	-7967 Sep 09 j 10:51	25°♓00'26	0.63740 AU
behind sun end	-7972 Apr 29 j 17:51	8°♈13'48	opposition	-7967 Sep 12 j 17:05	23°♓41'49	-3°01'16
	-7972 Jun 02 j 13:49	0°♉	greatest brilliancy	-7967 Sep 12 j 09:40	23°♓49'16	-1.5m
morning rise	-7972 Jun 14 j 04:43	7°♉32'54	direct	-7967 Oct 21 j 07:19	14°♓31'54	
	-7972 Jul 18 j 08:25	0°♊	asc. node	-7967 Dec 02 j 16:52	23°♓29'33	
	-7972 Aug 31 j 23:28	0°♋		-7967 Dec 18 j 17:47	0°♌	
	-7972 Oct 14 j 14:13	0°♍		-7966 Feb 14 j 23:47	0°♈	
	-7972 Nov 26 j 15:23	0°♎		-7966 Apr 05 j 22:31	0°♉	
	-7971 Jan 09 j 01:10	0°♏		-7966 May 21 j 22:10	0°♊	
	-7971 Feb 24 j 15:28	0°♐		-7966 Jul 03 j 22:22	0°♋	
desc. node	-7971 Mar 23 j 05:23	14°♐16'54	evening set	-7966 Jul 16 j 06:49	8°♋57'12	
retrograde	-7971 May 07 j 11:09	26°♐25'48	max. Earth dist.	-7966 Aug 05 j 23:22	24°♋15'24 2.41876 AU	
min. Earth dist.	-7971 Jun 03 j 14:52	21°♐38'50 0.42528 AU		-7966 Aug 13 j 14:44	0°♌	
greatest brilliancy	-7971 Jun 09 j 17:21	19°♐42'27 -2.6m				
opposition	-7971 Jun 11 j 02:37	19°♐15'50 -5°01'17	conjunction	-7966 Sep 10 j 23:34	21°♌40'39	0°43'55
direct	-7971 Jul 12 j 12:27	13°♐19'00	minimum elong	-7966 Sep 11 j 02:18	21°♌45'56	0°44'24
	-7971 Sep 08 j 17:54	0°♒		-7966 Sep 21 j 17:16	0°♍	
	-7971 Nov 02 j 22:02	0°♓		-7966 Oct 30 j 02:00	0°♎	
	-7971 Dec 22 j 18:23	0°♔	desc. node	-7966 Nov 12 j 18:36	10°♎43'05	
	-7970 Feb 09 j 10:25	0°♕	morning rise	-7966 Nov 13 j 03:00	10°♎59'31	
asc. node	-7970 Feb 27 j 11:46	11°♕14'02		-7966 Dec 07 j 13:55	0°♏	
	-7970 Mar 29 j 09:24	0°♈		-7965 Jan 16 j 01:53	0°♐	
evening set	-7970 Apr 20 j 06:24	13°♈53'53		-7965 Feb 26 j 09:51	0°♑	
	-7970 May 15 j 05:45	0°♉		-7965 Apr 11 j 11:13	0°♒	
max. Earth dist.	-7970 May 18 j 21:54	2°♉23'33 2.62720 AU		-7965 May 29 j 20:24	0°♓	
				-7965 Jul 29 j 12:03	0°♔	

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Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

retrograde	-7965 Sep 07 j 19:42	8° $\text{H}$ 27'42		-7960 Oct 06 j 02:57	0° $\text{L}$	
	-7965 Oct 14 j 15:29	30° $\text{R}$		-7960 Nov 15 j 15:04	0° $\text{M}$	
opposition	-7965 Oct 17 j 13:14	28° $\approx$ 50'15	-0°07'45	-7960 Dec 27 j 17:28	0° $\text{J}$	
greatest brilliancy	-7965 Oct 17 j 13:24	28° $\approx$ 50'04	-1.4m	evening set	-7959 Jan 12 j 04:27	10° $\text{J}$ 41'48
min. Earth dist.	-7965 Oct 18 j 00:30	28° $\approx$ 38'56	0.66776 AU		-7959 Feb 09 j 16:16	0° $\text{Z}$
asc. node	-7965 Oct 20 j 22:02	27° $\approx$ 29'22				
direct	-7965 Nov 27 j 00:39	19° $\approx$ 00'41		conjunction	-7959 Mar 05 j 14:11	15° $\text{Z}$ 50'28 -0°51'00
	-7964 Jan 13 j 14:57	0° $\text{H}$		minimum elong	-7959 Mar 05 j 15:53	15° $\text{Z}$ 53'14 0°51'30
	-7964 Mar 13 j 04:48	0° $\text{Y}$		max. Earth dist.	-7959 Mar 21 j 20:16	26° $\text{Z}$ 27'04 2.63134 AU
	-7964 Apr 30 j 12:32	0° $\text{B}$			-7959 Mar 27 j 07:35	0° $\approx$
	-7964 Jun 13 j 05:42	0° $\text{II}$		morning rise	-7959 Apr 24 j 00:23	17° $\approx$ 48'34
	-7964 Jul 24 j 01:06	0° $\text{E}$			-7959 May 13 j 03:54	0° $\text{H}$
	-7964 Sep 01 j 01:37	0° $\text{L}$		asc. node	-7959 Jun 11 j 15:36	18° $\text{H}$ 38'29
evening set	-7964 Sep 13 j 06:12	9° $\text{L}$ 32'02			-7959 Jun 29 j 17:20	0° $\text{Y}$
desc. node	-7964 Sep 29 j 13:08	22° $\text{L}$ 19'38			-7959 Aug 16 j 23:16	0° $\text{B}$
	-7964 Oct 09 j 07:24	0° $\text{M}$			-7959 Oct 06 j 00:26	0° $\text{II}$
					-7959 Dec 02 j 09:52	0° $\text{E}$
conjunction	-7964 Nov 16 j 04:53	29° $\text{M}$ 36'02	-0°34'26	retrograde	-7958 Jan 24 j 14:04	13° $\text{E}$ 43'14
minimum elong	-7964 Nov 16 j 02:02	29° $\text{M}$ 30'30	0°34'19	opposition	-7958 Feb 25 j 13:28	7° $\text{E}$ 59'07 5°22'11
	-7964 Nov 16 j 17:17	0° $\text{L}$		greatest brilliancy	-7958 Feb 27 j 00:59	7° $\text{E}$ 32'24 -2.6m
	-7964 Dec 26 j 04:01	0° $\text{M}$		min. Earth dist.	-7958 Mar 04 j 16:38	5° $\text{E}$ 51'14 0.42215 AU
max. Earth dist.	-7963 Jan 01 j 07:37	4° $\text{M}$ 34'19	2.41936 AU	direct	-7958 Mar 31 j 21:51	1° $\text{E}$ 15'36
morning rise	-7963 Jan 19 j 20:24	18° $\text{M}$ 09'30		desc. node	-7958 May 22 j 17:19	16° $\text{E}$ 24'26
	-7963 Feb 05 j 08:26	0° $\text{J}$			-7958 Jun 15 j 21:35	0° $\text{L}$
	-7963 Mar 20 j 18:44	0° $\text{Z}$			-7958 Jul 31 j 11:47	0° $\text{M}$
	-7963 May 05 j 20:56	0° $\approx$			-7958 Sep 12 j 05:08	0° $\text{L}$
	-7963 Jun 24 j 14:10	0° $\text{H}$			-7958 Oct 24 j 20:49	0° $\text{M}$
	-7963 Aug 22 j 10:36	0° $\text{Y}$			-7958 Dec 07 j 12:43	0° $\text{J}$
asc. node	-7963 Sep 07 j 00:30	5° $\text{Y}$ 55'54			-7957 Jan 21 j 13:41	0° $\text{Z}$
retrograde	-7963 Oct 13 j 05:59	12° $\text{Y}$ 45'08		evening set	-7957 Feb 25 j 14:17	22° $\text{Z}$ 46'16
opposition	-7963 Nov 20 j 16:53	3° $\text{Y}$ 51'40	2°48'59		-7957 Mar 08 j 19:47	0° $\approx$
greatest brilliancy	-7963 Nov 21 j 01:13	3° $\text{Y}$ 43'31	-1.5m			
min. Earth dist.	-7963 Nov 24 j 21:13	2° $\text{Y}$ 13'28	0.63649 AU	conjunction	-7957 Apr 15 j 04:17	23° $\approx$ 54'27 -0°08'08
	-7963 Nov 30 j 17:52	30° $\text{R}$ $\text{H}$		minimum elong	-7957 Apr 15 j 04:36	23° $\approx$ 54'57 0°08'29
direct	-7963 Dec 31 j 17:51	23° $\text{H}$ 51'59		behind sun begin	-7957 Apr 14 j 11:45	23° $\approx$ 28'04
	-7962 Feb 03 j 05:48	0° $\text{Y}$		behind sun end	-7957 Apr 15 j 21:28	24° $\approx$ 21'50
	-7962 Apr 05 j 22:46	0° $\text{B}$		max. Earth dist.	-7957 Apr 15 j 12:50	24° $\approx$ 08'04 2.66694 AU
	-7962 May 22 j 11:00	0° $\text{II}$			-7957 Apr 24 j 17:17	0° $\text{H}$
	-7962 Jul 03 j 05:55	0° $\text{E}$		asc. node	-7957 Apr 29 j 09:07	2° $\text{H}$ 58'37
	-7962 Aug 11 j 16:49	0° $\text{L}$		morning rise	-7957 May 31 j 16:12	23° $\text{H}$ 39'37
desc. node	-7962 Aug 17 j 12:08	4° $\text{L}$ 29'49			-7957 Jun 10 j 12:39	0° $\text{Y}$
	-7962 Sep 19 j 05:12	0° $\text{M}$			-7957 Jul 26 j 17:16	0° $\text{B}$
	-7962 Oct 27 j 21:17	0° $\text{L}$			-7957 Sep 10 j 03:53	0° $\text{II}$
evening set	-7962 Nov 18 j 19:42	16° $\text{L}$ 41'55			-7957 Oct 25 j 03:31	0° $\text{E}$
	-7962 Dec 06 j 14:40	0° $\text{M}$			-7957 Dec 09 j 11:15	0° $\text{L}$
					-7956 Jan 26 j 12:14	0° $\text{M}$
conjunction	-7961 Jan 17 j 07:17	0° $\text{J}$ 11'12	-1°11'23	desc. node	-7956 Apr 08 j 21:50	27° $\text{M}$ 58'20
minimum elong	-7961 Jan 17 j 07:08	0° $\text{J}$ 10'57	1°11'49	retrograde	-7956 Apr 11 j 20:00	28° $\text{M}$ 01'49
	-7961 Jan 17 j 00:57	0° $\text{J}$		min. Earth dist.	-7956 May 09 j 08:01	23° $\text{M}$ 29'11 0.38994 AU
max. Earth dist.	-7961 Feb 20 j 21:19	24° $\text{J}$ 09'47	2.54370 AU	opposition	-7956 May 13 j 22:29	22° $\text{M}$ 11'18 -2°39'14
	-7961 Mar 01 j 12:17	0° $\text{Z}$		greatest brilliancy	-7956 May 13 j 09:38	22° $\text{M}$ 20'24 -2.9m
morning rise	-7961 Mar 13 j 23:59	8° $\text{Z}$ 21'34		direct	-7956 Jun 13 j 05:17	16° $\text{M}$ 58'16
	-7961 Apr 16 j 01:06	0° $\approx$			-7956 Aug 01 j 16:16	0° $\text{L}$
	-7961 Jun 02 j 12:39	0° $\text{H}$			-7956 Sep 25 j 21:42	0° $\text{M}$
	-7961 Jul 22 j 07:58	0° $\text{Y}$			-7956 Nov 13 j 12:45	0° $\text{J}$
asc. node	-7961 Jul 25 j 21:59	2° $\text{Y}$ 04'50			-7956 Dec 31 j 04:33	0° $\text{Z}$
	-7961 Sep 15 j 13:23	0° $\text{B}$			-7955 Feb 16 j 20:49	0° $\approx$
retrograde	-7961 Nov 25 j 21:22	21° $\text{B}$ 35'34		asc. node	-7955 Mar 16 j 04:21	17° $\approx$ 12'43
opposition	-7961 Dec 31 j 18:45	13° $\text{B}$ 56'07	5°24'41	evening set	-7955 Apr 05 j 03:28	29° $\approx$ 51'02
greatest brilliancy	-7960 Jan 02 j 02:37	13° $\text{B}$ 26'56	-1.9m		-7955 Apr 05 j 09:07	0° $\text{H}$
min. Earth dist.	-7960 Jan 08 j 06:41	11° $\text{B}$ 11'41	0.54582 AU	max. Earth dist.	-7955 May 08 j 21:42	21° $\text{H}$ 26'45 2.64872 AU
direct	-7960 Feb 09 j 08:39	4° $\text{B}$ 38'48				
	-7960 Apr 21 j 21:49	0° $\text{II}$		conjunction	-7955 May 22 j 12:56	0° $\text{Y}$ 16'35 0°36'58
	-7960 Jun 07 j 13:20	0° $\text{E}$		minimum elong	-7955 May 22 j 11:41	0° $\text{Y}$ 14'34 0°36'53
desc. node	-7960 Jul 04 j 13:49	19° $\text{E}$ 22'29			-7955 May 22 j 02:43	0° $\text{Y}$
	-7960 Jul 18 j 21:53	0° $\text{L}$			-7955 Jul 06 j 12:23	0° $\text{B}$
	-7960 Aug 27 j 13:31	0° $\text{M}$		morning rise	-7955 Jul 07 j 21:02	0° $\text{B}$ 54'56

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 45

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-7955 Aug 19 j 08:08	0°♐		direct	-7950 Nov 13 j 03:19	6°♊00'37	
	-7955 Sep 30 j 16:35	0°♑			-7949 Jan 28 j 15:03	0°♋	
	-7955 Nov 10 j 22:33	0°♒			-7949 Mar 23 j 09:06	0°♌	
	-7955 Dec 21 j 16:58	0°♓			-7949 May 09 j 11:47	0°♍	
	-7954 Feb 01 j 01:37	0°♈			-7949 Jun 21 j 20:14	0°♎	
desc. node	-7954 Feb 24 j 23:18	16°♈36'04			-7949 Aug 01 j 13:37	0°♏	
	-7954 Mar 17 j 10:40	0°♉		evening set	-7949 Aug 20 j 03:06	14°♏08'59	
	-7954 May 16 j 23:07	0°♊			-7949 Sep 09 j 14:10	0°♐	
retrograde	-7954 Jun 09 j 08:51	3°♊36'35		desc. node	-7949 Oct 17 j 09:44	29°♐39'19	
	-7954 Jul 01 j 21:37	30°♋♌			-7949 Oct 17 j 20:16	0°♑	
min. Earth dist.	-7954 Jul 09 j 01:23	27°♌37'04	0.50078 AU				
greatest brilliancy	-7954 Jul 15 j 10:04	25°♌18'12	-2.1m	conjunction	-7949 Oct 21 j 03:10	2°♑34'56	-0°02'52
opposition	-7954 Jul 16 j 22:56	24°♌44'27	-5°52'29	minimum elong	-7949 Oct 21 j 02:53	2°♑34'24	0°02'34
direct	-7954 Aug 19 j 23:53	17°♌29'14		behind sun begin	-7949 Oct 19 j 23:36	1°♑40'50	
	-7954 Oct 08 j 23:42	0°♊		behind sun end	-7949 Oct 22 j 06:10	3°♑27'57	
	-7954 Dec 06 j 23:17	0°♋		max. Earth dist.	-7949 Nov 08 j 05:20	16°♑45'39	2.38164 AU
	-7953 Jan 27 j 09:11	0°♌			-7949 Nov 25 j 05:53	0°♈	
asc. node	-7953 Feb 01 j 03:26	2°♌51'39		morning rise	-7949 Dec 26 j 12:07	23°♈53'21	
	-7953 Mar 17 j 11:06	0°♋			-7948 Jan 03 j 15:36	0°♉	
	-7953 May 03 j 16:59	0°♌			-7948 Feb 13 j 19:23	0°♊	
evening set	-7953 May 14 j 14:20	7°♌05'46			-7948 Mar 28 j 07:59	0°♋	
max. Earth dist.	-7953 Jun 05 j 02:52	21°♌21'13	2.57850 AU		-7948 May 13 j 22:37	0°♌	
	-7953 Jun 17 j 22:30	0°♍			-7948 Jul 04 j 15:41	0°♋	
				asc. node	-7948 Sep 23 j 14:23	29°♋14'18	
conjunction	-7953 Jul 02 j 06:42	9°♍49'04	1°08'20	retrograde	-7948 Sep 28 j 15:42	29°♋23'42	
minimum elong	-7953 Jul 02 j 05:37	9°♍47'14	1°08'37	opposition	-7948 Nov 06 j 17:28	20°♋10'10	1°41'07
	-7953 Jul 31 j 01:37	0°♎		greatest brilliancy	-7948 Nov 06 j 20:26	20°♋07'14	-1.4m
morning rise	-7953 Aug 20 j 23:44	15°♎03'46		min. Earth dist.	-7948 Nov 09 j 11:03	19°♋05'07	0.65605 AU
	-7953 Sep 10 j 07:45	0°♏		direct	-7948 Dec 17 j 17:13	10°♋10'15	
	-7953 Oct 20 j 04:35	0°♐			-7947 Feb 22 j 07:17	0°♌	
	-7953 Nov 28 j 08:24	0°♑			-7947 Apr 16 j 03:11	0°♍	
	-7952 Jan 06 j 15:02	0°♒			-7947 May 31 j 02:37	0°♎	
desc. node	-7952 Jan 12 j 19:33	4°♒40'12			-7947 Jul 11 j 09:09	0°♏	
	-7952 Feb 16 j 02:10	0°♓			-7947 Aug 19 j 14:20	0°♐	
	-7952 Mar 30 j 08:53	0°♈		desc. node	-7947 Sep 03 j 05:43	11°♐24'57	
	-7952 May 19 j 18:06	0°♉			-7947 Sep 26 j 22:56	0°♑	
retrograde	-7952 Jul 20 j 12:05	19°♑02'04		evening set	-7947 Oct 24 j 10:35	21°♑27'38	
min. Earth dist.	-7952 Aug 24 j 10:49	11°♑00'43	0.60904 AU		-7947 Nov 04 j 11:26	0°♒	
opposition	-7952 Aug 29 j 03:52	9°♑08'12	-4°03'38		-7947 Dec 14 j 00:51	0°♓	
greatest brilliancy	-7952 Aug 28 j 13:10	9°♑22'50	-1.6m				
direct	-7952 Oct 05 j 16:38	0°♒22'10		conjunction	-7947 Dec 25 j 19:59	8°♒43'08	-1°05'45
asc. node	-7952 Dec 19 j 06:15	23°♒28'35		minimum elong	-7947 Dec 25 j 17:57	8°♒39'24	1°06'01
	-7951 Jan 01 j 04:25	0°♓			-7946 Jan 24 j 07:23	0°♊	
	-7951 Feb 23 j 18:49	0°♋		max. Earth dist.	-7946 Feb 05 j 15:41	8°♊41'49	2.49702 AU
	-7951 Apr 13 j 13:37	0°♌		morning rise	-7946 Feb 23 j 01:14	20°♊44'07	
	-7951 May 29 j 04:53	0°♍			-7946 Mar 08 j 16:22	0°♋	
evening set	-7951 Jun 26 j 13:56	19°♍37'17			-7946 Apr 23 j 07:17	0°♌	
	-7951 Jul 11 j 04:03	0°♎			-7946 Jun 10 j 07:50	0°♍	
max. Earth dist.	-7951 Jul 12 j 07:36	0°♏49'29	2.46641 AU		-7946 Jul 31 j 23:56	0°♌	
				asc. node	-7946 Aug 11 j 14:07	5°♌41'28	
conjunction	-7951 Aug 19 j 02:59	28°♏37'58	1°02'43		-7946 Oct 05 j 15:19	0°♍	
minimum elong	-7951 Aug 19 j 05:00	28°♏41'47	1°03'13	retrograde	-7946 Nov 07 j 13:49	5°♍42'53	
	-7951 Aug 20 j 22:38	0°♐			-7946 Dec 07 j 19:36	30°♍♎	
	-7951 Sep 29 j 04:20	0°♑		opposition	-7946 Dec 14 j 15:27	27°♎29'53	4°30'20
morning rise	-7951 Oct 16 j 21:05	13°♑45'33		greatest brilliancy	-7946 Dec 15 j 13:06	27°♎09'23	-1.7m
	-7951 Nov 06 j 16:13	0°♒		min. Earth dist.	-7946 Dec 20 j 23:19	25°♎06'02	0.58769 AU
desc. node	-7951 Nov 29 j 14:55	17°♒53'13		direct	-7945 Jan 24 j 02:47	17°♎46'29	
	-7951 Dec 15 j 06:43	0°♓			-7945 Mar 13 j 06:23	0°♋	
	-7950 Jan 23 j 21:09	0°♔			-7945 May 06 j 02:12	0°♌	
	-7950 Mar 06 j 10:04	0°♊			-7945 Jun 18 j 18:43	0°♍	
	-7950 Apr 20 j 02:03	0°♋		desc. node	-7945 Jul 22 j 05:34	24°♍48'44	
	-7950 Jun 09 j 18:11	0°♌			-7945 Jul 29 j 01:32	0°♎	
retrograde	-7950 Aug 25 j 08:22	25°♌26'12			-7945 Sep 06 j 02:24	0°♏	
min. Earth dist.	-7950 Oct 03 j 06:53	16°♌01'46	0.66325 AU		-7945 Oct 15 j 04:40	0°♐	
opposition	-7950 Oct 04 j 06:34	15°♌37'54	-1°16'04		-7945 Nov 24 j 07:07	0°♑	
greatest brilliancy	-7950 Oct 04 j 05:53	15°♌38'35	-1.4m	evening set	-7945 Dec 24 j 06:40	21°♑40'29	
asc. node	-7950 Nov 06 j 11:07	6°♌17'56			-7944 Jan 05 j 01:22	0°♊	

## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 46

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

conjunction	-7944 Feb 17 j 01:49	29° $\text{♊}$ 32'50	-1°03'11	retrograde	-7939 May 20 j 07:53	11° $\text{♍}$ 16'13	
minimum elong	-7944 Feb 17 j 03:23	29° $\text{♊}$ 35'28	1°03'42	min. Earth dist.	-7939 Jun 17 j 02:14	6° $\text{♍}$ 07'45	0.45110 AU
	-7944 Feb 17 j 18:00	0° $\text{♊}$		greatest brilliancy	-7939 Jun 23 j 14:47	3° $\text{♍}$ 56'11	-2.4m
max. Earth dist.	-7944 Mar 11 j 02:39	14° $\text{♊}$ 52'22	2.60293 AU	opposition	-7939 Jun 25 j 05:15	3° $\text{♍}$ 23'38	-5°39'33
	-7944 Apr 03 j 06:35	0° $\text{♊}$			-7939 Jul 06 j 03:01	30° $\text{♍}$	
morning rise	-7944 Apr 08 j 11:51	3° $\text{♊}$ 22'32		direct	-7939 Jul 27 j 12:43	26° $\text{♍}$ 57'54	
	-7944 May 20 j 05:56	0° $\text{♊}$			-7939 Aug 19 j 01:42	0° $\text{♍}$	
asc. node	-7944 Jun 28 j 09:45	24° $\text{♊}$ 27'14			-7939 Oct 26 j 00:32	0° $\text{♊}$	
	-7944 Jul 07 j 09:36	0° $\text{♊}$			-7939 Dec 16 j 21:48	0° $\text{♊}$	
	-7944 Aug 26 j 06:05	0° $\text{♊}$			-7938 Feb 04 j 08:44	0° $\text{♊}$	
	-7944 Oct 20 j 05:26	0° $\text{♊}$		asc. node	-7938 Feb 17 j 18:13	8° $\text{♊}$ 15'06	
retrograde	-7944 Dec 28 j 23:57	21° $\text{♊}$ 08'24			-7938 Mar 24 j 16:02	0° $\text{♊}$	
opposition	-7943 Jan 31 j 15:34	14° $\text{♊}$ 35'07	6°04'21	evening set	-7938 Apr 29 j 00:26	22° $\text{♊}$ 28'37	
greatest brilliancy	-7943 Feb 02 j 09:52	13° $\text{♊}$ 59'51	-2.3m		-7938 May 10 j 15:35	0° $\text{♊}$	
min. Earth dist.	-7943 Feb 08 j 22:17	11° $\text{♊}$ 50'44	0.46994 AU	max. Earth dist.	-7938 May 25 j 00:53	9° $\text{♊}$ 24'09	2.61207 AU
direct	-7943 Mar 09 j 13:55	6° $\text{♊}$ 35'40					
	-7943 May 15 j 21:29	0° $\text{♊}$		conjunction	-7938 Jun 15 j 20:00	23° $\text{♊}$ 52'57	0°58'59
desc. node	-7943 Jun 08 j 09:20	14° $\text{♊}$ 30'54		minimum elong	-7938 Jun 15 j 18:33	23° $\text{♊}$ 50'31	0°59'07
	-7943 Jul 01 j 06:49	0° $\text{♊}$			-7938 Jun 24 j 21:50	0° $\text{♊}$	
	-7943 Aug 12 j 01:27	0° $\text{♊}$		morning rise	-7938 Aug 02 j 15:30	26° $\text{♊}$ 44'34	
	-7943 Sep 21 j 23:06	0° $\text{♊}$			-7938 Aug 07 j 06:19	0° $\text{♊}$	
	-7943 Nov 02 j 11:01	0° $\text{♊}$			-7938 Sep 17 j 21:02	0° $\text{♊}$	
	-7943 Dec 15 j 07:47	0° $\text{♊}$			-7938 Oct 28 j 04:06	0° $\text{♊}$	
	-7942 Jan 28 j 19:44	0° $\text{♊}$			-7938 Dec 06 j 18:46	0° $\text{♊}$	
evening set	-7942 Feb 09 j 05:17	7° $\text{♊}$ 31'07			-7937 Jan 15 j 13:37	0° $\text{♊}$	
	-7942 Mar 15 j 18:20	0° $\text{♊}$		desc. node	-7937 Jan 29 j 15:59	10° $\text{♊}$ 26'29	
					-7937 Feb 25 j 19:07	0° $\text{♊}$	
conjunction	-7942 Mar 30 j 22:34	9° $\text{♊}$ 45'59	-0°25'51		-7937 Apr 11 j 23:39	0° $\text{♊}$	
minimum elong	-7942 Mar 30 j 23:34	9° $\text{♊}$ 47'36	0°26'17		-7937 Jun 14 j 02:05	0° $\text{♊}$	
max. Earth dist.	-7942 Apr 06 j 07:21	13° $\text{♊}$ 50'53	2.65952 AU	retrograde	-7937 Jul 06 j 07:51	3° $\text{♊}$ 08'43	
	-7942 May 01 j 13:45	0° $\text{♊}$			-7937 Jul 27 j 07:12	30° $\text{♊}$	
asc. node	-7942 May 16 j 02:40	9° $\text{♊}$ 16'27		min. Earth dist.	-7937 Aug 08 j 08:15	25° $\text{♊}$ 50'02	0.57199 AU
morning rise	-7942 May 17 j 05:50	9° $\text{♊}$ 59'47		greatest brilliancy	-7937 Aug 13 j 11:18	23° $\text{♊}$ 49'59	-1.8m
	-7942 Jun 17 j 13:49	0° $\text{♊}$		opposition	-7937 Aug 14 j 10:57	23° $\text{♊}$ 26'51	-4°58'56
	-7942 Aug 03 j 08:21	0° $\text{♊}$		direct	-7937 Sep 19 j 18:10	15° $\text{♊}$ 10'26	
	-7942 Sep 18 j 23:05	0° $\text{♊}$			-7937 Nov 15 j 01:00	0° $\text{♊}$	
	-7942 Nov 05 j 04:41	0° $\text{♊}$		asc. node	-7936 Jan 05 j 19:10	26° $\text{♊}$ 09'43	
	-7942 Dec 25 j 12:39	0° $\text{♊}$			-7936 Jan 12 j 16:25	0° $\text{♊}$	
retrograde	-7941 Mar 13 j 17:59	27° $\text{♊}$ 33'36			-7936 Mar 03 j 20:51	0° $\text{♊}$	
opposition	-7941 Apr 13 j 12:12	22° $\text{♊}$ 26'00	1°02'09		-7936 Apr 20 j 21:19	0° $\text{♊}$	
greatest brilliancy	-7941 Apr 13 j 14:16	22° $\text{♊}$ 24'37	-3.0m		-7936 Jun 05 j 07:25	0° $\text{♊}$	
min. Earth dist.	-7941 Apr 13 j 23:43	22° $\text{♊}$ 18'17	0.38029 AU	evening set	-7936 Jun 08 j 14:48	2° $\text{♊}$ 15'05	
desc. node	-7941 Apr 26 j 13:18	19° $\text{♊}$ 13'08		max. Earth dist.	-7936 Jun 25 j 02:29	13° $\text{♊}$ 36'45	2.51398 AU
direct	-7941 May 14 j 00:27	17° $\text{♊}$ 17'17			-7936 Jul 18 j 07:19	0° $\text{♊}$	
	-7941 Jun 30 j 22:31	0° $\text{♊}$					
	-7941 Aug 23 j 08:21	0° $\text{♊}$		conjunction	-7936 Jul 29 j 17:00	8° $\text{♊}$ 13'16	1°11'17
	-7941 Oct 08 j 23:49	0° $\text{♊}$		minimum elong	-7936 Jul 29 j 17:36	8° $\text{♊}$ 14'22	1°11'46
	-7941 Nov 23 j 19:13	0° $\text{♊}$			-7936 Aug 28 j 05:43	0° $\text{♊}$	
	-7940 Jan 09 j 02:27	0° $\text{♊}$		morning rise	-7936 Sep 22 j 03:50	18° $\text{♊}$ 51'17	
	-7940 Feb 25 j 01:52	0° $\text{♊}$			-7936 Oct 06 j 16:26	0° $\text{♊}$	
evening set	-7940 Mar 21 j 00:58	15° $\text{♊}$ 51'27			-7936 Nov 14 j 09:20	0° $\text{♊}$	
asc. node	-7940 Apr 01 j 20:54	23° $\text{♊}$ 22'43		desc. node	-7936 Dec 16 j 10:56	24° $\text{♊}$ 49'51	
	-7940 Apr 12 j 06:33	0° $\text{♊}$			-7936 Dec 23 j 04:28	0° $\text{♊}$	
max. Earth dist.	-7940 Apr 29 j 06:41	10° $\text{♊}$ 51'46	2.66240 AU		-7935 Jan 31 j 23:53	0° $\text{♊}$	
					-7935 Mar 14 j 21:54	0° $\text{♊}$	
conjunction	-7940 May 07 j 14:27	16° $\text{♊}$ 12'03	0°20'12		-7935 Apr 29 j 16:02	0° $\text{♊}$	
minimum elong	-7940 May 07 j 13:43	16° $\text{♊}$ 10'52	0°20'00		-7935 Jun 24 j 12:05	0° $\text{♊}$	
	-7940 May 28 j 23:37	0° $\text{♊}$		retrograde	-7935 Aug 11 j 18:31	12° $\text{♊}$ 01'53	
morning rise	-7940 Jun 22 j 15:29	16° $\text{♊}$ 06'22		min. Earth dist.	-7935 Sep 18 j 06:42	3° $\text{♊}$ 06'09	0.64905 AU
	-7940 Jul 13 j 14:58	0° $\text{♊}$		opposition	-7935 Sep 20 j 17:32	2° $\text{♊}$ 06'51	-2°23'17
	-7940 Aug 26 j 22:27	0° $\text{♊}$		greatest brilliancy	-7935 Sep 20 j 13:15	2° $\text{♊}$ 11'10	-1.4m
	-7940 Oct 09 j 00:48	0° $\text{♊}$			-7935 Sep 26 j 01:07	30° $\text{♊}$	
	-7940 Nov 20 j 06:47	0° $\text{♊}$		direct	-7935 Oct 29 j 19:27	22° $\text{♊}$ 46'04	
	-7939 Jan 01 j 10:01	0° $\text{♊}$		asc. node	-7935 Nov 22 j 23:53	26° $\text{♊}$ 00'12	
	-7939 Feb 14 j 02:39	0° $\text{♊}$			-7935 Dec 06 j 10:12	0° $\text{♊}$	
desc. node	-7939 Mar 13 j 16:04	17° $\text{♊}$ 10'29			-7934 Feb 08 j 17:05	0° $\text{♊}$	
	-7939 Apr 07 j 01:15	0° $\text{♊}$			-7934 Mar 31 j 17:50	0° $\text{♊}$	

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-7934 May 17 j 02:34	0°♄	morning rise	-7929 Mar 23 j 23:52	18°♄03'38	
	-7934 Jun 29 j 05:50	0°♂		-7929 Apr 11 j 07:36	0°♂	
evening set	-7934 Jul 28 j 06:46	21°♂15'00		-7929 May 28 j 13:01	0°♂	
	-7934 Aug 08 j 22:49	0°♄	asc. node	-7929 Jul 16 j 03:17	29°♂43'33	
max. Earth dist.	-7934 Aug 26 j 05:50	13°♄09'45	2.39582 AU	-7929 Jul 16 j 14:18	0°♄	
	-7934 Sep 17 j 00:31	0°♂		-7929 Sep 07 j 03:42	0°♄	
				-7929 Nov 19 j 07:21	0°♂	
conjunction	-7934 Sep 24 j 22:14	6°♂09'51	0°28'51	retrograde	-7929 Dec 07 j 09:02	1°♂52'02
minimum elong	-7934 Sep 25 j 00:31	6°♂14'19	0°29'17		-7929 Dec 24 j 10:22	30°♂♄
	-7934 Oct 25 j 07:58	0°♄	opposition	-7928 Jan 11 j 12:07	24°♂34'08	5°47'58
desc. node	-7934 Nov 03 j 04:36	6°♄56'52	greatest brilliancy	-7928 Jan 13 j 01:16	24°♂00'58	-2.0m
morning rise	-7934 Nov 28 j 23:46	27°♄04'19	min. Earth dist.	-7928 Jan 19 j 11:35	21°♂43'54	0.51963 AU
	-7934 Dec 02 j 18:32	0°♄	direct	-7928 Feb 19 j 07:31	15°♂38'40	
	-7933 Jan 11 j 04:49	0°♄		-7928 Apr 10 j 14:42	0°♂	
	-7933 Feb 21 j 10:00	0°♄		-7928 May 31 j 06:08	0°♄	
	-7933 Apr 06 j 04:31	0°♄	desc. node	-7928 Jun 25 j 00:26	17°♄10'59	
	-7933 May 23 j 16:32	0°♂		-7928 Jul 12 j 16:52	0°♂	
	-7933 Jul 18 j 07:47	0°♂		-7928 Aug 21 j 21:15	0°♄	
retrograde	-7933 Sep 15 j 17:15	16°♂21'04		-7928 Sep 30 j 19:20	0°♄	
asc. node	-7933 Oct 11 j 05:01	12°♂05'05		-7928 Nov 10 j 13:53	0°♄	
opposition	-7933 Oct 25 j 05:43	6°♂51'16	0°32'21		-7928 Dec 22 j 21:17	0°♄
greatest brilliancy	-7933 Oct 25 j 06:03	6°♂50'56	-1.4m	evening set	-7927 Jan 22 j 18:50	21°♄08'45
min. Earth dist.	-7933 Oct 26 j 12:18	6°♂20'40	0.66616 AU		-7927 Feb 04 j 23:33	0°♄
	-7933 Nov 13 j 07:47	30°♄♂				
direct	-7933 Dec 04 j 22:20	26°♂56'52	conjunction	-7927 Mar 15 j 01:52	25°♄03'58	-0°42'24
	-7933 Dec 28 j 07:14	0°♂	minimum elong	-7927 Mar 15 j 03:24	25°♄06'27	0°42'54
	-7932 Mar 06 j 13:43	0°♄		-7927 Mar 22 j 16:30	0°♂	
	-7932 Apr 25 j 02:47	0°♄	max. Earth dist.	-7927 Mar 27 j 16:22	3°♂13'43	2.64376 AU
	-7932 Jun 08 j 05:38	0°♂	morning rise	-7927 May 02 j 14:28	26°♂15'21	
	-7932 Jul 19 j 05:06	0°♄		-7927 May 08 j 11:32	0°♂	
	-7932 Aug 27 j 07:13	0°♂	asc. node	-7927 Jun 01 j 21:12	15°♂29'46	
desc. node	-7932 Sep 20 j 00:25	18°♂33'59		-7927 Jun 24 j 19:08	0°♄	
evening set	-7932 Sep 28 j 00:19	24°♂51'02		-7927 Aug 11 j 09:49	0°♄	
	-7932 Oct 04 j 13:37	0°♄		-7927 Sep 28 j 20:57	0°♂	
	-7932 Nov 11 j 23:46	0°♄		-7927 Nov 19 j 14:46	0°♄	
			retrograde	-7926 Feb 10 j 08:22	28°♄38'06	
conjunction	-7932 Dec 01 j 00:55	14°♄37'19	-0°48'55	opposition	-7926 Mar 13 j 10:46	23°♄17'05
minimum elong	-7932 Nov 30 j 21:40	14°♄31'07	0°48'57	greatest brilliancy	-7926 Mar 14 j 11:13	22°♄59'43
	-7932 Dec 21 j 10:24	0°♄	min. Earth dist.	-7926 Mar 18 j 21:28	21°♄44'26	0.40068 AU
max. Earth dist.	-7931 Jan 16 j 20:03	19°♄24'34	2.44666 AU	direct	-7926 Apr 15 j 07:07	17°♄15'59
	-7931 Jan 31 j 14:21	0°♄	desc. node	-7926 May 13 j 06:14	22°♄13'06	
morning rise	-7931 Feb 01 j 22:46	0°♄57'33		-7926 Jun 01 j 06:55	0°♂	
	-7931 Mar 15 j 22:44	0°♄		-7926 Jul 22 j 21:26	0°♄	
	-7931 Apr 30 j 18:49	0°♂		-7926 Sep 05 j 10:46	0°♄	
	-7931 Jun 18 j 16:26	0°♂		-7926 Oct 19 j 01:10	0°♄	
	-7931 Aug 12 j 17:40	0°♄		-7926 Dec 02 j 06:40	0°♄	
asc. node	-7931 Aug 28 j 06:28	7°♄08'21		-7925 Jan 16 j 16:07	0°♄	
retrograde	-7931 Oct 22 j 03:08	21°♄08'44		-7925 Mar 04 j 03:17	0°♂	
opposition	-7931 Nov 29 j 03:02	12°♄28'24	3°27'22	evening set	-7925 Mar 06 j 16:20	1°♂37'43
greatest brilliancy	-7931 Nov 29 j 15:34	12°♄16'15	-1.5m	asc. node	-7925 Apr 19 j 13:55	29°♂39'36
min. Earth dist.	-7931 Dec 04 j 02:12	10°♄32'49	0.62145 AU		-7925 Apr 20 j 02:42	0°♂
direct	-7930 Jan 09 j 00:48	2°♄32'00		max. Earth dist.	-7925 Apr 20 j 23:16	0°♂32'50
	-7930 Mar 29 j 09:03	0°♄				2.66770 AU
	-7930 May 16 j 12:41	0°♂	conjunction	-7925 Apr 23 j 18:53	2°♂20'45	0°02'26
	-7930 Jun 27 j 20:40	0°♄	minimum elong	-7925 Apr 23 j 18:50	2°♂20'40	0°02'09
	-7930 Aug 06 j 13:38	0°♂	behind sun begin	-7925 Apr 22 j 23:27	1°♂49'44	
desc. node	-7930 Aug 07 j 22:44	1°♂03'45	behind sun end	-7925 Apr 24 j 14:13	2°♂51'35	
	-7930 Sep 14 j 05:44	0°♄		-7925 Jun 05 j 20:58	0°♄	
	-7930 Oct 23 j 00:43	0°♄	morning rise	-7925 Jun 08 j 23:44	2°♄00'51	
	-7930 Dec 01 j 20:17	0°♄		-7925 Jul 21 j 20:15	0°♄	
evening set	-7930 Dec 02 j 06:18	0°♄18'32		-7925 Sep 04 j 19:47	0°♂	
	-7929 Jan 12 j 08:12	0°♄		-7925 Oct 19 j 00:04	0°♄	
				-7925 Dec 01 j 21:25	0°♂	
conjunction	-7929 Jan 28 j 23:50	11°♄39'10	-1°10'22		-7924 Jan 15 j 18:32	0°♄
minimum elong	-7929 Jan 29 j 00:33	11°♄40'24	1°10'51		-7924 Mar 06 j 15:59	0°♄
	-7929 Feb 24 j 20:10	0°♄	desc. node	-7924 Mar 30 j 10:15	10°♄01'38	
max. Earth dist.	-7929 Feb 28 j 08:06	2°♄21'10	2.56669 AU	retrograde	-7924 Apr 26 j 19:14	14°♄51'14

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Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

min. Earth dist.	-7924 May 23 j 19:29	10° $\underline{\text{A}}$ 16'05	0.40701 AU			-7919 Aug 16 j 06:27	0° $\text{S}$	
greatest brilliancy	-7924 May 29 j 06:08	8° $\underline{\text{A}}$ 37'37	-2.7m					
opposition	-7924 May 30 j 07:49	8° $\underline{\text{A}}$ 18'07	-4°12'28	conjunction		-7919 Aug 31 j 18:21	11° $\text{S}$ 45'08	0°53'18
direct	-7924 Jun 30 j 02:46	2° $\underline{\text{A}}$ 43'23		minimum elong		-7919 Aug 31 j 20:57	11° $\text{S}$ 50'07	0°53'48
	-7924 Sep 16 j 11:50	0° $\text{M}$				-7919 Sep 24 j 11:01	0° $\text{Q}$	
	-7924 Nov 07 j 00:18	0° $\text{J}$		morning rise		-7919 Nov 01 j 00:10	29° $\text{Q}$ 18'49	
	-7924 Dec 25 j 18:14	0° $\text{S}$				-7919 Nov 01 j 21:13	0° $\text{M}$	
	-7923 Feb 11 j 22:51	0° $\approx$		desc. node		-7919 Nov 20 j 00:55	14° $\text{M}$ 11'10	
asc. node	-7923 Mar 06 j 09:34	14° $\approx$ 03'08				-7919 Dec 10 j 09:55	0° $\underline{\text{A}}$	
	-7923 Mar 31 j 16:58	0° $\text{H}$				-7918 Jan 18 j 21:58	0° $\text{M}$	
evening set	-7923 Apr 13 j 19:43	8° $\text{H}$ 19'31				-7918 Mar 01 j 06:18	0° $\text{J}$	
max. Earth dist.	-7923 May 14 j 15:59	28° $\text{H}$ 08'26	2.63793 AU			-7918 Apr 14 j 11:13	0° $\text{S}$	
	-7923 May 17 j 12:42	0° $\text{Y}$				-7918 Jun 02 j 12:27	0° $\approx$	
						-7918 Aug 08 j 20:28	0° $\text{H}$	
conjunction	-7923 May 31 j 06:06	8° $\text{Y}$ 57'53	0°45'50	retrograde		-7918 Sep 02 j 03:07	3° $\text{H}$ 22'34	
minimum elong	-7923 May 31 j 04:42	8° $\text{Y}$ 55'35	0°45'50			-7918 Sep 24 j 14:00	30° $\text{R}$ $\approx$	
	-7923 Jul 01 j 21:15	0° $\text{B}$		opposition		-7918 Oct 11 j 22:41	23° $\approx$ 39'45	-0°36'24
morning rise	-7923 Jul 16 j 22:30	10° $\text{B}$ 12'46		greatest brilliancy		-7918 Oct 11 j 22:49	23° $\approx$ 39'36	-1.4m
	-7923 Aug 14 j 12:53	0° $\text{II}$		min. Earth dist.		-7918 Oct 11 j 18:12	23° $\approx$ 44'16	0.66688 AU
	-7923 Sep 25 j 14:28	0° $\text{S}$		asc. node		-7918 Oct 27 j 18:41	17° $\approx$ 47'34	
	-7923 Nov 05 j 11:06	0° $\text{Q}$		direct		-7918 Nov 21 j 03:38	13° $\approx$ 55'10	
	-7923 Dec 15 j 17:24	0° $\text{M}$				-7917 Jan 19 j 21:03	0° $\text{H}$	
	-7922 Jan 25 j 08:17	0° $\underline{\text{A}}$				-7917 Mar 17 j 13:20	0° $\text{Y}$	
desc. node	-7922 Feb 15 j 09:43	15° $\underline{\text{A}}$ 05'40				-7917 May 04 j 09:15	0° $\text{B}$	
	-7922 Mar 09 j 01:41	0° $\text{M}$				-7917 Jun 16 j 23:41	0° $\text{II}$	
	-7922 Apr 28 j 06:23	0° $\text{J}$				-7917 Jul 27 j 19:10	0° $\text{S}$	
retrograde	-7922 Jun 19 j 17:06	15° $\text{J}$ 17'14		evening set		-7917 Sep 03 j 02:57	28° $\text{S}$ 39'39	
min. Earth dist.	-7922 Jul 20 j 14:37	8° $\text{J}$ 47'45	0.52766 AU			-7917 Sep 04 j 20:12	0° $\text{Q}$	
opposition	-7922 Jul 27 j 22:57	6° $\text{J}$ 01'57	-5°40'22	desc. node		-7917 Oct 07 j 18:31	25° $\text{Q}$ 49'14	
greatest brilliancy	-7922 Jul 26 j 14:15	6° $\text{J}$ 32'52	-2.0m			-7917 Oct 13 j 02:06	0° $\text{M}$	
	-7922 Aug 16 j 08:03	30° $\text{R}$ $\text{M}$						
direct	-7922 Aug 31 j 20:23	28° $\text{M}$ 22'29		conjunction		-7917 Nov 05 j 11:25	18° $\text{M}$ 20'03	-0°21'23
	-7922 Sep 17 j 04:14	0° $\text{J}$		minimum elong		-7917 Nov 05 j 09:29	18° $\text{M}$ 16'16	0°21'11
	-7922 Nov 29 j 15:29	0° $\text{S}$				-7917 Nov 20 j 11:30	0° $\underline{\text{A}}$	
	-7921 Jan 21 j 19:38	0° $\approx$		max. Earth dist.		-7917 Dec 15 j 14:00	19° $\underline{\text{A}}$ 14'40	2.39917 AU
asc. node	-7921 Jan 22 j 09:43	0° $\approx$ 20'44				-7917 Dec 29 j 20:55	0° $\text{M}$	
	-7921 Mar 12 j 12:32	0° $\text{H}$		morning rise		-7916 Jan 10 j 04:55	8° $\text{M}$ 25'02	
	-7921 Apr 29 j 00:39	0° $\text{Y}$				-7916 Feb 08 j 23:42	0° $\text{J}$	
evening set	-7921 May 23 j 19:54	16° $\text{Y}$ 14'11				-7916 Mar 23 j 09:22	0° $\text{S}$	
max. Earth dist.	-7921 Jun 12 j 07:18	29° $\text{Y}$ 17'54	2.55734 AU			-7916 May 08 j 14:25	0° $\approx$	
	-7921 Jun 13 j 08:07	0° $\text{B}$				-7916 Jun 27 j 22:19	0° $\text{H}$	
						-7916 Aug 29 j 23:46	0° $\text{Y}$	
conjunction	-7921 Jul 12 j 04:26	19° $\text{B}$ 54'48	1°11'21	asc. node		-7916 Sep 13 j 21:32	4° $\text{Y}$ 26'44	
minimum elong	-7921 Jul 12 j 03:50	19° $\text{B}$ 53'45	1°11'43	retrograde		-7916 Oct 06 j 22:52	7° $\text{Y}$ 25'31	
	-7921 Jul 26 j 10:31	0° $\text{II}$				-7916 Nov 10 j 12:23	30° $\text{R}$ $\text{H}$	
morning rise	-7921 Sep 01 j 06:45	26° $\text{II}$ 48'06		opposition		-7916 Nov 14 j 16:27	28° $\text{H}$ 22'34	2°20'31
	-7921 Sep 05 j 14:10	0° $\text{S}$		greatest brilliancy		-7916 Nov 14 j 22:07	28° $\text{H}$ 16'59	-1.4m
	-7921 Oct 15 j 07:20	0° $\text{Q}$		min. Earth dist.		-7916 Nov 18 j 05:04	26° $\text{H}$ 59'08	0.64648 AU
	-7921 Nov 23 j 06:38	0° $\text{M}$		direct		-7916 Dec 25 j 17:04	18° $\text{H}$ 21'56	
	-7920 Jan 01 j 08:05	0° $\underline{\text{A}}$				-7915 Feb 12 j 00:31	0° $\text{Y}$	
desc. node	-7920 Jan 03 j 06:38	1° $\underline{\text{A}}$ 28'30				-7915 Apr 09 j 21:01	0° $\text{B}$	
	-7920 Feb 10 j 11:28	0° $\text{M}$				-7915 May 25 j 17:12	0° $\text{II}$	
	-7920 Mar 24 j 01:30	0° $\text{J}$				-7915 Jul 06 j 07:24	0° $\text{S}$	
	-7920 May 10 j 22:44	0° $\text{S}$				-7915 Aug 14 j 16:05	0° $\text{Q}$	
retrograde	-7920 Jul 28 j 20:05	27° $\text{S}$ 58'00		desc. node		-7915 Aug 24 j 16:37	7° $\text{Q}$ 47'25	
min. Earth dist.	-7920 Sep 02 j 17:46	19° $\text{S}$ 35'36	0.62576 AU			-7915 Sep 22 j 02:29	0° $\text{M}$	
opposition	-7920 Sep 06 j 15:37	18° $\text{S}$ 01'29	-3°28'10			-7915 Oct 30 j 16:17	0° $\underline{\text{A}}$	
greatest brilliancy	-7920 Sep 06 j 05:15	18° $\text{S}$ 11'53	-1.5m	evening set		-7915 Nov 08 j 00:53	6° $\underline{\text{A}}$ 25'00	
direct	-7920 Oct 14 j 18:33	9° $\text{S}$ 01'38				-7915 Dec 09 j 06:48	0° $\text{M}$	
asc. node	-7920 Dec 09 j 13:25	23° $\text{S}$ 22'21						
	-7920 Dec 24 j 03:00	0° $\approx$		conjunction		-7914 Jan 07 j 21:56	21° $\text{M}$ 39'56	-1°10'12
	-7919 Feb 18 j 02:40	0° $\text{H}$		minimum elong		-7914 Jan 07 j 21:01	21° $\text{M}$ 38'18	1°10'34
	-7919 Apr 08 j 13:50	0° $\text{Y}$				-7914 Jan 19 j 14:02	0° $\text{J}$	
	-7919 May 24 j 11:06	0° $\text{B}$		max. Earth dist.		-7914 Feb 14 j 20:13	18° $\text{J}$ 20'22	2.52356 AU
	-7919 Jul 06 j 12:01	0° $\text{II}$				-7914 Mar 03 j 22:59	0° $\text{S}$	
evening set	-7919 Jul 07 j 13:42	0° $\text{II}$ 46'07		morning rise		-7914 Mar 06 j 02:59	1° $\text{S}$ 27'39	
max. Earth dist.	-7919 Jul 25 j 01:24	13° $\text{II}$ 28'34	2.43972 AU			-7914 Apr 18 j 11:13	0° $\approx$	



## Planetary Phenomena of Mars from -8400 through -7898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 49

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

	-7914 Jun 05 j 02:35	0°♈	direct	-7909 May 31 j 12:32	4°♏41'34	
	-7914 Jul 25 j 13:03	0°♍		-7909 Aug 12 j 16:49	0°♊	
asc. node	-7914 Aug 01 j 19:53	4°♍07'17		-7909 Oct 01 j 19:45	0°♌	
	-7914 Sep 21 j 12:46	0°♉		-7909 Nov 17 j 23:23	0°♏	
retrograde	-7914 Nov 17 j 18:17	15°♏00'37		-7908 Jan 03 j 22:51	0°♎	
opposition	-7914 Dec 24 j 04:47	7°♏05'15 5°02'41		-7908 Feb 20 j 06:41	0°♍	
greatest brilliancy	-7914 Dec 25 j 08:06	6°♏39'47 -1.8m	asc. node	-7908 Mar 23 j 02:01	20°♏07'26	
min. Earth dist.	-7914 Dec 31 j 04:25	4°♏29'11 0.56556 AU	evening set	-7908 Mar 29 j 17:59	24°♏21'03	
	-7913 Jan 14 j 07:14	30°♏♍		-7908 Apr 07 j 15:20	0°♈	
direct	-7913 Feb 02 j 05:08	27°♍34'24	max. Earth dist.	-7908 May 04 j 20:05	17°♈22'51 2.65581 AU	
	-7913 Feb 22 j 00:25	0°♉				
	-7913 Apr 28 j 11:37	0°♊	conjunction	-7908 May 16 j 04:10	24°♈41'09 0°30'07	
	-7913 Jun 12 j 15:21	0°♋	minimum elong	-7908 May 16 j 03:07	24°♈39'27 0°29'59	
desc. node	-7913 Jul 12 j 18:10	21°♋57'03		-7908 May 24 j 09:05	0°♍	
	-7913 Jul 23 j 11:51	0°♌	morning rise	-7908 Jul 01 j 07:27	24°♍55'42	
	-7913 Aug 31 j 20:07	0°♎		-7908 Jul 08 j 21:46	0°♉	
	-7913 Oct 10 j 03:34	0°♏		-7908 Aug 21 j 23:18	0°♊	
	-7913 Nov 19 j 10:03	0°♌		-7908 Oct 03 j 15:48	0°♋	
	-7913 Dec 31 j 07:15	0°♏		-7908 Nov 14 j 07:57	0°♌	
evening set	-7912 Jan 04 j 20:42	3°♏11'12		-7908 Dec 25 j 14:45	0°♎	
	-7912 Feb 13 j 01:58	0°♎		-7907 Feb 05 j 18:05	0°♏	
			desc. node	-7907 Mar 04 j 04:02	17°♏43'58	
conjunction	-7912 Feb 27 j 06:43	9°♎28'08 -0°56'35		-7907 Mar 24 j 00:52	0°♌	
minimum elong	-7912 Feb 27 j 08:26	9°♎30'58 0°57'07	retrograde	-7907 Jun 01 j 02:48	24°♌47'04	
max. Earth dist.	-7912 Mar 17 j 10:48	22°♎04'56 2.61961 AU	min. Earth dist.	-7907 Jun 29 j 20:16	19°♌11'13 0.47838 AU	
	-7912 Mar 29 j 14:51	0°♍	greatest brilliancy	-7907 Jul 06 j 09:00	16°♌53'11 -2.2m	
morning rise	-7912 Apr 17 j 12:32	12°♍11'06	opposition	-7907 Jul 07 j 23:43	16°♌18'48 -5°53'53	
	-7912 May 15 j 11:36	0°♈	direct	-7907 Aug 10 j 06:56	9°♌24'55	
asc. node	-7912 Jun 18 j 14:00	21°♈27'52		-7907 Oct 16 j 12:43	0°♏	
	-7912 Jul 02 j 06:21	0°♍		-7907 Dec 10 j 15:49	0°♎	
	-7912 Aug 20 j 02:29	0°♉		-7906 Jan 30 j 03:07	0°♍	
	-7912 Oct 10 j 18:16	0°♊	asc. node	-7906 Feb 08 j 00:22	5°♍24'04	
	-7912 Dec 17 j 05:03	0°♋		-7906 Mar 19 j 20:45	0°♈	
retrograde	-7911 Jan 12 j 11:14	3°♋51'26		-7906 May 06 j 00:34	0°♍	
	-7911 Feb 06 j 19:15	30°♏♊	evening set	-7906 May 07 j 21:24	1°♍12'45	
opposition	-7911 Feb 14 j 05:03	27°♊45'34 5°49'33	max. Earth dist.	-7906 May 31 j 08:56	16°♍37'50 2.59437 AU	
greatest brilliancy	-7911 Feb 15 j 21:38	27°♊13'32 -2.4m		-7906 Jun 20 j 07:15	0°♉	
min. Earth dist.	-7911 Feb 22 j 03:20	25°♊16'32 0.44266 AU				
direct	-7911 Mar 21 j 19:21	20°♊26'33	conjunction	-7906 Jun 25 j 03:05	3°♉16'42 1°04'55	
	-7911 Apr 30 j 18:32	0°♋	minimum elong	-7906 Jun 25 j 01:48	3°♉14'31 1°05'09	
desc. node	-7911 May 29 j 21:22	15°♋03'55		-7906 Aug 02 j 13:41	0°♊	
	-7911 Jun 22 j 19:00	0°♌	morning rise	-7906 Aug 12 j 21:14	7°♊21'21	
	-7911 Aug 05 j 06:35	0°♎		-7906 Sep 13 j 00:13	0°♋	
	-7911 Sep 16 j 00:47	0°♏		-7906 Oct 23 j 01:59	0°♌	
	-7911 Oct 28 j 01:54	0°♌		-7906 Dec 01 j 10:21	0°♎	
	-7911 Dec 10 j 07:22	0°♏		-7905 Jan 09 j 21:32	0°♏	
	-7910 Jan 24 j 01:10	0°♎	desc. node	-7905 Jan 20 j 01:01	7°♏36'07	
evening set	-7910 Feb 18 j 17:17	16°♎48'10		-7905 Feb 19 j 14:35	0°♌	
	-7910 Mar 11 j 02:56	0°♍		-7905 Apr 04 j 10:46	0°♏	
				-7905 May 27 j 12:57	0°♎	
conjunction	-7910 Apr 08 j 18:30	18°♍22'43 -0°15'38	retrograde	-7905 Jul 15 j 04:29	12°♎50'43	
minimum elong	-7910 Apr 08 j 19:08	18°♍23'43 0°16'01	min. Earth dist.	-7905 Aug 18 j 06:58	5°♎07'27 0.59346 AU	
max. Earth dist.	-7910 Apr 11 j 20:14	20°♍20'33 2.66465 AU	opposition	-7905 Aug 23 j 15:07	3°♎00'41 -4°28'19	
	-7910 Apr 26 j 23:00	0°♈	greatest brilliancy	-7905 Aug 22 j 20:38	3°♎19'00 -1.7m	
asc. node	-7910 May 06 j 07:25	5°♈58'18		-7905 Aug 31 j 12:49	30°♏♏	
morning rise	-7910 May 25 j 13:40	18°♈16'59	direct	-7905 Sep 29 j 14:37	24°♏27'11	
	-7910 Jun 12 j 20:27	0°♍		-7905 Oct 31 j 17:27	0°♎	
	-7910 Jul 29 j 07:00	0°♉	asc. node	-7905 Dec 27 j 02:49	24°♎42'36	
	-7910 Sep 13 j 05:12	0°♊		-7904 Jan 06 j 02:15	0°♍	
	-7910 Oct 29 j 01:16	0°♋		-7904 Feb 27 j 14:01	0°♈	
	-7910 Dec 14 j 23:50	0°♌		-7904 Apr 16 j 01:40	0°♍	
	-7909 Feb 05 j 19:57	0°♎		-7904 May 31 j 15:51	0°♉	
retrograde	-7909 Mar 31 j 04:41	15°♎09'27	evening set	-7904 Jun 18 j 16:06	12°♉21'14	
desc. node	-7909 Apr 17 j 01:43	13°♎20'12	max. Earth dist.	-7904 Jul 04 j 09:43	23°♉23'05 2.48808 AU	
min. Earth dist.	-7909 Apr 28 j 22:25	10°♎25'49 0.38175 AU		-7904 Jul 13 j 16:34	0°♊	
opposition	-7909 May 01 j 09:58	9°♎45'28 -1°08'02				
greatest brilliancy	-7909 May 01 j 06:21	9°♎47'55 -2.9m	conjunction	-7904 Aug 10 j 00:41	19°♊54'42 1°07'33	

Attention, astronomical year style is used: The year -8399 in astronomical counting style is the year 8400 BCE in historical counting style.

minimum elong	-7904 Aug 10 j 02:07	19° $\Pi$ 57'20	1°08'04	opposition	-7899 Dec 07 j 20:25	21° $\Upsilon$ 20'22	4°04'06
	-7904 Aug 23 j 13:40	0° $\mathfrak{D}$		greatest brilliancy	-7899 Dec 08 j 13:50	21° $\Upsilon$ 03'40	-1.6m
	-7904 Oct 01 j 22:05	0° $\Omega$		min. Earth dist.	-7899 Dec 13 j 13:29	19° $\Upsilon$ 08'52	0.60399 AU
morning rise	-7904 Oct 05 j 18:56	2° $\Omega$ 59'32					
	-7904 Nov 09 j 12:03	0° $\mathfrak{M}$					
desc. node	-7904 Dec 06 j 20:31	21° $\mathfrak{M}$ 16'11					
	-7904 Dec 18 j 03:58	0° $\underline{\Omega}$					
	-7903 Jan 26 j 19:29	0° $\mathfrak{M}$					
	-7903 Mar 09 j 10:12	0° $\mathfrak{A}$					
	-7903 Apr 23 j 09:31	0° $\mathfrak{Z}$					
	-7903 Jun 14 j 11:46	0° $\approx$					
retrograde	-7903 Aug 19 j 15:28	20° $\approx$ 13'47					
min. Earth dist.	-7903 Sep 26 j 22:33	11° $\approx$ 01'43	0.65814 AU				
opposition	-7903 Sep 28 j 14:10	10° $\approx$ 21'45	-1°44'25				
greatest brilliancy	-7903 Sep 28 j 12:14	10° $\approx$ 23'43	-1.4m				
direct	-7903 Nov 07 j 02:40	0° $\approx$ 51'21					
asc. node	-7903 Nov 13 j 07:44	1° $\approx$ 05'28					
	-7902 Feb 01 j 19:55	0° $\mathfrak{H}$					
	-7902 Mar 26 j 08:35	0° $\Upsilon$					
	-7902 May 12 j 04:37	0° $\mathfrak{B}$					
	-7902 Jun 24 j 12:09	0° $\Pi$					
	-7902 Aug 04 j 06:22	0° $\mathfrak{D}$					
evening set	-7902 Aug 09 j 21:53	4° $\mathfrak{D}$ 16'18					
	-7902 Sep 12 j 08:04	0° $\Omega$					
max. Earth dist.	-7902 Sep 28 j 07:20	12° $\Omega$ 28'59	2.38103 AU				
conjunction	-7902 Oct 09 j 11:59	21° $\Omega$ 16'00	0°11'26				
minimum elong	-7902 Oct 09 j 13:02	21° $\Omega$ 18'05	0°11'49				
behind sun begin	-7902 Oct 08 j 18:01	20° $\Omega$ 40'46					
behind sun end	-7902 Oct 10 j 08:03	21° $\Omega$ 55'25					
	-7902 Oct 20 j 14:43	0° $\mathfrak{M}$					
desc. node	-7902 Oct 24 j 15:30	3° $\mathfrak{M}$ 10'03					
	-7902 Nov 28 j 00:11	0° $\underline{\Omega}$					
morning rise	-7902 Dec 14 j 16:55	12° $\underline{\Omega}$ 50'58					
	-7901 Jan 06 j 09:09	0° $\mathfrak{M}$					
	-7901 Feb 16 j 11:54	0° $\mathfrak{A}$					
	-7901 Apr 01 j 01:04	0° $\mathfrak{Z}$					
	-7901 May 17 j 21:23	0° $\approx$					
	-7901 Jul 09 j 18:11	0° $\mathfrak{H}$					
retrograde	-7901 Sep 23 j 16:56	24° $\mathfrak{H}$ 15'28					
asc. node	-7901 Oct 01 j 11:36	23° $\mathfrak{H}$ 51'58					
opposition	-7901 Nov 01 j 23:34	14° $\mathfrak{H}$ 54'09	1°12'20				
greatest brilliancy	-7901 Nov 02 j 01:02	14° $\mathfrak{H}$ 52'41	-1.4m				
min. Earth dist.	-7901 Nov 04 j 01:11	14° $\mathfrak{H}$ 04'41	0.66181 AU				
direct	-7901 Dec 12 j 20:23	4° $\mathfrak{H}$ 56'04					
	-7900 Feb 28 j 04:11	0° $\Upsilon$					
	-7900 Apr 19 j 11:15	0° $\mathfrak{B}$					
	-7900 Jun 03 j 02:42	0° $\Pi$					
	-7900 Jul 14 j 07:00	0° $\mathfrak{D}$					
	-7900 Aug 22 j 11:26	0° $\Omega$					
desc. node	-7900 Sep 10 j 10:59	14° $\Omega$ 49'46					
	-7900 Sep 29 j 19:00	0° $\mathfrak{M}$					
evening set	-7900 Oct 12 j 22:58	10° $\mathfrak{M}$ 19'11					
	-7900 Nov 07 j 05:55	0° $\underline{\Omega}$					
conjunction	-7900 Dec 15 j 08:04	28° $\underline{\Omega}$ 58'10	-0°59'54				
minimum elong	-7900 Dec 15 j 05:17	28° $\underline{\Omega}$ 52'58	1°00'04				
	-7900 Dec 16 j 17:13	0° $\mathfrak{M}$					
	-7899 Jan 26 j 21:11	0° $\mathfrak{A}$					
max. Earth dist.	-7899 Jan 28 j 20:47	1° $\mathfrak{A}$ 24'33	2.47463 AU				
morning rise	-7899 Feb 14 j 05:54	12° $\mathfrak{A}$ 54'51					
	-7899 Mar 11 j 04:22	0° $\mathfrak{Z}$					
	-7899 Apr 25 j 19:38	0° $\approx$					
	-7899 Jun 13 j 02:41	0° $\mathfrak{H}$					
	-7899 Aug 04 j 20:37	0° $\Upsilon$					
asc. node	-7899 Aug 18 j 11:48	6° $\Upsilon$ 58'24					
retrograde	-7899 Oct 31 j 08:30	29° $\Upsilon$ 46'23					