

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 1

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

conjunction	-4899 Feb 21 j 12:39	25° $\text{Z}$ 50'40	-0°59'55		-4895 Oct 22 j 07:46	0° $\Omega$	
minimum elong	-4899 Feb 21 j 14:37	25° $\text{Z}$ 54'08	1°00'09		-4895 Dec 06 j 12:37	0° $\text{M}$	
	-4899 Feb 27 j 10:07	0° $\approx$			-4894 Jan 21 j 07:29	0° $\underline{\text{A}}$	
max. Earth dist.	-4899 Mar 28 j 20:59	20° $\approx$ 21'07	2.54258 AU		-4894 Mar 11 j 19:38	0° $\text{M}$	
	-4899 Apr 12 j 04:14	0° $\text{H}$		desc. node	-4894 Mar 27 j 19:05	8° $\text{M}$ 15'25	
morning rise	-4899 Apr 18 j 11:36	4° $\text{H}$ 12'28		retrograde	-4894 May 16 j 17:04	22° $\text{M}$ 11'00	
	-4899 May 28 j 00:06	0° $\text{Y}$		min. Earth dist.	-4894 Jun 13 j 01:17	17° $\text{M}$ 43'16	0.38670 AU
asc. node	-4899 Jun 23 j 04:41	16° $\text{Y}$ 35'35		opposition	-4894 Jun 17 j 14:08	16° $\text{M}$ 27'02	-5°25'37
	-4899 Jul 14 j 19:36	0° $\text{B}$		greatest brilliancy	-4894 Jun 16 j 15:50	16° $\text{M}$ 42'41	-2.8m
	-4899 Sep 03 j 05:52	0° $\text{II}$		direct	-4894 Jul 17 j 12:27	11° $\text{M}$ 18'42	
	-4899 Oct 30 j 18:29	0° $\text{E}$			-4894 Sep 16 j 15:28	0° $\text{A}$	
retrograde	-4899 Dec 29 j 14:47	16° $\text{E}$ 08'53			-4894 Nov 08 j 07:47	0° $\text{Z}$	
opposition	-4898 Feb 03 j 18:31	8° $\text{E}$ 26'14	5°19'30		-4894 Dec 26 j 13:56	0° $\approx$	
greatest brilliancy	-4898 Feb 05 j 03:51	7° $\text{E}$ 55'43	-1.8m	asc. node	-4893 Feb 12 j 18:41	0° $\text{H}$ 19'04	
min. Earth dist.	-4898 Feb 11 j 09:46	5° $\text{E}$ 39'11	0.54992 AU		-4893 Feb 12 j 06:33	0° $\text{H}$	
	-4898 Mar 04 j 01:46	30° $\text{R}$ II			-4893 Apr 01 j 01:03	0° $\text{Y}$	
direct	-4898 Mar 15 j 12:38	29° $\text{II}$ 06'46		evening set	-4893 May 11 j 03:41	25° $\text{Y}$ 17'52	
	-4898 Mar 27 j 06:05	0° $\text{E}$			-4893 May 18 j 13:27	0° $\text{B}$	
	-4898 Jun 05 j 12:43	0° $\Omega$		max. Earth dist.	-4893 Jun 13 j 14:57	16° $\text{B}$ 40'20	2.65228 AU
desc. node	-4898 Jun 22 j 15:29	10° $\Omega$ 49'24					
	-4898 Jul 20 j 14:40	0° $\text{M}$		conjunction	-4893 Jun 26 j 22:21	25° $\text{B}$ 16'34	1°02'12
	-4898 Aug 30 j 08:07	0° $\underline{\text{A}}$		minimum elong	-4893 Jun 26 j 21:12	25° $\text{B}$ 14'42	1°02'23
	-4898 Oct 08 j 16:50	0° $\text{M}$			-4893 Jul 04 j 04:34	0° $\text{II}$	
	-4898 Nov 17 j 04:50	0° $\text{A}$		morning rise	-4893 Aug 11 j 14:47	25° $\text{II}$ 24'45	
	-4898 Dec 27 j 19:40	0° $\text{Z}$			-4893 Aug 18 j 10:25	0° $\text{E}$	
	-4897 Feb 08 j 03:45	0° $\approx$			-4893 Oct 01 j 02:46	0° $\Omega$	
evening set	-4897 Feb 17 j 08:57	6° $\approx$ 21'31			-4893 Nov 12 j 09:11	0° $\text{M}$	
	-4897 Mar 24 j 09:11	0° $\text{H}$			-4893 Dec 23 j 14:19	0° $\underline{\text{A}}$	
					-4892 Feb 02 j 09:24	0° $\text{M}$	
conjunction	-4897 Apr 10 j 23:26	11° $\text{H}$ 36'56	-0°17'05	desc. node	-4892 Feb 12 j 19:04	7° $\text{M}$ 36'45	
minimum elong	-4897 Apr 11 j 00:11	11° $\text{H}$ 38'10	0°17'11		-4892 Mar 14 j 22:29	0° $\text{A}$	
max. Earth dist.	-4897 Apr 27 j 02:49	22° $\text{H}$ 08'44	2.63230 AU		-4892 Apr 29 j 02:12	0° $\text{Z}$	
	-4897 May 09 j 06:18	0° $\text{Y}$		retrograde	-4892 Jul 13 j 23:35	28° $\text{Z}$ 52'39	
asc. node	-4897 May 11 j 01:22	1° $\text{Y}$ 09'22		min. Earth dist.	-4892 Aug 12 j 15:08	22° $\text{Z}$ 52'38	0.49730 AU
morning rise	-4897 May 30 j 01:04	13° $\text{Y}$ 19'43		greatest brilliancy	-4892 Aug 19 j 03:04	20° $\text{Z}$ 30'02	-2.2m
	-4897 Jun 25 j 06:45	0° $\text{B}$		opposition	-4892 Aug 20 j 11:11	20° $\text{Z}$ 00'34	-5°14'47
	-4897 Aug 12 j 00:14	0° $\text{II}$		direct	-4892 Sep 23 j 07:34	12° $\text{Z}$ 46'59	
	-4897 Sep 29 j 14:23	0° $\text{E}$			-4892 Nov 22 j 23:57	0° $\approx$	
	-4897 Nov 19 j 13:45	0° $\Omega$		asc. node	-4892 Dec 30 j 18:25	19° $\approx$ 20'05	
	-4896 Jan 20 j 18:01	0° $\text{M}$			-4891 Jan 18 j 20:10	0° $\text{H}$	
retrograde	-4896 Feb 27 j 20:38	7° $\text{M}$ 37'18			-4891 Mar 10 j 21:55	0° $\text{Y}$	
opposition	-4896 Mar 30 j 22:04	1° $\text{M}$ 50'10	2°38'43		-4891 Apr 28 j 19:48	0° $\text{B}$	
greatest brilliancy	-4896 Mar 31 j 18:21	1° $\text{M}$ 34'43	-2.6m		-4891 Jun 14 j 20:36	0° $\text{II}$	
	-4896 Apr 05 j 22:59	30° $\text{R}$ $\Omega$		evening set	-4891 Jun 17 j 23:10	2° $\text{II}$ 01'41	
min. Earth dist.	-4896 Apr 07 j 03:56	29° $\Omega$ 38'31	0.42274 AU	max. Earth dist.	-4891 Jul 09 j 04:54	16° $\text{II}$ 03'50	2.58324 AU
direct	-4896 May 04 j 11:34	25° $\Omega$ 00'19			-4891 Jul 29 j 20:00	0° $\text{E}$	
desc. node	-4896 May 09 j 16:55	25° $\Omega$ 11'44					
	-4896 Jun 01 j 10:24	0° $\text{M}$		conjunction	-4891 Aug 04 j 21:16	4° $\text{E}$ 09'01	1°10'20
	-4896 Jul 29 j 02:07	0° $\underline{\text{A}}$		minimum elong	-4891 Aug 04 j 21:46	4° $\text{E}$ 09'53	1°10'37
	-4896 Sep 11 j 08:15	0° $\text{M}$			-4891 Sep 10 j 17:15	0° $\Omega$	
	-4896 Oct 23 j 15:51	0° $\text{A}$		morning rise	-4891 Sep 23 j 01:56	8° $\Omega$ 54'13	
	-4896 Dec 05 j 06:37	0° $\text{Z}$			-4891 Oct 21 j 18:57	0° $\text{M}$	
	-4895 Jan 18 j 02:29	0° $\approx$			-4891 Nov 30 j 12:52	0° $\underline{\text{A}}$	
	-4895 Mar 04 j 09:07	0° $\text{H}$		desc. node	-4891 Dec 30 j 18:48	23° $\underline{\text{A}}$ 11'45	
asc. node	-4895 Mar 27 j 21:20	15° $\text{H}$ 15'17			-4890 Jan 08 j 15:16	0° $\text{M}$	
evening set	-4895 Apr 01 j 21:13	18° $\text{H}$ 28'30			-4890 Feb 16 j 22:29	0° $\text{A}$	
	-4895 Apr 19 j 20:02	0° $\text{Y}$			-4890 Mar 29 j 13:19	0° $\text{Z}$	
					-4890 May 12 j 07:33	0° $\approx$	
conjunction	-4895 May 20 j 04:22	19° $\text{Y}$ 23'07	0°29'08		-4890 Jul 03 j 17:16	0° $\text{H}$	
minimum elong	-4895 May 20 j 03:22	19° $\text{Y}$ 21'32	0°29'10	retrograde	-4890 Aug 25 j 01:45	14° $\text{H}$ 29'43	
max. Earth dist.	-4895 May 20 j 15:45	19° $\text{Y}$ 41'16	2.66950 AU	min. Earth dist.	-4890 Sep 28 j 22:42	6° $\text{H}$ 30'37	0.60793 AU
	-4895 Jun 05 j 19:42	0° $\text{B}$		opposition	-4890 Oct 03 j 19:13	4° $\text{H}$ 34'43	-1°48'58
morning rise	-4895 Jul 05 j 01:51	18° $\text{B}$ 42'49		greatest brilliancy	-4890 Oct 03 j 12:18	4° $\text{H}$ 41'35	-1.6m
	-4895 Jul 22 j 15:04	0° $\text{II}$			-4890 Oct 16 j 04:36	30° $\text{R}$ $\approx$	
	-4895 Sep 06 j 19:28	0° $\text{E}$		direct	-4890 Nov 10 j 10:06	25° $\approx$ 48'19	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 2

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

asc. node	-4890 Nov 17 j 19:15	26° $\approx$ 08'20			-4884 Mar 06 j 16:09	0° $\approx$	
	-4890 Dec 08 j 01:43	0° $\text{H}$		max. Earth dist.	-4884 Mar 13 j 20:47	5° $\approx$ 02'54	2.49510 AU
	-4889 Feb 14 j 19:33	0° $\text{Y}$		morning rise	-4884 Mar 30 j 13:19	16° $\approx$ 35'50	
	-4889 Apr 08 j 13:13	0° $\text{B}$			-4884 Apr 19 j 08:17	0° $\text{H}$	
	-4889 May 26 j 21:24	0° $\text{II}$			-4884 Jun 04 j 07:13	0° $\text{Y}$	
	-4889 Jul 11 j 03:35	0° $\text{E}$		asc. node	-4884 Jul 09 j 21:32	22° $\text{Y}$ 12'19	
evening set	-4889 Jul 30 j 23:53	13° $\text{E}$ 45'21			-4884 Jul 22 j 18:43	0° $\text{B}$	
max. Earth dist.	-4889 Aug 15 j 03:55	24° $\text{E}$ 31'03	2.47093 AU		-4884 Sep 13 j 12:57	0° $\text{II}$	
	-4889 Aug 22 j 18:42	0° $\text{Q}$			-4884 Dec 02 j 22:39	0° $\text{E}$	
				retrograde	-4884 Dec 11 j 11:41	0° $\text{E}$ 26'21	
conjunction	-4889 Sep 21 j 22:22	22° $\text{Q}$ 12'00	0°38'14		-4884 Dec 19 j 19:16	30° $\text{R}$ II	
minimum elong	-4889 Sep 22 j 00:24	22° $\text{Q}$ 15'48	0°38'23	opposition	-4883 Jan 17 j 18:39	22° $\text{II}$ 10'37	5°11'26
	-4889 Oct 02 j 07:12	0° $\text{M}$		greatest brilliancy	-4883 Jan 18 j 20:27	21° $\text{II}$ 46'10	-1.6m
	-4889 Nov 10 j 09:00	0° $\text{L}$		min. Earth dist.	-4883 Jan 24 j 03:32	19° $\text{II}$ 46'09	0.59261 AU
desc. node	-4889 Nov 17 j 16:16	5° $\text{L}$ 40'57		direct	-4883 Feb 27 j 09:50	12° $\text{II}$ 26'03	
morning rise	-4889 Nov 19 j 16:57	7° $\text{L}$ 15'48			-4883 Apr 27 j 23:46	0° $\text{E}$	
	-4889 Dec 18 j 19:08	0° $\text{M}$			-4883 Jun 17 j 18:09	0° $\text{Q}$	
	-4888 Jan 26 j 10:06	0° $\text{J}$		desc. node	-4883 Jul 09 j 08:54	14° $\text{Q}$ 46'17	
	-4888 Mar 06 j 03:22	0° $\text{Z}$			-4883 Jul 30 j 13:03	0° $\text{M}$	
	-4888 Apr 16 j 22:19	0° $\approx$			-4883 Sep 08 j 08:51	0° $\text{L}$	
	-4888 Jun 01 j 02:36	0° $\text{H}$			-4883 Oct 17 j 04:20	0° $\text{M}$	
	-4888 Jul 23 j 07:29	0° $\text{Y}$			-4883 Nov 25 j 05:45	0° $\text{J}$	
retrograde	-4888 Sep 28 j 18:48	20° $\text{Y}$ 45'27			-4882 Jan 04 j 11:08	0° $\text{Z}$	
asc. node	-4888 Oct 04 j 20:31	20° $\text{Y}$ 30'44		evening set	-4882 Jan 28 j 06:24	17° $\text{Z}$ 10'27	
opposition	-4888 Nov 07 j 19:49	10° $\text{Y}$ 56'08	1°16'16		-4882 Feb 15 j 11:03	0° $\approx$	
min. Earth dist.	-4888 Nov 06 j 16:03	11° $\text{Y}$ 24'03	0.66525 AU				
greatest brilliancy	-4888 Nov 07 j 17:53	10° $\text{Y}$ 58'05	-1.4m	conjunction	-4882 Mar 24 j 12:35	25° $\approx$ 22'09	-0°35'32
direct	-4888 Dec 17 j 20:38	1° $\text{Y}$ 18'26		minimum elong	-4882 Mar 24 j 14:09	25° $\approx$ 24'47	0°35'40
	-4887 Mar 13 j 18:16	0° $\text{B}$			-4882 Mar 31 j 10:30	0° $\text{H}$	
	-4887 May 05 j 03:41	0° $\text{II}$		max. Earth dist.	-4882 Apr 16 j 18:35	10° $\text{H}$ 49'40	2.60333 AU
	-4887 Jun 20 j 15:05	0° $\text{E}$		morning rise	-4882 May 14 j 18:08	29° $\text{H}$ 03'12	
	-4887 Aug 02 j 12:25	0° $\text{Q}$			-4882 May 16 j 05:23	0° $\text{Y}$	
	-4887 Sep 11 j 21:38	0° $\text{M}$		asc. node	-4882 May 27 j 17:56	7° $\text{Y}$ 23'56	
evening set	-4887 Sep 21 j 17:14	7° $\text{M}$ 30'14			-4882 Jul 02 j 10:09	0° $\text{B}$	
desc. node	-4887 Oct 04 j 12:01	17° $\text{M}$ 22'09			-4882 Aug 19 j 20:45	0° $\text{II}$	
	-4887 Oct 20 j 16:53	0° $\text{L}$			-4882 Oct 09 j 09:06	0° $\text{E}$	
					-4882 Dec 05 j 21:56	0° $\text{Q}$	
conjunction	-4887 Nov 23 j 04:30	26° $\text{L}$ 19'31	-0°34'47	retrograde	-4881 Feb 01 j 12:34	15° $\text{Q}$ 18'31	
minimum elong	-4887 Nov 23 j 01:40	26° $\text{L}$ 13'55	0°34'50	opposition	-4881 Mar 07 j 07:01	8° $\text{Q}$ 42'06	4°25'56
	-4887 Nov 27 j 20:36	0° $\text{M}$		greatest brilliancy	-4881 Mar 08 j 17:47	8° $\text{Q}$ 13'05	-2.3m
max. Earth dist.	-4887 Dec 09 j 04:33	8° $\text{M}$ 54'00	2.37780 AU	min. Earth dist.	-4881 Mar 15 j 18:12	5° $\text{Q}$ 53'09	0.47210 AU
	-4886 Jan 05 j 06:42	0° $\text{J}$		direct	-4881 Apr 13 j 12:13	0° $\text{Q}$ 37'25	
morning rise	-4886 Jan 29 j 22:36	18° $\text{J}$ 51'03		desc. node	-4881 May 27 j 09:11	11° $\text{Q}$ 52'51	
	-4886 Feb 13 j 19:32	0° $\text{Z}$			-4881 Jun 29 j 15:07	0° $\text{M}$	
	-4886 Mar 27 j 04:53	0° $\approx$			-4881 Aug 13 j 07:25	0° $\text{L}$	
	-4886 May 10 j 01:38	0° $\text{H}$			-4881 Sep 23 j 12:05	0° $\text{M}$	
	-4886 Jun 26 j 05:02	0° $\text{Y}$			-4881 Nov 03 j 05:19	0° $\text{J}$	
	-4886 Aug 18 j 06:43	0° $\text{B}$			-4881 Dec 14 j 18:34	0° $\text{Z}$	
asc. node	-4886 Aug 22 j 21:56	2° $\text{B}$ 19'51			-4880 Jan 26 j 20:11	0° $\approx$	
retrograde	-4886 Nov 02 j 21:59	24° $\text{B}$ 28'15			-4880 Mar 11 j 14:18	0° $\text{H}$	
opposition	-4886 Dec 12 j 03:08	15° $\text{B}$ 13'18	3°41'31	evening set	-4880 Mar 16 j 12:19	3° $\text{H}$ 14'04	
greatest brilliancy	-4886 Dec 12 j 09:22	15° $\text{B}$ 07'08	-1.4m	asc. node	-4880 Apr 13 j 14:01	21° $\text{H}$ 30'49	
min. Earth dist.	-4886 Dec 14 j 18:06	14° $\text{B}$ 11'01	0.66046 AU		-4880 Apr 26 j 18:02	0° $\text{Y}$	
direct	-4885 Jan 22 j 06:38	5° $\text{B}$ 13'16					
	-4885 Apr 08 j 19:35	0° $\text{II}$		conjunction	-4880 May 05 j 02:27	5° $\text{Y}$ 21'43	0°12'08
	-4885 May 29 j 18:56	0° $\text{E}$		minimum elong	-4880 May 05 j 01:59	5° $\text{Y}$ 20'57	0°12'08
	-4885 Jul 13 j 00:09	0° $\text{Q}$		behind sun begin	-4880 May 04 j 13:04	5° $\text{Y}$ 00'16	
desc. node	-4885 Aug 22 j 09:19	29° $\text{Q}$ 40'51		behind sun end	-4880 May 05 j 14:53	5° $\text{Y}$ 41'39	
	-4885 Aug 22 j 19:27	0° $\text{M}$		max. Earth dist.	-4880 May 11 j 08:06	9° $\text{Y}$ 21'25	2.66153 AU
	-4885 Sep 30 j 17:33	0° $\text{L}$			-4880 Jun 12 j 16:21	0° $\text{B}$	
	-4885 Nov 07 j 22:43	0° $\text{M}$		morning rise	-4880 Jun 20 j 20:48	5° $\text{B}$ 12'47	
evening set	-4885 Nov 28 j 01:21	15° $\text{M}$ 44'10			-4880 Jul 29 j 17:51	0° $\text{II}$	
	-4885 Dec 16 j 11:20	0° $\text{J}$			-4880 Sep 14 j 14:32	0° $\text{E}$	
	-4884 Jan 25 j 03:58	0° $\text{Z}$			-4880 Oct 31 j 11:18	0° $\text{Q}$	
					-4880 Dec 18 j 07:07	0° $\text{M}$	
conjunction	-4884 Jan 30 j 16:51	4° $\text{Z}$ 05'13	-1°07'59		-4879 Feb 08 j 10:00	0° $\text{L}$	
minimum elong	-4884 Jan 30 j 17:33	4° $\text{Z}$ 06'30	1°08'14	desc. node	-4879 Apr 13 j 11:07	21° $\text{L}$ 16'45	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 3

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

retrograde	-4879 Apr 16 j 08:17	21°♄19'59			-4874 Jul 18 j 05:15	0°♄	
opposition	-4879 May 16 j 19:19	16°♄16'22	-2°31'12	max. Earth dist.	-4874 Jul 29 j 15:06	7°♄51'51	2.51862 AU
greatest brilliancy	-4879 May 16 j 19:06	16°♄16'31	-3.0m		-4874 Aug 29 j 21:53	0°♄	
min. Earth dist.	-4879 May 17 j 13:41	16°♄04'07	0.37799 AU				
direct	-4879 Jun 16 j 07:16	11°♄08'59		conjunction	-4874 Sep 01 j 19:25	2°♄05'33	0°56'31
	-4879 Aug 15 j 05:03	0°♄		minimum elong	-4874 Sep 01 j 21:14	2°♄08'51	0°56'44
	-4879 Oct 04 j 16:26	0°♄			-4874 Oct 09 j 14:34	0°♄	
	-4879 Nov 19 j 19:10	0°♄		morning rise	-4874 Oct 25 j 23:45	12°♄24'32	
	-4878 Jan 04 j 14:14	0°♄			-4874 Nov 17 j 21:37	0°♄	
	-4878 Feb 20 j 01:19	0°♄		desc. node	-4874 Dec 04 j 10:09	12°♄48'15	
asc. node	-4878 Mar 01 j 10:48	6°♄00'26			-4874 Dec 26 j 12:45	0°♄	
	-4878 Apr 08 j 04:17	0°♄			-4873 Feb 03 j 08:17	0°♄	
evening set	-4878 Apr 26 j 04:40	11°♄25'36			-4873 Mar 15 j 06:45	0°♄	
	-4878 May 25 j 09:57	0°♄			-4873 Apr 26 j 11:55	0°♄	
max. Earth dist.	-4878 Jun 04 j 08:39	6°♄21'00	2.66557 AU		-4873 Jun 11 j 23:37	0°♄	
					-4873 Aug 10 j 16:09	0°♄	
conjunction	-4878 Jun 12 j 05:59	11°♄24'11	0°51'38	retrograde	-4873 Sep 16 j 05:47	7°♄24'35	
minimum elong	-4878 Jun 12 j 04:41	11°♄22'05	0°51'46		-4873 Oct 19 j 23:57	30°♄	
	-4878 Jul 11 j 01:26	0°♄		asc. node	-4873 Oct 22 j 11:41	29°♄00'57	
morning rise	-4878 Jul 27 j 15:15	10°♄49'32		min. Earth dist.	-4873 Oct 23 j 16:40	28°♄31'56	0.64983 AU
	-4878 Aug 25 j 14:09	0°♄		opposition	-4873 Oct 26 j 07:32	27°♄28'45	0°08'54
	-4878 Oct 08 j 19:55	0°♄		greatest brilliancy	-4873 Oct 26 j 07:11	27°♄29'06	-1.5m
	-4878 Nov 20 j 22:12	0°♄		direct	-4873 Dec 04 j 13:21	18°♄07'30	
	-4877 Jan 02 j 05:42	0°♄			-4872 Jan 23 j 15:51	0°♄	
	-4877 Feb 13 j 12:58	0°♄			-4872 Mar 24 j 01:20	0°♄	
desc. node	-4877 Mar 01 j 13:48	11°♄09'10			-4872 May 13 j 06:45	0°♄	
	-4877 Mar 29 j 19:07	0°♄			-4872 Jun 28 j 03:23	0°♄	
	-4877 May 24 j 22:05	0°♄			-4872 Aug 09 j 21:02	0°♄	
retrograde	-4877 Jun 24 j 20:49	6°♄11'36		evening set	-4872 Aug 30 j 00:59	14°♄47'27	
min. Earth dist.	-4877 Jul 22 j 11:21	1°♄03'57	0.44708 AU		-4872 Sep 19 j 06:43	0°♄	
	-4877 Jul 25 j 16:14	30°♄		max. Earth dist.	-4872 Sep 25 j 15:20	4°♄50'38	2.39750 AU
greatest brilliancy	-4877 Jul 28 j 20:28	28°♄55'16	-2.4m	desc. node	-4872 Oct 21 j 06:42	24°♄38'13	
opposition	-4877 Jul 30 j 11:31	28°♄22'09	-6°12'36				
direct	-4877 Aug 31 j 15:05	21°♄59'35		conjunction	-4872 Oct 27 j 14:19	29°♄33'50	-0°04'38
	-4877 Oct 08 j 18:55	0°♄		minimum elong	-4872 Oct 27 j 13:56	29°♄33'06	0°04'36
	-4877 Dec 08 j 23:49	0°♄		behind sun begin	-4872 Oct 26 j 12:20	28°♄43'07	
asc. node	-4876 Jan 17 j 08:55	22°♄51'06		behind sun end	-4872 Oct 28 j 15:32	0°♄23'06	
	-4876 Jan 29 j 08:13	0°♄			-4872 Oct 28 j 03:43	0°♄	
	-4876 Mar 18 j 17:03	0°♄			-4872 Dec 05 j 08:53	0°♄	
	-4876 May 05 j 22:29	0°♄		morning rise	-4871 Jan 01 j 14:18	21°♄18'05	
evening set	-4876 Jun 02 j 16:23	17°♄39'08			-4871 Jan 12 j 19:44	0°♄	
	-4876 Jun 21 j 18:05	0°♄			-4871 Feb 21 j 08:51	0°♄	
max. Earth dist.	-4876 Jun 28 j 06:46	4°♄16'22	2.61625 AU		-4871 Apr 03 j 19:30	0°♄	
					-4871 May 17 j 23:06	0°♄	
conjunction	-4876 Jul 19 j 18:54	18°♄31'30	1°11'01		-4871 Jul 05 j 04:22	0°♄	
minimum elong	-4876 Jul 19 j 18:34	18°♄30'57	1°11'16		-4871 Sep 01 j 16:04	0°♄	
	-4876 Aug 05 j 18:57	0°♄		asc. node	-4871 Sep 08 j 13:18	2°♄42'34	
morning rise	-4876 Sep 05 j 00:34	20°♄53'18		retrograde	-4871 Oct 20 j 00:49	11°♄32'08	
	-4876 Sep 17 j 22:23	0°♄		opposition	-4871 Nov 28 j 16:51	2°♄01'12	2°50'21
	-4876 Oct 29 j 09:22	0°♄		greatest brilliancy	-4871 Nov 28 j 18:06	1°♄59'57	-1.3m
	-4876 Dec 08 j 14:14	0°♄		min. Earth dist.	-4871 Nov 29 j 20:21	1°♄33'46	0.66985 AU
desc. node	-4875 Jan 16 j 12:59	29°♄31'22			-4871 Dec 03 j 19:08	30°♄	
	-4875 Jan 17 j 04:04	0°♄		direct	-4870 Jan 08 j 13:54	22°♄06'31	
	-4875 Feb 26 j 00:15	0°♄			-4870 Feb 16 j 23:24	0°♄	
	-4875 Apr 08 j 11:36	0°♄			-4870 Apr 20 j 00:37	0°♄	
	-4875 May 24 j 13:09	0°♄			-4870 Jun 07 j 11:35	0°♄	
retrograde	-4875 Aug 09 j 21:06	28°♄32'54			-4870 Jul 21 j 00:03	0°♄	
min. Earth dist.	-4875 Sep 11 j 19:32	21°♄16'06	0.56953 AU		-4870 Aug 30 j 13:48	0°♄	
greatest brilliancy	-4875 Sep 17 j 09:28	19°♄05'24	-1.8m	desc. node	-4870 Sep 08 j 03:23	6°♄31'56	
opposition	-4875 Sep 18 j 00:54	18°♄50'20	-3°09'44		-4870 Oct 08 j 09:49	0°♄	
direct	-4875 Oct 24 j 08:26	10°♄34'16		evening set	-4870 Oct 31 j 22:42	18°♄29'37	
asc. node	-4875 Dec 04 j 09:25	19°♄12'05			-4870 Nov 15 j 13:25	0°♄	
	-4875 Dec 29 j 21:18	0°♄			-4870 Dec 23 j 23:57	0°♄	
	-4874 Feb 24 j 16:51	0°♄					
	-4874 Apr 16 j 10:23	0°♄		conjunction	-4869 Jan 05 j 05:59	9°♄24'26	-1°05'25
	-4874 Jun 03 j 03:02	0°♄		minimum elong	-4869 Jan 05 j 04:13	9°♄21'03	1°05'39
evening set	-4874 Jul 13 j 10:27	26°♄44'14			-4869 Feb 01 j 13:49	0°♄	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 4

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

max. Earth dist.	-4869 Feb 22 j 22:21	15° $\text{Z}$ 39'57	2.44325 AU	greatest brilliancy	-4864 Apr 15 j 23:31	16° $\text{M}$ 57'00	-2.8m
morning rise	-4869 Mar 10 j 06:23	26° $\text{Z}$ 40'10		min. Earth dist.	-4864 Apr 21 j 07:38	15° $\text{M}$ 25'57	0.40056 AU
	-4869 Mar 14 j 23:12	0° $\approx$		desc. node	-4864 Apr 30 j 04:17	13° $\text{M}$ 09'28	
	-4869 Apr 27 j 14:49	0° $\text{H}$		direct	-4864 May 18 j 13:01	10° $\text{M}$ 56'39	
	-4869 Jun 12 j 19:57	0° $\text{Y}$			-4864 Jul 16 j 18:42	0° $\text{L}$	
asc. node	-4869 Jul 27 j 12:55	27° $\text{Y}$ 11'20			-4864 Sep 03 j 06:39	0° $\text{M}$	
	-4869 Aug 01 j 09:03	0° $\text{B}$			-4864 Oct 17 j 03:09	0° $\text{A}$	
	-4869 Sep 27 j 15:20	0° $\text{II}$			-4864 Nov 29 j 14:13	0° $\text{Z}$	
retrograde	-4869 Nov 26 j 04:08	16° $\text{II}$ 00'59			-4863 Jan 12 j 22:25	0° $\approx$	
opposition	-4868 Jan 03 j 08:53	7° $\text{II}$ 18'28	4°45'30		-4863 Feb 27 j 12:57	0° $\text{H}$	
greatest brilliancy	-4868 Jan 04 j 02:25	7° $\text{II}$ 01'30	-1.5m	asc. node	-4863 Mar 18 j 02:03	11° $\text{H}$ 59'23	
min. Earth dist.	-4868 Jan 08 j 07:40	5° $\text{II}$ 23'35	0.62650 AU	evening set	-4863 Apr 10 j 22:15	27° $\text{H}$ 16'52	
	-4868 Jan 24 j 09:52	30° $\text{R}$ $\text{B}$			-4863 Apr 15 j 04:24	0° $\text{Y}$	
direct	-4868 Feb 13 j 10:47	27° $\text{B}$ 21'26		max. Earth dist.	-4863 May 26 j 02:02	26° $\text{Y}$ 04'32	2.67048 AU
	-4868 Mar 05 j 15:54	0° $\text{II}$					
	-4868 May 12 j 00:31	0° $\text{E}$		conjunction	-4863 May 28 j 16:02	27° $\text{Y}$ 43'24	0°38'08
	-4868 Jun 27 j 18:10	0° $\text{L}$		minimum elong	-4863 May 28 j 14:51	27° $\text{Y}$ 41'31	0°38'13
desc. node	-4868 Jul 26 j 01:25	20° $\text{L}$ 07'15			-4863 Jun 01 j 05:39	0° $\text{B}$	
	-4868 Aug 08 j 10:24	0° $\text{M}$		morning rise	-4863 Jul 13 j 06:00	26° $\text{B}$ 56'51	
	-4868 Sep 16 j 18:21	0° $\text{L}$			-4863 Jul 17 j 23:22	0° $\text{II}$	
	-4868 Oct 25 j 06:00	0° $\text{M}$			-4863 Sep 01 j 21:25	0° $\text{E}$	
	-4868 Dec 03 j 00:37	0° $\text{A}$			-4863 Oct 16 j 21:07	0° $\text{L}$	
evening set	-4867 Jan 05 j 21:17	25° $\text{A}$ 30'15			-4863 Nov 30 j 03:45	0° $\text{M}$	
	-4867 Jan 11 j 23:25	0° $\text{Z}$			-4862 Jan 13 j 06:40	0° $\text{L}$	
	-4867 Feb 22 j 17:07	0° $\approx$			-4862 Feb 27 j 17:44	0° $\text{M}$	
conjunction	-4867 Mar 05 j 08:47	7° $\approx$ 25'45	-0°52'09	desc. node	-4862 Mar 18 j 05:33	11° $\text{M}$ 22'53	
minimum elong	-4867 Mar 05 j 10:50	7° $\approx$ 29'19	0°52'22		-4862 Apr 22 j 20:50	0° $\text{A}$	
max. Earth dist.	-4867 Apr 05 j 05:14	28° $\approx$ 28'04	2.56636 AU	retrograde	-4862 Jun 01 j 03:51	9° $\text{A}$ 21'11	
	-4867 Apr 07 j 12:06	0° $\text{H}$		min. Earth dist.	-4862 Jun 27 j 18:48	4° $\text{A}$ 50'43	0.40363 AU
morning rise	-4867 Apr 28 j 10:06	13° $\text{H}$ 51'53		greatest brilliancy	-4862 Jul 02 j 21:51	3° $\text{A}$ 19'13	-2.7m
	-4867 May 23 j 06:17	0° $\text{Y}$		opposition	-4862 Jul 04 j 07:01	2° $\text{A}$ 54'20	-6°12'23
asc. node	-4867 Jun 13 j 10:47	13° $\text{Y}$ 30'42			-4862 Jul 14 j 16:50	30° $\text{R}$ $\text{M}$	
	-4867 Jul 09 j 18:37	0° $\text{B}$		direct	-4862 Aug 03 j 20:34	27° $\text{M}$ 24'16	
	-4867 Aug 28 j 07:05	0° $\text{II}$			-4862 Aug 24 j 08:16	0° $\text{A}$	
	-4867 Oct 21 j 05:13	0° $\text{E}$			-4862 Oct 30 j 15:22	0° $\text{Z}$	
retrograde	-4866 Jan 09 j 22:36	26° $\text{E}$ 15'51			-4862 Dec 20 j 07:02	0° $\approx$	
opposition	-4866 Feb 14 j 08:29	18° $\text{E}$ 54'33	5°11'29	asc. node	-4861 Feb 03 j 00:34	27° $\approx$ 33'46	
greatest brilliancy	-4866 Feb 15 j 20:35	18° $\text{E}$ 22'23	-2.0m		-4861 Feb 06 j 22:54	0° $\text{H}$	
min. Earth dist.	-4866 Feb 22 j 12:46	16° $\text{E}$ 00'14	0.52342 AU		-4861 Mar 27 j 04:29	0° $\text{Y}$	
direct	-4866 Mar 25 j 10:01	9° $\text{E}$ 55'34		evening set	-4861 May 13 j 22:05	0° $\text{B}$	
	-4866 May 26 j 19:17	0° $\text{L}$		max. Earth dist.	-4861 May 19 j 17:09	3° $\text{B}$ 40'45	
desc. node	-4866 Jun 13 j 02:39	10° $\text{L}$ 00'43			-4861 Jun 19 j 07:36	23° $\text{B}$ 18'24	2.64170 AU
	-4866 Jul 13 j 16:45	0° $\text{M}$			-4861 Jun 29 j 14:47	0° $\text{II}$	
	-4866 Aug 24 j 07:36	0° $\text{L}$		conjunction	-4861 Jul 05 j 11:37	3° $\text{II}$ 50'13	1°06'40
	-4866 Oct 03 j 03:10	0° $\text{M}$		minimum elong	-4861 Jul 05 j 10:42	3° $\text{II}$ 48'43	1°06'52
	-4866 Nov 11 j 22:39	0° $\text{A}$			-4861 Aug 13 j 18:57	0° $\text{E}$	
	-4866 Dec 22 j 19:22	0° $\text{Z}$		morning rise	-4861 Aug 20 j 13:00	4° $\text{E}$ 34'56	
	-4865 Feb 03 j 08:00	0° $\approx$			-4861 Sep 26 j 06:41	0° $\text{L}$	
evening set	-4865 Feb 28 j 01:14	16° $\approx$ 51'43			-4861 Nov 07 j 05:34	0° $\text{M}$	
	-4865 Mar 19 j 16:50	0° $\text{H}$			-4861 Dec 18 j 00:49	0° $\text{L}$	
					-4860 Jan 27 j 06:52	0° $\text{M}$	
conjunction	-4865 Apr 20 j 10:01	20° $\text{H}$ 48'03	-0°06'13	desc. node	-4860 Feb 03 j 06:18	5° $\text{M}$ 11'28	
minimum elong	-4865 Apr 20 j 10:16	20° $\text{H}$ 48'27	0°06'16		-4860 Mar 08 j 00:09	0° $\text{A}$	
behind sun begin	-4865 Apr 19 j 15:11	20° $\text{H}$ 17'29			-4860 Apr 20 j 04:08	0° $\text{Z}$	
behind sun end	-4865 Apr 21 j 05:21	21° $\text{H}$ 19'24			-4860 Jun 11 j 22:15	0° $\approx$	
asc. node	-4865 May 01 j 06:04	27° $\text{H}$ 48'54		retrograde	-4860 Jul 24 j 07:11	10° $\approx$ 39'32	
max. Earth dist.	-4865 May 02 j 21:38	28° $\text{H}$ 52'43	2.64514 AU	min. Earth dist.	-4860 Aug 24 j 03:14	4° $\approx$ 11'03	0.52445 AU
	-4865 May 04 j 15:23	0° $\text{Y}$		greatest brilliancy	-4860 Aug 30 j 10:42	1° $\approx$ 48'23	-2.0m
morning rise	-4865 Jun 07 j 12:10	21° $\text{Y}$ 40'48		opposition	-4860 Aug 31 j 12:49	1° $\approx$ 23'45	-4°31'16
	-4865 Jun 20 j 14:13	0° $\text{B}$			-4860 Sep 04 j 07:18	30° $\text{R}$ $\text{Z}$	
	-4865 Aug 07 j 00:44	0° $\text{II}$		direct	-4860 Oct 05 j 07:58	23° $\text{Z}$ 45'30	
	-4865 Sep 23 j 20:42	0° $\text{E}$			-4860 Nov 08 j 03:55	0° $\approx$	
	-4865 Nov 11 j 21:27	0° $\text{L}$		asc. node	-4860 Dec 21 j 00:25	18° $\approx$ 30'17	
	-4864 Jan 04 j 09:59	0° $\text{M}$			-4859 Jan 11 j 22:09	0° $\text{H}$	
retrograde	-4864 Mar 15 j 10:30	22° $\text{M}$ 24'39			-4859 Mar 05 j 11:25	0° $\text{Y}$	
opposition	-4864 Apr 15 j 16:31	17° $\text{M}$ 02'00	1°02'40		-4859 Apr 23 j 22:29	0° $\text{B}$	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 5

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4859 Jun 10 j 04:38	0°♊				-4854 Jun 20 j 17:17	0°♑	
evening set	-4859 Jun 27 j 00:28	11°♊02'12				-4854 Aug 11 j 00:52	0°♎	
max. Earth dist.	-4859 Jul 16 j 04:47	23°♊52'11	2.56196 AU	asc. node		-4854 Aug 13 j 04:11	1°♎09'22	
	-4859 Jul 25 j 05:13	0°♎				-4854 Oct 21 j 07:39	0°♊	
				retrograde		-4854 Nov 11 j 03:11	2°♊27'40	
conjunction	-4859 Aug 14 j 14:56	14°♎06'34	1°07'14			-4854 Nov 30 j 15:27	30°♎♎	
minimum elong	-4859 Aug 14 j 15:57	14°♎08'21	1°07'30	opposition		-4854 Dec 20 j 01:16	23°♎23'13	4°07'32
	-4859 Sep 06 j 01:14	0°♏		greatest brilliancy		-4854 Dec 20 j 11:09	23°♎13'30	-1.4m
morning rise	-4859 Oct 04 j 06:49	20°♏33'22		min. Earth dist.		-4854 Dec 23 j 12:20	22°♎01'37	0.65120 AU
	-4859 Oct 16 j 23:56	0°♐		direct		-4853 Jan 30 j 06:23	13°♎22'28	
	-4859 Nov 25 j 14:03	0°♑				-4853 Mar 30 j 22:08	0°♊	
desc. node	-4859 Dec 21 j 04:40	19°♑43'16				-4853 May 23 j 17:53	0°♎	
	-4858 Jan 03 j 12:00	0°♐				-4853 Jul 07 j 16:29	0°♏	
	-4858 Feb 11 j 13:57	0°♑		desc. node		-4853 Aug 12 j 20:24	26°♏18'37	
	-4858 Mar 23 j 20:45	0°♎				-4853 Aug 17 j 18:21	0°♐	
	-4858 May 05 j 19:49	0°♎				-4853 Sep 25 j 19:36	0°♑	
	-4858 Jun 23 j 22:37	0°♑				-4853 Nov 03 j 02:25	0°♐	
retrograde	-4858 Sep 02 j 08:22	23°♑23'55				-4853 Dec 11 j 16:09	0°♑	
min. Earth dist.	-4858 Oct 08 j 04:33	15°♑04'20	0.62527 AU	evening set		-4853 Dec 12 j 23:18	0°♑59'49	
opposition	-4858 Oct 12 j 06:12	13°♑26'41	-1°04'10			-4852 Jan 20 j 09:49	0°♎	
greatest brilliancy	-4858 Oct 12 j 02:50	13°♑30'03	-1.6m					
asc. node	-4858 Nov 08 j 01:29	5°♑17'36		conjunction		-4852 Feb 12 j 23:32	17°♎12'22	-1°04'22
direct	-4858 Nov 19 j 12:27	4°♑26'19		minimum elong		-4852 Feb 13 j 01:08	17°♎15'16	1°04'35
	-4857 Feb 07 j 09:37	0°♑				-4852 Mar 01 j 22:33	0°♎	
	-4857 Apr 03 j 00:49	0°♎		max. Earth dist.		-4852 Mar 22 j 21:19	14°♎34'55	2.52199 AU
	-4857 May 21 j 23:06	0°♊		morning rise		-4852 Apr 10 j 14:48	27°♎19'31	
	-4857 Jul 06 j 10:13	0°♎				-4852 Apr 14 j 14:22	0°♑	
evening set	-4857 Aug 10 j 17:31	24°♎41'26				-4852 May 30 j 09:56	0°♑	
	-4857 Aug 18 j 02:29	0°♏		asc. node		-4852 Jun 30 j 01:55	19°♑19'48	
max. Earth dist.	-4857 Aug 26 j 23:51	6°♏28'03	2.44333 AU			-4852 Jul 17 j 10:27	0°♎	
	-4857 Sep 27 j 14:06	0°♐				-4852 Sep 06 j 15:28	0°♊	
						-4852 Nov 07 j 07:01	0°♎	
conjunction	-4857 Oct 04 j 11:39	5°♐14'20	0°24'19	retrograde		-4852 Dec 21 j 12:49	9°♎38'21	
minimum elong	-4857 Oct 04 j 13:15	5°♐17'22	0°24'24	opposition		-4851 Jan 27 j 05:47	1°♎40'08	5°18'16
	-4857 Nov 05 j 14:17	0°♑		greatest brilliancy		-4851 Jan 28 j 12:06	1°♎11'56	-1.7m
desc. node	-4857 Nov 08 j 00:30	1°♑53'23				-4851 Jan 31 j 17:16	30°♎♊	
morning rise	-4857 Dec 05 j 01:46	23°♑03'13		min. Earth dist.		-4851 Feb 03 j 08:39	29°♊01'36	0.57006 AU
	-4857 Dec 13 j 22:28	0°♐		direct		-4851 Mar 08 j 11:16	22°♊07'30	
	-4856 Jan 21 j 11:28	0°♑				-4851 Apr 14 j 18:35	0°♎	
	-4856 Mar 01 j 02:26	0°♎				-4851 Jun 10 j 14:10	0°♏	
	-4856 Apr 11 j 16:37	0°♎		desc. node		-4851 Jun 29 j 19:16	12°♏38'14	
	-4856 May 26 j 08:16	0°♑				-4851 Jul 24 j 12:59	0°♐	
	-4856 Jul 15 j 11:30	0°♑				-4851 Sep 02 j 20:25	0°♑	
asc. node	-4856 Sep 25 j 03:39	27°♑51'44				-4851 Oct 11 j 22:34	0°♐	
retrograde	-4856 Oct 06 j 11:52	28°♑39'25				-4851 Nov 20 j 04:49	0°♑	
opposition	-4856 Nov 15 j 10:59	18°♑55'44	1°52'38			-4851 Dec 30 j 14:15	0°♎	
greatest brilliancy	-4856 Nov 15 j 09:26	18°♑57'18	-1.4m	evening set		-4850 Feb 08 j 22:38	28°♎45'54	
min. Earth dist.	-4856 Nov 15 j 02:54	19°♑03'50	0.66964 AU			-4850 Feb 10 j 17:10	0°♎	
direct	-4856 Dec 25 j 20:40	9°♑10'45				-4850 Mar 26 j 18:39	0°♑	
	-4855 Mar 05 j 21:35	0°♎						
	-4855 Apr 29 j 12:12	0°♊		conjunction		-4850 Apr 03 j 16:13	5°♑15'00	-0°24'58
	-4855 Jun 15 j 14:08	0°♎		minimum elong		-4850 Apr 03 j 17:20	5°♑16'50	0°25'04
	-4855 Jul 28 j 16:41	0°♏		max. Earth dist.		-4850 Apr 22 j 23:51	17°♑56'59	2.62029 AU
	-4855 Sep 07 j 03:27	0°♐				-4850 May 11 j 13:34	0°♑	
desc. node	-4855 Sep 24 j 21:52	13°♐37'24		asc. node		-4850 May 17 j 22:56	4°♑06'49	
evening set	-4855 Oct 05 j 15:35	21°♐57'21		morning rise		-4850 May 23 j 15:22	7°♑45'41	
	-4855 Oct 15 j 22:48	0°♑				-4850 Jun 27 j 15:03	0°♎	
	-4855 Nov 23 j 01:55	0°♐				-4850 Aug 14 j 14:54	0°♊	
						-4850 Oct 02 j 21:52	0°♎	
conjunction	-4855 Dec 08 j 21:08	12°♐24'36	-0°49'19			-4850 Nov 24 j 22:15	0°♏	
minimum elong	-4855 Dec 08 j 17:47	12°♐18'04	0°49'26	retrograde		-4849 Feb 15 j 20:05	27°♏51'00	
	-4855 Dec 31 j 11:23	0°♑		opposition		-4849 Mar 20 j 15:54	21°♏41'38	3°33'55
max. Earth dist.	-4854 Jan 19 j 18:03	14°♑46'45	2.39446 AU	greatest brilliancy		-4849 Mar 21 j 20:15	21°♏19'02	-2.5m
	-4854 Feb 08 j 23:43	0°♎		min. Earth dist.		-4849 Mar 28 j 16:29	19°♏08'57	0.44398 AU
morning rise	-4854 Feb 14 j 01:47	3°♎46'25		direct		-4849 Apr 25 j 11:40	14°♏16'07	
	-4854 Mar 22 j 07:51	0°♎		desc. node		-4849 May 17 j 20:07	17°♏32'09	
	-4854 May 05 j 01:09	0°♑				-4849 Jun 17 j 06:57	0°♐	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 6

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4849 Aug 05 j 07:55	0°♎				-4844 Aug 01 j 05:03	0°♏		
	-4849 Sep 16 j 22:05	0°♍				-4844 Sep 13 j 06:00	0°♎		
	-4849 Oct 28 j 09:14	0°♊		morning rise		-4844 Sep 15 j 01:41	1°♎17'56		
	-4849 Dec 09 j 10:34	0°♐				-4844 Oct 24 j 12:17	0°♑		
	-4848 Jan 21 j 20:29	0°♐				-4844 Dec 03 j 11:15	0°♎		
	-4848 Mar 06 j 20:19	0°♋		desc. node		-4843 Jan 06 j 22:33	26°♎18'37		
evening set	-4848 Mar 25 j 23:54	12°♋29'42				-4843 Jan 11 j 18:18	0°♍		
asc. node	-4848 Apr 03 j 19:17	18°♋11'53				-4843 Feb 20 j 05:59	0°♊		
	-4848 Apr 22 j 03:05	0°♑				-4843 Apr 02 j 03:16	0°♐		
						-4843 May 16 j 13:25	0°♐		
conjunction	-4848 May 13 j 19:31	13°♑52'55	0°22'12			-4843 Jul 11 j 23:27	0°♋		
minimum elong	-4848 May 13 j 18:43	13°♑51'38	0°22'14	retrograde		-4843 Aug 18 j 17:34	8°♋17'04		
max. Earth dist.	-4848 May 16 j 18:39	15°♑46'29	2.66694 AU	min. Earth dist.		-4843 Sep 21 j 18:25	0°♋36'02	0.59185 AU	
	-4848 Jun 08 j 01:46	0°♉				-4843 Sep 23 j 07:06	30°♋		
morning rise	-4848 Jun 29 j 01:03	13°♉23'06		opposition		-4843 Sep 27 j 05:51	28°♋26'16	-2°22'43	
	-4848 Jul 24 j 23:44	0°♈		greatest brilliancy		-4843 Sep 26 j 19:39	28°♋36'21	-1.7m	
	-4848 Sep 09 j 10:59	0°♏		direct		-4843 Nov 03 j 07:42	19°♋52'24		
	-4848 Oct 25 j 12:31	0°♎		asc. node		-4843 Nov 24 j 16:09	22°♋29'35		
	-4848 Dec 10 j 16:39	0°♑				-4843 Dec 18 j 12:36	0°♋		
	-4847 Jan 27 j 10:19	0°♎				-4842 Feb 18 j 10:13	0°♑		
	-4847 Mar 25 j 02:13	0°♍				-4842 Apr 11 j 06:12	0°♉		
desc. node	-4847 Apr 03 j 22:43	3°♍40'22				-4842 May 29 j 08:32	0°♈		
retrograde	-4847 May 03 j 18:39	9°♍03'45				-4842 Jul 13 j 14:08	0°♏		
min. Earth dist.	-4847 Jun 01 j 11:48	4°♍23'30	0.37889 AU	evening set		-4842 Jul 23 j 05:59	6°♏38'27		
opposition	-4847 Jun 03 j 20:06	3°♍45'27	-4°22'14	max. Earth dist.		-4842 Aug 07 j 12:01	17°♏17'58	2.49280 AU	
greatest brilliancy	-4847 Jun 03 j 08:54	3°♍53'00	-2.9m			-4842 Aug 25 j 07:11	0°♎		
	-4847 Jun 19 j 20:17	30°♋							
direct	-4847 Jul 03 j 17:18	28°♋45'03		conjunction		-4842 Sep 12 j 22:05	13°♎35'03	0°47'02	
	-4847 Jul 17 j 15:31	0°♍		minimum elong		-4842 Sep 13 j 00:08	13°♎38'50	0°47'13	
	-4847 Sep 25 j 00:49	0°♊				-4842 Oct 04 j 22:22	0°♑		
	-4847 Nov 12 j 22:30	0°♐		morning rise		-4842 Nov 08 j 12:33	26°♑26'23		
	-4847 Dec 29 j 21:53	0°♐				-4842 Nov 13 j 02:59	0°♎		
	-4846 Feb 14 j 23:39	0°♋		desc. node		-4842 Nov 24 j 20:38	9°♎06'55		
asc. node	-4846 Feb 19 j 16:16	2°♋58'34				-4842 Dec 21 j 15:14	0°♍		
	-4846 Apr 03 j 10:23	0°♑				-4841 Jan 29 j 07:26	0°♊		
evening set	-4846 May 04 j 19:14	19°♑49'38				-4841 Mar 10 j 01:41	0°♐		
	-4846 May 20 j 19:44	0°♉				-4841 Apr 20 j 22:41	0°♐		
max. Earth dist.	-4846 Jun 09 j 18:57	12°♉45'29	2.65923 AU			-4841 Jun 05 j 11:40	0°♋		
						-4841 Jul 29 j 14:37	0°♑		
conjunction	-4846 Jun 20 j 15:37	19°♉44'48	0°58'09	retrograde		-4841 Sep 24 j 01:42	15°♑35'10		
minimum elong	-4846 Jun 20 j 14:22	19°♉42'48	0°58'19	asc. node		-4841 Oct 12 j 17:31	13°♑14'00		
	-4846 Jul 06 j 11:23	0°♈		min. Earth dist.		-4841 Nov 01 j 08:29	6°♑25'55	0.65961 AU	
morning rise	-4846 Aug 05 j 03:23	19°♈30'01		opposition		-4841 Nov 03 j 03:44	5°♑42'27	0°48'54	
	-4846 Aug 20 j 20:42	0°♏		greatest brilliancy		-4841 Nov 03 j 02:03	5°♑44'08	-1.4m	
	-4846 Oct 03 j 19:26	0°♎				-4841 Nov 18 j 14:47	30°♋		
	-4846 Nov 15 j 10:29	0°♑		direct		-4841 Dec 12 j 20:47	26°♋11'24		
	-4846 Dec 27 j 02:35	0°♎				-4840 Jan 08 j 07:50	0°♑		
	-4845 Feb 06 j 11:04	0°♍				-4840 Mar 17 j 13:28	0°♉		
desc. node	-4845 Feb 19 j 23:09	9°♍42'14				-4840 May 08 j 00:08	0°♈		
	-4845 Mar 20 j 21:12	0°♊				-4840 Jun 23 j 06:17	0°♏		
	-4845 May 07 j 11:36	0°♐				-4840 Aug 05 j 03:24	0°♎		
retrograde	-4845 Jul 06 j 14:52	19°♐53'45		evening set		-4840 Sep 11 j 12:47	27°♎41'40		
min. Earth dist.	-4845 Aug 04 j 07:30	14°♐17'58	0.47465 AU			-4840 Sep 14 j 13:44	0°♑		
greatest brilliancy	-4845 Aug 10 j 20:52	11°♐58'44	-2.3m	desc. node		-4840 Oct 11 j 16:31	20°♑50'47		
opposition	-4845 Aug 12 j 08:59	11°♐26'37	-5°44'02			-4840 Oct 23 j 10:22	0°♎		
direct	-4845 Sep 14 j 10:38	4°♐35'10		max. Earth dist.		-4840 Oct 26 j 15:48	2°♎31'28	2.38000 AU	
	-4845 Nov 30 j 09:14	0°♐							
asc. node	-4844 Jan 07 j 15:30	20°♐56'12		conjunction		-4840 Nov 11 j 07:25	14°♎48'39	-0°22'01	
	-4844 Jan 23 j 07:59	0°♋		minimum elong		-4840 Nov 11 j 05:31	14°♎44'56	0°22'02	
	-4844 Mar 13 j 14:08	0°♑				-4840 Nov 30 j 14:46	0°♍		
	-4844 May 01 j 04:51	0°♉				-4839 Jan 08 j 00:35	0°♊		
evening set	-4844 Jun 11 j 08:49	26°♉13'42		morning rise		-4839 Jan 17 j 17:39	7°♊28'35		
	-4844 Jun 17 j 04:08	0°♈				-4839 Feb 16 j 12:31	0°♐		
max. Earth dist.	-4844 Jul 04 j 11:03	11°♈21'30	2.59895 AU			-4839 Mar 29 j 20:49	0°♐		
						-4839 May 12 j 18:16	0°♋		
conjunction	-4844 Jul 28 j 20:30	27°♈43'00	1°11'18			-4839 Jun 29 j 04:46	0°♑		
minimum elong	-4844 Jul 28 j 20:37	27°♈43'13	1°11'33			-4839 Aug 22 j 19:13	0°♉		

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 7

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

asc. node	-4839 Aug 29 j 18:58	3°♄16'25			-4833 Jan 29 j 11:28	0°♊	
retrograde	-4839 Oct 27 j 22:32	19°♄23'27		evening set	-4833 Mar 10 j 04:14	26°♊48'05	
opposition	-4839 Dec 06 j 09:27	10°♄00'59	3°20'53		-4833 Mar 15 j 00:06	0°♋	
greatest brilliancy	-4839 Dec 06 j 13:16	9°♄57'12	-1.3m	asc. node	-4833 Apr 21 j 11:43	24°♋29'32	
min. Earth dist.	-4839 Dec 08 j 08:53	9°♄13'53	0.66595 AU				
direct	-4838 Jan 16 j 11:13	0°♄02'36		conjunction	-4833 Apr 29 j 11:49	29°♋39'31	0°04'35
	-4838 Apr 13 j 03:03	0°♄		minimum elong	-4833 Apr 29 j 11:37	29°♋39'12	0°04'34
	-4838 Jun 01 j 23:16	0°♄		behind sun begin	-4833 Apr 28 j 16:09	29°♋07'50	
	-4838 Jul 15 j 22:22	0°♄		behind sun end	-4833 Apr 30 j 07:06	0°♌10'33	
	-4838 Aug 25 j 15:59	0°♌			-4833 Apr 30 j 00:33	0°♌	
desc. node	-4838 Aug 29 j 13:26	2°♌57'18		max. Earth dist.	-4833 May 08 j 12:19	5°♌27'32	2.65519 AU
	-4838 Oct 03 j 13:38	0°♌		morning rise	-4833 Jun 15 j 19:00	29°♌54'14	
	-4838 Nov 10 j 18:01	0°♌			-4833 Jun 15 j 22:37	0°♍	
evening set	-4838 Nov 16 j 05:57	4°♌19'10			-4833 Aug 02 j 03:38	0°♍	
	-4838 Dec 19 j 05:02	0°♍			-4833 Sep 18 j 09:37	0°♍	
					-4833 Nov 05 j 01:56	0°♎	
conjunction	-4837 Jan 19 j 22:39	24°♍08'05	-1°08'23		-4833 Dec 24 j 17:28	0°♎	
minimum elong	-4837 Jan 19 j 22:22	24°♍07'34	1°08'39		-4832 Feb 22 j 04:14	0°♎	
	-4837 Jan 27 j 19:29	0°♎		retrograde	-4832 Apr 02 j 07:53	8°♎40'11	
max. Earth dist.	-4837 Mar 07 j 02:03	27°♎47'12	2.47219 AU	desc. node	-4832 Apr 20 j 14:00	6°♎37'47	
	-4837 Mar 10 j 05:04	0°♎		opposition	-4832 May 02 j 20:39	3°♎34'23	-0°55'29
morning rise	-4837 Mar 22 j 16:33	8°♎45'03		greatest brilliancy	-4832 May 02 j 22:41	3°♎33'00	-2.9m
	-4837 Apr 22 j 19:21	0°♋		min. Earth dist.	-4832 May 06 j 01:18	2°♎42'26	0.38448 AU
	-4837 Jun 07 j 19:02	0°♌			-4832 May 17 j 01:07	30°♌	
asc. node	-4837 Jul 17 j 18:44	24°♌44'07		direct	-4832 Jun 03 j 05:47	28°♌07'15	
	-4837 Jul 26 j 14:31	0°♌			-4832 Jun 20 j 04:40	0°♌	
	-4837 Sep 18 j 17:53	0°♌			-4832 Aug 24 j 06:14	0°♌	
retrograde	-4837 Dec 05 j 07:06	24°♌35'11			-4832 Oct 09 j 20:43	0°♍	
opposition	-4836 Jan 12 j 00:49	16°♌06'50	5°01'52		-4832 Nov 23 j 13:35	0°♎	
greatest brilliancy	-4836 Jan 12 j 23:00	15°♌45'37	-1.6m		-4831 Jan 07 j 14:42	0°♎	
min. Earth dist.	-4836 Jan 17 j 19:09	13°♌54'41	0.60899 AU		-4831 Feb 22 j 15:12	0°♋	
direct	-4836 Feb 21 j 22:30	6°♌15'17		asc. node	-4831 Mar 08 j 08:18	8°♋49'13	
	-4836 May 03 j 21:42	0°♍			-4831 Apr 10 j 12:13	0°♌	
	-4836 Jun 21 j 15:53	0°♎		evening set	-4831 Apr 19 j 17:45	5°♌52'16	
desc. node	-4836 Jul 16 j 12:37	17°♎18'33			-4831 May 27 j 15:50	0°♍	
	-4836 Aug 02 j 22:53	0°♎		max. Earth dist.	-4831 May 31 j 11:30	2°♍26'15	2.66888 AU
	-4836 Sep 11 j 13:31	0°♎					
	-4836 Oct 20 j 05:07	0°♌		conjunction	-4831 Jun 06 j 01:01	5°♍59'31	0°46'17
	-4836 Nov 28 j 02:31	0°♍		minimum elong	-4831 Jun 05 j 23:44	5°♍57'28	0°46'24
	-4835 Jan 07 j 03:47	0°♎			-4831 Jul 13 j 08:32	0°♌	
evening set	-4835 Jan 18 j 20:41	8°♎32'18		morning rise	-4831 Jul 21 j 10:56	5°♌15'42	
	-4835 Feb 17 j 23:30	0°♎			-4831 Aug 28 j 01:47	0°♍	
					-4831 Oct 11 j 15:38	0°♎	
conjunction	-4835 Mar 16 j 12:14	18°♎19'08	-0°42'55		-4831 Nov 24 j 05:40	0°♎	
minimum elong	-4835 Mar 16 j 14:04	18°♎22'16	0°43'05		-4830 Jan 06 j 05:49	0°♎	
	-4835 Apr 02 j 19:36	0°♋			-4830 Feb 18 j 14:15	0°♌	
max. Earth dist.	-4835 Apr 12 j 02:10	6°♋10'43	2.58774 AU	desc. node	-4830 Mar 08 j 17:11	12°♌07'31	
morning rise	-4835 May 07 j 22:11	23°♋07'58			-4830 Apr 06 j 05:22	0°♍	
	-4835 May 18 j 12:56	0°♌		retrograde	-4830 Jun 15 j 02:12	25°♍27'00	
asc. node	-4835 Jun 03 j 15:36	10°♌19'24		min. Earth dist.	-4830 Jul 12 j 01:22	20°♍39'20	0.42605 AU
	-4835 Jul 04 j 19:51	0°♍		greatest brilliancy	-4830 Jul 18 j 01:16	18°♍44'18	-2.6m
	-4835 Aug 22 j 15:30	0°♌		opposition	-4830 Jul 19 j 15:51	18°♍13'07	-6°23'13
	-4835 Oct 13 j 07:17	0°♍		direct	-4830 Aug 20 j 01:18	12°♍14'50	
	-4835 Dec 15 j 23:47	0°♎			-4830 Oct 19 j 11:04	0°♎	
retrograde	-4834 Jan 22 j 08:02	7°♎10'43			-4830 Dec 13 j 09:53	0°♎	
opposition	-4834 Feb 25 j 20:26	0°♎13'21	4°50'55	asc. node	-4829 Jan 24 j 05:58	25°♎02'00	
	-4834 Feb 26 j 11:56	30°♎			-4829 Feb 01 j 09:57	0°♋	
greatest brilliancy	-4834 Feb 27 j 08:55	29°♎41'52	-2.1m		-4829 Mar 22 j 05:50	0°♌	
min. Earth dist.	-4834 Mar 06 j 07:10	27°♎19'00	0.49530 AU		-4829 May 09 j 06:10	0°♍	
direct	-4834 Apr 04 j 23:43	21°♎41'31		evening set	-4829 May 28 j 06:47	12°♍05'11	
	-4834 May 12 j 07:12	0°♎		max. Earth dist.	-4829 Jun 25 j 02:44	0°♌02'44	2.62866 AU
desc. node	-4834 Jun 03 j 12:39	10°♎35'03			-4829 Jun 25 j 01:03	0°♌	
	-4834 Jul 05 j 18:03	0°♎					
	-4834 Aug 17 j 19:17	0°♎		conjunction	-4829 Jul 14 j 03:54	12°♌33'53	1°09'43
	-4834 Sep 27 j 07:12	0°♌		minimum elong	-4829 Jul 14 j 03:18	12°♌32'54	1°09'57
	-4834 Nov 06 j 12:58	0°♍			-4829 Aug 09 j 04:12	0°♍	
	-4834 Dec 17 j 17:14	0°♎		morning rise	-4829 Aug 29 j 18:42	14°♍06'42	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 8

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4829 Sep 21 j 12:11	0°♂			-4824 Nov 15 j 04:00	30°♈	
	-4829 Nov 02 j 05:00	0°♍		opposition	-4824 Nov 23 j 02:11	26°♈53'48	2°27'01
	-4829 Dec 12 j 16:21	0°♊		greatest brilliancy	-4824 Nov 23 j 01:54	26°♈54'05	-1.3m
	-4828 Jan 21 j 12:54	0°♋		min. Earth dist.	-4824 Nov 23 j 14:10	26°♈41'49	0.67098 AU
desc. node	-4828 Jan 24 j 16:56	2°♋23'12		direct	-4823 Jan 02 j 18:49	17°♈02'51	
	-4828 Mar 01 j 16:24	0°♌			-4823 Feb 24 j 06:36	0°♉	
	-4828 Apr 12 j 16:26	0°♍			-4823 Apr 23 j 11:51	0°♊	
	-4828 May 30 j 10:43	0°♎			-4823 Jun 10 j 09:18	0°♋	
retrograde	-4828 Aug 03 j 00:01	21°♎33'29			-4823 Jul 23 j 18:51	0°♌	
min. Earth dist.	-4828 Sep 03 j 23:59	14°♎37'51	0.55002 AU		-4823 Sep 02 j 08:17	0°♍	
opposition	-4828 Sep 10 j 19:04	12°♎00'56	-3°44'45	desc. node	-4823 Sep 15 j 07:41	9°♍54'47	
greatest brilliancy	-4828 Sep 09 j 23:12	12°♎20'05	-1.9m		-4823 Oct 11 j 04:32	0°♎	
direct	-4828 Oct 16 j 11:17	4°♎00'43		evening set	-4823 Oct 20 j 06:20	7°♎06'55	
asc. node	-4828 Dec 11 j 05:52	18°♎41'22			-4823 Nov 18 j 07:58	0°♏	
	-4827 Jan 04 j 02:06	0°♐					
	-4827 Feb 27 j 19:13	0°♑		conjunction	-4823 Dec 24 j 10:38	28°♏14'05	-1°00'06
	-4827 Apr 18 j 23:28	0°♒		minimum elong	-4823 Dec 24 j 07:53	28°♏08'46	1°00'16
	-4827 Jun 05 j 12:23	0°♓			-4823 Dec 26 j 17:24	0°♑	
evening set	-4827 Jul 06 j 06:43	20°♓17'07			-4822 Feb 04 j 05:27	0°♒	
	-4827 Jul 20 j 14:58	0°♔		max. Earth dist.	-4822 Feb 10 j 23:04	4°♒59'32	2.42016 AU
max. Earth dist.	-4827 Jul 23 j 14:10	2°♔01'50	2.53876 AU	morning rise	-4822 Feb 28 j 03:06	17°♒32'39	
					-4822 Mar 17 j 12:53	0°♓	
conjunction	-4827 Aug 24 j 18:11	24°♔30'52	1°01'58		-4822 Apr 30 j 03:22	0°♐	
minimum elong	-4827 Aug 24 j 19:41	24°♔33'32	1°02'12		-4822 Jun 15 j 10:59	0°♑	
	-4827 Sep 01 j 10:12	0°♌		asc. node	-4822 Aug 03 j 09:53	29°♑21'08	
	-4827 Oct 12 j 06:18	0°♍			-4822 Aug 04 j 13:18	0°♒	
morning rise	-4827 Oct 16 j 05:05	2°♍57'54			-4822 Oct 04 j 00:07	0°♓	
	-4827 Nov 20 j 16:51	0°♎		retrograde	-4822 Nov 19 j 15:03	10°♓36'00	
desc. node	-4827 Dec 11 j 14:05	16°♎08'21		opposition	-4822 Dec 28 j 04:20	1°♓43'15	4°30'33
	-4827 Dec 29 j 11:03	0°♏		greatest brilliancy	-4822 Dec 28 j 18:23	1°♓29'33	-1.4m
	-4826 Feb 06 j 08:45	0°♐		min. Earth dist.	-4821 Jan 01 j 11:44	0°♓02'32	0.63871 AU
	-4826 Mar 18 j 09:26	0°♑			-4821 Jan 01 j 14:21	30°♒	
	-4826 Apr 29 j 19:28	0°♒		direct	-4821 Feb 07 j 08:51	21°♒43'35	
	-4826 Jun 16 j 01:06	0°♓			-4821 Mar 18 j 23:25	0°♓	
	-4826 Aug 23 j 14:49	0°♔			-4821 May 17 j 04:15	0°♔	
retrograde	-4826 Sep 10 j 10:02	1°♔58'09			-4821 Jul 02 j 02:43	0°♌	
	-4826 Sep 27 j 07:55	30°♒		desc. node	-4821 Aug 03 j 05:19	23°♌03'30	
min. Earth dist.	-4826 Oct 17 j 04:19	23°♒19'30	0.63994 AU		-4821 Aug 12 j 13:14	0°♍	
opposition	-4826 Oct 20 j 10:24	22°♒01'08	-0°21'00		-4821 Sep 20 j 18:31	0°♎	
greatest brilliancy	-4826 Oct 20 j 09:35	22°♒01'57	-1.5m		-4821 Oct 29 j 03:57	0°♏	
asc. node	-4826 Oct 29 j 07:54	18°♒34'19			-4821 Dec 06 j 19:45	0°♑	
direct	-4826 Nov 28 j 06:12	12°♒48'33		evening set	-4821 Dec 27 j 08:36	15°♑37'04	
	-4825 Jan 29 j 17:15	0°♒			-4820 Jan 15 j 15:12	0°♒	
	-4825 Mar 28 j 06:02	0°♓					
	-4825 May 16 j 22:34	0°♔		conjunction	-4820 Feb 25 j 10:04	29°♒25'51	-0°58'05
	-4825 Jul 01 j 16:22	0°♕		minimum elong	-4820 Feb 25 j 12:05	29°♒29'24	0°58'17
	-4825 Aug 13 j 10:48	0°♌			-4820 Feb 26 j 05:27	0°♓	
evening set	-4825 Aug 21 j 23:26	6°♌11'52		max. Earth dist.	-4820 Mar 30 j 18:14	23°♓09'50	2.54736 AU
max. Earth dist.	-4825 Sep 11 j 01:11	21°♌03'02	2.41697 AU	morning rise	-4820 Apr 09 j 21:30	0°♐	
	-4825 Sep 22 j 22:15	0°♍			-4820 Apr 20 j 23:34	7°♐33'37	
					-4820 May 25 j 14:55	0°♑	
conjunction	-4825 Oct 17 j 18:08	19°♍01'31	0°08'29	asc. node	-4820 Jun 20 j 08:05	16°♑20'19	
minimum elong	-4825 Oct 17 j 18:47	19°♍02'47	0°08'32		-4820 Jul 12 j 06:53	0°♒	
behind sun begin	-4825 Oct 16 j 20:38	18°♍19'57			-4820 Aug 31 j 09:10	0°♓	
behind sun end	-4825 Oct 18 j 16:56	19°♍45'38			-4820 Oct 26 j 13:13	0°♔	
desc. node	-4825 Oct 29 j 10:48	28°♍06'27		retrograde	-4819 Jan 01 j 05:46	19°♕17'34	
	-4825 Oct 31 j 21:05	0°♎		opposition	-4819 Feb 06 j 06:07	11°♕38'51	5°17'28
	-4825 Dec 09 j 03:35	0°♏		greatest brilliancy	-4819 Feb 07 j 16:13	11°♕07'48	-1.9m
morning rise	-4825 Dec 20 j 23:45	9°♏17'02		min. Earth dist.	-4819 Feb 14 j 00:31	8°♕49'32	0.54513 AU
	-4824 Jan 16 j 14:44	0°♐		direct	-4819 Mar 17 j 22:07	2°♕22'17	
	-4824 Feb 25 j 03:29	0°♑			-4819 Jun 02 j 06:20	0°♒	
	-4824 Apr 06 j 14:03	0°♒		desc. node	-4819 Jun 20 j 05:53	11°♒08'02	
	-4824 May 20 j 20:04	0°♓			-4819 Jul 18 j 02:01	0°♓	
	-4824 Jul 08 j 14:41	0°♔			-4819 Aug 28 j 01:12	0°♔	
	-4824 Sep 09 j 10:10	0°♕			-4819 Oct 06 j 12:02	0°♕	
asc. node	-4824 Sep 15 j 10:01	1°♕53'28			-4819 Nov 15 j 00:24	0°♑	
retrograde	-4824 Oct 14 j 06:23	6°♕30'44			-4819 Dec 25 j 14:41	0°♒	



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Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4818 Feb 05 j 21:42	0°♊			-4814 Sep 28 j 21:47	0°♏		
evening set	-4818 Feb 20 j 01:44	9°♊45'37			-4814 Nov 10 j 04:10	0°♐		
	-4818 Mar 22 j 01:58	0°♋			-4814 Dec 21 j 08:10	0°♑		
					-4813 Jan 31 j 00:32	0°♒		
conjunction	-4818 Apr 13 j 09:52	14°♋43'54	-0°14'06	desc. node	-4813 Feb 10 j 10:03	7°♒38'33		
minimum elong	-4818 Apr 13 j 10:28	14°♋44'54	0°14'11		-4813 Mar 13 j 07:28	0°♓		
behind sun begin	-4818 Apr 13 j 01:16	14°♋29'51			-4813 Apr 26 j 17:35	0°♈		
behind sun end	-4818 Apr 13 j 19:41	14°♋59'57			-4813 Jun 28 j 09:51	0°♉		
max. Earth dist.	-4818 Apr 28 j 22:21	24°♋50'10	2.63517 AU	retrograde	-4813 Jul 17 j 13:15	2°♉29'34		
	-4818 May 06 j 22:00	0°♐			-4813 Aug 05 j 03:01	30°♐		
asc. node	-4818 May 08 j 04:04	0°♐48'30		min. Earth dist.	-4813 Aug 16 j 09:29	26°♐24'58	0.50243 AU	
morning rise	-4818 Jun 01 j 06:08	16°♐15'05		greatest brilliancy	-4813 Aug 22 j 22:09	24°♐01'05	-2.1m	
	-4818 Jun 22 j 21:16	0°♑		opposition	-4813 Aug 24 j 04:59	23°♐32'41	-5°04'43	
	-4818 Aug 09 j 12:44	0°♒		direct	-4813 Sep 27 j 06:31	16°♐14'15		
	-4818 Sep 26 j 22:02	0°♓			-4813 Nov 19 j 07:40	0°♑		
	-4818 Nov 16 j 07:39	0°♏		asc. node	-4813 Dec 28 j 21:27	19°♑33'51		
	-4817 Jan 14 j 03:59	0°♐			-4812 Jan 16 j 19:54	0°♋		
retrograde	-4817 Mar 03 j 08:21	11°♐34'11			-4812 Mar 08 j 06:51	0°♐		
opposition	-4817 Apr 04 j 07:21	5°♐51'44	2°18'02		-4812 Apr 26 j 09:01	0°♑		
greatest brilliancy	-4817 Apr 05 j 00:44	5°♐38'40	-2.6m		-4812 Jun 12 j 12:48	0°♒		
min. Earth dist.	-4817 Apr 11 j 08:06	3°♐45'45	0.41833 AU	evening set	-4812 Jun 20 j 06:12	5°♒02'27		
	-4817 Apr 27 j 13:40	30°♒♏		max. Earth dist.	-4812 Jul 11 j 02:56	18°♒51'37	2.57942 AU	
direct	-4817 May 08 j 12:21	29°♒10'16			-4812 Jul 27 j 14:40	0°♓		
desc. node	-4817 May 08 j 07:44	29°♒10'17						
	-4817 May 19 j 14:07	0°♐		conjunction	-4812 Aug 07 j 06:45	7°♓19'07	1°09'43	
	-4817 Jul 26 j 14:40	0°♑		minimum elong	-4812 Aug 07 j 07:23	7°♓20'13	1°09'57	
	-4817 Sep 09 j 14:58	0°♒			-4812 Sep 08 j 13:54	0°♏		
	-4817 Oct 22 j 04:37	0°♓		morning rise	-4812 Sep 25 j 17:11	12°♏21'23		
	-4817 Dec 03 j 21:35	0°♈			-4812 Oct 19 j 16:51	0°♐		
	-4816 Jan 16 j 17:57	0°♉			-4812 Nov 28 j 11:13	0°♑		
	-4816 Mar 02 j 00:26	0°♋		desc. node	-4812 Dec 28 j 08:46	22°♑56'12		
asc. node	-4816 Mar 24 j 23:51	14°♋54'44			-4811 Jan 06 j 13:07	0°♒		
evening set	-4816 Apr 04 j 05:28	21°♋30'15			-4811 Feb 14 j 18:32	0°♓		
	-4816 Apr 17 j 11:16	0°♐			-4811 Mar 27 j 05:33	0°♈		
					-4811 May 09 j 14:56	0°♉		
conjunction	-4816 May 22 j 09:16	22°♐17'49	0°31'42		-4811 Jun 29 j 14:10	0°♋		
minimum elong	-4816 May 22 j 08:13	22°♐16'07	0°31'47	retrograde	-4811 Aug 27 j 06:01	17°♋30'38		
max. Earth dist.	-4816 May 22 j 04:57	22°♐10'55	2.67002 AU	min. Earth dist.	-4811 Oct 01 j 07:18	9°♋27'18	0.61132 AU	
	-4816 Jun 03 j 11:10	0°♑		opposition	-4811 Oct 05 j 23:51	7°♋35'14	-1°36'43	
morning rise	-4816 Jul 07 j 04:38	21°♑34'41		greatest brilliancy	-4811 Oct 05 j 17:56	7°♋41'08	-1.6m	
	-4816 Jul 20 j 06:46	0°♒			-4811 Oct 30 j 01:15	30°♒		
	-4816 Sep 04 j 10:46	0°♓		direct	-4811 Nov 12 j 18:01	28°♒45'50		
	-4816 Oct 19 j 21:13	0°♏		asc. node	-4811 Nov 14 j 22:25	28°♒47'38		
	-4816 Dec 03 j 21:34	0°♐			-4811 Nov 27 j 03:51	0°♋		
	-4815 Jan 18 j 06:25	0°♑			-4810 Feb 11 j 13:39	0°♐		
	-4815 Mar 07 j 11:20	0°♒			-4810 Apr 05 j 21:41	0°♑		
desc. node	-4815 Mar 25 j 09:20	9°♒48'03			-4810 May 24 j 11:54	0°♒		
retrograde	-4815 May 20 j 09:00	26°♒47'35			-4810 Jul 08 j 21:49	0°♓		
min. Earth dist.	-4815 Jun 16 j 10:31	22°♒20'37	0.38936 AU	evening set	-4810 Aug 02 j 13:45	17°♓06'12		
greatest brilliancy	-4815 Jun 20 j 09:09	21°♒13'54	-2.8m	max. Earth dist.	-4810 Aug 17 j 19:56	27°♓58'17	2.46550 AU	
opposition	-4815 Jun 21 j 09:52	20°♒56'23	-5°40'18		-4810 Aug 20 j 15:31	0°♏		
direct	-4815 Jul 21 j 10:29	15°♒44'51						
	-4815 Sep 11 j 12:56	0°♓		conjunction	-4810 Sep 24 j 20:11	25°♏56'12	0°34'59	
	-4815 Nov 05 j 04:44	0°♈		minimum elong	-4810 Sep 24 j 22:08	25°♏59'52	0°35'07	
	-4815 Dec 23 j 21:42	0°♉			-4810 Sep 30 j 05:39	0°♐		
asc. node	-4814 Feb 09 j 21:53	0°♋05'39			-4810 Nov 08 j 08:15	0°♑		
	-4814 Feb 09 j 18:16	0°♋		desc. node	-4810 Nov 15 j 04:57	5°♑20'16		
	-4814 Mar 29 j 14:42	0°♐		morning rise	-4810 Nov 23 j 03:42	11°♑32'06		
evening set	-4814 May 13 j 08:58	28°♐12'38			-4810 Dec 16 j 18:21	0°♒		
	-4814 May 16 j 04:39	0°♑			-4809 Jan 24 j 08:23	0°♓		
max. Earth dist.	-4814 Jun 15 j 09:14	19°♑18'23	2.65064 AU		-4809 Mar 04 j 23:39	0°♈		
					-4809 Apr 15 j 15:02	0°♉		
conjunction	-4814 Jun 29 j 02:46	28°♑11'43	1°03'32		-4809 May 30 j 12:10	0°♋		
minimum elong	-4814 Jun 29 j 01:42	28°♑09'58	1°03'44		-4809 Jul 20 j 18:40	0°♐		
	-4814 Jul 01 j 21:20	0°♒		retrograde	-4809 Oct 01 j 19:24	23°♐33'27		
morning rise	-4814 Aug 13 j 20:11	28°♒25'01		asc. node	-4809 Oct 03 j 00:37	23°♐32'53		
	-4814 Aug 16 j 04:36	0°♓		opposition	-4809 Nov 10 j 20:13	13°♐45'22	1°26'42	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 10

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

min. Earth dist.	-4809 Nov 09 j 20:43	14° $\Upsilon$ 08'58	0.66636 AU	conjunction	-4803 Mar 27 j 01:51	28° $\approx$ 36'47	-0°32'45
greatest brilliancy	-4809 Nov 10 j 18:13	13° $\Upsilon$ 47'22	-1.4m	minimum elong	-4803 Mar 27 j 03:18	28° $\approx$ 39'14	0°32'52
direct	-4809 Dec 20 j 22:55	4° $\Upsilon$ 06'00			-4803 Mar 29 j 03:34	0° $\text{H}$	
	-4808 Mar 10 j 09:24	0° $\text{B}$		max. Earth dist.	-4803 Apr 18 j 13:56	13° $\text{H}$ 32'29	2.60666 AU
	-4808 May 02 j 13:08	0° $\text{II}$			-4803 May 13 j 20:37	0° $\Upsilon$	
	-4808 Jun 18 j 07:40	0° $\text{E}$		morning rise	-4803 May 17 j 01:29	2° $\Upsilon$ 03'53	
	-4808 Jul 31 j 08:59	0° $\Omega$		asc. node	-4803 May 24 j 20:32	7° $\Upsilon$ 04'26	
	-4808 Sep 09 j 20:29	0° $\text{M}$			-4803 Jun 29 j 23:21	0° $\text{B}$	
evening set	-4808 Sep 24 j 20:25	11° $\text{M}$ 28'28			-4803 Aug 17 j 06:24	0° $\text{II}$	
desc. node	-4808 Oct 02 j 02:00	17° $\text{M}$ 03'38			-4803 Oct 06 j 09:38	0° $\text{E}$	
	-4808 Oct 18 j 16:42	0° $\underline{\text{A}}$			-4803 Dec 01 j 07:49	0° $\Omega$	
	-4808 Nov 25 j 20:18	0° $\text{M}$		retrograde	-4802 Feb 04 j 16:32	18° $\Omega$ 53'52	
				opposition	-4802 Mar 10 j 06:53	12° $\Omega$ 22'18	4°14'24
conjunction	-4808 Nov 26 j 18:01	0° $\text{M}$ 42'44	-0°38'28	greatest brilliancy	-4802 Mar 11 j 16:20	11° $\Omega$ 54'31	-2.3m
minimum elong	-4808 Nov 26 j 14:57	0° $\text{M}$ 36'42	0°38'33	min. Earth dist.	-4802 Mar 18 j 16:17	9° $\Omega$ 36'01	0.46666 AU
max. Earth dist.	-4808 Dec 19 j 12:57	18° $\text{M}$ 35'14	2.37942 AU	direct	-4802 Apr 16 j 05:23	4° $\Omega$ 24'23	
	-4807 Jan 03 j 05:24	0° $\text{A}$		desc. node	-4802 May 24 j 23:20	13° $\Omega$ 25'39	
morning rise	-4807 Feb 02 j 12:30	23° $\text{A}$ 08'04			-4802 Jun 26 j 00:26	0° $\text{M}$	
	-4807 Feb 11 j 16:28	0° $\text{B}$			-4802 Aug 10 j 14:18	0° $\underline{\text{A}}$	
	-4807 Mar 24 j 23:22	0° $\approx$			-4802 Sep 21 j 01:43	0° $\text{M}$	
	-4807 May 07 j 16:35	0° $\text{H}$			-4802 Oct 31 j 21:34	0° $\text{A}$	
	-4807 Jun 23 j 13:45	0° $\Upsilon$			-4802 Dec 12 j 11:32	0° $\text{B}$	
	-4807 Aug 14 j 21:09	0° $\text{B}$			-4801 Jan 24 j 12:54	0° $\approx$	
asc. node	-4807 Aug 20 j 01:35	2° $\text{B}$ 40'41			-4801 Mar 10 j 06:19	0° $\text{H}$	
retrograde	-4807 Nov 04 j 23:57	27° $\text{B}$ 16'44		evening set	-4801 Mar 19 j 22:20	6° $\text{H}$ 21'05	
opposition	-4807 Dec 14 j 04:28	18° $\text{B}$ 03'55	3°48'44	asc. node	-4801 Apr 11 j 17:08	21° $\text{H}$ 10'44	
greatest brilliancy	-4807 Dec 14 j 11:29	17° $\text{B}$ 56'58	-1.4m		-4801 Apr 25 j 09:24	0° $\Upsilon$	
min. Earth dist.	-4807 Dec 17 j 00:01	16° $\text{B}$ 57'14	0.65910 AU				
direct	-4806 Jan 24 j 08:57	8° $\text{B}$ 03'28		conjunction	-4801 May 08 j 08:39	8° $\Upsilon$ 19'32	0°14'58
	-4806 Apr 05 j 06:48	0° $\text{II}$		minimum elong	-4801 May 08 j 08:04	8° $\Upsilon$ 18'37	0°14'59
	-4806 May 27 j 04:53	0° $\text{E}$		behind sun begin	-4801 May 08 j 01:52	8° $\Upsilon$ 08'41	
	-4806 Jul 10 j 17:57	0° $\Omega$		behind sun end	-4801 May 08 j 14:16	8° $\Upsilon$ 28'32	
desc. node	-4806 Aug 20 j 00:26	29° $\Omega$ 28'34		max. Earth dist.	-4801 May 14 j 00:16	11° $\Upsilon$ 56'34	2.66268 AU
	-4806 Aug 20 j 17:07	0° $\text{M}$			-4801 Jun 11 j 07:13	0° $\text{B}$	
	-4806 Sep 28 j 17:03	0° $\underline{\text{A}}$		morning rise	-4801 Jun 24 j 00:16	8° $\text{B}$ 05'58	
	-4806 Nov 05 j 22:36	0° $\text{M}$			-4801 Jul 28 j 08:04	0° $\text{II}$	
evening set	-4806 Dec 01 j 11:27	19° $\text{M}$ 58'12			-4801 Sep 13 j 03:10	0° $\text{E}$	
	-4806 Dec 14 j 10:26	0° $\text{A}$			-4801 Oct 29 j 19:50	0° $\Omega$	
	-4805 Jan 23 j 01:25	0° $\text{B}$			-4801 Dec 16 j 05:39	0° $\text{M}$	
					-4800 Feb 04 j 23:30	0° $\underline{\text{A}}$	
conjunction	-4805 Feb 02 j 21:51	8° $\text{B}$ 00'04	-1°07'19	desc. node	-4800 Apr 11 j 01:56	25° $\underline{\text{A}}$ 23'17	
minimum elong	-4805 Feb 02 j 22:50	8° $\text{B}$ 01'53	1°07'34	retrograde	-4800 Apr 20 j 03:23	25° $\underline{\text{A}}$ 54'59	
	-4805 Mar 05 j 11:23	0° $\approx$		opposition	-4800 May 20 j 17:34	20° $\underline{\text{A}}$ 50'10	-2°58'22
max. Earth dist.	-4805 Mar 17 j 04:54	8° $\approx$ 13'50	2.50022 AU	greatest brilliancy	-4800 May 20 j 15:49	20° $\underline{\text{A}}$ 51'21	-2.9m
morning rise	-4805 Apr 03 j 08:16	20° $\approx$ 03'07		min. Earth dist.	-4800 May 20 j 21:13	20° $\underline{\text{A}}$ 47'44	0.37737 AU
	-4805 Apr 18 j 00:55	0° $\text{H}$		direct	-4800 Jun 20 j 01:12	15° $\underline{\text{A}}$ 45'33	
	-4805 Jun 02 j 20:42	0° $\Upsilon$			-4800 Aug 09 j 23:09	0° $\text{M}$	
asc. node	-4805 Jul 07 j 23:20	21° $\Upsilon$ 59'44			-4800 Oct 01 j 12:04	0° $\text{A}$	
	-4805 Jul 21 j 02:57	0° $\text{B}$			-4800 Nov 17 j 02:27	0° $\text{B}$	
	-4805 Sep 11 j 06:46	0° $\text{II}$			-4799 Jan 02 j 01:48	0° $\approx$	
	-4805 Nov 19 j 19:40	0° $\text{E}$			-4799 Feb 17 j 14:36	0° $\text{H}$	
retrograde	-4805 Dec 14 j 21:42	3° $\text{E}$ 27'31		asc. node	-4799 Feb 26 j 13:29	5° $\text{H}$ 43'09	
	-4804 Jan 07 j 06:35	30° $\text{R}$ $\text{II}$			-4799 Apr 05 j 18:34	0° $\Upsilon$	
opposition	-4804 Jan 21 j 02:26	25° $\text{II}$ 15'10	5°13'07	evening set	-4799 Apr 28 j 10:18	14° $\Upsilon$ 21'28	
greatest brilliancy	-4804 Jan 22 j 05:19	24° $\text{II}$ 49'49	-1.7m		-4799 May 23 j 01:11	0° $\text{B}$	
min. Earth dist.	-4804 Jan 27 j 15:30	22° $\text{II}$ 47'15	0.58859 AU	max. Earth dist.	-4799 Jun 05 j 21:08	8° $\text{B}$ 49'44	2.66457 AU
direct	-4804 Mar 01 j 16:34	15° $\text{II}$ 32'23					
	-4804 Apr 23 j 17:32	0° $\text{E}$		conjunction	-4799 Jun 14 j 10:24	14° $\text{B}$ 18'41	0°53'33
	-4804 Jun 15 j 00:46	0° $\Omega$		minimum elong	-4799 Jun 14 j 09:06	14° $\text{B}$ 16'36	0°53'42
desc. node	-4804 Jul 06 j 23:05	14° $\Omega$ 49'25			-4799 Jul 08 j 17:35	0° $\text{II}$	
	-4804 Jul 28 j 05:07	0° $\text{M}$		morning rise	-4799 Jul 29 j 19:53	13° $\text{II}$ 47'12	
	-4804 Sep 06 j 04:48	0° $\underline{\text{A}}$			-4799 Aug 23 j 06:54	0° $\text{E}$	
	-4804 Oct 15 j 01:47	0° $\text{M}$			-4799 Oct 06 j 12:29	0° $\Omega$	
	-4804 Nov 23 j 03:15	0° $\text{A}$			-4799 Nov 18 j 13:33	0° $\text{M}$	
	-4803 Jan 02 j 07:40	0° $\text{B}$			-4799 Dec 30 j 18:25	0° $\underline{\text{A}}$	
evening set	-4803 Jan 31 j 02:20	20° $\text{B}$ 44'24			-4798 Feb 10 j 20:21	0° $\text{M}$	
	-4803 Feb 13 j 05:58	0° $\approx$		desc. node	-4798 Feb 27 j 02:54	11° $\text{M}$ 25'11	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4798 Mar 26 j 12:41	0°♈				-4793 Mar 22 j 02:05	0°♈		
	-4798 May 18 j 00:23	0°♉				-4793 May 11 j 18:42	0°♉		
retrograde	-4798 Jun 27 j 16:22	10°♊10'49				-4793 Jun 26 j 20:52	0°♊		
min. Earth dist.	-4798 Jul 25 j 12:08	4°♋58'26	0.45220 AU			-4793 Aug 08 j 18:02	0°♋		
greatest brilliancy	-4798 Jul 31 j 22:58	2°♋46'52	-2.4m	evening set		-4793 Sep 02 j 20:57	18°♌26'17		
opposition	-4798 Aug 02 j 13:41	2°♋13'45	-6°07'39			-4793 Sep 18 j 05:59	0°♍		
	-4798 Aug 09 j 09:29	30°♌♈		max. Earth dist.		-4793 Oct 01 j 04:42	9°♍52'40	2.39368 AU	
direct	-4798 Sep 03 j 20:17	25°♌45'46		desc. node		-4793 Oct 19 j 20:53	24°♍18'33		
	-4798 Sep 30 j 19:04	0°♍				-4793 Oct 27 j 04:07	0°♎		
	-4798 Dec 05 j 16:18	0°♏							
asc. node	-4797 Jan 14 j 12:14	22°♏49'30		conjunction		-4793 Oct 31 j 20:13	3°♏39'04	-0°08'43	
	-4797 Jan 26 j 14:37	0°♐		minimum elong		-4793 Oct 31 j 19:29	3°♏37'39	0°08'43	
	-4797 Mar 17 j 04:32	0°♑		behind sun begin		-4793 Oct 30 j 20:37	2°♏52'56		
	-4797 May 04 j 12:53	0°♒		behind sun end		-4793 Nov 01 j 18:22	4°♏22'24		
evening set	-4797 Jun 05 j 21:12	20°♒34'06				-4793 Dec 04 j 09:26	0°♓		
	-4797 Jun 20 j 10:51	0°♓		morning rise		-4792 Jan 06 j 05:03	25°♓39'54		
max. Earth dist.	-4797 Jul 01 j 01:58	6°♓57'16	2.61316 AU			-4792 Jan 11 j 19:23	0°♈		
						-4792 Feb 20 j 06:32	0°♉		
conjunction	-4797 Jul 23 j 00:48	21°♓32'03	1°11'15			-4792 Apr 01 j 14:07	0°♊		
minimum elong	-4797 Jul 23 j 00:36	21°♓31'44	1°11'29			-4792 May 15 j 12:54	0°♋		
	-4797 Aug 04 j 13:44	0°♌				-4792 Jul 02 j 08:33	0°♌		
morning rise	-4797 Sep 08 j 10:35	24°♌06'45				-4792 Aug 28 j 02:26	0°♍		
	-4797 Sep 16 j 18:32	0°♎		asc. node		-4792 Sep 05 j 15:31	3°♍36'11		
	-4797 Oct 28 j 06:05	0°♏		retrograde		-4792 Oct 22 j 02:15	14°♍20'31		
	-4797 Dec 07 j 10:37	0°♐		opposition		-4792 Nov 30 j 17:39	4°♍51'15	2°59'08	
desc. node	-4796 Jan 15 j 01:58	29°♐19'41		greatest brilliancy		-4792 Nov 30 j 19:24	4°♍49'30	-1.3m	
	-4796 Jan 15 j 23:10	0°♑		min. Earth dist.		-4792 Dec 02 j 01:32	4°♍19'29	0.66949 AU	
	-4796 Feb 24 j 16:37	0°♒				-4792 Dec 13 j 11:14	30°♌♑		
	-4796 Apr 05 j 22:09	0°♓		direct		-4791 Jan 10 j 15:57	24°♑55'26		
	-4796 May 21 j 07:16	0°♔				-4791 Feb 10 j 11:22	0°♒		
	-4796 Jul 26 j 19:38	0°♕				-4791 Apr 17 j 01:06	0°♓		
retrograde	-4796 Aug 12 j 04:58	1°♕46'07				-4791 Jun 05 j 01:06	0°♔		
	-4796 Aug 27 j 21:56	30°♕♔				-4791 Jul 18 j 19:17	0°♕		
min. Earth dist.	-4796 Sep 14 j 08:25	24°♔24'15	0.57414 AU			-4791 Aug 28 j 12:03	0°♖		
opposition	-4796 Sep 20 j 10:07	22°♔01'46	-2°57'17	desc. node		-4791 Sep 05 j 17:29	6°♖15'34		
greatest brilliancy	-4796 Sep 19 j 20:04	22°♔15'31	-1.8m			-4791 Oct 06 j 09:28	0°♗		
direct	-4796 Oct 26 j 21:44	13°♔41'48		evening set		-4791 Nov 04 j 09:06	22°♗46'32		
asc. node	-4796 Dec 01 j 12:46	20°♔25'09				-4791 Nov 13 j 13:18	0°♘		
	-4796 Dec 25 j 16:06	0°♕				-4791 Dec 21 j 23:07	0°♈		
	-4795 Feb 21 j 19:15	0°♑							
	-4795 Apr 13 j 21:25	0°♒		conjunction		-4790 Jan 08 j 15:43	13°♈34'16	-1°06'29	
	-4795 May 31 j 18:43	0°♓		minimum elong		-4790 Jan 08 j 14:17	13°♈31'33	1°06'42	
evening set	-4795 Jul 15 j 19:06	29°♓51'06				-4790 Jan 30 j 11:30	0°♉		
	-4795 Jul 16 j 00:19	0°♔		max. Earth dist.		-4790 Feb 25 j 23:56	19°♉25'58	2.44879 AU	
max. Earth dist.	-4795 Jul 31 j 17:25	10°♔49'47	2.51403 AU			-4790 Mar 12 j 18:45	0°♊		
	-4795 Aug 27 j 19:26	0°♕		morning rise		-4790 Mar 13 j 06:48	0°♊21'19		
						-4790 Apr 25 j 07:31	0°♋		
conjunction	-4795 Sep 04 j 09:05	5°♕28'09	0°54'22			-4790 Jun 10 j 08:34	0°♌		
minimum elong	-4795 Sep 04 j 10:57	5°♕31'34	0°54'34	asc. node		-4790 Jul 24 j 15:41	27°♌07'11		
	-4795 Oct 07 j 13:44	0°♍				-4790 Jul 29 j 13:30	0°♍		
morning rise	-4795 Oct 28 j 23:41	16°♍14'15				-4790 Sep 23 j 12:40	0°♎		
	-4795 Nov 15 j 21:22	0°♏		retrograde		-4790 Nov 28 j 10:35	18°♎56'33		
desc. node	-4795 Dec 02 j 00:30	12°♏30'03		opposition		-4789 Jan 05 j 13:47	10°♎16'45	4°49'49	
	-4795 Dec 24 j 12:05	0°♐		greatest brilliancy		-4789 Jan 06 j 08:20	9°♎58'51	-1.5m	
	-4794 Feb 01 j 06:07	0°♑		min. Earth dist.		-4789 Jan 10 j 16:50	8°♎18'02	0.62355 AU	
	-4794 Mar 13 j 01:45	0°♒		direct		-4789 Feb 15 j 15:39	0°♓20'20		
	-4794 Apr 24 j 01:52	0°♓				-4789 May 09 j 21:18	0°♔		
	-4794 Jun 09 j 02:18	0°♕				-4789 Jun 26 j 07:20	0°♕		
	-4794 Aug 05 j 04:39	0°♑		desc. node		-4789 Jul 24 j 16:14	20°♕01'51		
retrograde	-4794 Sep 18 j 08:20	10°♑18'28				-4789 Aug 07 j 05:43	0°♖		
asc. node	-4794 Oct 19 j 14:02	3°♑52'13				-4789 Sep 15 j 16:19	0°♗		
min. Earth dist.	-4794 Oct 25 j 23:20	1°♑22'02	0.65207 AU			-4789 Oct 24 j 04:45	0°♘		
opposition	-4794 Oct 28 j 09:50	0°♑23'14	0°20'26			-4789 Dec 01 j 22:53	0°♈		
greatest brilliancy	-4794 Oct 28 j 08:59	0°♑24'05	-1.5m	evening set		-4788 Jan 09 j 23:14	29°♈21'05		
	-4794 Oct 29 j 08:57	30°♑♕				-4788 Jan 10 j 20:21	0°♉		
direct	-4794 Dec 06 j 17:39	20°♑59'41				-4788 Feb 21 j 12:13	0°♊		
	-4793 Jan 18 j 10:25	0°♑							

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 12

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

conjunction	-4788 Mar 08 j 02:43	10° $\approx$ 52'26	-0°49'51			-4783 Apr 16 j 13:31	0° $\nearrow$	
minimum elong	-4788 Mar 08 j 04:44	10° $\approx$ 55'56	0°50'01	retrograde		-4783 Jun 04 j 11:42	13° $\nearrow$ 51'23	
	-4788 Apr 05 j 05:12	0° $\bowtie$		min. Earth dist.		-4783 Jul 01 j 04:16	9° $\nearrow$ 18'11	0.40728 AU
max. Earth dist.	-4788 Apr 07 j 01:10	1° $\bowtie$ 13'41	2.57060 AU	greatest brilliancy		-4783 Jul 06 j 11:23	7° $\nearrow$ 42'03	-2.7m
morning rise	-4788 Apr 30 j 20:26	16° $\bowtie$ 59'14		opposition		-4783 Jul 07 j 22:09	7° $\nearrow$ 15'29	-6°18'35
	-4788 May 20 j 21:15	0° $\Upsilon$		direct		-4783 Aug 07 j 15:22	1° $\nearrow$ 40'32	
asc. node	-4788 Jun 10 j 13:02	13° $\Upsilon$ 12'23				-4783 Oct 26 j 21:30	0° $\beth$	
	-4788 Jul 07 j 06:39	0° $\bowtie$				-4783 Dec 17 j 09:54	0° $\approx$	
	-4788 Aug 25 j 13:02	0° $\Pi$		asc. node		-4782 Jan 31 j 03:20	27° $\approx$ 23'52	
	-4788 Oct 17 j 15:46	0° $\ominus$				-4782 Feb 04 j 08:26	0° $\bowtie$	
retrograde	-4787 Jan 12 j 20:37	29° $\ominus$ 36'21				-4782 Mar 24 j 17:07	0° $\Upsilon$	
opposition	-4787 Feb 17 j 01:17	22° $\ominus$ 19'31	5°06'31			-4782 May 11 j 12:48	0° $\bowtie$	
greatest brilliancy	-4787 Feb 18 j 13:30	21° $\ominus$ 47'21	-2.0m	evening set		-4782 May 21 j 21:55	6° $\bowtie$ 35'10	
min. Earth dist.	-4787 Feb 25 j 06:24	19° $\ominus$ 25'06	0.51821 AU	max. Earth dist.		-4782 Jun 21 j 01:23	25° $\bowtie$ 56'26	2.63957 AU
direct	-4787 Mar 27 j 22:50	13° $\ominus$ 24'57				-4782 Jun 27 j 07:19	0° $\Pi$	
	-4787 May 22 j 14:24	0° $\Omega$						
desc. node	-4787 Jun 10 j 16:15	10° $\Omega$ 36'17		conjunction		-4782 Jul 07 j 15:58	6° $\Pi$ 46'30	1°07'36
	-4787 Jul 10 j 22:15	0° $\cap$		minimum elong		-4782 Jul 07 j 15:08	6° $\Pi$ 45'08	1°07'50
	-4787 Aug 21 j 22:14	0° $\underline{\cap}$				-4782 Aug 11 j 13:04	0° $\ominus$	
	-4787 Sep 30 j 21:21	0° $\cap$		morning rise		-4782 Aug 22 j 19:10	7° $\ominus$ 38'38	
	-4787 Nov 09 j 17:59	0° $\nearrow$				-4782 Sep 24 j 01:55	0° $\Omega$	
	-4787 Dec 20 j 14:28	0° $\beth$				-4782 Nov 05 j 01:14	0° $\cap$	
	-4786 Feb 01 j 02:06	0° $\approx$				-4782 Dec 15 j 20:03	0° $\underline{\cap}$	
evening set	-4786 Mar 02 j 14:03	20° $\approx$ 06'04				-4781 Jan 25 j 00:25	0° $\cap$	
	-4786 Mar 17 j 09:41	0° $\bowtie$		desc. node		-4781 Jan 31 j 20:54	5° $\cap$ 06'51	
						-4781 Mar 06 j 13:37	0° $\nearrow$	
conjunction	-4786 Apr 22 j 17:40	23° $\bowtie$ 49'08	-0°03'16			-4781 Apr 18 j 07:01	0° $\beth$	
minimum elong	-4786 Apr 22 j 17:50	23° $\bowtie$ 49'23	0°03'19			-4781 Jun 07 j 22:39	0° $\approx$	
behind sun begin	-4786 Apr 21 j 21:42	23° $\bowtie$ 16'47		retrograde		-4781 Jul 27 j 18:39	14° $\approx$ 05'56	
behind sun end	-4786 Apr 23 j 13:57	24° $\bowtie$ 21'58		min. Earth dist.		-4781 Aug 27 j 19:05	7° $\approx$ 32'42	0.52919 AU
asc. node	-4786 Apr 28 j 09:23	27° $\bowtie$ 28'41		greatest brilliancy		-4781 Sep 03 j 01:56	5° $\approx$ 10'14	-2.0m
	-4786 May 02 j 07:10	0° $\Upsilon$		opposition		-4781 Sep 04 j 02:30	4° $\approx$ 46'56	-4°19'51
max. Earth dist.	-4786 May 04 j 16:00	1° $\Upsilon$ 31'35	2.64724 AU			-4781 Sep 18 j 05:05	30° $\bowtie$	
morning rise	-4786 Jun 09 j 15:52	24° $\Upsilon$ 33'46		direct		-4781 Oct 09 j 02:25	27° $\beth$ 04'16	
	-4786 Jun 18 j 05:02	0° $\bowtie$				-4781 Oct 31 j 11:08	0° $\approx$	
	-4786 Aug 04 j 14:07	0° $\Pi$		asc. node		-4781 Dec 19 j 02:48	18° $\approx$ 58'40	
	-4786 Sep 21 j 06:38	0° $\ominus$				-4780 Jan 09 j 14:56	0° $\bowtie$	
	-4786 Nov 08 j 22:24	0° $\Omega$				-4780 Mar 02 j 18:07	0° $\Upsilon$	
	-4786 Dec 31 j 04:46	0° $\cap$				-4780 Apr 21 j 10:54	0° $\bowtie$	
retrograde	-4785 Mar 20 j 11:07	26° $\cap$ 44'16				-4780 Jun 07 j 20:44	0° $\Pi$	
opposition	-4785 Apr 20 j 11:06	21° $\cap$ 26'03	0°36'05	evening set		-4780 Jun 29 j 07:37	14° $\Pi$ 04'05	
greatest brilliancy	-4785 Apr 20 j 15:01	21° $\cap$ 23'17	-2.8m	max. Earth dist.		-4780 Jul 18 j 02:18	26° $\Pi$ 39'48	2.55778 AU
min. Earth dist.	-4785 Apr 25 j 17:05	19° $\cap$ 57'29	0.39676 AU			-4780 Jul 23 j 00:07	0° $\ominus$	
desc. node	-4785 Apr 28 j 17:12	19° $\cap$ 08'23						
direct	-4785 May 23 j 01:05	15° $\cap$ 29'03		conjunction		-4780 Aug 17 j 01:18	17° $\ominus$ 19'48	1°06'05
	-4785 Jul 12 j 14:28	0° $\underline{\cap}$		minimum elong		-4780 Aug 17 j 02:27	17° $\ominus$ 21'49	1°06'19
	-4785 Sep 01 j 02:27	0° $\cap$				-4780 Sep 03 j 22:08	0° $\Omega$	
	-4785 Oct 15 j 10:57	0° $\nearrow$		morning rise		-4780 Oct 07 j 00:18	24° $\Omega$ 07'12	
	-4785 Nov 28 j 02:44	0° $\beth$				-4780 Oct 14 j 22:03	0° $\cap$	
	-4784 Jan 11 j 12:45	0° $\approx$				-4780 Nov 23 j 12:34	0° $\underline{\cap}$	
	-4784 Feb 26 j 03:48	0° $\bowtie$		desc. node		-4780 Dec 18 j 18:09	19° $\underline{\cap}$ 26'13	
asc. node	-4784 Mar 15 j 06:04	11° $\bowtie$ 41'48				-4779 Jan 01 j 10:03	0° $\cap$	
	-4784 Apr 12 j 19:27	0° $\Upsilon$				-4779 Feb 09 j 10:33	0° $\nearrow$	
evening set	-4784 Apr 13 j 04:19	0° $\Upsilon$ 14'09				-4779 Mar 21 j 14:14	0° $\beth$	
max. Earth dist.	-4784 May 27 j 13:53	28° $\Upsilon$ 32'00	2.67047 AU			-4779 May 03 j 06:43	0° $\approx$	
	-4784 May 29 j 21:04	0° $\bowtie$				-4779 Jun 20 j 13:25	0° $\bowtie$	
				retrograde		-4779 Sep 04 j 11:52	26° $\bowtie$ 21'08	
conjunction	-4784 May 30 j 19:24	0° $\bowtie$ 35'36	0°40'27	min. Earth dist.		-4779 Oct 10 j 12:16	17° $\bowtie$ 57'18	0.62816 AU
minimum elong	-4784 May 30 j 18:10	0° $\bowtie$ 33'39	0°40'33	opposition		-4779 Oct 14 j 09:23	16° $\bowtie$ 24'01	-0°52'09
morning rise	-4784 Jul 15 j 08:06	29° $\bowtie$ 48'19		greatest brilliancy		-4779 Oct 14 j 06:47	16° $\bowtie$ 26'38	-1.6m
	-4784 Jul 15 j 15:19	0° $\Pi$		asc. node		-4779 Nov 05 j 04:48	9° $\bowtie$ 09'16	
	-4784 Aug 30 j 13:33	0° $\ominus$		direct		-4779 Nov 21 j 17:46	7° $\bowtie$ 21'03	
	-4784 Oct 14 j 12:21	0° $\Omega$				-4778 Feb 03 j 18:20	0° $\Upsilon$	
	-4784 Nov 27 j 16:17	0° $\cap$				-4778 Mar 31 j 06:57	0° $\bowtie$	
	-4783 Jan 10 j 13:10	0° $\underline{\cap}$				-4778 May 19 j 12:54	0° $\Pi$	
	-4783 Feb 24 j 09:38	0° $\cap$				-4778 Jul 04 j 04:36	0° $\ominus$	
desc. node	-4783 Mar 15 j 20:35	12° $\cap$ 17'01		evening set		-4778 Aug 13 j 08:08	28° $\ominus$ 05'04	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 13

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4778 Aug 15 j 23:57	0°♊		morning rise	-4773 Apr 14 j 04:45	0°♋34'43	
max. Earth dist.	-4778 Aug 30 j 04:29	10°♊19'52	2.43834 AU		-4773 May 29 j 00:55	0°♌	
	-4778 Sep 25 j 13:30	0°♍		asc. node	-4773 Jun 28 j 05:32	19°♌05'50	
					-4773 Jul 15 j 21:14	0°♍	
conjunction	-4778 Oct 07 j 10:36	9°♍01'54	0°20'41		-4773 Sep 04 j 16:16	0°♎	
minimum elong	-4778 Oct 07 j 12:01	9°♍04'36	0°20'46		-4773 Nov 03 j 02:42	0°♏	
	-4778 Nov 03 j 14:31	0°♐		retrograde	-4773 Dec 25 j 01:49	12°♏42'08	
desc. node	-4778 Nov 05 j 15:12	1°♐34'48		opposition	-4772 Jan 30 j 15:12	4°♏47'32	5°18'03
morning rise	-4778 Dec 08 j 13:17	27°♐20'47		greatest brilliancy	-4772 Jan 31 j 22:24	4°♏18'36	-1.8m
	-4778 Dec 11 j 22:30	0°♑		min. Earth dist.	-4772 Feb 06 j 21:20	2°♏06'19	0.56553 AU
	-4777 Jan 19 j 10:23	0°♒			-4772 Feb 12 j 22:13	30°♒II	
	-4777 Feb 27 j 23:13	0°♓		direct	-4772 Mar 10 j 18:33	25°♒17'05	
	-4777 Apr 10 j 10:04	0°♈			-4772 Apr 07 j 21:47	0°♓	
	-4777 May 24 j 19:47	0°♉			-4772 Jun 07 j 15:01	0°♊	
	-4777 Jul 13 j 07:46	0°♌		desc. node	-4772 Jun 27 j 09:14	12°♊48'00	
asc. node	-4777 Sep 23 j 07:07	29°♌52'48			-4772 Jul 22 j 02:44	0°♍	
	-4777 Sep 23 j 22:49	0°♍			-4772 Aug 31 j 14:47	0°♎	
retrograde	-4777 Oct 09 j 13:31	1°♍27'46			-4772 Oct 09 j 18:37	0°♏	
	-4777 Oct 24 j 09:58	30°♍♌			-4772 Nov 18 j 01:04	0°♐	
opposition	-4777 Nov 18 j 11:45	21°♌45'31	2°02'33		-4772 Dec 28 j 09:46	0°♓	
greatest brilliancy	-4777 Nov 18 j 10:23	21°♌46'53	-1.4m		-4771 Feb 08 j 11:30	0°♈	
min. Earth dist.	-4777 Nov 18 j 08:12	21°♌49'05	0.67011 AU	evening set	-4771 Feb 11 j 17:23	2°♈15'28	
direct	-4777 Dec 28 j 22:14	11°♌59'08			-4771 Mar 24 j 11:39	0°♉	
	-4776 Mar 02 j 00:18	0°♊		conjunction	-4771 Apr 06 j 03:41	8°♉24'50	-0°22'02
	-4776 Apr 26 j 18:34	0°♋		minimum elong	-4771 Apr 06 j 04:40	8°♉26'27	0°22'08
	-4776 Jun 13 j 05:20	0°♌		max. Earth dist.	-4771 Apr 24 j 16:55	20°♉35'00	2.62353 AU
	-4776 Jul 26 j 12:37	0°♍			-4771 May 09 j 05:15	0°♌	
	-4776 Sep 05 j 02:16	0°♎		asc. node	-4771 May 15 j 02:08	3°♌47'03	
desc. node	-4776 Sep 22 j 12:12	13°♎19'27		morning rise	-4771 May 25 j 20:48	10°♌42'06	
evening set	-4776 Oct 08 j 21:36	26°♎02'39			-4771 Jun 25 j 05:14	0°♍	
	-4776 Oct 13 j 23:07	0°♏			-4771 Aug 12 j 02:30	0°♎	
	-4776 Nov 21 j 02:33	0°♐			-4771 Sep 30 j 03:12	0°♏	
conjunction	-4776 Dec 12 j 08:40	16°♐41'12	-0°52'09		-4771 Nov 21 j 07:36	0°♊	
minimum elong	-4776 Dec 12 j 05:22	16°♐34'46	0°52'18		-4770 Feb 02 j 12:56	0°♋	
	-4776 Dec 29 j 11:15	0°♌		retrograde	-4770 Feb 19 j 03:21	1°♋37'06	
max. Earth dist.	-4775 Jan 25 j 01:20	20°♌20'53	2.39876 AU		-4770 Mar 07 j 06:56	30°♋♌	
	-4775 Feb 06 j 21:53	0°♓		opposition	-4770 Mar 23 j 20:37	25°♌32'33	3°17'25
morning rise	-4775 Feb 17 j 08:15	7°♓44'01		greatest brilliancy	-4770 Mar 24 j 22:39	25°♌12'00	-2.5m
	-4775 Mar 20 j 03:33	0°♈		min. Earth dist.	-4770 Mar 31 j 18:39	23°♌03'47	0.43904 AU
	-4775 May 02 j 17:31	0°♉		direct	-4770 Apr 28 j 08:27	18°♌15'04	
	-4775 Jun 18 j 04:21	0°♌		desc. node	-4770 May 15 j 11:12	20°♌11'32	
	-4775 Aug 07 j 23:03	0°♍			-4770 Jun 12 j 02:00	0°♎	
asc. node	-4775 Aug 10 j 07:11	1°♍17'13			-4770 Aug 02 j 07:15	0°♏	
	-4775 Oct 12 j 19:10	0°♎			-4770 Sep 14 j 08:33	0°♐	
retrograde	-4775 Nov 13 j 07:01	5°♎17'27			-4770 Oct 25 j 23:42	0°♑	
	-4775 Dec 12 j 04:06	30°♎♏			-4770 Dec 07 j 02:20	0°♓	
opposition	-4775 Dec 22 j 03:33	26°♏15'22	4°13'52		-4769 Jan 19 j 12:17	0°♈	
greatest brilliancy	-4775 Dec 22 j 14:22	26°♏04'45	-1.4m		-4769 Mar 05 j 11:42	0°♉	
min. Earth dist.	-4775 Dec 25 j 19:16	24°♏49'21	0.64901 AU	evening set	-4769 Mar 29 j 09:22	15°♉34'50	
direct	-4774 Feb 01 j 08:41	16°♏14'26		asc. node	-4769 Apr 01 j 21:35	17°♉51'05	
	-4774 Mar 26 j 15:27	0°♊			-4769 Apr 20 j 18:10	0°♌	
	-4774 May 21 j 00:06	0°♋		conjunction	-4769 May 17 j 01:13	16°♌49'34	0°24'55
	-4774 Jul 05 j 08:16	0°♌		minimum elong	-4769 May 17 j 00:20	16°♌48'09	0°24'58
desc. node	-4774 Aug 10 j 09:19	26°♌05'47		max. Earth dist.	-4769 May 19 j 10:57	18°♌21'42	2.66784 AU
	-4774 Aug 15 j 14:33	0°♍			-4769 Jun 06 j 16:49	0°♎	
	-4774 Sep 23 j 17:59	0°♏		morning rise	-4769 Jul 02 j 03:58	16°♏15'27	
	-4774 Nov 01 j 01:34	0°♐			-4769 Jul 23 j 14:43	0°♑	
evening set	-4774 Dec 09 j 15:03	0°♑			-4769 Sep 08 j 01:07	0°♓	
	-4774 Dec 16 j 08:31	5°♑09'42			-4769 Oct 23 j 23:57	0°♊	
	-4773 Jan 18 j 07:35	0°♓			-4769 Dec 08 j 21:48	0°♋	
conjunction	-4773 Feb 15 j 23:47	20°♓54'15	-1°02'58		-4768 Jan 24 j 23:49	0°♌	
minimum elong	-4773 Feb 16 j 01:33	20°♓57'25	1°03'12		-4768 Mar 18 j 10:46	0°♍	
	-4773 Feb 28 j 18:32	0°♈		desc. node	-4768 Apr 01 j 12:48	6°♍04'13	
max. Earth dist.	-4773 Mar 25 j 19:33	17°♈25'38	2.52696 AU	retrograde	-4768 May 07 j 15:06	13°♍43'42	
	-4773 Apr 13 j 08:05	0°♉		min. Earth dist.	-4768 Jun 04 j 20:57	9°♍07'44	0.38023 AU

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 14

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

opposition	-4768 Jun 07 j 18:26	8°♌20'41	-4°43'42	conjunction	-4763 Sep 15 j 17:18	17°♏12'37	0°44'13
greatest brilliancy	-4768 Jun 07 j 04:35	8°♌30'04	-2.9m	minimum elong	-4763 Sep 15 j 19:21	17°♏16'24	0°44'22
direct	-4768 Jul 07 j 14:16	3°♌19'31			-4763 Oct 02 j 20:26	0°♐	
	-4768 Sep 21 j 03:12	0°♐		morning rise	-4763 Nov 11 j 19:46	0°♐34'37	
	-4768 Nov 10 j 00:37	0°♐			-4763 Nov 11 j 01:54	0°♐	
	-4768 Dec 27 j 07:10	0°♐		desc. node	-4763 Nov 22 j 09:11	8°♐46'36	
	-4767 Feb 12 j 11:43	0°♐			-4763 Dec 19 j 14:09	0°♌	
asc. node	-4767 Feb 16 j 18:48	2°♐43'11			-4762 Jan 27 j 05:26	0°♐	
	-4767 Mar 31 j 23:55	0°♐			-4762 Mar 07 j 21:36	0°♐	
evening set	-4767 May 07 j 01:04	22°♐46'03			-4762 Apr 18 j 14:39	0°♐	
	-4767 May 18 j 10:32	0°♐			-4762 Jun 02 j 19:16	0°♐	
max. Earth dist.	-4767 Jun 11 j 09:48	15°♐18'33	2.65797 AU		-4762 Jul 25 j 15:20	0°♐	
				retrograde	-4762 Sep 26 j 03:18	18°♐24'58	
conjunction	-4767 Jun 22 j 20:19	22°♐40'33	0°59'45	asc. node	-4762 Oct 09 j 20:59	17°♐08'36	
minimum elong	-4767 Jun 22 j 19:06	22°♐38'36	0°59'57	min. Earth dist.	-4762 Nov 03 j 13:39	9°♐12'17	0.66111 AU
	-4767 Jul 04 j 03:36	0°♐		opposition	-4762 Nov 05 j 04:31	8°♐33'11	0°59'46
morning rise	-4767 Aug 07 j 08:18	22°♐29'13		greatest brilliancy	-4762 Nov 05 j 02:35	8°♐35'08	-1.4m
	-4767 Aug 18 j 14:05	0°♐			-4762 Dec 02 j 13:43	30°♐	
	-4767 Oct 01 j 13:20	0°♐		direct	-4762 Dec 14 j 22:48	29°♐00'17	
	-4767 Nov 13 j 03:55	0°♐			-4762 Dec 27 j 23:00	0°♐	
	-4767 Dec 24 j 18:19	0°♐			-4761 Mar 15 j 09:08	0°♐	
	-4766 Feb 03 j 23:07	0°♌			-4761 May 06 j 10:37	0°♐	
desc. node	-4766 Feb 17 j 13:28	9°♌49'47			-4761 Jun 21 j 23:09	0°♐	
	-4766 Mar 18 j 00:53	0°♐			-4761 Aug 03 j 23:59	0°♐	
	-4766 May 03 j 10:30	0°♐			-4761 Sep 13 j 12:30	0°♐	
retrograde	-4766 Jul 09 j 08:04	23°♐42'01		evening set	-4761 Sep 15 j 13:47	1°♐33'32	
min. Earth dist.	-4766 Aug 07 j 04:51	18°♐01'37	0.47988 AU	desc. node	-4761 Oct 10 j 05:58	20°♐31'14	
greatest brilliancy	-4766 Aug 13 j 19:49	15°♐40'11	-2.2m		-4761 Oct 22 j 10:05	0°♐	
opposition	-4766 Aug 15 j 06:51	15°♐08'52	-5°35'35	max. Earth dist.	-4761 Nov 05 j 07:24	10°♐53'10	2.37786 AU
direct	-4766 Sep 17 j 13:57	8°♐12'04					
	-4766 Nov 26 j 10:45	0°♐		conjunction	-4761 Nov 15 j 19:51	19°♐09'31	-0°26'06
asc. node	-4765 Jan 04 j 18:12	21°♐02'38		minimum elong	-4761 Nov 15 j 17:38	19°♐05'09	0°26'08
	-4765 Jan 20 j 10:13	0°♐			-4761 Nov 29 j 14:24	0°♌	
	-4765 Mar 11 j 23:33	0°♐			-4760 Jan 06 j 23:18	0°♐	
	-4765 Apr 29 j 17:52	0°♐		morning rise	-4760 Jan 22 j 10:40	11°♐54'12	
evening set	-4765 Jun 14 j 15:24	29°♐13'46			-4760 Feb 15 j 09:31	0°♐	
	-4765 Jun 15 j 19:52	0°♐			-4760 Mar 27 j 15:15	0°♐	
max. Earth dist.	-4765 Jul 07 j 10:51	14°♐12'14	2.59549 AU		-4760 May 10 j 08:55	0°♐	
	-4765 Jul 30 j 23:08	0°♐			-4760 Jun 26 j 12:12	0°♐	
					-4760 Aug 19 j 02:39	0°♐	
conjunction	-4765 Aug 01 j 04:46	0°♐50'24	1°11'02	asc. node	-4760 Aug 26 j 22:19	3°♐48'01	
minimum elong	-4765 Aug 01 j 05:02	0°♐50'51	1°11'18	retrograde	-4760 Oct 30 j 00:39	22°♐11'01	
	-4765 Sep 12 j 01:57	0°♐		opposition	-4760 Dec 08 j 10:23	12°♐50'30	3°28'42
morning rise	-4765 Sep 18 j 14:30	4°♐39'31		greatest brilliancy	-4760 Dec 08 j 14:52	12°♐46'02	-1.3m
	-4765 Oct 23 j 09:24	0°♐		min. Earth dist.	-4760 Dec 10 j 14:16	11°♐59'01	0.66504 AU
	-4765 Dec 02 j 08:43	0°♐		direct	-4759 Jan 18 j 12:27	2°♐51'21	
desc. node	-4764 Jan 05 j 12:33	26°♐05'17			-4759 Apr 09 j 21:12	0°♐	
	-4764 Jan 10 j 15:06	0°♌			-4759 May 30 j 11:11	0°♐	
	-4764 Feb 19 j 00:45	0°♐			-4759 Jul 13 j 17:11	0°♐	
	-4764 Mar 30 j 17:31	0°♐			-4759 Aug 23 j 14:19	0°♐	
	-4764 May 13 j 16:32	0°♐		desc. node	-4759 Aug 27 j 04:14	2°♐42'33	
	-4764 Jul 06 j 15:35	0°♐			-4759 Oct 01 j 13:35	0°♐	
retrograde	-4764 Aug 21 j 00:10	11°♐24'03			-4759 Nov 08 j 18:11	0°♌	
min. Earth dist.	-4764 Sep 24 j 05:22	3°♐38'05	0.59564 AU	evening set	-4759 Nov 19 j 16:59	8°♌36'06	
opposition	-4764 Sep 29 j 12:32	1°♐32'10	-2°10'13		-4759 Dec 17 j 04:20	0°♐	
greatest brilliancy	-4764 Sep 29 j 03:28	1°♐41'09	-1.7m				
	-4764 Oct 03 j 10:44	30°♐		conjunction	-4758 Jan 23 j 06:48	28°♐11'28	-1°08'25
direct	-4764 Nov 05 j 17:16	22°♐55'01		minimum elong	-4758 Jan 23 j 06:51	28°♐11'35	1°08'39
asc. node	-4764 Nov 21 j 19:06	24°♐26'56			-4758 Jan 25 j 17:05	0°♐	
	-4764 Dec 12 j 14:13	0°♐			-4758 Mar 08 j 00:26	0°♐	
	-4763 Feb 15 j 07:32	0°♐		max. Earth dist.	-4758 Mar 09 j 16:21	1°♐10'39	2.47754 AU
	-4763 Apr 08 j 15:07	0°♐		morning rise	-4758 Mar 25 j 14:41	12°♐19'43	
	-4763 May 26 j 22:52	0°♐			-4758 Apr 20 j 12:06	0°♐	
	-4763 Jul 11 j 08:00	0°♐			-4758 Jun 05 j 08:23	0°♐	
evening set	-4763 Jul 25 j 18:17	9°♐55'22		asc. node	-4758 Jul 14 j 20:31	24°♐33'35	
max. Earth dist.	-4763 Aug 09 j 23:49	20°♐36'19	2.48755 AU		-4758 Jul 23 j 21:48	0°♐	
	-4763 Aug 23 j 03:35	0°♐			-4758 Sep 15 j 06:21	0°♐	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

retrograde	-4758 Dec 07 j 16:12	27° $\Pi$ 32'59			-4752 Jan 06 j 03:37	0° $\approx$	
opposition	-4757 Jan 14 j 07:25	19° $\Pi$ 07'44	5°04'41		-4752 Feb 21 j 05:11	0° $\text{H}$	
greatest brilliancy	-4757 Jan 15 j 06:38	18° $\Pi$ 45'34	-1.6m	asc. node	-4752 Mar 05 j 11:01	8° $\text{H}$ 30'52	
min. Earth dist.	-4757 Jan 20 j 05:34	16° $\Pi$ 52'09	0.60542 AU		-4752 Apr 08 j 02:48	0° $\Upsilon$	
direct	-4757 Feb 24 j 03:40	9° $\Pi$ 17'23		evening set	-4752 Apr 21 j 23:31	8° $\Upsilon$ 48'44	
	-4757 May 01 j 06:52	0° $\text{E}$			-4752 May 25 j 07:03	0° $\text{B}$	
	-4757 Jun 20 j 01:58	0° $\Omega$		max. Earth dist.	-4752 Jun 01 j 22:53	4° $\text{B}$ 53'17	2.66822 AU
desc. node	-4757 Jul 15 j 02:49	17° $\Omega$ 16'27					
	-4757 Aug 01 j 16:44	0° $\text{M}$		conjunction	-4752 Jun 08 j 05:11	8° $\text{B}$ 53'26	0°48'24
	-4757 Sep 10 j 10:46	0° $\underline{\text{A}}$		minimum elong	-4752 Jun 08 j 03:53	8° $\text{B}$ 51'21	0°48'31
	-4757 Oct 19 j 03:36	0° $\text{M}$			-4752 Jul 11 j 00:25	0° $\Pi$	
	-4757 Nov 27 j 00:52	0° $\text{A}$		morning rise	-4752 Jul 23 j 14:39	8° $\Pi$ 11'13	
	-4756 Jan 06 j 01:01	0° $\text{B}$			-4752 Aug 25 j 17:57	0° $\text{E}$	
evening set	-4756 Jan 22 j 19:23	12° $\text{B}$ 13'01			-4752 Oct 09 j 07:18	0° $\Omega$	
	-4756 Feb 16 j 18:58	0° $\approx$			-4752 Nov 21 j 19:35	0° $\text{M}$	
					-4751 Jan 03 j 16:10	0° $\underline{\text{A}}$	
conjunction	-4756 Mar 19 j 03:45	21° $\approx$ 38'38	-0°40'17		-4751 Feb 15 j 16:53	0° $\text{M}$	
minimum elong	-4756 Mar 19 j 05:31	21° $\approx$ 41'38	0°40'25	desc. node	-4751 Mar 06 j 06:43	12° $\text{M}$ 35'34	
	-4756 Mar 31 j 13:05	0° $\text{H}$			-4751 Apr 02 j 08:50	0° $\text{A}$	
max. Earth dist.	-4756 Apr 13 j 20:54	8° $\text{H}$ 52'47	2.59143 AU	retrograde	-4751 Jun 18 j 01:25	29° $\text{A}$ 37'30	
morning rise	-4756 May 10 j 07:02	26° $\text{H}$ 11'19		min. Earth dist.	-4751 Jul 15 j 04:51	24° $\text{A}$ 45'53	0.43076 AU
	-4756 May 16 j 04:24	0° $\Upsilon$		greatest brilliancy	-4751 Jul 21 j 07:33	22° $\text{A}$ 47'03	-2.5m
asc. node	-4756 May 31 j 17:44	9° $\Upsilon$ 59'15		opposition	-4751 Jul 22 j 22:40	22° $\text{A}$ 15'08	-6°22'03
	-4756 Jul 02 j 09:00	0° $\text{B}$		direct	-4751 Aug 23 j 10:41	16° $\text{A}$ 11'28	
	-4756 Aug 20 j 00:21	0° $\Pi$			-4751 Oct 14 j 13:04	0° $\text{B}$	
	-4756 Oct 10 j 04:08	0° $\text{E}$			-4751 Dec 10 j 08:04	0° $\approx$	
	-4756 Dec 09 j 17:43	0° $\Omega$		asc. node	-4750 Jan 21 j 09:17	24° $\approx$ 56'29	
retrograde	-4755 Jan 25 j 08:04	10° $\Omega$ 36'38			-4750 Jan 29 j 17:56	0° $\text{H}$	
opposition	-4755 Feb 28 j 16:09	3° $\Omega$ 43'50	4°42'36		-4750 Mar 19 j 17:46	0° $\Upsilon$	
greatest brilliancy	-4755 Mar 02 j 04:01	3° $\Omega$ 13'00	-2.2m		-4750 May 06 j 20:35	0° $\text{B}$	
min. Earth dist.	-4755 Mar 09 j 02:35	0° $\Omega$ 50'45	0.48992 AU	evening set	-4750 May 30 j 11:08	14° $\text{B}$ 59'20	
	-4755 Mar 11 j 17:01	30° $\text{R}$ $\text{E}$			-4750 Jun 22 j 17:34	0° $\Pi$	
direct	-4755 Apr 07 j 13:20	25° $\text{E}$ 17'43		max. Earth dist.	-4750 Jun 26 j 20:33	2° $\Pi$ 41'18	2.62592 AU
	-4755 May 04 j 23:12	0° $\Omega$					
desc. node	-4755 Jun 01 j 02:40	11° $\Omega$ 35'29		conjunction	-4750 Jul 16 j 09:07	15° $\Pi$ 32'39	1°10'16
	-4755 Jul 02 j 15:20	0° $\text{M}$		minimum elong	-4750 Jul 16 j 08:37	15° $\Pi$ 31'49	1°10'31
	-4755 Aug 15 j 06:26	0° $\underline{\text{A}}$			-4750 Aug 06 j 22:27	0° $\text{E}$	
	-4755 Sep 24 j 23:15	0° $\text{M}$		morning rise	-4750 Sep 01 j 03:10	17° $\text{E}$ 16'22	
	-4755 Nov 04 j 06:50	0° $\text{A}$			-4750 Sep 19 j 07:36	0° $\Omega$	
	-4755 Dec 15 j 11:25	0° $\text{B}$			-4750 Oct 31 j 00:45	0° $\text{M}$	
	-4754 Jan 27 j 05:06	0° $\approx$			-4750 Dec 10 j 11:39	0° $\underline{\text{A}}$	
evening set	-4754 Mar 12 j 15:50	29° $\approx$ 58'19			-4749 Jan 19 j 06:42	0° $\text{M}$	
	-4754 Mar 12 j 16:51	0° $\text{H}$		desc. node	-4749 Jan 22 j 05:33	2° $\text{M}$ 13'46	
asc. node	-4754 Apr 18 j 14:47	24° $\text{H}$ 08'39			-4749 Feb 28 j 07:06	0° $\text{A}$	
	-4754 Apr 27 j 16:23	0° $\Upsilon$			-4749 Apr 11 j 00:03	0° $\text{B}$	
					-4749 May 27 j 18:57	0° $\approx$	
conjunction	-4754 May 01 j 19:12	2° $\Upsilon$ 39'05	0°07'30	retrograde	-4749 Aug 06 j 09:33	24° $\approx$ 51'39	
minimum elong	-4754 May 01 j 18:54	2° $\Upsilon$ 38'37	0°07'29	min. Earth dist.	-4749 Sep 07 j 14:33	17° $\approx$ 50'15	0.55489 AU
behind sun begin	-4754 May 01 j 00:57	2° $\Upsilon$ 09'45		greatest brilliancy	-4749 Sep 13 j 11:17	15° $\approx$ 34'20	-1.9m
behind sun end	-4754 May 02 j 12:51	3° $\Upsilon$ 07'29		opposition	-4749 Sep 14 j 05:38	15° $\approx$ 16'33	-3°32'35
max. Earth dist.	-4754 May 10 j 06:39	8° $\Upsilon$ 05'48	2.65676 AU	direct	-4749 Oct 20 j 01:56	7° $\approx$ 12'08	
	-4754 Jun 13 j 13:41	0° $\text{B}$		asc. node	-4749 Dec 09 j 09:49	19° $\approx$ 32'34	
morning rise	-4754 Jun 17 j 22:53	2° $\text{B}$ 47'26			-4748 Jan 01 j 08:45	0° $\text{H}$	
	-4754 Jul 30 j 17:42	0° $\Pi$			-4748 Feb 25 j 23:33	0° $\Upsilon$	
	-4754 Sep 15 j 21:26	0° $\text{E}$			-4748 Apr 16 j 10:58	0° $\text{B}$	
	-4754 Nov 02 j 08:13	0° $\Omega$			-4748 Jun 03 j 04:04	0° $\Pi$	
	-4754 Dec 21 j 08:52	0° $\text{M}$		evening set	-4748 Jul 08 j 13:59	23° $\Pi$ 20'40	
	-4753 Feb 15 j 13:22	0° $\underline{\text{A}}$			-4748 Jul 18 j 09:48	0° $\text{E}$	
retrograde	-4753 Apr 07 j 04:14	13° $\underline{\text{A}}$ 06'43		max. Earth dist.	-4748 Jul 25 j 15:34	4° $\text{E}$ 57'17	2.53437 AU
desc. node	-4753 Apr 19 j 05:04	12° $\underline{\text{A}}$ 11'59					
opposition	-4753 May 07 j 16:56	8° $\underline{\text{A}}$ 02'23	-1°23'48	conjunction	-4748 Aug 27 j 05:56	27° $\text{E}$ 48'31	1°00'15
greatest brilliancy	-4753 May 07 j 19:15	8° $\underline{\text{A}}$ 00'49	-2.9m	minimum elong	-4748 Aug 27 j 07:33	27° $\text{E}$ 51'24	1°00'28
min. Earth dist.	-4753 May 10 j 08:06	7° $\underline{\text{A}}$ 19'37	0.38238 AU		-4748 Aug 30 j 07:24	0° $\Omega$	
direct	-4753 Jun 07 j 21:22	2° $\underline{\text{A}}$ 40'32			-4748 Oct 10 j 04:56	0° $\text{M}$	
	-4753 Aug 21 j 09:36	0° $\text{M}$		morning rise	-4748 Oct 19 j 01:54	6° $\text{M}$ 40'12	
	-4753 Oct 07 j 23:22	0° $\text{A}$			-4748 Nov 18 j 15:56	0° $\underline{\text{A}}$	
	-4753 Nov 21 j 23:40	0° $\text{B}$		desc. node	-4748 Dec 09 j 04:28	15° $\underline{\text{A}}$ 51'51	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 16

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4748 Dec 27 j 09:33	0°♌		greatest brilliancy	-4743 Dec 30 j 22:40	4°♊23'29	-1.5m
	-4747 Feb 04 j 05:36	0°♈		min. Earth dist.	-4742 Jan 03 j 18:58	2°♊53'39	0.63622 AU
	-4747 Mar 16 j 03:16	0°♊			-4742 Jan 11 j 13:54	30°♋♂	
	-4747 Apr 27 j 07:40	0°♋		direct	-4742 Feb 09 j 11:36	24°♋38'34	
	-4747 Jun 12 j 23:33	0°♌			-4742 Mar 12 j 14:26	0°♌	
	-4747 Aug 14 j 12:09	0°♍			-4742 May 14 j 06:14	0°♍	
retrograde	-4747 Sep 12 j 13:12	4°♍54'05			-4742 Jun 29 j 17:41	0°♎	
	-4747 Oct 09 j 10:04	30°♋♌		desc. node	-4742 Jul 31 j 19:57	22°♎54'47	
min. Earth dist.	-4747 Oct 19 j 11:14	26°♌11'21	0.64261 AU		-4742 Aug 10 j 09:29	0°♏	
opposition	-4747 Oct 22 j 13:00	24°♌57'12	-0°09'13		-4742 Sep 18 j 17:08	0°♏	
greatest brilliancy	-4747 Oct 22 j 12:43	24°♌57'30	-1.5m		-4742 Oct 27 j 03:14	0°♌	
asc. node	-4747 Oct 26 j 11:12	23°♌23'18			-4742 Dec 04 j 18:30	0°♈	
direct	-4747 Nov 30 j 10:19	15°♌42'10		evening set	-4742 Dec 30 j 13:42	19°♈35'57	
	-4746 Jan 25 j 09:04	0°♍			-4741 Jan 13 j 12:37	0°♊	
	-4746 Mar 25 j 09:05	0°♋			-4741 Feb 24 j 01:02	0°♋	
	-4746 May 14 j 11:06	0°♌					
	-4746 Jun 29 j 09:55	0°♍		conjunction	-4741 Feb 28 j 06:51	2°♋59'09	-0°56'05
	-4746 Aug 11 j 07:40	0°♎		minimum elong	-4741 Feb 28 j 08:55	3°♋02'47	0°56'17
evening set	-4746 Aug 24 j 16:20	9°♎43'06		max. Earth dist.	-4741 Apr 02 j 15:38	25°♋58'19	2.55190 AU
max. Earth dist.	-4746 Sep 14 j 21:14	25°♎28'18	2.41247 AU		-4741 Apr 08 j 15:00	0°♌	
	-4746 Sep 20 j 21:17	0°♏		morning rise	-4741 Apr 24 j 11:40	10°♌34'32	
					-4741 May 24 j 06:02	0°♍	
conjunction	-4746 Oct 20 j 20:20	22°♏58'21	0°04'32	asc. node	-4741 Jun 18 j 10:47	16°♍03'19	
minimum elong	-4746 Oct 20 j 20:43	22°♏59'04	0°04'35		-4741 Jul 10 j 18:35	0°♋	
behind sun begin	-4746 Oct 19 j 19:44	22°♏10'40			-4741 Aug 29 j 13:24	0°♌	
behind sun end	-4746 Oct 21 j 21:41	23°♏47'30			-4741 Oct 23 j 13:59	0°♍	
desc. node	-4746 Oct 27 j 01:35	27°♏48'16		retrograde	-4740 Jan 05 j 00:08	22°♍31'05	
	-4746 Oct 29 j 21:15	0°♏		opposition	-4740 Feb 09 j 19:49	14°♍56'18	5°14'43
	-4746 Dec 07 j 03:50	0°♌		greatest brilliancy	-4740 Feb 11 j 06:18	14°♍24'58	-1.9m
morning rise	-4746 Dec 24 j 13:22	13°♌38'25		min. Earth dist.	-4740 Feb 17 j 15:30	12°♍06'13	0.54025 AU
	-4745 Jan 14 j 14:01	0°♈		direct	-4740 Mar 20 j 08:03	5°♍43'11	
	-4745 Feb 23 j 00:46	0°♊			-4740 May 29 j 18:40	0°♎	
	-4745 Apr 05 j 08:05	0°♋		desc. node	-4740 Jun 17 j 20:06	11°♎30'22	
	-4745 May 19 j 08:51	0°♌			-4740 Jul 15 j 12:12	0°♏	
	-4745 Jul 06 j 16:03	0°♍			-4740 Aug 25 j 18:23	0°♏	
	-4745 Sep 04 j 15:24	0°♋			-4740 Oct 04 j 07:58	0°♌	
asc. node	-4745 Sep 13 j 12:27	3°♋10'07			-4740 Nov 12 j 20:59	0°♈	
retrograde	-4745 Oct 17 j 08:09	9°♋19'15			-4740 Dec 23 j 10:43	0°♊	
	-4745 Nov 25 j 10:34	30°♋♍			-4739 Feb 03 j 16:29	0°♋	
opposition	-4745 Nov 26 j 02:50	29°♍43'45	2°36'16	evening set	-4739 Feb 22 j 16:09	13°♋03'55	
greatest brilliancy	-4745 Nov 26 j 02:55	29°♍43'39	-1.3m		-4739 Mar 19 j 19:20	0°♌	
min. Earth dist.	-4745 Nov 26 j 18:57	29°♍27'37	0.67106 AU				
direct	-4744 Jan 05 j 20:00	19°♍51'29		conjunction	-4739 Apr 15 j 18:36	17°♌47'07	-0°11'09
	-4744 Feb 20 j 09:06	0°♋		minimum elong	-4739 Apr 15 j 19:05	17°♌47'54	0°11'12
	-4744 Apr 20 j 15:08	0°♌		behind sun begin	-4739 Apr 15 j 04:13	17°♌23'37	
	-4744 Jun 07 j 23:32	0°♍		behind sun end	-4739 Apr 16 j 09:58	18°♌12'11	
	-4744 Jul 21 j 14:18	0°♎		max. Earth dist.	-4739 Apr 30 j 14:35	27°♌25'36	2.63765 AU
	-4744 Aug 31 j 06:35	0°♏			-4739 May 04 j 14:05	0°♍	
desc. node	-4744 Sep 12 j 21:53	9°♏38'05		asc. node	-4739 May 05 j 07:11	0°♍27'37	
	-4744 Oct 09 j 04:15	0°♏		morning rise	-4739 Jun 03 j 10:19	19°♍08'32	
evening set	-4744 Oct 23 j 14:53	11°♏19'44			-4739 Jun 20 j 12:11	0°♋	
	-4744 Nov 16 j 07:57	0°♌			-4739 Aug 07 j 01:44	0°♌	
	-4744 Dec 24 j 16:42	0°♈			-4739 Sep 24 j 06:31	0°♍	
					-4739 Nov 13 j 03:42	0°♎	
conjunction	-4744 Dec 27 j 21:43	2°♈28'51	-1°01'57		-4738 Jan 08 j 14:02	0°♏	
minimum elong	-4744 Dec 27 j 19:14	2°♈24'01	1°02'10	retrograde	-4738 Mar 07 j 03:58	15°♏41'05	
	-4743 Feb 02 j 03:18	0°♊		opposition	-4738 Apr 07 j 21:22	10°♏03'58	1°55'24
max. Earth dist.	-4743 Feb 14 j 19:13	9°♊22'28	2.42552 AU	greatest brilliancy	-4738 Apr 08 j 11:41	9°♏53'22	-2.7m
morning rise	-4743 Mar 03 j 06:32	21°♊21'43		min. Earth dist.	-4738 Apr 14 j 16:18	8°♏04'00	0.41369 AU
	-4743 Mar 15 j 08:33	0°♋		desc. node	-4738 May 05 j 20:43	3°♏46'03	
	-4743 Apr 27 j 20:01	0°♌		direct	-4738 May 11 j 19:12	3°♏31'37	
	-4743 Jun 12 j 23:06	0°♍			-4738 Jul 22 j 18:44	0°♏	
asc. node	-4743 Jul 31 j 12:55	29°♍21'29			-4738 Sep 06 j 18:42	0°♌	
	-4743 Aug 01 j 15:45	0°♋			-4738 Oct 19 j 16:09	0°♈	
	-4743 Sep 29 j 04:17	0°♌			-4738 Dec 01 j 12:17	0°♊	
retrograde	-4743 Nov 21 j 20:13	13°♌28'24			-4737 Jan 14 j 09:40	0°♋	
opposition	-4743 Dec 30 j 07:37	4°♌38'08	4°35'42		-4737 Feb 28 j 16:15	0°♌	



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Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

asc. node	-4737 Mar 23 j 03:43	14° $\text{X}$ 35'35				-4733 Nov 27 j 09:05	0° $\text{A}$		
evening set	-4737 Apr 07 j 12:19	24° $\text{X}$ 28'43			desc. node	-4733 Dec 26 j 22:11	22° $\text{A}$ 40'27		
	-4737 Apr 16 j 02:58	0° $\text{Y}$				-4732 Jan 05 j 10:32	0° $\text{M}$		
						-4732 Feb 13 j 14:20	0° $\text{X}$		
conjunction	-4737 May 25 j 13:09	25° $\text{Y}$ 10'09	0°34'11			-4732 Mar 24 j 21:51	0° $\text{Z}$		
minimum elong	-4737 May 25 j 12:02	25° $\text{Y}$ 08'22	0°34'16			-4732 May 06 j 23:14	0° $\approx$		
max. Earth dist.	-4737 May 24 j 19:39	24° $\text{Y}$ 42'15	2.67034 AU			-4732 Jun 25 j 18:02	0° $\text{X}$		
	-4737 Jun 02 j 02:59	0° $\text{X}$			retrograde	-4732 Aug 29 j 11:03	20° $\text{X}$ 32'40		
morning rise	-4737 Jul 10 j 06:41	24° $\text{X}$ 25'01			min. Earth dist.	-4732 Oct 03 j 16:21	12° $\text{X}$ 24'53	0.61460 AU	
	-4737 Jul 18 j 22:50	0° $\text{II}$			opposition	-4732 Oct 08 j 04:36	10° $\text{X}$ 36'48	-1°24'20	
	-4737 Sep 03 j 02:37	0° $\text{X}$			greatest brilliancy	-4732 Oct 07 j 23:37	10° $\text{X}$ 41'47	-1.6m	
	-4737 Oct 18 j 11:31	0° $\text{Q}$			asc. node	-4732 Nov 12 j 01:25	1° $\text{X}$ 48'05		
	-4737 Dec 02 j 07:52	0° $\text{M}$			direct	-4732 Nov 15 j 00:26	1° $\text{X}$ 44'41		
	-4736 Jan 16 j 07:49	0° $\text{A}$				-4731 Feb 08 j 04:01	0° $\text{Y}$		
	-4736 Mar 03 j 11:23	0° $\text{M}$				-4731 Apr 03 j 04:40	0° $\text{X}$		
desc. node	-4736 Mar 22 j 23:34	11° $\text{M}$ 10'26				-4731 May 22 j 01:42	0° $\text{II}$		
	-4736 May 09 j 05:21	0° $\text{X}$				-4731 Jul 06 j 15:51	0° $\text{X}$		
retrograde	-4736 May 23 j 23:33	1° $\text{X}$ 27'14			evening set	-4731 Aug 05 j 02:39	20° $\text{X}$ 25'34		
	-4736 Jun 07 j 14:27	30° $\text{K}$ $\text{M}$				-4731 Aug 18 j 12:31	0° $\text{Q}$		
min. Earth dist.	-4736 Jun 19 j 21:56	26° $\text{M}$ 59'54	0.39205 AU		max. Earth dist.	-4731 Aug 20 j 15:15	1° $\text{Q}$ 31'28	2.46045 AU	
greatest brilliancy	-4736 Jun 24 j 02:59	25° $\text{M}$ 47'38	-2.8m						
opposition	-4736 Jun 25 j 06:04	25° $\text{M}$ 28'07	-5°53'29		conjunction	-4731 Sep 27 j 16:34	29° $\text{Q}$ 37'37	0°31'42	
direct	-4736 Jul 25 j 10:33	20° $\text{M}$ 12'55			minimum elong	-4731 Sep 27 j 18:25	29° $\text{Q}$ 41'06	0°31'48	
	-4736 Sep 05 j 09:05	0° $\text{X}$				-4731 Sep 28 j 04:27	0° $\text{M}$		
	-4736 Nov 01 j 21:29	0° $\text{Z}$				-4731 Nov 06 j 07:48	0° $\text{A}$		
	-4736 Dec 21 j 03:47	0° $\approx$			desc. node	-4731 Nov 12 j 19:16	5° $\text{A}$ 02'12		
asc. node	-4735 Feb 07 j 00:32	29° $\approx$ 52'36			morning rise	-4731 Nov 26 j 12:58	15° $\text{A}$ 45'28		
	-4735 Feb 07 j 05:16	0° $\text{X}$				-4731 Dec 14 j 17:42	0° $\text{M}$		
	-4735 Mar 27 j 04:06	0° $\text{Y}$				-4730 Jan 22 j 06:35	0° $\text{X}$		
	-4735 May 13 j 19:46	0° $\text{X}$				-4730 Mar 02 j 19:43	0° $\text{Z}$		
evening set	-4735 May 15 j 14:01	1° $\text{X}$ 07'00				-4730 Apr 13 j 07:31	0° $\approx$		
max. Earth dist.	-4735 Jun 16 j 23:39	21° $\text{X}$ 50'16	2.64888 AU			-4730 May 27 j 21:53	0° $\text{X}$		
	-4735 Jun 29 j 14:01	0° $\text{II}$				-4730 Jul 17 j 08:48	0° $\text{Y}$		
					asc. node	-4730 Sep 30 j 03:33	26° $\text{Y}$ 18'28		
conjunction	-4735 Jul 01 j 07:10	1° $\text{II}$ 06'55	1°04'46		retrograde	-4730 Oct 03 j 21:42	26° $\text{Y}$ 23'51		
minimum elong	-4735 Jul 01 j 06:08	1° $\text{II}$ 05'15	1°04'58		opposition	-4730 Nov 12 j 21:10	16° $\text{Y}$ 36'56	1°37'08	
	-4735 Aug 13 j 22:39	0° $\text{X}$			min. Earth dist.	-4730 Nov 12 j 01:53	16° $\text{Y}$ 56'20	0.66726 AU	
morning rise	-4735 Aug 16 j 01:32	1° $\text{X}$ 25'45			greatest brilliancy	-4730 Nov 12 j 19:10	16° $\text{Y}$ 38'57	-1.4m	
	-4735 Sep 26 j 16:43	0° $\text{Q}$			direct	-4730 Dec 23 j 00:18	6° $\text{Y}$ 56'06		
	-4735 Nov 07 j 23:12	0° $\text{M}$				-4729 Mar 07 j 19:31	0° $\text{X}$		
	-4735 Dec 19 j 02:22	0° $\text{A}$				-4729 Apr 30 j 20:32	0° $\text{II}$		
	-4734 Jan 28 j 16:24	0° $\text{M}$				-4729 Jun 16 j 22:58	0° $\text{X}$		
desc. node	-4734 Feb 08 j 00:33	7° $\text{M}$ 37'49				-4729 Jul 30 j 04:50	0° $\text{Q}$		
	-4734 Mar 10 j 17:56	0° $\text{X}$				-4729 Sep 08 j 19:07	0° $\text{M}$		
	-4734 Apr 23 j 13:00	0° $\text{Z}$			evening set	-4729 Sep 29 j 00:00	15° $\text{M}$ 27'46		
	-4734 Jun 19 j 05:40	0° $\approx$			desc. node	-4729 Sep 30 j 16:22	16° $\text{M}$ 45'44		
retrograde	-4734 Jul 20 j 04:18	6° $\approx$ 05'32				-4729 Oct 17 j 16:46	0° $\text{A}$		
	-4734 Aug 18 j 23:49	30° $\text{K}$ $\text{Z}$				-4729 Nov 24 j 20:36	0° $\text{M}$		
min. Earth dist.	-4734 Aug 19 j 04:42	29° $\text{Z}$ 55'37	0.50736 AU						
opposition	-4734 Aug 26 j 22:15	27° $\text{Z}$ 04'17	-4°54'13		conjunction	-4729 Dec 01 j 05:38	5° $\text{M}$ 01'04	-0°41'56	
greatest brilliancy	-4734 Aug 25 j 16:55	27° $\text{Z}$ 31'29	-2.1m		minimum elong	-4729 Dec 01 j 02:27	4° $\text{M}$ 54'47	0°42'01	
direct	-4734 Sep 30 j 04:52	19° $\text{Z}$ 40'58			max. Earth dist.	-4729 Dec 31 j 04:46	28° $\text{M}$ 26'54	2.38188 AU	
	-4734 Nov 13 j 23:45	0° $\approx$				-4728 Jan 02 j 04:48	0° $\text{X}$		
asc. node	-4734 Dec 25 j 23:38	19° $\approx$ 51'02			morning rise	-4728 Feb 06 j 22:41	27° $\text{X}$ 16'30		
	-4733 Jan 13 j 17:07	0° $\text{X}$				-4728 Feb 10 j 14:04	0° $\text{Z}$		
	-4733 Mar 06 j 14:43	0° $\text{Y}$				-4728 Mar 22 j 18:20	0° $\approx$		
	-4733 Apr 24 j 21:43	0° $\text{X}$				-4728 May 05 j 07:52	0° $\text{X}$		
	-4733 Jun 11 j 04:47	0° $\text{II}$				-4728 Jun 20 j 22:58	0° $\text{Y}$		
evening set	-4733 Jun 23 j 12:46	8° $\text{II}$ 02'47				-4728 Aug 11 j 14:07	0° $\text{X}$		
max. Earth dist.	-4733 Jul 14 j 01:50	21° $\text{II}$ 41'06	2.57554 AU		asc. node	-4728 Aug 17 j 03:52	2° $\text{X}$ 56'49		
	-4733 Jul 26 j 09:10	0° $\text{X}$				-4728 Nov 02 j 19:04	0° $\text{II}$		
					retrograde	-4728 Nov 07 j 03:49	0° $\text{II}$ 06'59		
conjunction	-4733 Aug 10 j 15:46	10° $\text{X}$ 28'54	1°08'57			-4728 Nov 11 j 10:59	30° $\text{K}$ $\text{Z}$		
minimum elong	-4733 Aug 10 j 16:32	10° $\text{X}$ 30'13	1°09'11		opposition	-4728 Dec 16 j 06:24	20° $\text{X}$ 56'19	3°55'49	
	-4733 Sep 07 j 10:16	0° $\text{Q}$			greatest brilliancy	-4728 Dec 16 j 14:16	20° $\text{X}$ 48'33	-1.4m	
morning rise	-4733 Sep 29 j 08:05	15° $\text{Q}$ 48'53			min. Earth dist.	-4728 Dec 19 j 06:09	19° $\text{X}$ 45'29	0.65737 AU	
	-4733 Oct 18 j 14:21	0° $\text{M}$			direct	-4727 Jan 26 j 10:23	10° $\text{X}$ 55'24		

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 18

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4727 Apr 01 j 12:11	0°♊	conjunction	-4722 May 10 j 15:22	11°♑17'31	0°17'49
	-4727 May 24 j 12:47	0°♋	minimum elong	-4722 May 10 j 14:41	11°♑16'26	0°17'50
	-4727 Jul 08 j 10:15	0°♌	max. Earth dist.	-4722 May 15 j 18:26	14°♑34'16	2.66401 AU
desc. node	-4727 Aug 17 j 13:10	29°♌14'13		-4722 Jun 08 j 22:36	0°♍	
	-4727 Aug 18 j 13:31	0°♎	morning rise	-4722 Jun 26 j 03:22	10°♍57'47	
	-4727 Sep 26 j 15:33	0°♏		-4722 Jul 25 j 23:01	0°♐	
	-4727 Nov 03 j 21:51	0°♑		-4722 Sep 10 j 16:43	0°♋	
evening set	-4727 Dec 04 j 22:09	24°♑13'38		-4722 Oct 27 j 05:42	0°♌	
	-4727 Dec 12 j 09:19	0°♍		-4722 Dec 13 j 06:36	0°♎	
	-4726 Jan 20 j 23:03	0°♎		-4721 Jan 31 j 21:52	0°♏	
			desc. node	-4721 Apr 09 j 16:07	29°♏02'32	
conjunction	-4726 Feb 06 j 00:48	11°♎50'11 -1°06'28		-4721 Apr 15 j 22:49	0°♐	
minimum elong	-4726 Feb 06 j 02:01	11°♎52'25 1°06'41	retrograde	-4721 Apr 25 j 01:06	0°♑31'36	
	-4726 Mar 03 j 07:06	0°♒		-4721 May 04 j 04:19	30°♒♏	
max. Earth dist.	-4726 Mar 19 j 07:50	11°♒14'44 2.50537 AU	opposition	-4721 May 25 j 16:27	25°♏24'55 -3°24'46	
morning rise	-4726 Apr 06 j 00:43	23°♒24'56	min. Earth dist.	-4721 May 25 j 05:28	25°♏32'13 0.37724 AU	
	-4726 Apr 15 j 18:12	0°♈	greatest brilliancy	-4721 May 25 j 12:47	25°♏27'22 -2.9m	
	-4726 May 31 j 10:58	0°♑	direct	-4721 Jun 24 j 18:53	20°♏22'26	
asc. node	-4726 Jul 05 j 02:37	21°♑47'46		-4721 Aug 04 j 16:44	0°♑	
	-4726 Jul 18 j 12:21	0°♒		-4721 Sep 29 j 04:58	0°♍	
	-4726 Sep 08 j 03:28	0°♐		-4721 Nov 15 j 09:07	0°♎	
	-4726 Nov 11 j 23:07	0°♋		-4721 Dec 31 j 13:17	0°♒	
retrograde	-4726 Dec 17 j 09:23	6°♋28'52		-4720 Feb 16 j 03:57	0°♈	
	-4725 Jan 18 j 21:56	30°♒♐	asc. node	-4720 Feb 24 j 16:02	5°♈25'34	
opposition	-4725 Jan 23 j 10:32	28°♐19'46 5°14'18		-4720 Apr 03 j 08:55	0°♑	
greatest brilliancy	-4725 Jan 24 j 14:22	27°♐53'34 -1.7m	evening set	-4720 Apr 30 j 16:00	17°♑17'06	
min. Earth dist.	-4725 Jan 30 j 02:35	25°♐49'13 0.58440 AU		-4720 May 20 j 16:35	0°♒	
direct	-4725 Mar 04 j 22:22	18°♐38'38	max. Earth dist.	-4720 Jun 07 j 10:06	11°♒18'53 2.66366 AU	
	-4725 Apr 20 j 00:29	0°♋				
	-4725 Jun 13 j 05:50	0°♌	conjunction	-4720 Jun 16 j 14:36	17°♒12'25 0°55'23	
desc. node	-4725 Jul 05 j 12:23	14°♌52'48	minimum elong	-4720 Jun 16 j 13:19	17°♒10'22 0°55'32	
	-4725 Jul 26 j 20:18	0°♎		-4720 Jul 06 j 10:08	0°♐	
	-4725 Sep 04 j 23:56	0°♏	morning rise	-4720 Jul 31 j 23:39	16°♐42'51	
	-4725 Oct 13 j 22:24	0°♑		-4720 Aug 21 j 00:21	0°♋	
	-4725 Nov 21 j 23:56	0°♍		-4720 Oct 04 j 06:06	0°♌	
	-4724 Jan 01 j 03:35	0°♎		-4720 Nov 16 j 06:13	0°♎	
evening set	-4724 Feb 03 j 23:32	24°♎20'37		-4720 Dec 28 j 08:38	0°♏	
	-4724 Feb 12 j 00:38	0°♒		-4719 Feb 08 j 05:33	0°♑	
	-4724 Mar 26 j 20:44	0°♈	desc. node	-4719 Feb 24 j 16:51	11°♑39'13	
				-4719 Mar 23 j 09:45	0°♍	
conjunction	-4724 Mar 29 j 15:03	1°♈50'53 -0°29'54		-4719 May 12 j 10:55	0°♎	
minimum elong	-4724 Mar 29 j 16:24	1°♈53'08 0°30'01	retrograde	-4719 Jun 30 j 13:23	14°♎09'13	
max. Earth dist.	-4724 Apr 20 j 05:21	16°♈08'26 2.61026 AU	min. Earth dist.	-4719 Jul 28 j 12:27	8°♎52'19 0.45740 AU	
	-4724 May 11 j 12:18	0°♑	greatest brilliancy	-4719 Aug 04 j 01:43	6°♎37'41 -2.4m	
morning rise	-4724 May 19 j 07:59	5°♑02'34	opposition	-4719 Aug 05 j 15:52	6°♎04'50 -6°01'35	
asc. node	-4724 May 21 j 23:44	6°♑45'00		-4719 Aug 29 j 16:48	30°♒♍	
	-4724 Jun 27 j 13:15	0°♒	direct	-4719 Sep 07 j 03:52	29°♍31'13	
	-4724 Aug 14 j 17:07	0°♐		-4719 Sep 15 j 20:08	0°♎	
	-4724 Oct 03 j 12:18	0°♋		-4719 Dec 02 j 05:14	0°♒	
	-4724 Nov 27 j 03:42	0°♌	asc. node	-4718 Jan 11 j 15:17	22°♒49'33	
retrograde	-4723 Feb 07 j 19:04	22°♌29'06		-4718 Jan 23 j 19:54	0°♈	
opposition	-4723 Mar 13 j 06:44	16°♌02'11 4°01'50		-4718 Mar 14 j 15:23	0°♑	
greatest brilliancy	-4723 Mar 14 j 14:42	15°♌35'52 -2.3m		-4718 May 02 j 02:49	0°♒	
min. Earth dist.	-4723 Mar 21 j 15:26	13°♌18'12 0.46149 AU	evening set	-4718 Jun 08 j 02:56	23°♒31'11	
direct	-4723 Apr 18 j 22:11	8°♌11'18		-4718 Jun 18 j 03:13	0°♐	
desc. node	-4723 May 22 j 14:26	15°♌09'52	max. Earth dist.	-4718 Jul 02 j 23:49	9°♐43'08 2.61014 AU	
	-4723 Jun 22 j 04:33	0°♎				
	-4723 Aug 07 j 20:23	0°♏	conjunction	-4718 Jul 25 j 07:46	24°♐34'59 1°11'21	
	-4723 Sep 18 j 15:13	0°♑	minimum elong	-4718 Jul 25 j 07:41	24°♐34'50 1°11'35	
	-4723 Oct 29 j 13:46	0°♍		-4718 Aug 02 j 08:15	0°♋	
	-4723 Dec 10 j 04:26	0°♎	morning rise	-4718 Sep 10 j 21:06	27°♋21'29	
	-4722 Jan 22 j 05:33	0°♒		-4718 Sep 14 j 14:45	0°♌	
	-4722 Mar 07 j 22:24	0°♈		-4718 Oct 26 j 03:18	0°♎	
evening set	-4722 Mar 22 j 09:18	9°♈29'12		-4718 Dec 05 j 07:58	0°♏	
asc. node	-4722 Apr 08 j 19:14	20°♈48'40	desc. node	-4717 Jan 12 j 16:22	29°♏08'08	
	-4722 Apr 23 j 01:02	0°♑		-4717 Jan 13 j 19:37	0°♑	
				-4717 Feb 22 j 10:37	0°♍	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4717 Apr 04 j 10:47	0°☾	direct	-4712 Jan 13 j 16:13	27°☿43'21	
	-4717 May 19 j 05:31	0°♊		-4712 Feb 02 j 17:09	0°♈	
	-4717 Jul 18 j 04:12	0°♋		-4712 Apr 13 j 23:36	0°♊	
retrograde	-4717 Aug 15 j 12:34	4°♋57'03		-4712 Jun 02 j 14:00	0°♊	
	-4717 Sep 11 j 02:29	30°♋		-4712 Jul 16 j 14:20	0°♊	
min. Earth dist.	-4717 Sep 17 j 20:43	27°♋29'46	0.57829 AU	-4712 Aug 26 j 10:20	0°♊	
opposition	-4717 Sep 23 j 18:08	25°♋10'51	-2°44'49	-4712 Sep 03 j 08:15	6°♊00'26	
greatest brilliancy	-4717 Sep 23 j 05:22	25°♋23'25	-1.8m	-4712 Oct 04 j 09:13	0°♊	
direct	-4717 Oct 30 j 08:22	16°♋47'23		-4712 Nov 07 j 19:40	27°♊03'49	
asc. node	-4717 Nov 29 j 16:10	21°♋48'24		-4712 Nov 11 j 13:11	0°♊	
	-4717 Dec 22 j 01:54	0°♋		-4712 Dec 19 j 22:05	0°♊	
	-4716 Feb 19 j 20:02	0°♋				
	-4716 Apr 11 j 07:35	0°♋	conjunction	-4711 Jan 12 j 02:26	17°♊46'02	-1°07'16
	-4716 May 29 j 09:38	0°♊	minimum elong	-4711 Jan 12 j 01:22	17°♊44'01	1°07'31
	-4716 Jul 13 j 18:31	0°♊		-4711 Jan 28 j 08:45	0°♊	
evening set	-4716 Jul 18 j 05:46	3°♊02'59	max. Earth dist.	-4711 Feb 28 j 22:18	23°♊06'46	2.45426 AU
max. Earth dist.	-4716 Aug 03 j 02:53	14°♊01'45	2.50905 AU	-4711 Mar 10 j 13:46	0°♊	
	-4716 Aug 25 j 16:04	0°♊	morning rise	-4711 Mar 16 j 08:11	4°♊04'42	
				-4711 Apr 22 j 23:50	0°♋	
conjunction	-4716 Sep 07 j 01:41	8°♊58'06	0°52'00	-4711 Jun 07 j 21:12	0°♋	
minimum elong	-4716 Sep 07 j 03:37	9°♊01'38	0°52'11	-4711 Jul 21 j 18:09	27°♋01'13	
	-4716 Oct 05 j 11:59	0°♋		-4711 Jul 26 j 18:58	0°♋	
morning rise	-4716 Nov 01 j 02:53	20°♋12'13		-4711 Sep 19 j 16:41	0°♊	
	-4716 Nov 13 j 20:24	0°♊	retrograde	-4711 Nov 30 j 18:08	21°♊51'32	
desc. node	-4716 Nov 29 j 13:39	12°♊10'40	opposition	-4710 Jan 07 j 18:30	13°♊14'32	4°53'40
	-4716 Dec 22 j 11:04	0°♋	greatest brilliancy	-4710 Jan 08 j 14:04	12°♊55'41	-1.5m
	-4715 Jan 30 j 04:03	0°♊	min. Earth dist.	-4710 Jan 13 j 01:04	11°♊12'30	0.62046 AU
	-4715 Mar 10 j 21:22	0°♊	direct	-4710 Feb 17 j 18:44	3°♊18'54	
	-4715 Apr 21 j 17:04	0°♊		-4710 May 06 j 14:54	0°♊	
	-4715 Jun 06 j 07:33	0°♋		-4710 Jun 23 j 19:25	0°♊	
	-4715 Jul 31 j 11:41	0°♋	desc. node	-4710 Jul 22 j 06:44	19°♊57'09	
retrograde	-4715 Sep 20 j 10:10	13°♋09'27		-4710 Aug 05 j 00:28	0°♋	
asc. node	-4715 Oct 16 j 17:52	8°♋28'59		-4710 Sep 13 j 14:05	0°♊	
min. Earth dist.	-4715 Oct 28 j 04:23	4°♋09'35	0.65395 AU	-4710 Oct 22 j 03:35	0°♋	
opposition	-4715 Oct 30 j 10:48	3°♋14'45	0°31'39	-4710 Nov 29 j 21:27	0°♊	
greatest brilliancy	-4715 Oct 30 j 09:30	3°♋16'04	-1.4m	-4709 Jan 08 j 17:37	0°♊	
	-4715 Nov 07 j 17:47	30°♋	evening set	-4709 Jan 13 j 00:52	3°♊10'11	
direct	-4715 Dec 08 j 19:48	23°♋49'20		-4709 Feb 19 j 07:36	0°♊	
	-4714 Jan 12 j 09:12	0°♋				
	-4714 Mar 19 j 01:24	0°♋	conjunction	-4709 Mar 11 j 20:41	14°♋18'31	-0°47'24
	-4714 May 09 j 06:08	0°♊	minimum elong	-4709 Mar 11 j 22:40	14°♋21'57	0°47'35
	-4714 Jun 24 j 13:57	0°♊		-4709 Apr 03 j 22:23	0°♋	
	-4714 Aug 06 j 14:31	0°♊	max. Earth dist.	-4709 Apr 09 j 21:44	4°♋00'13	2.57456 AU
evening set	-4714 Sep 05 j 18:51	22°♊10'14	morning rise	-4709 May 04 j 06:42	20°♋06'27	
	-4714 Sep 16 j 04:30	0°♋		-4709 May 19 j 12:14	0°♋	
max. Earth dist.	-4714 Oct 06 j 21:47	15°♋50'33	2.38952 AU	-4709 Jun 08 j 15:20	12°♋53'55	
desc. node	-4714 Oct 17 j 10:17	23°♋59'16	asc. node	-4709 Jul 05 j 18:53	0°♋	
	-4714 Oct 25 j 03:33	0°♊		-4709 Aug 23 j 19:57	0°♊	
				-4709 Oct 15 j 06:29	0°♊	
conjunction	-4714 Nov 04 j 05:30	7°♊53'08	-0°12'55	-4709 Dec 24 j 17:20	0°♊	
minimum elong	-4714 Nov 04 j 04:24	7°♊50'59	0°12'55	-4708 Jan 16 j 16:42	2°♊55'43	
behind sun begin	-4714 Nov 03 j 11:41	7°♊18'16		-4708 Feb 07 j 05:30	30°♋	
behind sun end	-4714 Nov 04 j 21:06	8°♊23'43	opposition	-4708 Feb 20 j 17:39	25°♊43'02	5°00'53
	-4714 Dec 02 j 08:51	0°♋	greatest brilliancy	-4708 Feb 22 j 05:44	25°♊11'07	-2.0m
morning rise	-4713 Jan 09 j 22:54	0°♊09'39	min. Earth dist.	-4708 Feb 28 j 23:28	22°♊48'51	0.51299 AU
	-4713 Jan 09 j 17:55	0°♊	direct	-4708 Mar 30 j 09:40	16°♊53'15	
	-4713 Feb 18 j 03:23	0°♊		-4708 May 17 j 23:17	0°♊	
	-4713 Mar 31 j 08:23	0°♊	desc. node	-4708 Jun 08 j 06:26	11°♊16'38	
	-4713 May 14 j 03:00	0°♋		-4708 Jul 08 j 02:08	0°♋	
	-4713 Jun 30 j 14:14	0°♋		-4708 Aug 19 j 12:03	0°♊	
	-4713 Aug 24 j 22:52	0°♋		-4708 Sep 28 j 14:55	0°♋	
asc. node	-4713 Sep 03 j 19:19	4°♋23'16		-4708 Nov 07 j 12:52	0°♊	
retrograde	-4713 Oct 25 j 04:17	17°♋07'38		-4708 Dec 18 j 09:16	0°♊	
opposition	-4713 Dec 03 j 18:02	7°♋40'01	3°07'31	-4707 Jan 29 j 20:05	0°♊	
greatest brilliancy	-4713 Dec 03 j 20:19	7°♋37'44	-1.3m	-4707 Mar 05 j 02:44	23°♋19'56	
min. Earth dist.	-4713 Dec 05 j 05:52	7°♋04'18	0.66903 AU	-4707 Mar 15 j 02:28	0°♋	
	-4713 Dec 25 j 23:18	30°♋				

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 20

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

conjunction	-4707 Apr 25 j 01:48	26° $\text{H}$ 50'56	-0°00'16	desc. node	-4702 Jan 29 j 09:10	4° $\text{M}$ 59'16	
minimum elong	-4707 Apr 25 j 01:47	26° $\text{H}$ 50'54	0°00'17		-4702 Mar 04 j 02:40	0° $\text{X}$	
behind sun begin	-4707 Apr 24 j 05:34	26° $\text{H}$ 18'13			-4702 Apr 15 j 11:01	0° $\text{Z}$	
behind sun end	-4707 Apr 25 j 21:59	27° $\text{H}$ 23'33			-4702 Jun 03 j 12:50	0° $\approx$	
asc. node	-4707 Apr 25 j 12:45	27° $\text{H}$ 08'37		retrograde	-4702 Jul 30 j 06:33	17° $\approx$ 30'27	
	-4707 Apr 29 j 22:50	0° $\text{Y}$		min. Earth dist.	-4702 Aug 30 j 12:21	10° $\approx$ 50'47	0.53428 AU
max. Earth dist.	-4707 May 06 j 08:39	4° $\text{Y}$ 07'54	2.64920 AU	opposition	-4702 Sep 06 j 15:39	8° $\approx$ 07'57	-4°08'11
morning rise	-4707 Jun 11 j 19:55	27° $\text{Y}$ 27'36		greatest brilliancy	-4702 Sep 05 j 16:38	8° $\approx$ 29'55	-2.0m
	-4707 Jun 15 j 19:43	0° $\text{X}$		direct	-4702 Oct 11 j 19:28	0° $\approx$ 20'45	
	-4707 Aug 02 j 03:29	0° $\text{II}$		asc. node	-4702 Dec 16 j 06:45	19° $\approx$ 32'43	
	-4707 Sep 18 j 17:05	0° $\text{G}$			-4701 Jan 06 j 05:46	0° $\text{H}$	
	-4707 Nov 06 j 01:19	0° $\text{O}$			-4701 Mar 01 j 00:40	0° $\text{Y}$	
	-4707 Dec 27 j 08:00	0° $\text{P}$			-4701 Apr 19 j 23:23	0° $\text{X}$	
	-4706 Mar 11 j 08:08	0° $\text{L}$			-4701 Jun 06 j 12:55	0° $\text{II}$	
retrograde	-4706 Mar 24 j 07:28	1° $\text{L}$ 00'52		evening set	-4701 Jul 02 j 14:03	17° $\text{II}$ 04'33	
	-4706 Apr 06 j 00:29	30° $\text{R}$ $\text{P}$		max. Earth dist.	-4701 Jul 21 j 03:37	29° $\text{II}$ 33'31	2.55363 AU
opposition	-4706 Apr 24 j 04:22	25° $\text{P}$ 46'07	0°09'32		-4701 Jul 21 j 19:12	0° $\text{G}$	
greatest brilliancy	-4706 Apr 24 j 05:25	25° $\text{P}$ 45'23	-2.9m				
desc. node	-4706 Apr 26 j 08:17	25° $\text{P}$ 09'42		conjunction	-4701 Aug 20 j 11:29	20° $\text{G}$ 32'28	1°04'47
min. Earth dist.	-4706 Apr 28 j 23:30	24° $\text{P}$ 25'35	0.39341 AU	minimum elong	-4701 Aug 20 j 12:45	20° $\text{G}$ 34'41	1°05'01
direct	-4706 May 26 j 12:53	19° $\text{P}$ 56'18			-4701 Sep 02 j 19:23	0° $\text{O}$	
	-4706 Jul 06 j 14:09	0° $\text{L}$		morning rise	-4701 Oct 10 j 18:23	27° $\text{O}$ 41'53	
	-4706 Aug 28 j 20:19	0° $\text{M}$			-4701 Oct 13 j 20:35	0° $\text{P}$	
	-4706 Oct 12 j 18:12	0° $\text{X}$			-4701 Nov 22 j 11:23	0° $\text{L}$	
	-4706 Nov 25 j 14:54	0° $\text{Z}$		desc. node	-4701 Dec 17 j 08:17	19° $\text{L}$ 10'02	
	-4705 Jan 09 j 02:47	0° $\approx$			-4701 Dec 31 j 08:12	0° $\text{M}$	
	-4705 Feb 23 j 18:27	0° $\text{H}$			-4700 Feb 08 j 06:58	0° $\text{X}$	
asc. node	-4705 Mar 13 j 08:42	11° $\text{H}$ 22'15			-4700 Mar 19 j 07:23	0° $\text{Z}$	
	-4705 Apr 11 j 10:24	0° $\text{Y}$			-4700 Apr 30 j 17:31	0° $\approx$	
evening set	-4705 Apr 16 j 10:48	3° $\text{Y}$ 12'04			-4700 Jun 17 j 06:38	0° $\text{H}$	
	-4705 May 28 j 12:23	0° $\text{X}$		retrograde	-4700 Sep 06 j 15:59	29° $\text{H}$ 20'01	
max. Earth dist.	-4705 May 30 j 04:14	1° $\text{X}$ 03'33	2.67016 AU	min. Earth dist.	-4700 Oct 12 j 20:04	20° $\text{H}$ 52'06	0.63129 AU
				opposition	-4700 Oct 16 j 13:17	19° $\text{H}$ 22'31	-0°39'59
conjunction	-4705 Jun 02 j 23:58	3° $\text{X}$ 29'50	0°42'45	greatest brilliancy	-4700 Oct 16 j 11:23	19° $\text{H}$ 24'26	-1.5m
minimum elong	-4705 Jun 02 j 22:43	3° $\text{X}$ 27'50	0°42'52	asc. node	-4700 Nov 02 j 08:05	13° $\text{H}$ 22'53	
	-4705 Jul 14 j 07:02	0° $\text{II}$		direct	-4700 Nov 23 j 23:24	10° $\text{H}$ 17'03	
morning rise	-4705 Jul 18 j 11:37	2° $\text{II}$ 42'43			-4699 Jan 30 j 22:21	0° $\text{Y}$	
	-4705 Aug 29 j 05:18	0° $\text{G}$			-4699 Mar 28 j 12:06	0° $\text{X}$	
	-4705 Oct 13 j 03:13	0° $\text{O}$			-4699 May 17 j 02:13	0° $\text{II}$	
	-4705 Nov 26 j 04:44	0° $\text{P}$			-4699 Jul 01 j 22:35	0° $\text{G}$	
	-4704 Jan 08 j 20:34	0° $\text{L}$			-4699 Aug 13 j 21:06	0° $\text{O}$	
	-4704 Feb 22 j 05:20	0° $\text{M}$		evening set	-4699 Aug 15 j 22:56	1° $\text{O}$ 29'46	
desc. node	-4704 Mar 13 j 10:10	13° $\text{M}$ 01'13		max. Earth dist.	-4699 Sep 02 j 12:02	14° $\text{O}$ 17'56	2.43356 AU
	-4704 Apr 11 j 09:32	0° $\text{X}$			-4699 Sep 23 j 12:47	0° $\text{P}$	
retrograde	-4704 Jun 07 j 15:24	18° $\text{X}$ 12'24					
min. Earth dist.	-4704 Jul 04 j 10:05	13° $\text{X}$ 36'38	0.41131 AU	conjunction	-4699 Oct 10 j 09:56	12° $\text{P}$ 50'44	0°16'58
greatest brilliancy	-4704 Jul 09 j 21:30	11° $\text{X}$ 55'43	-2.7m	minimum elong	-4699 Oct 10 j 11:07	12° $\text{P}$ 53'01	0°17'02
opposition	-4704 Jul 11 j 09:40	11° $\text{X}$ 27'45	-6°22'42		-4699 Nov 01 j 14:50	0° $\text{L}$	
direct	-4704 Aug 11 j 04:43	5° $\text{X}$ 47'47		desc. node	-4699 Nov 03 j 05:47	1° $\text{L}$ 15'47	
	-4704 Oct 22 j 23:53	0° $\text{Z}$			-4699 Dec 09 j 22:50	0° $\text{M}$	
	-4704 Dec 14 j 12:31	0° $\approx$		morning rise	-4699 Dec 12 j 01:35	1° $\text{M}$ 39'30	
asc. node	-4703 Jan 28 j 06:21	27° $\approx$ 14'12			-4698 Jan 17 j 09:41	0° $\text{X}$	
	-4703 Feb 01 j 18:07	0° $\text{H}$			-4698 Feb 25 j 20:23	0° $\text{Z}$	
	-4703 Mar 22 j 05:57	0° $\text{Y}$			-4698 Apr 08 j 03:46	0° $\approx$	
	-4703 May 09 j 03:43	0° $\text{X}$			-4698 May 22 j 07:37	0° $\text{H}$	
evening set	-4703 May 24 j 02:43	9° $\text{X}$ 29'13			-4698 Jul 10 j 05:43	0° $\text{Y}$	
max. Earth dist.	-4703 Jun 22 j 15:50	28° $\text{X}$ 28'38	2.63714 AU		-4698 Sep 13 j 23:33	0° $\text{X}$	
	-4703 Jun 25 j 00:04	0° $\text{II}$		asc. node	-4698 Sep 20 j 08:50	1° $\text{X}$ 39'48	
				retrograde	-4698 Oct 11 j 15:42	4° $\text{X}$ 17'18	
conjunction	-4703 Jul 09 j 21:19	9° $\text{II}$ 44'05	1°08'29		-4698 Nov 06 j 03:02	30° $\text{R}$ $\text{Y}$	
minimum elong	-4703 Jul 09 j 20:34	9° $\text{II}$ 42'51	1°08'41	opposition	-4698 Nov 20 j 12:35	24° $\text{Y}$ 36'11	2°12'24
	-4703 Aug 09 j 07:19	0° $\text{G}$		greatest brilliancy	-4698 Nov 20 j 11:25	24° $\text{Y}$ 37'22	-1.3m
morning rise	-4703 Aug 25 j 02:45	10° $\text{G}$ 44'57		min. Earth dist.	-4698 Nov 20 j 12:44	24° $\text{Y}$ 36'02	0.67062 AU
	-4703 Sep 21 j 21:02	0° $\text{O}$		direct	-4698 Dec 30 j 23:43	14° $\text{Y}$ 48'29	
	-4703 Nov 02 j 20:29	0° $\text{P}$			-4697 Feb 26 j 20:25	0° $\text{X}$	
	-4703 Dec 13 j 14:34	0° $\text{L}$			-4697 Apr 24 j 23:56	0° $\text{II}$	
	-4702 Jan 22 j 17:11	0° $\text{M}$			-4697 Jun 11 j 20:10	0° $\text{G}$	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:22, page 21

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4697 Jul 25 j 08:16	0°♊		max. Earth dist.	-4692 Apr 26 j 07:45	23°♋09'41	2.62641 AU
	-4697 Sep 04 j 00:43	0°♍			-4692 May 06 j 20:45	0°♍	
desc. node	-4697 Sep 21 j 01:57	13°♍01'14		asc. node	-4692 May 12 j 04:35	3°♍26'17	
	-4697 Oct 12 j 22:57	0°♌		morning rise	-4692 May 28 j 02:11	13°♍38'49	
evening set	-4697 Oct 13 j 04:25	0°♌10'40			-4692 Jun 22 j 19:16	0°♌	
	-4697 Nov 20 j 02:40	0°♍			-4692 Aug 09 j 14:07	0°♌	
					-4692 Sep 27 j 08:57	0°♌	
conjunction	-4697 Dec 16 j 20:57	20°♍59'59	-0°54'48		-4692 Nov 17 j 19:38	0°♊	
minimum elong	-4697 Dec 16 j 17:46	20°♍53'47	0°54'57		-4691 Jan 21 j 16:26	0°♍	
	-4697 Dec 28 j 10:42	0°♌		retrograde	-4691 Feb 22 j 16:36	5°♍32'19	
max. Earth dist.	-4696 Jan 31 j 18:35	26°♌13'02	2.40344 AU		-4691 Mar 25 j 18:42	30°♌	
	-4696 Feb 05 j 19:45	0°♌		opposition	-4691 Mar 27 j 05:11	29°♌33'22	2°59'11
morning rise	-4696 Feb 21 j 15:14	11°♌42'32		greatest brilliancy	-4691 Mar 28 j 04:48	29°♌15'00	-2.5m
	-4696 Mar 17 j 23:02	0°♌		min. Earth dist.	-4691 Apr 04 j 00:08	27°♌08'57	0.43390 AU
	-4696 Apr 30 j 09:41	0°♋		direct	-4691 May 01 j 10:25	22°♌24'39	
	-4696 Jun 15 j 15:20	0°♍		desc. node	-4691 May 13 j 00:05	23°♌18'38	
	-4696 Aug 04 j 22:14	0°♌			-4691 Jun 05 j 12:28	0°♍	
asc. node	-4696 Aug 07 j 09:31	1°♌22'51			-4691 Jul 30 j 01:22	0°♌	
	-4696 Oct 06 j 08:45	0°♌			-4691 Sep 11 j 16:55	0°♍	
retrograde	-4696 Nov 15 j 11:49	8°♌09'08			-4691 Oct 23 j 13:24	0°♌	
	-4696 Dec 22 j 02:05	30°♌			-4691 Dec 04 j 18:07	0°♌	
opposition	-4696 Dec 24 j 06:08	29°♌09'14	4°19'55		-4690 Jan 17 j 04:30	0°♌	
greatest brilliancy	-4696 Dec 24 j 17:51	28°♌57'44	-1.4m		-4690 Mar 03 j 03:36	0°♋	
min. Earth dist.	-4696 Dec 28 j 01:26	27°♌39'40	0.64695 AU	asc. node	-4690 Mar 30 j 01:10	17°♋31'32	
direct	-4695 Feb 03 j 10:30	19°♌08'10		evening set	-4690 Mar 31 j 17:20	18°♋36'30	
	-4695 Mar 21 j 21:35	0°♌			-4690 Apr 18 j 09:43	0°♍	
	-4695 May 18 j 05:09	0°♌					
	-4695 Jul 03 j 00:05	0°♊		conjunction	-4690 May 19 j 05:50	19°♍43'46	0°27'33
desc. node	-4695 Aug 07 j 23:25	25°♊54'42		minimum elong	-4690 May 19 j 04:53	19°♍42'14	0°27'37
	-4695 Aug 13 j 11:03	0°♍		max. Earth dist.	-4690 May 21 j 03:54	20°♍57'13	2.66853 AU
	-4695 Sep 21 j 16:34	0°♌			-4690 Jun 04 j 08:14	0°♌	
	-4695 Oct 30 j 00:41	0°♍		morning rise	-4690 Jul 04 j 06:02	19°♌06'04	
	-4695 Dec 07 j 13:36	0°♌			-4690 Jul 21 j 06:06	0°♌	
evening set	-4695 Dec 19 j 16:08	9°♌16'43			-4690 Sep 05 j 15:49	0°♌	
	-4694 Jan 16 j 04:45	0°♌			-4690 Oct 21 j 12:17	0°♊	
					-4690 Dec 06 j 04:26	0°♍	
conjunction	-4694 Feb 18 j 23:25	24°♌35'51	-1°01'23		-4689 Jan 21 j 16:44	0°♌	
minimum elong	-4694 Feb 19 j 01:18	24°♌39'13	1°01'35		-4689 Mar 13 j 21:29	0°♍	
	-4694 Feb 26 j 13:49	0°♌		desc. node	-4689 Mar 31 j 02:16	8°♍12'37	
max. Earth dist.	-4694 Mar 27 j 21:54	20°♌24'28	2.53184 AU	retrograde	-4689 May 12 j 12:18	18°♍30'04	
	-4694 Apr 11 j 01:09	0°♋		min. Earth dist.	-4689 Jun 09 j 09:29	13°♍57'04	0.38168 AU
morning rise	-4694 Apr 16 j 19:09	3°♋51'39		opposition	-4689 Jun 12 j 18:53	13°♍01'30	-5°03'59
	-4694 May 26 j 15:21	0°♍		greatest brilliancy	-4689 Jun 12 j 02:20	13°♍12'49	-2.9m
asc. node	-4694 Jun 25 j 08:13	18°♍51'00		direct	-4689 Jul 12 j 16:21	7°♍59'02	
	-4694 Jul 13 j 07:37	0°♌			-4689 Sep 17 j 19:19	0°♌	
	-4694 Sep 01 j 17:21	0°♌			-4689 Nov 07 j 23:56	0°♌	
	-4694 Oct 29 j 09:33	0°♌			-4689 Dec 25 j 15:31	0°♌	
retrograde	-4694 Dec 27 j 17:23	15°♌51'53			-4688 Feb 10 j 23:40	0°♋	
opposition	-4693 Feb 02 j 02:45	8°♌00'45	5°17'05	asc. node	-4688 Feb 14 j 22:03	2°♋29'08	
greatest brilliancy	-4693 Feb 03 j 10:33	7°♌31'18	-1.8m		-4688 Mar 29 j 13:40	0°♍	
min. Earth dist.	-4693 Feb 09 j 10:24	5°♌18'26	0.56104 AU	evening set	-4688 May 09 j 05:39	25°♍39'51	
	-4693 Feb 27 j 12:50	30°♋			-4688 May 16 j 01:40	0°♌	
direct	-4693 Mar 14 j 02:29	28°♌33'04		max. Earth dist.	-4688 Jun 12 j 21:45	17°♌46'26	2.65658 AU
	-4693 Mar 29 j 05:05	0°♌					
	-4693 Jun 05 j 11:59	0°♊		conjunction	-4688 Jun 24 j 23:53	25°♌33'58	1°01'14
desc. node	-4693 Jun 25 j 23:33	13°♊01'50		minimum elong	-4688 Jun 24 j 22:44	25°♌32'06	1°01'25
	-4693 Jul 20 j 15:23	0°♍			-4688 Jul 01 j 20:06	0°♌	
	-4693 Aug 30 j 09:04	0°♌		morning rise	-4688 Aug 09 j 12:13	25°♌26'33	
	-4693 Oct 08 j 15:02	0°♍			-4688 Aug 16 j 07:48	0°♌	
	-4693 Nov 16 j 21:50	0°♌			-4688 Sep 29 j 07:43	0°♊	
	-4693 Dec 27 j 05:44	0°♌			-4688 Nov 10 j 22:08	0°♍	
	-4692 Feb 07 j 06:02	0°♌			-4688 Dec 22 j 11:09	0°♌	
evening set	-4692 Feb 15 j 10:06	5°♌40'41			-4687 Feb 01 j 12:45	0°♍	
	-4692 Mar 22 j 04:35	0°♋		desc. node	-4687 Feb 15 j 04:05	9°♍54'42	
					-4687 Mar 15 j 07:08	0°♌	
conjunction	-4692 Apr 08 j 14:13	11°♋33'04	-0°19'05		-4687 Apr 29 j 17:19	0°♌	
minimum elong	-4692 Apr 08 j 15:05	11°♋34'29	0°19'10	retrograde	-4687 Jul 12 j 02:47	27°♌28'30	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 22

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

min. Earth dist.	-4687 Aug 10 j 03:22	21° $\text{♁}$ 42'24	0.48499 AU			-4682 Oct 20 j 10:41	0° $\text{♁}$	
greatest brilliancy	-4687 Aug 16 j 18:21	19° $\text{♁}$ 19'57	-2.2m	max. Earth dist.		-4682 Nov 15 j 17:53	20° $\text{♁}$ 38'32	2.37662 AU
opposition	-4687 Aug 18 j 04:06	18° $\text{♁}$ 49'30	-5°26'25					
direct	-4687 Sep 20 j 16:32	11° $\text{♁}$ 47'20		conjunction		-4682 Nov 19 j 05:13	23° $\text{♁}$ 22'32	-0°29'56
	-4687 Nov 22 j 04:59	0° $\text{♁}$		minimum elong		-4682 Nov 19 j 02:42	23° $\text{♁}$ 17'36	0°29'59
asc. node	-4686 Jan 01 j 20:46	21° $\text{♁}$ 11'31				-4682 Nov 27 j 15:07	0° $\text{♁}$	
	-4686 Jan 17 j 11:10	0° $\text{♁}$				-4681 Jan 04 j 23:04	0° $\text{♁}$	
	-4686 Mar 09 j 08:51	0° $\text{♁}$		morning rise		-4681 Jan 25 j 23:10	16° $\text{♁}$ 08'55	
	-4686 Apr 27 j 07:17	0° $\text{♁}$				-4681 Feb 13 j 07:27	0° $\text{♁}$	
	-4686 Jun 13 j 12:13	0° $\text{♁}$				-4681 Mar 26 j 10:29	0° $\text{♁}$	
evening set	-4686 Jun 16 j 21:03	2° $\text{♁}$ 11'17				-4681 May 09 j 00:17	0° $\text{♁}$	
max. Earth dist.	-4686 Jul 09 j 07:49	16° $\text{♁}$ 57'12	2.59200 AU			-4681 Jun 24 j 20:40	0° $\text{♁}$	
	-4686 Jul 28 j 17:50	0° $\text{♁}$				-4681 Aug 16 j 14:22	0° $\text{♁}$	
				asc. node		-4681 Aug 25 j 00:55	4° $\text{♁}$ 14'01	
conjunction	-4686 Aug 03 j 12:18	3° $\text{♁}$ 55'40	1°10'40	retrograde		-4681 Nov 02 j 04:08	24° $\text{♁}$ 59'39	
minimum elong	-4686 Aug 03 j 12:42	3° $\text{♁}$ 56'19	1°10'53	opposition		-4681 Dec 11 j 11:43	15° $\text{♁}$ 40'57	3°36'25
	-4686 Sep 09 j 22:23	0° $\text{♁}$		greatest brilliancy		-4681 Dec 11 j 16:53	15° $\text{♁}$ 35'49	-1.3m
morning rise	-4686 Sep 21 j 02:54	7° $\text{♁}$ 59'54		min. Earth dist.		-4681 Dec 13 j 19:06	14° $\text{♁}$ 45'57	0.66380 AU
	-4686 Oct 21 j 06:55	0° $\text{♁}$		direct		-4680 Jan 21 j 13:17	5° $\text{♁}$ 41'19	
	-4686 Nov 30 j 06:34	0° $\text{♁}$				-4680 Apr 06 j 11:08	0° $\text{♁}$	
desc. node	-4685 Jan 03 j 02:25	25° $\text{♁}$ 50'50				-4680 May 27 j 21:14	0° $\text{♁}$	
	-4685 Jan 08 j 12:23	0° $\text{♁}$				-4680 Jul 11 j 10:35	0° $\text{♁}$	
	-4685 Feb 16 j 20:14	0° $\text{♁}$				-4680 Aug 21 j 11:34	0° $\text{♁}$	
	-4685 Mar 29 j 08:57	0° $\text{♁}$		desc. node		-4680 Aug 24 j 17:27	2° $\text{♁}$ 26'54	
	-4685 May 11 j 22:11	0° $\text{♁}$				-4680 Sep 29 j 12:51	0° $\text{♁}$	
	-4685 Jul 03 j 01:07	0° $\text{♁}$				-4680 Nov 06 j 18:07	0° $\text{♁}$	
retrograde	-4685 Aug 24 j 05:29	14° $\text{♁}$ 28'56		evening set		-4680 Nov 23 j 03:52	12° $\text{♁}$ 52'34	
min. Earth dist.	-4685 Sep 27 j 14:56	6° $\text{♁}$ 38'28	0.59927 AU			-4680 Dec 15 j 03:51	0° $\text{♁}$	
opposition	-4685 Oct 02 j 18:16	4° $\text{♁}$ 35'56	-1°57'47			-4679 Jan 23 j 15:17	0° $\text{♁}$	
greatest brilliancy	-4685 Oct 02 j 10:16	4° $\text{♁}$ 43'53	-1.7m					
	-4685 Oct 15 j 06:46	30° $\text{♁}$		conjunction		-4679 Jan 26 j 12:07	2° $\text{♁}$ 08'02	-1°08'12
direct	-4685 Nov 09 j 00:45	25° $\text{♁}$ 55'57		minimum elong		-4679 Jan 26 j 12:31	2° $\text{♁}$ 08'46	1°08'27
asc. node	-4685 Nov 19 j 22:11	26° $\text{♁}$ 39'03				-4679 Mar 05 j 20:34	0° $\text{♁}$	
	-4685 Dec 06 j 05:27	0° $\text{♁}$		max. Earth dist.		-4679 Mar 12 j 02:15	4° $\text{♁}$ 24'40	2.48281 AU
	-4684 Feb 13 j 03:13	0° $\text{♁}$		morning rise		-4679 Mar 28 j 09:39	15° $\text{♁}$ 47'13	
	-4684 Apr 05 j 23:57	0° $\text{♁}$				-4679 Apr 18 j 05:41	0° $\text{♁}$	
	-4684 May 24 j 13:42	0° $\text{♁}$				-4679 Jun 02 j 22:40	0° $\text{♁}$	
	-4684 Jul 09 j 02:45	0° $\text{♁}$		asc. node		-4679 Jul 12 j 00:02	24° $\text{♁}$ 23'43	
evening set	-4684 Jul 28 j 05:25	13° $\text{♁}$ 08'49				-4679 Jul 21 j 06:23	0° $\text{♁}$	
max. Earth dist.	-4684 Aug 12 j 13:10	23° $\text{♁}$ 55'46	2.48257 AU			-4679 Sep 11 j 22:38	0° $\text{♁}$	
	-4684 Aug 21 j 01:03	0° $\text{♁}$				-4679 Nov 30 j 19:30	0° $\text{♁}$	
				retrograde		-4679 Dec 10 j 01:46	0° $\text{♁}$ 30'22	
conjunction	-4684 Sep 18 j 11:00	20° $\text{♁}$ 45'50	0°41'21			-4679 Dec 19 j 00:15	30° $\text{♁}$	
minimum elong	-4684 Sep 18 j 13:01	20° $\text{♁}$ 49'35	0°41'30	opposition		-4678 Jan 16 j 13:30	22° $\text{♁}$ 08'03	5°07'11
	-4684 Sep 30 j 19:33	0° $\text{♁}$		greatest brilliancy		-4678 Jan 17 j 13:41	21° $\text{♁}$ 44'58	-1.6m
	-4684 Nov 09 j 01:41	0° $\text{♁}$		min. Earth dist.		-4678 Jan 22 j 14:28	19° $\text{♁}$ 49'51	0.60161 AU
morning rise	-4684 Nov 15 j 01:31	4° $\text{♁}$ 38'52		direct		-4678 Feb 26 j 07:29	12° $\text{♁}$ 19'00	
desc. node	-4684 Nov 19 j 23:31	8° $\text{♁}$ 28'12				-4678 Apr 27 j 10:03	0° $\text{♁}$	
	-4684 Dec 17 j 13:39	0° $\text{♁}$				-4678 Jun 17 j 10:19	0° $\text{♁}$	
	-4683 Jan 25 j 03:47	0° $\text{♁}$		desc. node		-4678 Jul 12 j 15:56	17° $\text{♁}$ 14'56	
	-4683 Mar 05 j 17:45	0° $\text{♁}$				-4678 Jul 30 j 09:18	0° $\text{♁}$	
	-4683 Apr 16 j 06:57	0° $\text{♁}$				-4678 Sep 08 j 06:47	0° $\text{♁}$	
	-4683 May 31 j 03:55	0° $\text{♁}$				-4678 Oct 17 j 00:56	0° $\text{♁}$	
	-4683 Jul 21 j 22:12	0° $\text{♁}$				-4678 Nov 24 j 22:15	0° $\text{♁}$	
retrograde	-4683 Sep 28 j 05:26	21° $\text{♁}$ 15'06				-4677 Jan 03 j 21:34	0° $\text{♁}$	
asc. node	-4683 Oct 07 j 00:20	20° $\text{♁}$ 43'57		evening set		-4677 Jan 25 j 19:01	15° $\text{♁}$ 55'42	
min. Earth dist.	-4683 Nov 05 j 18:11	11° $\text{♁}$ 59'38	0.66245 AU			-4677 Feb 14 j 14:08	0° $\text{♁}$	
opposition	-4683 Nov 07 j 05:25	11° $\text{♁}$ 24'08	1°10'32					
greatest brilliancy	-4683 Nov 07 j 03:17	11° $\text{♁}$ 26'16	-1.4m	conjunction		-4677 Mar 22 j 18:39	24° $\text{♁}$ 56'51	-0°37'35
direct	-4683 Dec 17 j 00:35	1° $\text{♁}$ 49'47		minimum elong		-4677 Mar 22 j 20:19	24° $\text{♁}$ 59'41	0°37'43
	-4682 Mar 12 j 01:55	0° $\text{♁}$				-4677 Mar 30 j 06:35	0° $\text{♁}$	
	-4682 May 03 j 20:09	0° $\text{♁}$		max. Earth dist.		-4677 Apr 16 j 13:32	11° $\text{♁}$ 31'11	2.59526 AU
	-4682 Jun 19 j 15:40	0° $\text{♁}$		morning rise		-4677 May 13 j 14:18	29° $\text{♁}$ 11'48	
	-4682 Aug 01 j 20:39	0° $\text{♁}$				-4677 May 14 j 20:05	0° $\text{♁}$	
	-4682 Sep 11 j 11:47	0° $\text{♁}$		asc. node		-4677 May 29 j 21:37	9° $\text{♁}$ 41'23	
evening set	-4682 Sep 18 j 13:40	5° $\text{♁}$ 22'31				-4677 Jun 30 j 22:30	0° $\text{♁}$	
desc. node	-4682 Oct 07 j 20:42	20° $\text{♁}$ 12'41				-4677 Aug 18 j 09:55	0° $\text{♁}$	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 23

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4677 Oct 08 j 03:09	0°☿		direct	-4672 Aug 26 j 21:41	20°♊07'40	
	-4677 Dec 05 j 11:00	0°♈			-4672 Oct 08 j 19:42	0°♊	
retrograde	-4676 Jan 29 j 06:11	14°♈02'59			-4672 Dec 07 j 03:32	0°♊	
opposition	-4676 Mar 03 j 11:47	7°♈14'32	4°33'25	asc. node	-4671 Jan 18 j 12:23	24°♊52'35	
greatest brilliancy	-4676 Mar 04 j 22:50	6°♈44'36	-2.2m		-4671 Jan 27 j 00:48	0°♊	
min. Earth dist.	-4676 Mar 11 j 23:14	4°♈22'08	0.48467 AU		-4671 Mar 17 j 05:01	0°♊	
	-4676 Mar 28 j 15:01	30°♈☿			-4671 May 04 j 10:28	0°♊	
direct	-4676 Apr 10 j 03:14	28°♈54'26		evening set	-4671 Jun 01 j 16:56	17°♊56'26	
	-4676 Apr 22 j 23:25	0°♈			-4671 Jun 20 j 09:41	0°♊	
desc. node	-4676 May 29 j 17:54	12°♈44'39		max. Earth dist.	-4671 Jun 28 j 14:34	5°♊20'47	2.62326 AU
	-4676 Jun 29 j 09:34	0°♈					
	-4676 Aug 12 j 16:37	0°♈		conjunction	-4671 Jul 18 j 15:35	18°♊34'03	1°10'43
	-4676 Sep 22 j 14:38	0°♈		minimum elong	-4671 Jul 18 j 15:12	18°♊33'25	1°10'57
	-4676 Nov 02 j 00:02	0°♈			-4671 Aug 04 j 16:34	0°♈	
	-4676 Dec 13 j 04:51	0°♈		morning rise	-4671 Sep 03 j 12:02	20°♈27'03	
	-4675 Jan 24 j 21:58	0°♈			-4671 Sep 17 j 03:14	0°♈	
	-4675 Mar 10 j 08:55	0°♈			-4671 Oct 28 j 21:10	0°♈	
evening set	-4675 Mar 15 j 03:39	3°♈09'42			-4671 Dec 08 j 07:57	0°♈	
asc. node	-4675 Apr 15 j 17:09	23°♈47'21			-4670 Jan 17 j 01:47	0°♈	
	-4675 Apr 25 j 07:47	0°♈		desc. node	-4670 Jan 19 j 20:07	2°♈05'29	
					-4670 Feb 25 j 23:16	0°♈	
conjunction	-4675 May 04 j 02:21	5°♈38'48	0°10'24		-4670 Apr 08 j 09:38	0°♈	
minimum elong	-4675 May 04 j 01:56	5°♈38'08	0°10'25		-4670 May 24 j 08:33	0°♈	
behind sun begin	-4675 May 03 j 10:38	5°♈13'35		retrograde	-4670 Aug 08 j 18:31	28°♈09'35	
behind sun end	-4675 May 04 j 17:13	6°♈02'40		min. Earth dist.	-4670 Sep 10 j 04:52	21°♈02'31	0.55937 AU
max. Earth dist.	-4675 May 11 j 22:25	10°♈40'31	2.65853 AU	opposition	-4670 Sep 16 j 16:05	18°♈31'46	-3°20'15
	-4675 Jun 11 j 04:36	0°♈		greatest brilliancy	-4670 Sep 15 j 23:04	18°♈48'19	-1.9m
morning rise	-4675 Jun 20 j 01:57	5°♈39'41		direct	-4670 Oct 22 j 14:46	10°♈23'32	
	-4675 Jul 28 j 07:53	0°♈		asc. node	-4670 Dec 06 j 13:03	20°♈31'18	
	-4675 Sep 13 j 09:38	0°♈			-4670 Dec 28 j 09:40	0°♈	
	-4675 Oct 30 j 15:23	0°♈			-4669 Feb 23 j 02:25	0°♈	
	-4675 Dec 18 j 03:01	0°♈			-4669 Apr 14 j 21:33	0°♈	
	-4674 Feb 10 j 00:38	0°♈			-4669 Jun 01 j 18:56	0°♈	
retrograde	-4674 Apr 11 j 00:43	17°♈36'47		evening set	-4669 Jul 11 j 23:28	26°♈29'28	
desc. node	-4674 Apr 16 j 19:34	17°♈24'10			-4669 Jul 17 j 03:46	0°♈	
opposition	-4674 May 11 j 14:19	12°♈33'10	-1°52'02	max. Earth dist.	-4669 Jul 28 j 23:08	8°♈04'51	2.52972 AU
greatest brilliancy	-4674 May 11 j 16:21	12°♈31'48	-2.9m		-4669 Aug 29 j 03:45	0°♈	
min. Earth dist.	-4674 May 13 j 15:22	12°♈00'11	0.38080 AU				
direct	-4674 Jun 11 j 11:30	7°♈16'10		conjunction	-4669 Aug 30 j 20:13	1°♈12'30	0°58'21
	-4674 Aug 17 j 04:53	0°♈		minimum elong	-4669 Aug 30 j 21:55	1°♈15'32	0°58'32
	-4674 Oct 05 j 00:02	0°♈			-4669 Oct 09 j 02:55	0°♈	
	-4674 Nov 19 j 08:54	0°♈		morning rise	-4669 Oct 23 j 01:23	10°♈29'03	
	-4673 Jan 03 j 16:01	0°♈			-4669 Nov 17 j 14:45	0°♈	
	-4673 Feb 18 j 18:47	0°♈		desc. node	-4669 Dec 07 j 17:59	15°♈33'42	
asc. node	-4673 Mar 03 j 13:25	8°♈12'38			-4669 Dec 26 j 08:16	0°♈	
	-4673 Apr 06 j 17:01	0°♈			-4668 Feb 03 j 03:11	0°♈	
evening set	-4673 Apr 25 j 05:44	11°♈46'13			-4668 Mar 13 j 22:19	0°♈	
	-4673 May 23 j 22:02	0°♈			-4668 Apr 24 j 21:40	0°♈	
max. Earth dist.	-4673 Jun 04 j 13:56	7°♈26'21	2.66766 AU		-4668 Jun 10 j 01:24	0°♈	
					-4668 Aug 08 j 01:22	0°♈	
conjunction	-4673 Jun 11 j 09:33	11°♈47'51	0°50'26	retrograde	-4668 Sep 14 j 15:32	7°♈48'13	
minimum elong	-4673 Jun 11 j 08:15	11°♈45'46	0°50'35		-4668 Oct 19 j 06:51	30°♈♈	
	-4673 Jul 09 j 16:20	0°♈		min. Earth dist.	-4668 Oct 21 j 16:52	29°♈02'09	0.64492 AU
morning rise	-4673 Jul 26 j 18:02	11°♈06'11		asc. node	-4668 Oct 23 j 14:25	28°♈16'17	
	-4673 Aug 24 j 10:31	0°♈		opposition	-4668 Oct 24 j 15:06	27°♈51'23	0°02'25
	-4673 Oct 07 j 23:40	0°♈		greatest brilliancy	-4668 Oct 24 j 15:04	27°♈51'26	-1.5m
	-4673 Nov 20 j 10:26	0°♈		direct	-4668 Dec 02 j 14:12	18°♈34'25	
	-4672 Jan 02 j 03:38	0°♈			-4667 Jan 20 j 15:27	0°♈	
	-4672 Feb 13 j 21:19	0°♈			-4667 Mar 22 j 10:53	0°♈	
desc. node	-4672 Mar 03 j 20:11	13°♈00'05			-4667 May 11 j 23:08	0°♈	
	-4672 Mar 29 j 17:54	0°♈			-4667 Jun 27 j 03:07	0°♈	
	-4672 May 28 j 07:57	0°♈			-4667 Aug 09 j 04:08	0°♈	
retrograde	-4672 Jun 21 j 02:29	3°♈47'35		evening set	-4667 Aug 27 j 12:13	13°♈20'54	
	-4672 Jul 14 j 15:37	30°♈♈			-4667 Sep 18 j 19:44	0°♈	
min. Earth dist.	-4672 Jul 18 j 07:25	28°♈52'20	0.43564 AU	max. Earth dist.	-4667 Sep 18 j 17:32	29°♈55'51	2.40755 AU
greatest brilliancy	-4672 Jul 24 j 14:00	26°♈49'15	-2.5m				
opposition	-4672 Jul 26 j 05:12	26°♈17'00	-6°19'35	conjunction	-4667 Oct 24 j 02:58	27°♈05'28	0°00'21

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 24

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

minimum elong	-4667 Oct 24 j 02:57	27° $\mathbb{M}$ 05'26	0°00'22		-4662 Jul 08 j 06:25	0° $\mathcal{B}$	
behind sun begin	-4667 Oct 23 j 01:06	26° $\mathbb{M}$ 15'13			-4662 Aug 26 j 18:41	0° $\mathbb{I}$	
behind sun end	-4667 Oct 25 j 04:48	27° $\mathbb{M}$ 55'40			-4662 Oct 19 j 20:38	0° $\mathcal{C}$	
desc. node	-4667 Oct 24 j 14:18	27° $\mathbb{M}$ 27'28		retrograde	-4661 Jan 07 j 17:29	25° $\mathcal{C}$ 45'10	
	-4667 Oct 27 j 20:42	0° $\mathcal{L}$		opposition	-4661 Feb 12 j 09:54	18° $\mathcal{C}$ 14'07	5°11'18
	-4667 Dec 05 j 03:21	0° $\mathbb{M}$		greatest brilliancy	-4661 Feb 13 j 20:36	17° $\mathcal{C}$ 42'42	-1.9m
morning rise	-4667 Dec 28 j 07:29	18° $\mathbb{M}$ 09'42		min. Earth dist.	-4661 Feb 20 j 07:14	15° $\mathcal{C}$ 23'21	0.53527 AU
	-4666 Jan 12 j 12:46	0° $\mathcal{A}$		direct	-4661 Mar 23 j 17:30	9° $\mathcal{C}$ 05'06	
	-4666 Feb 20 j 21:53	0° $\mathcal{Z}$			-4661 May 27 j 01:17	0° $\mathcal{Q}$	
	-4666 Apr 03 j 02:29	0° $\approx$		desc. node	-4661 Jun 16 j 09:54	11° $\mathcal{Q}$ 56'02	
	-4666 May 16 j 22:39	0° $\mathcal{H}$			-4661 Jul 13 j 20:33	0° $\mathbb{M}$	
	-4666 Jul 03 j 19:49	0° $\mathcal{Y}$			-4661 Aug 24 j 10:21	0° $\mathcal{L}$	
	-4666 Aug 30 j 17:02	0° $\mathcal{B}$			-4661 Oct 03 j 02:56	0° $\mathbb{M}$	
asc. node	-4666 Sep 10 j 15:42	4° $\mathcal{B}$ 16'26			-4661 Nov 11 j 16:52	0° $\mathcal{A}$	
retrograde	-4666 Oct 19 j 10:08	12° $\mathcal{B}$ 06'23			-4661 Dec 22 j 06:17	0° $\mathcal{Z}$	
opposition	-4666 Nov 28 j 03:06	2° $\mathcal{B}$ 32'13	2°45'14		-4660 Feb 02 j 10:57	0° $\approx$	
greatest brilliancy	-4666 Nov 28 j 03:32	2° $\mathcal{B}$ 31'46	-1.3m	evening set	-4660 Feb 26 j 06:43	16° $\approx$ 22'32	
min. Earth dist.	-4666 Nov 28 j 22:37	2° $\mathcal{B}$ 12'39	0.67099 AU		-4660 Mar 17 j 12:24	0° $\mathcal{H}$	
	-4666 Dec 04 j 12:48	30° $\mathcal{R}$ $\mathcal{Y}$					
direct	-4665 Jan 07 j 20:32	22° $\mathcal{Y}$ 39'05		conjunction	-4660 Apr 18 j 04:07	20° $\mathcal{H}$ 51'56	-0°08'09
	-4665 Feb 14 j 19:33	0° $\mathcal{B}$		minimum elong	-4660 Apr 18 j 04:28	20° $\mathcal{H}$ 52'30	0°08'12
	-4665 Apr 18 j 17:11	0° $\mathbb{I}$		behind sun begin	-4660 Apr 17 j 10:29	20° $\mathcal{H}$ 23'12	
	-4665 Jun 06 j 13:35	0° $\mathcal{C}$		behind sun end	-4660 Apr 18 j 22:27	21° $\mathcal{H}$ 21'47	
	-4665 Jul 20 j 09:55	0° $\mathcal{Q}$		max. Earth dist.	-4660 May 02 j 05:35	29° $\mathcal{H}$ 59'36	2.64001 AU
	-4665 Aug 30 j 05:12	0° $\mathbb{M}$		asc. node	-4660 May 02 j 09:46	0° $\mathcal{Y}$ 06'22	
desc. node	-4665 Sep 11 j 11:49	9° $\mathbb{M}$ 20'18			-4660 May 02 j 05:50	0° $\mathcal{Y}$	
	-4665 Oct 08 j 04:15	0° $\mathcal{L}$		morning rise	-4660 Jun 05 j 15:18	22° $\mathcal{Y}$ 03'56	
evening set	-4665 Oct 28 j 01:13	15° $\mathcal{L}$ 35'48			-4660 Jun 18 j 02:44	0° $\mathcal{B}$	
	-4665 Nov 15 j 08:02	0° $\mathbb{M}$			-4660 Aug 04 j 14:36	0° $\mathbb{I}$	
	-4665 Dec 23 j 15:52	0° $\mathcal{A}$			-4660 Sep 21 j 15:31	0° $\mathcal{C}$	
					-4660 Nov 10 j 02:19	0° $\mathcal{Q}$	
conjunction	-4664 Jan 01 j 11:15	6° $\mathcal{A}$ 48'10	-1°03'37		-4659 Jan 03 j 18:27	0° $\mathbb{M}$	
minimum elong	-4664 Jan 01 j 09:04	6° $\mathcal{A}$ 43'58	1°03'48	retrograde	-4659 Mar 10 j 22:23	19° $\mathbb{M}$ 45'43	
	-4664 Feb 01 j 00:47	0° $\mathcal{Z}$		opposition	-4659 Apr 11 j 10:02	14° $\mathbb{M}$ 13'27	1°32'19
max. Earth dist.	-4664 Feb 19 j 07:51	13° $\mathcal{Z}$ 31'46	2.43091 AU	greatest brilliancy	-4659 Apr 11 j 21:22	14° $\mathbb{M}$ 05'10	-2.7m
morning rise	-4664 Mar 06 j 11:39	25° $\mathcal{Z}$ 14'06		min. Earth dist.	-4659 Apr 17 j 21:13	12° $\mathbb{M}$ 20'03	0.40932 AU
	-4664 Mar 13 j 03:45	0° $\approx$		desc. node	-4659 May 03 j 11:12	8° $\mathbb{M}$ 43'35	
	-4664 Apr 25 j 12:24	0° $\mathcal{H}$		direct	-4659 May 15 j 02:11	7° $\mathbb{M}$ 49'14	
	-4664 Jun 10 j 11:23	0° $\mathcal{Y}$			-4659 Jul 18 j 16:06	0° $\mathcal{L}$	
asc. node	-4664 Jul 28 j 15:18	29° $\mathcal{Y}$ 19'03			-4659 Sep 03 j 20:33	0° $\mathbb{M}$	
	-4664 Jul 29 j 19:31	0° $\mathcal{B}$			-4659 Oct 17 j 02:30	0° $\mathcal{A}$	
	-4664 Sep 24 j 19:37	0° $\mathbb{I}$			-4659 Nov 29 j 01:58	0° $\mathcal{Z}$	
retrograde	-4664 Nov 24 j 02:57	16° $\mathbb{I}$ 21'14			-4658 Jan 12 j 00:32	0° $\approx$	
opposition	-4663 Jan 01 j 11:23	7° $\mathbb{I}$ 33'24	4°40'32		-4658 Feb 26 j 07:20	0° $\mathcal{H}$	
greatest brilliancy	-4663 Jan 02 j 03:20	7° $\mathbb{I}$ 17'53	-1.5m	asc. node	-4658 Mar 20 j 06:12	14° $\mathcal{H}$ 15'16	
min. Earth dist.	-4663 Jan 06 j 01:50	5° $\mathbb{I}$ 45'53	0.63357 AU	evening set	-4658 Apr 09 j 19:51	27° $\mathcal{H}$ 29'10	
	-4663 Jan 23 j 10:00	30° $\mathcal{R}$ $\mathcal{B}$			-4658 Apr 13 j 18:00	0° $\mathcal{Y}$	
direct	-4663 Feb 11 j 13:52	27° $\mathcal{B}$ 34'22					
	-4663 Mar 03 j 22:48	0° $\mathbb{I}$		conjunction	-4658 May 27 j 18:15	28° $\mathcal{Y}$ 05'27	0°36'40
	-4663 May 11 j 05:49	0° $\mathcal{C}$		minimum elong	-4658 May 27 j 17:05	28° $\mathcal{Y}$ 03'36	0°36'45
	-4663 Jun 27 j 07:48	0° $\mathcal{Q}$		max. Earth dist.	-4658 May 26 j 12:57	27° $\mathcal{Y}$ 18'45	2.67043 AU
desc. node	-4663 Jul 29 j 10:23	22° $\mathcal{Q}$ 46'37			-4658 May 30 j 18:06	0° $\mathcal{B}$	
	-4663 Aug 08 j 05:22	0° $\mathbb{M}$		morning rise	-4658 Jul 12 j 09:57	27° $\mathcal{B}$ 18'47	
	-4663 Sep 16 j 15:41	0° $\mathcal{L}$			-4658 Jul 16 j 14:04	0° $\mathbb{I}$	
	-4663 Oct 25 j 02:39	0° $\mathbb{M}$			-4658 Aug 31 j 17:33	0° $\mathcal{C}$	
	-4663 Dec 02 j 17:28	0° $\mathcal{A}$			-4658 Oct 16 j 01:04	0° $\mathcal{Q}$	
evening set	-4662 Jan 02 j 18:09	23° $\mathcal{A}$ 32'47			-4658 Nov 29 j 17:59	0° $\mathbb{M}$	
	-4662 Jan 11 j 10:13	0° $\mathcal{Z}$			-4657 Jan 13 j 10:35	0° $\mathcal{L}$	
	-4662 Feb 21 j 20:37	0° $\approx$			-4657 Feb 28 j 18:30	0° $\mathbb{M}$	
				desc. node	-4657 Mar 21 j 13:21	12° $\mathbb{M}$ 20'37	
conjunction	-4662 Mar 03 j 03:38	6° $\approx$ 32'05	-0°53'56		-4657 Apr 27 j 12:29	0° $\mathcal{A}$	
minimum elong	-4662 Mar 03 j 05:44	6° $\approx$ 35'44	0°54'07	retrograde	-4657 May 28 j 08:08	5° $\mathcal{A}$ 59'07	
max. Earth dist.	-4662 Apr 04 j 17:37	28° $\approx$ 54'42	2.55625 AU	min. Earth dist.	-4657 Jun 24 j 06:01	1° $\mathcal{A}$ 31'24	0.39509 AU
	-4662 Apr 06 j 08:22	0° $\mathcal{H}$		opposition	-4657 Jun 29 j 22:43	29° $\mathbb{M}$ 51'57	-6°04'02
morning rise	-4662 Apr 27 j 00:06	13° $\mathcal{H}$ 46'12		greatest brilliancy	-4657 Jun 28 j 17:21	0° $\mathcal{A}$ 13'25	-2.8m
	-4662 May 21 j 21:01	0° $\mathcal{Y}$			-4657 Jun 29 j 11:42	30° $\mathcal{R}$ $\mathbb{M}$	
asc. node	-4662 Jun 15 j 12:41	15° $\mathcal{Y}$ 44'58		direct	-4657 Jul 30 j 04:38	24° $\mathbb{M}$ 32'52	



## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 25

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4657 Aug 29 j 13:59	0°♊		minimum elong	-4652 Sep 30 j 14:26	3°♎21'28	0°28'27
	-4657 Oct 30 j 11:45	0°♊			-4652 Nov 04 j 07:59	0°♊	
	-4657 Dec 19 j 09:05	0°♊		desc. node	-4652 Nov 10 j 10:04	4°♊43'49	
asc. node	-4656 Feb 05 j 03:39	29°♊41'13		morning rise	-4652 Nov 29 j 22:01	19°♊57'29	
	-4656 Feb 05 j 15:42	0°♊			-4652 Dec 12 j 17:47	0°♊	
	-4656 Mar 24 j 16:56	0°♊			-4651 Jan 20 j 05:28	0°♊	
	-4656 May 11 j 10:21	0°♊			-4651 Feb 28 j 16:19	0°♊	
evening set	-4656 May 17 j 18:29	4°♊01'10			-4651 Apr 11 j 00:25	0°♊	
max. Earth dist.	-4656 Jun 18 j 11:40	24°♊19'07	2.64682 AU		-4651 May 25 j 08:16	0°♊	
	-4656 Jun 27 j 06:12	0°♊			-4651 Jul 14 j 02:00	0°♊	
				asc. node	-4651 Sep 27 j 05:39	28°♊45'27	
conjunction	-4656 Jul 03 j 11:46	4°♊03'22	1°05'54	retrograde	-4651 Oct 05 j 23:21	29°♊13'53	
minimum elong	-4656 Jul 03 j 10:49	4°♊01'49	1°06'07	opposition	-4651 Nov 14 j 21:58	19°♊27'45	1°47'20
	-4656 Aug 11 j 16:06	0°♊		min. Earth dist.	-4651 Nov 14 j 05:57	19°♊43'53	0.66824 AU
morning rise	-4656 Aug 18 j 07:44	4°♊29'13		greatest brilliancy	-4651 Nov 14 j 19:59	19°♊29'45	-1.4m
	-4656 Sep 24 j 10:53	0°♊		direct	-4651 Dec 25 j 02:28	9°♊45'36	
	-4656 Nov 05 j 17:16	0°♊			-4650 Mar 04 j 02:21	0°♊	
	-4656 Dec 16 j 19:28	0°♊			-4650 Apr 28 j 03:52	0°♊	
	-4655 Jan 26 j 07:19	0°♊			-4650 Jun 14 j 14:30	0°♊	
desc. node	-4655 Feb 05 j 12:57	7°♊34'46			-4650 Jul 28 j 00:50	0°♊	
	-4655 Mar 08 j 04:09	0°♊			-4650 Sep 06 j 17:47	0°♊	
	-4655 Apr 20 j 10:44	0°♊		desc. node	-4650 Sep 28 j 06:20	16°♊27'09	
	-4655 Jun 12 j 18:20	0°♊		evening set	-4650 Oct 02 j 03:13	19°♊26'40	
retrograde	-4655 Jul 22 j 18:03	9°♊38'36			-4650 Oct 15 j 16:51	0°♊	
min. Earth dist.	-4655 Aug 22 j 00:21	3°♊21'52	0.51266 AU		-4650 Nov 22 j 21:02	0°♊	
greatest brilliancy	-4655 Aug 28 j 10:23	0°♊58'36	-2.1m				
opposition	-4655 Aug 29 j 14:12	0°♊32'36	-4°43'13	conjunction	-4650 Dec 04 j 16:47	9°♊18'09	-0°45'12
	-4655 Aug 31 j 01:19	30°♊		minimum elong	-4650 Dec 04 j 13:29	9°♊11'41	0°45'18
direct	-4655 Oct 03 j 00:35	23°♊04'21			-4650 Dec 31 j 04:34	0°♊	
	-4655 Nov 07 j 18:04	0°♊		max. Earth dist.	-4649 Jan 07 j 09:26	5°♊34'24	2.38507 AU
asc. node	-4655 Dec 23 j 03:42	20°♊13'26			-4649 Feb 08 j 12:15	0°♊	
	-4654 Jan 10 j 12:55	0°♊		morning rise	-4649 Feb 10 j 08:18	1°♊22'20	
	-4654 Mar 03 j 22:19	0°♊			-4649 Mar 21 j 14:01	0°♊	
	-4654 Apr 22 j 10:21	0°♊			-4649 May 03 j 23:59	0°♊	
	-4654 Jun 08 j 20:47	0°♊			-4649 Jun 19 j 09:17	0°♊	
evening set	-4654 Jun 25 j 18:14	11°♊01'14			-4649 Aug 09 j 10:02	0°♊	
max. Earth dist.	-4654 Jul 16 j 00:02	24°♊29'11	2.57169 AU	asc. node	-4649 Aug 15 j 06:23	3°♊09'23	
	-4654 Jul 24 j 03:50	0°♊			-4649 Oct 18 j 08:48	0°♊	
				retrograde	-4649 Nov 10 j 07:40	2°♊56'33	
conjunction	-4654 Aug 13 j 00:23	13°♊37'48	1°08'03		-4649 Dec 01 j 13:55	30°♊	
minimum elong	-4654 Aug 13 j 01:17	13°♊39'22	1°08'17	opposition	-4649 Dec 19 j 08:02	23°♊47'38	4°02'30
	-4654 Sep 05 j 06:57	0°♊		greatest brilliancy	-4649 Dec 19 j 16:38	23°♊39'09	-1.4m
morning rise	-4654 Oct 01 j 23:38	19°♊17'25		min. Earth dist.	-4649 Dec 22 j 10:53	22°♊33'42	0.65580 AU
	-4654 Oct 16 j 12:09	0°♊		direct	-4648 Jan 29 j 11:29	13°♊46'29	
	-4654 Nov 25 j 07:05	0°♊			-4648 Mar 28 j 12:43	0°♊	
desc. node	-4654 Dec 24 j 12:11	22°♊25'58			-4648 May 21 j 20:46	0°♊	
	-4653 Jan 03 j 07:46	0°♊			-4648 Jul 06 j 03:18	0°♊	
	-4653 Feb 11 j 09:42	0°♊		desc. node	-4648 Aug 15 j 03:25	29°♊01'20	
	-4653 Mar 23 j 13:40	0°♊			-4648 Aug 16 j 10:44	0°♊	
	-4653 May 05 j 07:38	0°♊			-4648 Sep 24 j 14:42	0°♊	
	-4653 Jun 23 j 02:44	0°♊			-4648 Nov 01 j 21:31	0°♊	
retrograde	-4653 Sep 01 j 14:51	23°♊34'30		evening set	-4648 Dec 08 j 07:16	28°♊25'04	
min. Earth dist.	-4653 Oct 07 j 00:23	15°♊22'40	0.61814 AU		-4648 Dec 10 j 08:25	0°♊	
opposition	-4653 Oct 11 j 09:09	13°♊37'47	-1°12'02		-4647 Jan 18 j 20:51	0°♊	
greatest brilliancy	-4653 Oct 11 j 05:00	13°♊41'55	-1.6m				
asc. node	-4653 Nov 10 j 04:56	5°♊08'56		conjunction	-4647 Feb 09 j 03:00	15°♊38'12	-1°05'24
direct	-4653 Nov 18 j 07:25	4°♊43'05		minimum elong	-4647 Feb 09 j 04:27	15°♊40'50	1°05'38
	-4652 Feb 05 j 15:44	0°♊			-4647 Mar 01 j 03:02	0°♊	
	-4652 Mar 31 j 11:17	0°♊		max. Earth dist.	-4647 Mar 21 j 16:42	14°♊25'11	2.51053 AU
	-4652 May 19 j 15:28	0°♊		morning rise	-4647 Apr 08 j 17:17	26°♊46'15	
	-4652 Jul 04 j 09:58	0°♊			-4647 Apr 13 j 11:52	0°♊	
evening set	-4652 Aug 07 j 15:14	23°♊44'14			-4647 May 29 j 01:46	0°♊	
	-4652 Aug 16 j 09:43	0°♊		asc. node	-4647 Jul 02 j 05:53	21°♊34'38	
max. Earth dist.	-4652 Aug 23 j 11:14	5°♊05'44	2.45560 AU		-4647 Jul 15 j 22:31	0°♊	
	-4652 Sep 26 j 03:40	0°♊			-4647 Sep 05 j 02:07	0°♊	
					-4647 Nov 05 j 19:37	0°♊	
conjunction	-4652 Sep 30 j 12:42	3°♊18'13	0°28'20	retrograde	-4647 Dec 19 j 21:28	9°♊32'13	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 26

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

opposition	-4646 Jan 25 j 19:12	1° $\overline{\text{C}}$ 26'06	5°14'56	asc. node	-4641 Feb 21 j 19:42	5° $\text{H}$ 10'06	
greatest brilliancy	-4646 Jan 26 j 23:43	0° $\overline{\text{C}}$ 59'17	-1.7m		-4641 Apr 01 j 23:16	0° $\text{Y}$	
	-4646 Jan 29 j 14:33	30° $\text{R}$ II		evening set	-4641 May 03 j 20:43	20° $\text{Y}$ 11'00	
min. Earth dist.	-4646 Feb 01 j 13:19	28°II53'53	0.58034 AU		-4641 May 19 j 07:57	0° $\text{B}$	
direct	-4646 Mar 07 j 03:55	21°II47'11		max. Earth dist.	-4641 Jun 09 j 23:44	13° $\text{B}$ 49'05	2.66262 AU
	-4646 Apr 14 j 13:45	0° $\overline{\text{C}}$					
	-4646 Jun 10 j 09:25	0° $\Omega$		conjunction	-4641 Jun 19 j 18:00	20° $\text{B}$ 04'55	0°57'05
desc. node	-4646 Jul 03 j 03:14	14° $\Omega$ 59'25		minimum elong	-4641 Jun 19 j 16:45	20° $\text{B}$ 02'54	0°57'15
	-4646 Jul 24 j 11:43	0° $\text{M}$			-4641 Jul 05 j 02:36	0°II	
	-4646 Sep 02 j 19:56	0° $\underline{\text{A}}$		morning rise	-4641 Aug 04 j 02:57	19°II37'58	
	-4646 Oct 11 j 20:09	0° $\text{M}$			-4641 Aug 19 j 17:50	0° $\overline{\text{C}}$	
	-4646 Nov 19 j 21:47	0° $\text{X}$			-4641 Oct 02 j 23:59	0° $\Omega$	
	-4646 Dec 30 j 00:29	0° $\overline{\text{Z}}$			-4641 Nov 14 j 23:28	0° $\text{M}$	
evening set	-4645 Feb 06 j 18:36	27° $\overline{\text{Z}}$ 51'09			-4641 Dec 26 j 23:50	0° $\underline{\text{A}}$	
	-4645 Feb 09 j 19:59	0° $\approx$			-4640 Feb 06 j 16:18	0° $\text{M}$	
	-4645 Mar 25 j 14:22	0° $\text{H}$		desc. node	-4640 Feb 23 j 07:27	11° $\text{M}$ 51'20	
					-4640 Mar 20 j 09:49	0° $\text{X}$	
conjunction	-4645 Apr 02 j 03:12	5° $\text{H}$ 02'09	-0°27'01		-4640 May 07 j 15:55	0° $\overline{\text{Z}}$	
minimum elong	-4645 Apr 02 j 04:25	5° $\text{H}$ 04'11	0°27'08	retrograde	-4640 Jul 03 j 11:43	18° $\overline{\text{Z}}$ 07'02	
max. Earth dist.	-4645 Apr 22 j 21:28	18° $\text{H}$ 44'55	2.61343 AU	min. Earth dist.	-4640 Jul 31 j 13:36	12° $\overline{\text{Z}}$ 44'51	0.46243 AU
	-4645 May 10 j 04:17	0° $\text{Y}$		greatest brilliancy	-4640 Aug 07 j 04:08	10° $\overline{\text{Z}}$ 28'02	-2.3m
asc. node	-4645 May 20 j 02:26	6° $\text{Y}$ 24'14		opposition	-4640 Aug 08 j 17:19	9° $\overline{\text{Z}}$ 55'38	-5°54'41
morning rise	-4645 May 22 j 14:05	8° $\text{Y}$ 00'06		direct	-4640 Sep 10 j 10:49	3° $\overline{\text{Z}}$ 16'21	
	-4645 Jun 26 j 03:29	0° $\text{B}$			-4640 Nov 28 j 12:48	0° $\approx$	
	-4645 Aug 13 j 04:17	0°II		asc. node	-4639 Jan 08 j 18:01	22° $\approx$ 52'20	
	-4645 Oct 01 j 15:57	0° $\overline{\text{C}}$			-4639 Jan 20 j 23:25	0° $\text{H}$	
	-4645 Nov 24 j 05:12	0° $\Omega$			-4639 Mar 12 j 01:28	0° $\text{Y}$	
retrograde	-4644 Feb 12 j 01:58	26° $\Omega$ 11'39			-4639 Apr 29 j 16:25	0° $\text{B}$	
opposition	-4644 Mar 16 j 09:57	19° $\Omega$ 50'06	3°47'45	evening set	-4639 Jun 10 j 08:33	26° $\text{B}$ 28'19	
greatest brilliancy	-4644 Mar 17 j 16:14	19° $\Omega$ 25'29	-2.4m		-4639 Jun 15 j 19:23	0°II	
min. Earth dist.	-4644 Mar 24 j 18:11	17° $\Omega$ 08'31	0.45611 AU	max. Earth dist.	-4639 Jul 04 j 16:57	12°II21'33	2.60698 AU
direct	-4644 Apr 21 j 20:02	12° $\Omega$ 07'09					
desc. node	-4644 May 20 j 03:51	17° $\Omega$ 11'39		conjunction	-4639 Jul 27 j 14:35	27°II38'10	1°11'19
	-4644 Jun 17 j 21:24	0° $\text{M}$		minimum elong	-4639 Jul 27 j 14:38	27°II38'14	1°11'33
	-4644 Aug 04 j 23:32	0° $\underline{\text{A}}$			-4639 Jul 31 j 02:33	0° $\overline{\text{C}}$	
	-4644 Sep 16 j 03:44	0° $\text{M}$			-4639 Sep 12 j 10:38	0° $\Omega$	
	-4644 Oct 27 j 05:57	0° $\text{X}$		morning rise	-4639 Sep 13 j 07:33	0° $\Omega$ 37'01	
	-4644 Dec 07 j 21:49	0° $\overline{\text{Z}}$			-4639 Oct 24 j 00:08	0° $\text{M}$	
	-4643 Jan 19 j 22:51	0° $\approx$			-4639 Dec 03 j 05:00	0° $\underline{\text{A}}$	
	-4643 Mar 05 j 15:03	0° $\text{H}$		desc. node	-4638 Jan 10 j 06:33	28° $\underline{\text{A}}$ 56'18	
evening set	-4643 Mar 24 j 17:46	12° $\text{H}$ 32'06			-4638 Jan 11 j 15:58	0° $\text{M}$	
asc. node	-4643 Apr 05 j 22:50	20° $\text{H}$ 28'16			-4638 Feb 20 j 04:52	0° $\text{X}$	
	-4643 Apr 20 j 17:03	0° $\text{Y}$			-4638 Apr 02 j 00:12	0° $\overline{\text{Z}}$	
					-4638 May 16 j 06:17	0° $\approx$	
conjunction	-4643 May 12 j 20:16	14° $\text{Y}$ 11'54	0°20'33		-4638 Jul 11 j 12:39	0° $\text{H}$	
minimum elong	-4643 May 12 j 19:31	14° $\text{Y}$ 10'41	0°20'35	retrograde	-4638 Aug 17 j 18:49	8° $\text{H}$ 07'54	
max. Earth dist.	-4643 May 17 j 09:45	17° $\text{Y}$ 06'51	2.66510 AU	min. Earth dist.	-4638 Sep 20 j 07:37	0° $\text{H}$ 36'14	0.58222 AU
	-4643 Jun 06 j 14:18	0° $\text{B}$			-4638 Sep 21 j 20:36	30° $\text{R}$ $\approx$	
morning rise	-4643 Jun 28 j 05:27	13° $\text{B}$ 47'36		opposition	-4638 Sep 26 j 01:50	28° $\approx$ 19'58	-2°32'16
	-4643 Jul 23 j 14:22	0°II		greatest brilliancy	-4638 Sep 25 j 14:14	28° $\approx$ 31'25	-1.8m
	-4643 Sep 08 j 06:53	0° $\overline{\text{C}}$		direct	-4638 Nov 01 j 18:16	19° $\approx$ 53'30	
	-4643 Oct 24 j 16:28	0° $\Omega$		asc. node	-4638 Nov 26 j 18:46	23° $\approx$ 23'59	
	-4643 Dec 10 j 09:12	0° $\text{M}$			-4638 Dec 16 j 21:48	0° $\text{H}$	
	-4642 Jan 28 j 01:57	0° $\underline{\text{A}}$			-4637 Feb 16 j 18:35	0° $\text{Y}$	
	-4642 Mar 30 j 06:07	0° $\text{M}$			-4637 Apr 09 j 16:48	0° $\text{B}$	
desc. node	-4642 Apr 07 j 05:13	2° $\text{M}$ 20'49			-4637 May 28 j 00:09	0°II	
retrograde	-4642 Apr 29 j 03:47	5° $\text{M}$ 17'23			-4637 Jul 12 j 12:39	0° $\overline{\text{C}}$	
opposition	-4642 May 29 j 18:43	0° $\text{M}$ 08'15	-3°50'48	evening set	-4637 Jul 21 j 15:39	6° $\overline{\text{C}}$ 13'45	
min. Earth dist.	-4642 May 28 j 18:09	0° $\text{M}$ 24'35	0.37728 AU	max. Earth dist.	-4637 Aug 06 j 11:20	17° $\overline{\text{C}}$ 12'04	2.50422 AU
greatest brilliancy	-4642 May 29 j 12:53	0° $\text{M}$ 12'08	-2.9m		-4637 Aug 24 j 12:46	0° $\Omega$	
	-4642 May 30 j 07:07	30° $\text{R}$ $\underline{\text{A}}$					
direct	-4642 Jun 28 j 18:49	25° $\underline{\text{A}}$ 07'30		conjunction	-4637 Sep 10 j 17:05	12° $\Omega$ 26'09	0°49'33
	-4642 Jul 27 j 01:20	0° $\text{M}$		minimum elong	-4637 Sep 10 j 19:02	12° $\Omega$ 29'45	0°49'43
	-4642 Sep 25 j 15:46	0° $\text{X}$			-4637 Oct 04 j 10:17	0° $\text{M}$	
	-4642 Nov 12 j 13:31	0° $\overline{\text{Z}}$		morning rise	-4637 Nov 05 j 05:18	24° $\text{M}$ 09'17	
	-4642 Dec 28 j 23:53	0° $\approx$			-4637 Nov 12 j 19:22	0° $\underline{\text{A}}$	
	-4641 Feb 13 j 17:03	0° $\text{H}$		desc. node	-4637 Nov 28 j 03:34	11° $\underline{\text{A}}$ 53'02	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4637 Dec 21 j 09:50	0°♌			-4631 Jun 21 j 05:48	0°♏		
	-4636 Jan 29 j 01:40	0°♐		desc. node	-4631 Jul 19 j 19:21	19°♏51'44		
	-4636 Mar 08 j 16:40	0°♑			-4631 Aug 02 j 17:51	0°♐		
	-4636 Apr 19 j 08:10	0°♒			-4631 Sep 11 j 10:33	0°♑		
	-4636 Jun 03 j 13:32	0°♓			-4631 Oct 20 j 01:18	0°♌		
	-4636 Jul 27 j 04:37	0°♈			-4631 Nov 27 j 19:11	0°♐		
retrograde	-4636 Sep 22 j 12:15	16°♈02'34			-4630 Jan 06 j 14:29	0°♑		
asc. node	-4636 Oct 13 j 20:47	12°♈55'34		evening set	-4630 Jan 16 j 03:03	7°♑00'14		
min. Earth dist.	-4636 Oct 30 j 09:00	7°♈00'07	0.65574 AU		-4630 Feb 17 j 03:03	0°♒		
opposition	-4636 Nov 01 j 12:23	6°♈08'19	0°42'50					
greatest brilliancy	-4636 Nov 01 j 10:41	6°♈10'01	-1.4m	conjunction	-4630 Mar 14 j 13:47	17°♒42'14	-0°44'55	
	-4636 Nov 18 j 11:33	30°♐		minimum elong	-4630 Mar 14 j 15:43	17°♒45'34	0°45'04	
direct	-4636 Dec 10 j 23:03	26°♐41'20			-4630 Apr 01 j 16:02	0°♓		
	-4635 Jan 04 j 13:31	0°♈		max. Earth dist.	-4630 Apr 11 j 18:52	6°♓46'46	2.57873 AU	
	-4635 Mar 15 j 21:33	0°♉		morning rise	-4630 May 06 j 15:34	23°♓10'19		
	-4635 May 06 j 16:05	0°♊			-4630 May 17 j 03:54	0°♈		
	-4635 Jun 22 j 06:18	0°♋		asc. node	-4630 Jun 05 j 19:03	12°♈36'25		
	-4635 Aug 04 j 10:51	0°♌			-4630 Jul 03 j 08:00	0°♉		
evening set	-4635 Sep 08 j 16:19	25°♌53'18			-4630 Aug 21 j 04:14	0°♊		
	-4635 Sep 14 j 03:19	0°♍			-4630 Oct 12 j 00:47	0°♋		
max. Earth dist.	-4635 Oct 13 j 09:29	22°♍24'46	2.38615 AU		-4630 Dec 15 j 21:50	0°♌		
desc. node	-4635 Oct 15 j 00:24	23°♍40'14		retrograde	-4629 Jan 19 j 11:55	6°♌15'19		
	-4635 Oct 23 j 03:36	0°♍			-4629 Feb 20 j 20:57	30°♐		
				opposition	-4629 Feb 23 j 10:21	29°♐06'40	4°54'30	
conjunction	-4635 Nov 07 j 13:02	12°♍02'41	-0°16'58	greatest brilliancy	-4629 Feb 24 j 22:11	28°♐35'09	-2.1m	
minimum elong	-4635 Nov 07 j 11:35	11°♍59'51	0°16'59	min. Earth dist.	-4629 Mar 03 j 18:33	26°♐11'48	0.50778 AU	
	-4635 Nov 30 j 09:01	0°♌		direct	-4629 Apr 02 j 22:05	20°♐21'59		
	-4634 Jan 07 j 17:09	0°♐			-4629 May 13 j 16:28	0°♏		
morning rise	-4634 Jan 13 j 13:52	4°♐32'16		desc. node	-4629 Jun 06 j 20:50	12°♏01'50		
	-4634 Feb 16 j 00:46	0°♑			-4629 Jul 06 j 04:13	0°♐		
	-4634 Mar 29 j 02:58	0°♒			-4629 Aug 18 j 01:05	0°♑		
	-4634 May 11 j 17:21	0°♓			-4629 Sep 27 j 07:52	0°♌		
	-4634 Jun 27 j 20:34	0°♈			-4629 Nov 06 j 07:07	0°♐		
	-4634 Aug 21 j 01:10	0°♉			-4629 Dec 17 j 03:28	0°♑		
asc. node	-4634 Aug 31 j 21:36	5°♉03'35			-4628 Jan 28 j 13:36	0°♒		
retrograde	-4634 Oct 27 j 07:17	19°♉57'13		evening set	-4628 Mar 07 j 16:15	26°♒35'16		
opposition	-4634 Dec 05 j 19:10	10°♉31'07	3°15'49		-4628 Mar 12 j 19:04	0°♓		
greatest brilliancy	-4634 Dec 05 j 21:58	10°♉28'20	-1.3m	asc. node	-4628 Apr 22 j 14:37	26°♓45'58		
min. Earth dist.	-4634 Dec 07 j 10:04	9°♉52'19	0.66822 AU					
direct	-4633 Jan 15 j 17:29	0°♉33'58		conjunction	-4628 Apr 27 j 10:06	29°♓52'39	0°02'47	
	-4633 Apr 11 j 18:16	0°♊		minimum elong	-4628 Apr 27 j 09:57	29°♓52'26	0°02'45	
	-4633 Jun 01 j 00:54	0°♋		behind sun begin	-4628 Apr 26 j 13:53	29°♓20'01		
	-4633 Jul 15 j 07:58	0°♌		behind sun end	-4628 Apr 28 j 06:02	0°♈24'50		
	-4633 Aug 25 j 07:40	0°♍			-4628 Apr 27 j 14:40	0°♈		
desc. node	-4633 Sep 01 j 21:23	5°♍43'54		max. Earth dist.	-4628 May 07 j 21:51	6°♈38'20	2.65142 AU	
	-4633 Oct 03 j 08:31	0°♍		morning rise	-4628 Jun 13 j 23:43	0°♉20'27		
	-4633 Nov 10 j 13:09	0°♌			-4628 Jun 13 j 10:51	0°♉		
evening set	-4633 Nov 12 j 07:00	1°♌22'19			-4628 Jul 30 j 17:33	0°♊		
	-4633 Dec 18 j 21:34	0°♐			-4628 Sep 16 j 04:31	0°♋		
					-4628 Nov 03 j 06:00	0°♌		
conjunction	-4632 Jan 16 j 10:45	21°♐51'29	-1°07'50		-4628 Dec 23 j 16:51	0°♍		
minimum elong	-4632 Jan 16 j 10:03	21°♐50'10	1°08'03		-4627 Feb 25 j 06:51	0°♍		
	-4632 Jan 27 j 06:46	0°♑		retrograde	-4627 Mar 28 j 01:53	5°♍19'28		
max. Earth dist.	-4632 Mar 03 j 18:13	26°♑41'16	2.45955 AU	desc. node	-4627 Apr 23 j 22:38	1°♍13'03		
	-4632 Mar 08 j 09:37	0°♒		opposition	-4627 Apr 27 j 22:09	0°♍07'31	-0°17'42	
morning rise	-4632 Mar 19 j 06:12	7°♒40'25		greatest brilliancy	-4627 Apr 27 j 23:12	0°♍06'48	-2.9m	
	-4632 Apr 20 j 16:54	0°♓			-4627 Apr 28 j 08:57	30°♐		
	-4632 Jun 05 j 10:36	0°♈		min. Earth dist.	-4627 May 02 j 05:04	28°♐56'04	0.39046 AU	
asc. node	-4632 Jul 18 j 21:02	26°♈54'04		direct	-4627 May 29 j 22:47	24°♐24'31		
	-4632 Jul 24 j 01:40	0°♉			-4627 Jun 28 j 19:11	0°♍		
	-4632 Sep 16 j 01:40	0°♊			-4627 Aug 25 j 10:36	0°♌		
retrograde	-4632 Dec 03 j 02:18	24°♊47'34			-4627 Oct 10 j 00:24	0°♐		
opposition	-4631 Jan 09 j 23:37	16°♊13'09	4°57'17		-4627 Nov 23 j 02:41	0°♑		
greatest brilliancy	-4631 Jan 10 j 20:05	15°♊53'25	-1.5m		-4626 Jan 06 j 16:40	0°♒		
min. Earth dist.	-4631 Jan 15 j 08:57	14°♊08'31	0.61700 AU		-4626 Feb 21 j 08:59	0°♓		
direct	-4631 Feb 19 j 21:55	6°♊18'34		asc. node	-4626 Mar 10 j 10:40	11°♓01'48		
	-4631 May 03 j 04:16	0°♋			-4626 Apr 09 j 01:18	0°♈		

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 28

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

evening set	-4626 Apr 18 j 18:00	6° $\Upsilon$ 10'57			-4621 Jun 15 j 03:44	0° $\text{H}$		
	-4626 May 26 j 03:49	0° $\text{B}$			-4621 Aug 21 j 12:51	0° $\Upsilon$		
max. Earth dist.	-4626 May 31 j 21:47	3° $\text{B}$ 39'52	2.66999 AU	retrograde	-4621 Sep 09 j 18:00	2° $\Upsilon$ 16'47		
					-4621 Sep 27 j 19:32	30° $\text{R}$ $\text{H}$		
conjunction	-4626 Jun 05 j 04:39	6° $\text{B}$ 23'59	0°45'00	min. Earth dist.	-4621 Oct 16 j 01:46	23° $\text{H}$ 45'45	0.63401 AU	
minimum elong	-4626 Jun 05 j 03:23	6° $\text{B}$ 21'56	0°45'06	opposition	-4621 Oct 19 j 16:03	22° $\text{H}$ 18'59	-0°28'02	
	-4626 Jul 11 j 23:07	0° $\text{II}$		greatest brilliancy	-4621 Oct 19 j 14:47	22° $\text{H}$ 20'16	-1.5m	
morning rise	-4626 Jul 20 j 14:33	5° $\text{II}$ 35'43		asc. node	-4621 Oct 31 j 10:57	17° $\text{H}$ 52'13		
	-4626 Aug 26 j 21:42	0° $\text{E}$		direct	-4621 Nov 27 j 04:41	13° $\text{H}$ 11'29		
	-4626 Oct 10 j 18:55	0° $\Omega$			-4620 Jan 27 j 20:26	0° $\Upsilon$		
	-4626 Nov 23 j 18:13	0° $\text{M}$			-4620 Mar 25 j 15:51	0° $\text{B}$		
	-4625 Jan 06 j 05:19	0° $\text{E}$			-4620 May 14 j 14:41	0° $\text{II}$		
	-4625 Feb 19 j 03:41	0° $\text{M}$			-4620 Jun 29 j 15:47	0° $\text{E}$		
desc. node	-4625 Mar 11 j 23:29	13° $\text{M}$ 40'04			-4620 Aug 11 j 17:23	0° $\Omega$		
	-4625 Apr 07 j 19:43	0° $\text{J}$		evening set	-4620 Aug 18 j 16:28	5° $\Omega$ 01'15		
retrograde	-4625 Jun 11 j 20:58	22° $\text{J}$ 33'47		max. Earth dist.	-4620 Sep 05 j 16:38	18° $\Omega$ 12'59	2.42834 AU	
min. Earth dist.	-4625 Jul 08 j 15:03	17° $\text{J}$ 55'54	0.41559 AU		-4620 Sep 21 j 11:01	0° $\text{M}$		
greatest brilliancy	-4625 Jul 14 j 08:08	16° $\text{J}$ 09'36	-2.6m					
opposition	-4625 Jul 15 j 21:25	15° $\text{J}$ 40'31	-6°25'02	conjunction	-4620 Oct 13 j 13:00	16° $\text{M}$ 49'12	0°13'03	
direct	-4625 Aug 15 j 19:35	9° $\text{J}$ 55'21		minimum elong	-4620 Oct 13 j 13:56	16° $\text{M}$ 51'01	0°13'06	
	-4625 Oct 19 j 18:08	0° $\text{Z}$		behind sun begin	-4620 Oct 12 j 22:41	16° $\text{M}$ 21'42		
	-4625 Dec 12 j 13:12	0° $\approx$		behind sun end	-4620 Oct 14 j 05:12	17° $\text{M}$ 20'21		
asc. node	-4624 Jan 26 j 09:33	27° $\approx$ 06'24			-4620 Oct 30 j 14:03	0° $\text{E}$		
	-4624 Jan 31 j 02:52	0° $\text{H}$		desc. node	-4620 Oct 31 j 18:16	0° $\text{E}$ 54'53		
	-4624 Mar 19 j 18:07	0° $\Upsilon$			-4620 Dec 07 j 22:08	0° $\text{M}$		
	-4624 May 06 j 18:06	0° $\text{B}$		morning rise	-4620 Dec 15 j 17:12	6° $\text{M}$ 06'46		
evening set	-4624 May 26 j 07:53	12° $\text{B}$ 24'33			-4619 Jan 15 j 08:14	0° $\text{J}$		
	-4624 Jun 22 j 16:26	0° $\text{II}$			-4619 Feb 23 j 17:12	0° $\text{Z}$		
max. Earth dist.	-4624 Jun 24 j 06:29	1° $\text{II}$ 01'48	2.63489 AU		-4619 Apr 05 j 21:39	0° $\approx$		
					-4619 May 19 j 20:21	0° $\text{H}$		
conjunction	-4624 Jul 12 j 02:38	12° $\text{II}$ 42'11	1°09'13		-4619 Jul 07 j 06:22	0° $\Upsilon$		
minimum elong	-4624 Jul 12 j 01:58	12° $\text{II}$ 41'06	1°09'27		-4619 Sep 07 j 04:54	0° $\text{B}$		
	-4624 Aug 07 j 01:32	0° $\text{E}$		asc. node	-4619 Sep 17 j 12:28	3° $\text{B}$ 13'24		
morning rise	-4624 Aug 27 j 09:49	13° $\text{E}$ 50'31		retrograde	-4619 Oct 13 j 16:50	7° $\text{B}$ 04'49		
	-4624 Sep 19 j 16:33	0° $\Omega$			-4619 Nov 15 j 23:41	30° $\text{R}$ $\Upsilon$		
	-4624 Oct 31 j 16:33	0° $\text{M}$		opposition	-4619 Nov 22 j 12:34	27° $\Upsilon$ 24'45	2°21'47	
	-4624 Dec 11 j 10:11	0° $\text{E}$		greatest brilliancy	-4619 Nov 22 j 11:35	27° $\Upsilon$ 25'44	-1.3m	
	-4623 Jan 20 j 11:12	0° $\text{M}$		min. Earth dist.	-4619 Nov 22 j 15:41	27° $\Upsilon$ 21'37	0.67097 AU	
desc. node	-4623 Jan 26 j 23:46	4° $\text{M}$ 53'38		direct	-4618 Jan 02 j 00:44	17° $\Upsilon$ 36'09		
	-4623 Mar 01 j 17:06	0° $\text{J}$			-4618 Feb 22 j 08:36	0° $\text{B}$		
	-4623 Apr 12 j 17:03	0° $\text{Z}$			-4618 Apr 22 j 04:16	0° $\text{II}$		
	-4623 May 30 j 12:18	0° $\approx$			-4618 Jun 09 j 10:41	0° $\text{E}$		
retrograde	-4623 Aug 01 j 16:41	20° $\approx$ 55'13			-4618 Jul 23 j 03:47	0° $\Omega$		
min. Earth dist.	-4623 Sep 02 j 04:34	14° $\approx$ 09'40	0.53913 AU		-4618 Sep 01 j 23:01	0° $\text{M}$		
greatest brilliancy	-4623 Sep 08 j 06:54	11° $\approx$ 49'42	-1.9m	desc. node	-4618 Sep 18 j 15:44	12° $\text{M}$ 43'31		
opposition	-4623 Sep 09 j 04:32	11° $\approx$ 28'56	-3°56'03		-4618 Oct 10 j 22:31	0° $\text{E}$		
direct	-4623 Oct 14 j 10:52	3° $\approx$ 37'33		evening set	-4618 Oct 16 j 12:13	4° $\text{E}$ 21'31		
asc. node	-4623 Dec 13 j 09:52	20° $\approx$ 12'34			-4618 Nov 18 j 02:20	0° $\text{M}$		
	-4622 Jan 02 j 16:22	0° $\text{H}$						
	-4622 Feb 26 j 05:36	0° $\Upsilon$		conjunction	-4618 Dec 20 j 11:16	25° $\text{M}$ 23'36	-0°57'16	
	-4622 Apr 17 j 10:44	0° $\text{B}$		minimum elong	-4618 Dec 20 j 08:13	25° $\text{M}$ 17'40	0°57'26	
	-4622 Jun 04 j 04:04	0° $\text{II}$			-4618 Dec 26 j 09:31	0° $\text{J}$		
evening set	-4622 Jul 04 j 22:16	20° $\text{II}$ 09'45			-4617 Feb 03 j 16:56	0° $\text{Z}$		
	-4622 Jul 19 j 13:16	0° $\text{E}$		max. Earth dist.	-4617 Feb 05 j 14:27	1° $\text{Z}$ 25'07	2.40845 AU	
max. Earth dist.	-4622 Jul 23 j 06:46	2° $\text{E}$ 32'07	2.54937 AU	morning rise	-4617 Feb 24 j 23:40	15° $\text{Z}$ 44'24		
					-4617 Mar 16 j 17:59	0° $\approx$		
conjunction	-4622 Aug 22 j 23:31	23° $\text{E}$ 50'18	1°03'19		-4617 Apr 29 j 01:38	0° $\text{H}$		
minimum elong	-4622 Aug 23 j 00:54	23° $\text{E}$ 52'44	1°03'32		-4617 Jun 14 j 02:44	0° $\Upsilon$		
	-4622 Aug 31 j 15:45	0° $\Omega$			-4617 Aug 02 j 23:23	0° $\text{B}$		
	-4622 Oct 11 j 18:33	0° $\text{M}$		asc. node	-4617 Aug 05 j 12:45	1° $\text{B}$ 26'58		
morning rise	-4622 Oct 13 j 14:22	1° $\text{M}$ 21'38			-4617 Oct 02 j 00:18	0° $\text{II}$		
	-4622 Nov 20 j 10:06	0° $\text{E}$		retrograde	-4617 Nov 18 j 16:45	11° $\text{II}$ 00'05		
desc. node	-4622 Dec 14 j 22:16	18° $\text{E}$ 53'06		opposition	-4617 Dec 27 j 08:32	2° $\text{II}$ 02'11	4°25'26	
	-4622 Dec 29 j 06:45	0° $\text{M}$		greatest brilliancy	-4617 Dec 27 j 21:01	1° $\text{II}$ 49'56	-1.4m	
	-4621 Feb 06 j 04:13	0° $\text{J}$		min. Earth dist.	-4617 Dec 31 j 06:37	0° $\text{II}$ 29'55	0.64485 AU	
	-4621 Mar 18 j 01:44	0° $\text{Z}$			-4616 Jan 01 j 13:23	30° $\text{R}$ $\text{B}$		
	-4621 Apr 29 j 06:01	0° $\approx$		direct	-4616 Feb 06 j 12:01	22° $\text{B}$ 01'27		

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 29

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4616 Mar 16 j 12:06	0°♐	conjunction	-4611 May 21 j 11:01	22°♑38'53	0°30'09
	-4616 May 15 j 08:34	0°♑	minimum elong	-4611 May 21 j 09:59	22°♑37'15	0°30'13
	-4616 Jun 30 j 15:20	0°♒	max. Earth dist.	-4611 May 22 j 20:05	23°♑31'36	2.66906 AU
desc. node	-4616 Aug 05 j 14:27	25°♒45'44		-4611 Jun 01 j 23:35	0°♑	
	-4616 Aug 11 j 07:26	0°♑	morning rise	-4611 Jul 06 j 09:05	21°♑58'31	
	-4616 Sep 19 j 15:20	0°♑		-4611 Jul 18 j 21:22	0°♐	
	-4616 Oct 28 j 00:09	0°♑		-4611 Sep 03 j 06:29	0°♑	
	-4616 Dec 05 j 12:32	0°♑		-4611 Oct 19 j 00:55	0°♒	
evening set	-4616 Dec 22 j 22:48	13°♑20'52		-4611 Dec 03 j 12:22	0°♑	
	-4615 Jan 14 j 02:13	0°♑		-4610 Jan 18 j 13:38	0°♑	
				-4610 Mar 09 j 04:12	0°♑	
conjunction	-4615 Feb 21 j 22:59	28°♑16'31 -0°59'37	desc. node	-4610 Mar 28 j 16:41	10°♑01'20	
minimum elong	-4615 Feb 22 j 00:59	28°♑20'04 0°59'49	retrograde	-4610 May 16 j 02:12	23°♑06'56	
	-4615 Feb 24 j 09:16	0°♑	min. Earth dist.	-4610 Jun 12 j 19:04	18°♑35'54	0.38349 AU
max. Earth dist.	-4615 Mar 30 j 05:49	23°♑32'27 2.53657 AU	opposition	-4610 Jun 16 j 15:10	17°♑32'05	-5°21'34
	-4615 Apr 08 j 18:20	0°♑	greatest brilliancy	-4610 Jun 15 j 19:59	17°♑45'26	-2.9m
morning rise	-4615 Apr 19 j 09:44	7°♑08'35	direct	-4610 Jul 16 j 14:06	12°♑27'28	
	-4615 May 24 j 06:01	0°♑		-4610 Sep 13 j 03:13	0°♑	
asc. node	-4615 Jun 22 j 10:25	18°♑34'37		-4610 Nov 04 j 22:23	0°♑	
	-4615 Jul 10 j 18:40	0°♑		-4610 Dec 22 j 23:44	0°♑	
	-4615 Aug 29 j 20:20	0°♐		-4609 Feb 08 j 11:34	0°♑	
	-4615 Oct 25 j 03:28	0°♑	asc. node	-4609 Feb 12 j 01:11	2°♑15'00	
retrograde	-4615 Dec 30 j 07:10	19°♑00'01		-4609 Mar 28 j 03:24	0°♑	
opposition	-4614 Feb 04 j 13:44	11°♑12'15 5°15'36	evening set	-4609 May 12 j 10:20	28°♑33'42	
greatest brilliancy	-4614 Feb 05 j 21:58	10°♑42'29 -1.8m		-4609 May 14 j 16:46	0°♑	
min. Earth dist.	-4614 Feb 11 j 23:58	8°♑28'18 0.55642 AU	max. Earth dist.	-4609 Jun 15 j 11:22	20°♑16'58	2.65485 AU
direct	-4614 Mar 16 j 10:03	1°♑47'56				
	-4614 Jun 02 j 05:56	0°♒	conjunction	-4609 Jun 28 j 04:20	28°♑28'57	1°02'39
desc. node	-4614 Jun 23 j 13:43	13°♒17'47	minimum elong	-4609 Jun 28 j 03:14	28°♑27'09	1°02'49
	-4614 Jul 18 j 03:00	0°♑		-4609 Jun 30 j 12:32	0°♐	
	-4614 Aug 28 j 02:47	0°♑	morning rise	-4609 Aug 12 j 17:46	28°♐27'06	
	-4614 Oct 06 j 11:13	0°♑		-4609 Aug 15 j 01:18	0°♑	
	-4614 Nov 14 j 18:38	0°♑		-4609 Sep 28 j 01:41	0°♒	
	-4614 Dec 25 j 01:58	0°♑		-4609 Nov 09 j 15:47	0°♑	
	-4613 Feb 05 j 00:57	0°♑		-4609 Dec 21 j 03:30	0°♑	
evening set	-4613 Feb 18 j 02:28	9°♑04'09		-4608 Jan 31 j 02:20	0°♑	
	-4613 Mar 20 j 21:54	0°♑	desc. node	-4608 Feb 13 j 16:44	9°♑55'42	
				-4608 Mar 12 j 14:34	0°♑	
conjunction	-4613 Apr 12 j 00:49	14°♑40'37 -0°16'07		-4608 Apr 26 j 06:14	0°♑	
minimum elong	-4613 Apr 12 j 01:32	14°♑41'48 0°16'11		-4608 Jul 01 j 21:48	0°♑	
max. Earth dist.	-4613 Apr 28 j 23:54	25°♑46'00 2.62906 AU	retrograde	-4608 Jul 14 j 18:18	1°♑08'58	
	-4613 May 05 j 12:31	0°♑		-4608 Jul 27 j 04:55	30°♑	
asc. node	-4613 May 10 j 07:24	3°♑05'39	min. Earth dist.	-4608 Aug 13 j 01:03	25°♑16'11	0.49026 AU
morning rise	-4613 May 31 j 07:33	16°♑35'05	opposition	-4608 Aug 20 j 22:58	22°♑24'10	-5°16'47
	-4613 Jun 21 j 09:35	0°♑	greatest brilliancy	-4608 Aug 19 j 14:35	22°♑53'40	-2.2m
	-4613 Aug 08 j 02:19	0°♐	direct	-4608 Sep 23 j 15:11	15°♑16'46	
	-4613 Sep 25 j 16:14	0°♑		-4608 Nov 17 j 15:43	0°♑	
	-4613 Nov 15 j 12:26	0°♒	asc. node	-4608 Dec 30 j 00:45	21°♑23'41	
	-4612 Jan 15 j 05:26	0°♑		-4607 Jan 14 j 11:32	0°♑	
retrograde	-4612 Feb 27 j 06:11	9°♑23'58		-4607 Mar 06 j 18:10	0°♑	
opposition	-4612 Mar 30 j 12:33	3°♑30'28 2°40'22		-4607 Apr 24 j 20:48	0°♑	
greatest brilliancy	-4612 Mar 31 j 09:45	3°♑14'12 -2.6m		-4607 Jun 11 j 04:41	0°♐	
min. Earth dist.	-4612 Apr 07 j 03:16	1°♑10'36 0.42885 AU	evening set	-4607 Jun 19 j 02:30	5°♐08'15	
	-4612 Apr 11 j 05:11	30°♑0	max. Earth dist.	-4607 Jul 11 j 01:46	19°♐36'55	2.58834 AU
direct	-4612 May 04 j 12:27	26°♒29'53		-4607 Jul 26 j 12:40	0°♑	
desc. node	-4612 May 10 j 14:30	26°♒45'07				
	-4612 May 27 j 15:31	0°♑	conjunction	-4607 Aug 05 j 20:07	7°♑01'19	1°10'09
	-4612 Jul 26 j 16:48	0°♑	minimum elong	-4607 Aug 05 j 20:38	7°♑02'13	1°10'23
	-4612 Sep 09 j 00:23	0°♑		-4607 Sep 07 j 18:56	0°♒	
	-4612 Oct 21 j 02:32	0°♑	morning rise	-4607 Sep 23 j 16:23	11°♒22'28	
	-4612 Dec 02 j 09:27	0°♑		-4607 Oct 19 j 04:24	0°♑	
	-4611 Jan 14 j 20:25	0°♑		-4607 Nov 28 j 04:05	0°♑	
	-4611 Feb 28 j 19:23	0°♑	desc. node	-4607 Dec 31 j 15:50	25°♑36'34	
asc. node	-4611 Mar 27 j 04:03	17°♑10'57		-4606 Jan 06 j 09:03	0°♑	
evening set	-4611 Apr 03 j 01:12	21°♑37'51		-4606 Feb 14 j 14:58	0°♑	
	-4611 Apr 16 j 01:13	0°♑		-4606 Mar 26 j 23:48	0°♑	
				-4606 May 09 j 04:16	0°♑	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 30

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4606 Jun 28 j 20:32	0°♄			-4601 Nov 05 j 17:28	0°♍	
retrograde	-4606 Aug 26 j 09:40	17°♄33'52		evening set	-4601 Nov 27 j 15:02	17°♍10'34	
min. Earth dist.	-4606 Sep 29 j 23:53	9°♄39'26	0.60316 AU		-4601 Dec 14 j 02:40	0°♄	
opposition	-4606 Oct 05 j 00:11	7°♄39'40	-1°45'13		-4600 Jan 22 j 12:46	0°♄	
greatest brilliancy	-4606 Oct 04 j 17:12	7°♄46'38	-1.7m				
	-4606 Oct 29 j 20:10	30°♄		conjunction	-4600 Jan 30 j 17:34	6°♄05'41	-1°07'47
direct	-4606 Nov 11 j 09:56	28°♄56'58		minimum elong	-4600 Jan 30 j 18:16	6°♄06'58	1°08'00
asc. node	-4606 Nov 17 j 01:40	29°♄08'49			-4600 Mar 03 j 16:06	0°♄	
	-4606 Nov 24 j 17:22	0°♄		max. Earth dist.	-4600 Mar 14 j 18:27	7°♄50'35	2.48817 AU
	-4605 Feb 09 j 20:43	0°♄		morning rise	-4600 Mar 31 j 04:47	19°♄15'47	
	-4605 Apr 04 j 08:02	0°♄			-4600 Apr 15 j 22:45	0°♄	
	-4605 May 23 j 03:58	0°♄			-4600 May 31 j 12:28	0°♄	
	-4605 Jul 07 j 21:02	0°♄		asc. node	-4600 Jul 09 j 03:03	24°♄13'29	
evening set	-4605 Jul 31 j 16:18	16°♄22'34			-4600 Jul 18 j 14:44	0°♄	
max. Earth dist.	-4605 Aug 16 j 00:25	27°♄12'19	2.47775 AU		-4600 Sep 08 j 16:20	0°♄	
	-4605 Aug 19 j 22:13	0°♄			-4600 Nov 17 j 01:27	0°♄	
				retrograde	-4600 Dec 12 j 11:28	3°♄31'21	
conjunction	-4605 Sep 22 j 04:32	24°♄19'25	0°38'23		-4599 Jan 04 j 23:01	30°♄	
minimum elong	-4605 Sep 22 j 06:30	24°♄23'05	0°38'30	opposition	-4599 Jan 18 j 20:30	25°♄11'41	5°09'06
	-4605 Sep 29 j 18:39	0°♄		greatest brilliancy	-4599 Jan 19 j 21:26	24°♄47'56	-1.6m
	-4605 Nov 08 j 01:39	0°♄		min. Earth dist.	-4599 Jan 25 j 00:12	22°♄51'15	0.59792 AU
desc. node	-4605 Nov 18 j 13:58	8°♄09'36		direct	-4599 Feb 28 j 12:19	15°♄24'26	
morning rise	-4605 Nov 19 j 07:36	8°♄43'55			-4599 Apr 23 j 04:21	0°♄	
	-4605 Dec 16 j 13:25	0°♄			-4599 Jun 14 j 17:14	0°♄	
	-4604 Jan 24 j 02:18	0°♄		desc. node	-4599 Jul 10 j 06:33	17°♄17'00	
	-4604 Mar 03 j 13:52	0°♄			-4599 Jul 28 j 01:42	0°♄	
	-4604 Apr 13 j 23:07	0°♄			-4599 Sep 06 j 03:02	0°♄	
	-4604 May 28 j 12:41	0°♄			-4599 Oct 14 j 22:34	0°♄	
	-4604 Jul 18 j 08:44	0°♄			-4599 Nov 22 j 19:48	0°♄	
retrograde	-4604 Sep 30 j 06:41	24°♄06'45			-4598 Jan 01 j 18:03	0°♄	
asc. node	-4604 Oct 04 j 02:26	24°♄00'55		evening set	-4598 Jan 28 j 16:53	19°♄34'58	
min. Earth dist.	-4604 Nov 07 j 22:25	14°♄48'48	0.66394 AU		-4598 Feb 12 j 08:59	0°♄	
opposition	-4604 Nov 09 j 06:42	14°♄16'17	1°21'13				
greatest brilliancy	-4604 Nov 09 j 04:24	14°♄18'35	-1.4m	conjunction	-4598 Mar 25 j 09:07	28°♄14'42	-0°34'48
direct	-4604 Dec 19 j 04:05	4°♄40'29		minimum elong	-4598 Mar 25 j 10:42	28°♄17'21	0°34'55
	-4603 Mar 08 j 15:23	0°♄			-4598 Mar 27 j 23:40	0°♄	
	-4603 May 01 j 04:37	0°♄		max. Earth dist.	-4598 Apr 18 j 09:55	14°♄16'26	2.59887 AU
	-4603 Jun 17 j 07:26	0°♄			-4598 May 12 j 11:23	0°♄	
	-4603 Jul 30 j 16:36	0°♄		morning rise	-4598 May 15 j 22:03	2°♄13'43	
	-4603 Sep 09 j 10:20	0°♄		asc. node	-4598 May 26 j 23:56	9°♄21'35	
evening set	-4603 Sep 21 j 14:24	9°♄14'52			-4598 Jun 28 j 11:41	0°♄	
desc. node	-4603 Oct 05 j 10:13	19°♄53'06			-4598 Aug 15 j 19:19	0°♄	
	-4603 Oct 18 j 10:39	0°♄			-4598 Oct 05 j 02:48	0°♄	
					-4598 Nov 30 j 16:03	0°♄	
conjunction	-4603 Nov 22 j 15:32	27°♄38'25	-0°33'42	retrograde	-4597 Feb 01 j 08:35	17°♄37'20	
minimum elong	-4603 Nov 22 j 12:47	27°♄33'01	0°33'45	opposition	-4597 Mar 07 j 10:53	10°♄53'51	4°22'53
	-4603 Nov 25 j 15:26	0°♄		greatest brilliancy	-4597 Mar 08 j 21:02	10°♄25'02	-2.2m
max. Earth dist.	-4603 Nov 26 j 11:38	0°♄39'46	2.37649 AU	min. Earth dist.	-4597 Mar 15 j 23:32	8°♄02'16	0.47927 AU
	-4602 Jan 02 j 22:45	0°♄		direct	-4597 Apr 13 j 22:05	2°♄40'31	
morning rise	-4602 Jan 29 j 12:04	20°♄24'04		desc. node	-4597 May 28 j 07:05	14°♄05'07	
	-4602 Feb 11 j 05:27	0°♄			-4597 Jun 26 j 21:23	0°♄	
	-4602 Mar 24 j 05:49	0°♄			-4597 Aug 11 j 00:37	0°♄	
	-4602 May 06 j 15:42	0°♄			-4597 Sep 21 j 05:17	0°♄	
	-4602 Jun 22 j 05:25	0°♄			-4597 Oct 31 j 17:14	0°♄	
	-4602 Aug 13 j 04:49	0°♄			-4597 Dec 11 j 22:40	0°♄	
asc. node	-4602 Aug 22 j 03:03	4°♄36'10			-4596 Jan 23 j 15:16	0°♄	
retrograde	-4602 Nov 04 j 07:11	27°♄49'31			-4596 Mar 08 j 01:21	0°♄	
opposition	-4602 Dec 13 j 12:58	18°♄32'18	3°43'49	evening set	-4596 Mar 17 j 13:37	6°♄17'09	
greatest brilliancy	-4602 Dec 13 j 18:45	18°♄26'34	-1.4m	asc. node	-4596 Apr 12 j 19:57	23°♄26'20	
min. Earth dist.	-4602 Dec 15 j 23:20	17°♄34'22	0.66264 AU		-4596 Apr 22 j 23:26	0°♄	
direct	-4601 Jan 23 j 14:42	8°♄32'24					
	-4601 Apr 03 j 21:02	0°♄		conjunction	-4596 May 06 j 08:25	8°♄36'18	0°13'15
	-4601 May 26 j 06:30	0°♄		minimum elong	-4596 May 06 j 07:54	8°♄35'28	0°13'16
	-4601 Jul 10 j 03:45	0°♄		behind sun begin	-4596 May 05 j 20:58	8°♄17'55	
	-4601 Aug 20 j 08:36	0°♄		behind sun end	-4596 May 06 j 18:51	8°♄53'01	
desc. node	-4601 Aug 23 j 07:12	2°♄12'46		max. Earth dist.	-4596 May 13 j 11:25	13°♄10'26	2.66004 AU
	-4601 Sep 28 j 11:44	0°♄			-4596 Jun 08 j 19:45	0°♄	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 31

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

morning rise	-4596 Jun 22 j 04:54	8°♄31'24		greatest brilliancy	-4591 Sep 18 j 10:00	22°♊00'37	-1.8m
	-4596 Jul 25 j 22:26	0°♈		opposition	-4591 Sep 19 j 01:45	21°♊45'16	-3°07'39
	-4596 Sep 10 j 22:24	0°♉		direct	-4591 Oct 25 j 03:26	13°♊33'41	
	-4596 Oct 27 j 23:29	0°♊		asc. node	-4591 Dec 03 j 15:14	21°♊37'40	
	-4596 Dec 14 j 23:22	0°♋			-4591 Dec 24 j 03:50	0°♋	
	-4595 Feb 05 j 02:43	0°♌			-4590 Feb 20 j 04:16	0°♋	
desc. node	-4595 Apr 14 j 07:57	22°♌16'40			-4590 Apr 12 j 08:09	0°♌	
retrograde	-4595 Apr 15 j 04:35	22°♌16'57			-4590 May 30 j 10:14	0°♌	
opposition	-4595 May 15 j 15:43	17°♌14'04	-2°21'10	evening set	-4590 Jul 14 j 08:05	29°♌35'49	
greatest brilliancy	-4595 May 15 j 17:01	17°♌13'13	-2.9m		-4590 Jul 14 j 22:22	0°♌	
min. Earth dist.	-4595 May 17 j 03:03	16°♌50'32	0.37930 AU	max. Earth dist.	-4590 Jul 31 j 01:55	11°♌03'10	2.52514 AU
direct	-4595 Jun 15 j 06:13	12°♌02'07			-4590 Aug 27 j 00:45	0°♌	
	-4595 Aug 12 j 09:17	0°♍					
	-4595 Oct 01 j 20:47	0°♎		conjunction	-4590 Sep 02 j 09:25	4°♍33'46	0°56'20
	-4595 Nov 16 j 16:44	0°♏		minimum elong	-4590 Sep 02 j 11:12	4°♍36'57	0°56'31
	-4594 Jan 01 j 04:07	0°♐			-4590 Oct 07 j 01:25	0°♐	
	-4594 Feb 16 j 08:37	0°♑		morning rise	-4590 Oct 26 j 00:27	14°♐16'44	
asc. node	-4594 Feb 28 j 17:01	7°♑55'48			-4590 Nov 15 j 13:56	0°♑	
	-4594 Apr 04 j 07:39	0°♒		desc. node	-4590 Dec 05 j 07:37	15°♑15'13	
evening set	-4594 Apr 27 j 11:05	14°♒41'29			-4590 Dec 24 j 07:14	0°♒	
	-4594 May 21 j 13:25	0°♓			-4589 Feb 01 j 01:00	0°♓	
max. Earth dist.	-4594 Jun 06 j 06:32	10°♓01'11	2.66698 AU		-4589 Mar 12 j 17:43	0°♓	
					-4589 Apr 23 j 12:21	0°♓	
conjunction	-4594 Jun 13 j 12:56	14°♓40'06	0°52'22		-4589 Jun 08 j 05:12	0°♓	
minimum elong	-4594 Jun 13 j 11:39	14°♓38'01	0°52'30		-4589 Aug 03 j 17:41	0°♓	
	-4594 Jul 07 j 08:38	0°♈		retrograde	-4589 Sep 17 j 16:57	10°♓41'56	
morning rise	-4594 Jul 28 j 20:42	13°♈59'30		asc. node	-4589 Oct 21 j 17:09	3°♓09'20	
	-4594 Aug 22 j 03:33	0°♉		min. Earth dist.	-4589 Oct 24 j 21:23	1°♓53'26	0.64715 AU
	-4594 Oct 05 j 16:47	0°♊		opposition	-4589 Oct 27 j 16:59	0°♓45'21	0°14'00
	-4594 Nov 18 j 02:23	0°♋		greatest brilliancy	-4589 Oct 27 j 16:20	0°♓46'00	-1.5m
	-4594 Dec 30 j 16:38	0°♌			-4589 Oct 29 j 14:12	30°♓♋	
	-4593 Feb 11 j 03:59	0°♍		direct	-4589 Dec 05 j 18:43	21°♓26'38	
desc. node	-4593 Mar 02 j 10:36	13°♍21'56			-4588 Jan 16 j 07:03	0°♓	
	-4593 Mar 27 j 08:05	0°♎			-4588 Mar 19 j 10:59	0°♓	
	-4593 May 20 j 15:35	0°♏			-4588 May 09 j 10:43	0°♈	
retrograde	-4593 Jun 25 j 05:17	7°♏58'35			-4588 Jun 24 j 20:28	0°♉	
min. Earth dist.	-4593 Jul 22 j 11:57	2°♏58'43	0.44043 AU		-4588 Aug 07 j 01:09	0°♊	
greatest brilliancy	-4593 Jul 28 j 21:10	0°♏52'18	-2.5m	evening set	-4588 Aug 30 j 06:59	16°♊55'39	
opposition	-4593 Jul 30 j 12:07	0°♏19'51	-6°15'52		-4588 Sep 16 j 19:02	0°♋	
	-4593 Jul 31 j 12:05	30°♎♊		max. Earth dist.	-4588 Sep 22 j 20:32	4°♋35'13	2.40306 AU
direct	-4593 Aug 31 j 10:35	24°♊04'45		desc. node	-4588 Oct 22 j 04:18	27°♋07'26	
	-4593 Oct 02 j 14:44	0°♌			-4588 Oct 25 j 21:04	0°♌	
	-4593 Dec 04 j 19:37	0°♍					
asc. node	-4592 Jan 16 j 15:15	24°♍50'10		conjunction	-4588 Oct 27 j 07:22	1°♌06'47	-0°03'45
	-4592 Jan 25 j 06:43	0°♋		minimum elong	-4588 Oct 27 j 07:02	1°♌06'08	0°03'44
	-4592 Mar 14 j 16:08	0°♌		behind sun begin	-4588 Oct 26 j 05:18	0°♌16'03	
	-4592 May 02 j 00:33	0°♍		behind sun end	-4588 Oct 28 j 08:46	1°♌56'14	
evening set	-4592 Jun 03 j 21:50	20°♍51'35			-4588 Dec 03 j 03:41	0°♍	
	-4592 Jun 18 j 02:05	0°♈		morning rise	-4588 Dec 31 j 22:15	22°♍33'02	
max. Earth dist.	-4592 Jun 30 j 04:27	7°♈53'01	2.62051 AU		-4587 Jan 10 j 12:06	0°♎	
					-4587 Feb 18 j 19:22	0°♏	
conjunction	-4592 Jul 20 j 21:06	21°♈33'32	1°11'01		-4587 Mar 31 j 21:03	0°♐	
minimum elong	-4592 Jul 20 j 20:49	21°♈33'04	1°11'14		-4587 May 14 j 12:43	0°♑	
	-4592 Aug 02 j 10:56	0°♉			-4587 Jul 01 j 00:37	0°♒	
morning rise	-4592 Sep 05 j 20:31	23°♉36'53			-4587 Aug 26 j 06:11	0°♓	
	-4592 Sep 14 j 23:06	0°♊		asc. node	-4587 Sep 07 j 18:42	5°♓14'44	
	-4592 Oct 26 j 17:54	0°♋		retrograde	-4587 Oct 21 j 11:56	14°♓54'57	
	-4592 Dec 06 j 04:46	0°♌		opposition	-4587 Nov 30 j 03:52	5°♓22'07	2°54'03
	-4591 Jan 14 j 21:40	0°♍		greatest brilliancy	-4587 Nov 30 j 04:40	5°♓21'18	-1.3m
desc. node	-4591 Jan 17 j 10:28	1°♍55'13		min. Earth dist.	-4587 Dec 01 j 02:17	4°♓59'40	0.67067 AU
	-4591 Feb 23 j 16:39	0°♎			-4587 Dec 14 j 10:26	30°♓♋	
	-4591 Apr 05 j 21:08	0°♏		direct	-4586 Jan 09 j 22:24	25°♓28'28	
	-4591 May 21 j 02:58	0°♐			-4586 Feb 07 j 23:24	0°♓	
	-4591 Jul 27 j 11:52	0°♑			-4586 Apr 15 j 16:19	0°♈	
retrograde	-4591 Aug 11 j 01:51	1°♑25'33			-4586 Jun 04 j 02:02	0°♉	
	-4591 Aug 25 j 01:31	30°♎♊			-4586 Jul 18 j 04:25	0°♊	
min. Earth dist.	-4591 Sep 12 j 17:17	24°♊13'56	0.56367 AU		-4586 Aug 28 j 03:09	0°♋	

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Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

desc. node	-4586 Sep 09 j 01:40	9°♎03'25		-4581 Jun 16 j 17:21	0°♎	
	-4586 Oct 06 j 04:04	0°♏		-4581 Aug 03 j 03:43	0°♐	
evening set	-4586 Oct 31 j 10:32	19°♏49'48		-4581 Sep 20 j 01:11	0°♑	
	-4586 Nov 13 j 08:24	0°♎		-4581 Nov 08 j 02:54	0°♒	
	-4586 Dec 21 j 15:39	0°♏		-4581 Dec 31 j 10:06	0°♑	
			retrograde	-4580 Mar 14 j 13:25	23°♐51'23	
conjunction	-4585 Jan 04 j 21:16	10°♏59'00 -1°04'57	opposition	-4580 Apr 14 j 22:41	18°♐23'16	1°08'29
minimum elong	-4585 Jan 04 j 19:24	10°♏55'26 1°05'10	greatest brilliancy	-4580 Apr 15 j 06:52	18°♐17'19	-2.8m
	-4585 Jan 29 j 23:04	0°♑	min. Earth dist.	-4580 Apr 21 j 00:49	16°♐37'17	0.40532 AU
max. Earth dist.	-4585 Feb 22 j 15:02	17°♑29'06 2.43607 AU	desc. node	-4580 May 01 j 02:02	14°♐03'42	
morning rise	-4585 Mar 10 j 12:42	28°♑57'27	direct	-4580 May 18 j 07:20	12°♐06'45	
	-4585 Mar 11 j 23:45	0°♑		-4580 Jul 14 j 03:49	0°♏	
	-4585 Apr 24 j 05:28	0°♏		-4580 Aug 31 j 20:33	0°♎	
	-4585 Jun 09 j 00:22	0°♑		-4580 Oct 14 j 12:05	0°♏	
asc. node	-4585 Jul 26 j 18:19	29°♑15'36		-4580 Nov 26 j 15:08	0°♑	
	-4585 Jul 28 j 00:36	0°♎		-4579 Jan 09 j 14:54	0°♑	
	-4585 Sep 21 j 18:46	0°♐		-4579 Feb 23 j 21:57	0°♏	
retrograde	-4585 Nov 27 j 08:55	19°♐14'44	asc. node	-4579 Mar 17 j 08:25	13°♏55'13	
opposition	-4584 Jan 04 j 15:05	10°♐29'06 4°45'01		-4579 Apr 11 j 08:43	0°♑	
greatest brilliancy	-4584 Jan 05 j 07:54	10°♐12'45 -1.5m	evening set	-4579 Apr 12 j 03:21	0°♑29'51	
min. Earth dist.	-4584 Jan 09 j 08:33	8°♐38'50 0.63063 AU	max. Earth dist.	-4579 May 28 j 05:12	29°♑53'42	2.67072 AU
direct	-4584 Feb 14 j 16:28	0°♐30'55		-4579 May 28 j 09:09	0°♎	
	-4584 May 08 j 01:55	0°♑				
	-4584 Jun 24 j 19:59	0°♒	conjunction	-4579 May 29 j 22:56	1°♎00'14	0°39'04
desc. node	-4584 Jul 26 j 23:22	22°♒38'58	minimum elong	-4579 May 29 j 21:44	0°♎58'19	0°39'10
	-4584 Aug 05 j 23:37	0°♐	morning rise	-4579 Jul 14 j 12:37	0°♐11'23	
	-4584 Sep 14 j 12:48	0°♏		-4579 Jul 14 j 05:33	0°♐	
	-4584 Oct 23 j 00:52	0°♎		-4579 Aug 29 j 08:59	0°♑	
	-4584 Nov 30 j 15:39	0°♏		-4579 Oct 13 j 15:20	0°♒	
evening set	-4583 Jan 05 j 22:24	27°♏29'18		-4579 Nov 27 j 05:07	0°♐	
	-4583 Jan 09 j 07:30	0°♑		-4578 Jan 10 j 15:06	0°♏	
	-4583 Feb 19 j 16:21	0°♑		-4578 Feb 25 j 06:30	0°♎	
			desc. node	-4578 Mar 19 j 03:06	13°♎22'34	
conjunction	-4583 Mar 05 j 22:52	10°♑01'29 -0°51'43		-4578 Apr 19 j 19:45	0°♏	
minimum elong	-4583 Mar 06 j 00:58	10°♑05'07 0°51'54	retrograde	-4578 May 31 j 17:38	10°♏29'32	
	-4583 Apr 04 j 02:09	0°♏	min. Earth dist.	-4578 Jun 27 j 12:27	6°♏01'32	0.39851 AU
max. Earth dist.	-4583 Apr 06 j 19:08	1°♏49'28 2.56073 AU	greatest brilliancy	-4578 Jul 02 j 07:04	4°♏37'22	-2.8m
morning rise	-4583 Apr 29 j 10:32	16°♏53'41	opposition	-4578 Jul 03 j 14:33	4°♏14'07	-6°12'36
	-4583 May 19 j 12:34	0°♑		-4578 Jul 20 j 17:08	30°♎	
asc. node	-4583 Jun 12 j 16:39	15°♑28'50	direct	-4578 Aug 02 j 21:25	28°♎50'43	
	-4583 Jul 05 j 18:59	0°♎		-4578 Aug 16 j 09:35	0°♏	
	-4583 Aug 24 j 01:19	0°♐		-4578 Oct 26 j 22:04	0°♑	
	-4583 Oct 16 j 08:12	0°♑		-4578 Dec 16 j 13:17	0°♑	
retrograde	-4582 Jan 10 j 08:54	28°♑57'54	asc. node	-4577 Feb 02 j 06:53	29°♑30'51	
opposition	-4582 Feb 14 j 23:08	21°♑30'40 5°07'17		-4577 Feb 03 j 01:39	0°♏	
greatest brilliancy	-4582 Feb 16 j 10:01	20°♑59'15 -1.9m		-4577 Mar 23 j 05:27	0°♑	
min. Earth dist.	-4582 Feb 22 j 23:44	18°♑38'12 0.53024 AU		-4577 May 10 j 00:43	0°♎	
direct	-4582 Mar 26 j 03:40	12°♑25'52	evening set	-4577 May 20 j 23:34	6°♎56'27	
	-4582 May 23 j 01:25	0°♒	max. Earth dist.	-4577 Jun 21 j 02:43	26°♎52'49	2.64489 AU
desc. node	-4582 Jun 14 j 00:01	12°♒25'34		-4577 Jun 25 j 22:22	0°♐	
	-4582 Jul 11 j 03:25	0°♐				
	-4582 Aug 22 j 01:20	0°♏	conjunction	-4577 Jul 06 j 16:35	7°♐00'10	1°06'57
	-4582 Sep 30 j 20:56	0°♎	minimum elong	-4577 Jul 06 j 15:43	6°♐58'44	1°07'08
	-4582 Nov 09 j 11:45	0°♏		-4577 Aug 10 j 09:55	0°♑	
	-4582 Dec 20 j 00:55	0°♑	morning rise	-4577 Aug 21 j 13:50	7°♑32'05	
	-4581 Jan 31 j 04:41	0°♑		-4577 Sep 23 j 05:49	0°♒	
evening set	-4581 Feb 28 j 21:38	19°♑42'21		-4577 Nov 04 j 12:27	0°♐	
	-4581 Mar 16 j 05:03	0°♏		-4577 Dec 15 j 13:54	0°♏	
				-4576 Jan 24 j 23:41	0°♎	
conjunction	-4581 Apr 21 j 13:02	23°♏55'58 -0°05'10	desc. node	-4576 Feb 04 j 03:17	7°♎32'31	
minimum elong	-4581 Apr 21 j 13:14	23°♏56'19 0°05'12		-4576 Mar 05 j 16:04	0°♏	
behind sun begin	-4581 Apr 20 j 17:32	23°♏24'17		-4576 Apr 17 j 11:29	0°♑	
behind sun end	-4581 Apr 22 j 08:57	24°♏28'20		-4576 Jun 07 j 11:01	0°♑	
asc. node	-4581 Apr 30 j 12:38	29°♏45'46	retrograde	-4576 Jul 25 j 05:35	13°♑10'34	
	-4581 Apr 30 j 21:25	0°♑	min. Earth dist.	-4576 Aug 24 j 18:22	6°♑47'54	0.51769 AU
max. Earth dist.	-4581 May 04 j 18:56	2°♑31'09 2.64252 AU	greatest brilliancy	-4576 Aug 31 j 03:05	4°♑24'44	-2.1m
morning rise	-4581 Jun 08 j 19:08	24°♑57'31	opposition	-4576 Sep 01 j 05:36	3°♑59'48	-4°31'51



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Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4576 Sep 12 j 20:01	30° $\mathbb{R}$ 3		conjunction	-4571 Dec 08 j 08:04	13° $\mathbb{M}$ 44'36	-0°48'25
direct	-4576 Oct 05 j 18:52	26° $\mathbb{Z}$ 27'00		minimum elong	-4571 Dec 08 j 04:45	13° $\mathbb{M}$ 38'05	0°48'32
	-4576 Oct 30 j 14:27	0° $\approx$			-4571 Dec 29 j 03:36	0° $\mathbb{A}$	
asc. node	-4576 Dec 20 j 06:55	20° $\approx$ 39'15		max. Earth dist.	-4570 Jan 15 j 22:57	13° $\mathbb{A}$ 44'12	2.38885 AU
	-4575 Jan 07 j 06:06	0° $\mathbb{H}$			-4570 Feb 06 j 09:46	0° $\mathbb{Z}$	
	-4575 Mar 01 j 04:58	0° $\mathbb{Y}$		morning rise	-4570 Feb 13 j 20:57	5° $\mathbb{Z}$ 34'27	
	-4575 Apr 19 j 22:22	0° $\mathbb{B}$			-4570 Mar 19 j 09:18	0° $\approx$	
	-4575 Jun 06 j 12:11	0° $\mathbb{II}$			-4570 May 01 j 16:08	0° $\mathbb{H}$	
evening set	-4575 Jun 28 j 01:55	14° $\mathbb{II}$ 04'14			-4570 Jun 16 j 20:17	0° $\mathbb{Y}$	
max. Earth dist.	-4575 Jul 17 j 22:16	27° $\mathbb{II}$ 18'19	2.56770 AU		-4570 Aug 06 j 08:30	0° $\mathbb{B}$	
	-4575 Jul 21 j 21:56	0° $\mathbb{E}$		asc. node	-4570 Aug 12 j 09:54	3° $\mathbb{B}$ 19'43	
					-4570 Oct 10 j 09:57	0° $\mathbb{II}$	
conjunction	-4575 Aug 15 j 10:47	16° $\mathbb{E}$ 50'58	1°07'00	retrograde	-4570 Nov 12 j 10:58	5° $\mathbb{II}$ 45'52	
minimum elong	-4575 Aug 15 j 11:47	16° $\mathbb{E}$ 52'43	1°07'13		-4570 Dec 12 j 14:12	30° $\mathbb{R}$ 8	
	-4575 Sep 03 j 03:14	0° $\mathbb{Q}$		opposition	-4570 Dec 21 j 09:43	26° $\mathbb{B}$ 38'42	4°08'51
morning rise	-4575 Oct 04 j 16:30	22° $\mathbb{Q}$ 49'10		greatest brilliancy	-4570 Dec 21 j 19:00	26° $\mathbb{B}$ 29'32	-1.4m
	-4575 Oct 14 j 09:54	0° $\mathbb{M}$		min. Earth dist.	-4570 Dec 24 j 15:26	25° $\mathbb{B}$ 22'03	0.65413 AU
	-4575 Nov 23 j 05:31	0° $\mathbb{L}$		direct	-4569 Jan 31 j 13:23	16° $\mathbb{B}$ 37'44	
desc. node	-4575 Dec 22 j 02:13	22° $\mathbb{L}$ 10'00			-4569 Mar 25 j 05:12	0° $\mathbb{II}$	
	-4574 Jan 01 j 05:56	0° $\mathbb{M}$			-4569 May 20 j 03:22	0° $\mathbb{E}$	
	-4574 Feb 09 j 06:24	0° $\mathbb{A}$			-4569 Jul 04 j 19:51	0° $\mathbb{Q}$	
	-4574 Mar 21 j 07:13	0° $\mathbb{Z}$		desc. node	-4569 Aug 13 j 18:10	28° $\mathbb{Q}$ 49'42	
	-4574 May 02 j 18:25	0° $\approx$			-4569 Aug 15 j 07:50	0° $\mathbb{M}$	
	-4574 Jun 19 j 17:20	0° $\mathbb{H}$			-4569 Sep 23 j 13:56	0° $\mathbb{L}$	
retrograde	-4574 Sep 03 j 17:20	26° $\mathbb{H}$ 34'21			-4569 Oct 31 j 21:17	0° $\mathbb{M}$	
min. Earth dist.	-4574 Oct 09 j 07:02	18° $\mathbb{H}$ 19'26	0.62125 AU		-4569 Dec 09 j 07:31	0° $\mathbb{A}$	
opposition	-4574 Oct 13 j 13:17	16° $\mathbb{H}$ 37'04	-0°59'43	evening set	-4569 Dec 12 j 17:04	2° $\mathbb{A}$ 37'29	
greatest brilliancy	-4574 Oct 13 j 09:57	16° $\mathbb{H}$ 40'24	-1.6m		-4568 Jan 17 j 18:25	0° $\mathbb{Z}$	
asc. node	-4574 Nov 07 j 07:38	8° $\mathbb{H}$ 49'55					
direct	-4574 Nov 20 j 14:48	7° $\mathbb{H}$ 40'01		conjunction	-4568 Feb 13 j 06:03	19° $\mathbb{Z}$ 27'52	-1°04'08
	-4573 Feb 01 j 23:42	0° $\mathbb{Y}$		minimum elong	-4568 Feb 13 j 07:41	19° $\mathbb{Z}$ 30'50	1°04'20
	-4573 Mar 29 j 16:54	0° $\mathbb{B}$			-4568 Feb 27 j 22:32	0° $\approx$	
	-4573 May 18 j 04:33	0° $\mathbb{II}$		max. Earth dist.	-4568 Mar 24 j 06:01	17° $\approx$ 43'59	2.51562 AU
	-4573 Jul 03 j 03:20	0° $\mathbb{E}$		morning rise	-4568 Apr 11 j 10:21	0° $\mathbb{H}$ 09'04	
evening set	-4573 Aug 11 j 06:44	27° $\mathbb{E}$ 09'46			-4568 Apr 11 j 04:59	0° $\mathbb{H}$	
	-4573 Aug 15 j 06:01	0° $\mathbb{Q}$			-4568 May 26 j 16:09	0° $\mathbb{Y}$	
max. Earth dist.	-4573 Aug 27 j 06:37	8° $\mathbb{Q}$ 41'00	2.45031 AU	asc. node	-4568 Jun 29 j 07:46	21° $\mathbb{Y}$ 19'23	
	-4573 Sep 25 j 01:53	0° $\mathbb{M}$			-4568 Jul 13 j 08:44	0° $\mathbb{B}$	
					-4568 Sep 02 j 02:20	0° $\mathbb{II}$	
conjunction	-4573 Oct 04 j 12:40	7° $\mathbb{M}$ 08'16	0°24'44		-4568 Oct 31 j 14:12	0° $\mathbb{E}$	
minimum elong	-4573 Oct 04 j 14:14	7° $\mathbb{M}$ 11'15	0°24'48	retrograde	-4568 Dec 22 j 08:43	12° $\mathbb{E}$ 36'25	
	-4573 Nov 03 j 07:16	0° $\mathbb{L}$		opposition	-4567 Jan 28 j 04:25	4° $\mathbb{E}$ 33'28	5°14'59
desc. node	-4573 Nov 08 j 22:21	4° $\mathbb{L}$ 22'15		greatest brilliancy	-4567 Jan 29 j 09:34	4° $\mathbb{E}$ 06'08	-1.7m
morning rise	-4573 Dec 04 j 10:52	24° $\mathbb{L}$ 18'32		min. Earth dist.	-4567 Feb 04 j 01:50	1° $\mathbb{E}$ 58'55	0.57607 AU
	-4573 Dec 11 j 17:14	0° $\mathbb{M}$			-4567 Feb 09 j 16:28	30° $\mathbb{R}$ II	
	-4572 Jan 19 j 04:12	0° $\mathbb{A}$		direct	-4567 Mar 09 j 11:10	24° $\mathbb{II}$ 57'21	
	-4572 Feb 27 j 13:18	0° $\mathbb{Z}$			-4567 Apr 07 j 20:21	0° $\mathbb{E}$	
	-4572 Apr 08 j 18:18	0° $\approx$			-4567 Jun 07 j 10:08	0° $\mathbb{Q}$	
	-4572 May 22 j 20:23	0° $\mathbb{H}$		desc. node	-4567 Jun 30 j 17:16	15° $\mathbb{Q}$ 07'46	
	-4572 Jul 10 j 23:16	0° $\mathbb{Y}$			-4567 Jul 22 j 01:39	0° $\mathbb{M}$	
	-4572 Sep 19 j 11:35	0° $\mathbb{B}$			-4567 Aug 31 j 14:53	0° $\mathbb{L}$	
asc. node	-4572 Sep 24 j 09:13	0° $\mathbb{B}$ 54'09			-4567 Oct 09 j 17:07	0° $\mathbb{M}$	
retrograde	-4572 Oct 07 j 23:44	2° $\mathbb{B}$ 01'39			-4567 Nov 17 j 19:03	0° $\mathbb{A}$	
	-4572 Oct 25 j 08:16	30° $\mathbb{R}$ Y			-4567 Dec 27 j 20:58	0° $\mathbb{Z}$	
opposition	-4572 Nov 16 j 22:06	22° $\mathbb{Y}$ 16'22	1°57'17		-4566 Feb 07 j 14:59	0° $\approx$	
min. Earth dist.	-4572 Nov 16 j 08:56	22° $\mathbb{Y}$ 29'36	0.66904 AU	evening set	-4566 Feb 09 j 13:29	1° $\approx$ 21'34	
greatest brilliancy	-4572 Nov 16 j 20:09	22° $\mathbb{Y}$ 18'19	-1.4m		-4566 Mar 23 j 07:37	0° $\mathbb{H}$	
direct	-4572 Dec 27 j 04:35	12° $\mathbb{Y}$ 33'04					
	-4571 Feb 28 j 04:32	0° $\mathbb{B}$		conjunction	-4566 Apr 04 j 15:51	8° $\mathbb{H}$ 14'42	-0°24'05
	-4571 Apr 25 j 10:27	0° $\mathbb{II}$		minimum elong	-4566 Apr 04 j 16:57	8° $\mathbb{H}$ 16'31	0°24'09
	-4571 Jun 12 j 05:48	0° $\mathbb{E}$		max. Earth dist.	-4566 Apr 24 j 18:08	21° $\mathbb{H}$ 29'29	2.61649 AU
	-4571 Jul 25 j 20:42	0° $\mathbb{Q}$			-4566 May 07 j 19:50	0° $\mathbb{Y}$	
	-4571 Sep 04 j 16:12	0° $\mathbb{M}$		asc. node	-4566 May 17 j 04:35	6° $\mathbb{Y}$ 03'12	
desc. node	-4571 Sep 25 j 19:15	16° $\mathbb{M}$ 07'14		morning rise	-4566 May 24 j 20:53	10° $\mathbb{Y}$ 59'28	
evening set	-4571 Oct 05 j 09:20	23° $\mathbb{M}$ 32'18			-4566 Jun 23 j 17:19	0° $\mathbb{B}$	
	-4571 Oct 13 j 16:31	0° $\mathbb{L}$			-4566 Aug 10 j 15:25	0° $\mathbb{II}$	
	-4571 Nov 20 j 20:50	0° $\mathbb{M}$			-4566 Sep 28 j 20:40	0° $\mathbb{E}$	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 34

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4566 Nov 20 j 12:43	0°♊			-4560 Mar 09 j 11:11	0°♑		
retrograde	-4565 Feb 15 j 11:15	29°♊53'45			-4560 Apr 27 j 05:42	0°♒		
opposition	-4565 Mar 20 j 13:03	23°♊37'44	3°32'54	evening set	-4560 Jun 12 j 13:27	29°♒24'36		
greatest brilliancy	-4565 Mar 21 j 17:43	23°♊14'41	-2.4m		-4560 Jun 13 j 11:21	0°♓		
min. Earth dist.	-4565 Mar 28 j 19:20	20°♊59'02	0.45072 AU	max. Earth dist.	-4560 Jul 06 j 07:31	14°♓56'00	2.60363 AU	
direct	-4565 Apr 25 j 18:13	16°♊02'11			-4560 Jul 28 j 20:42	0°♈		
desc. node	-4565 May 18 j 17:25	19°♊28'35						
	-4565 Jun 14 j 02:08	0°♐		conjunction	-4560 Jul 29 j 21:16	0°♈41'33	1°11'10	
	-4565 Aug 03 j 00:00	0°♑		minimum elong	-4560 Jul 29 j 21:26	0°♈41'49	1°11'23	
	-4565 Sep 14 j 14:34	0°♒			-4560 Sep 10 j 06:22	0°♊		
	-4565 Oct 25 j 20:42	0°♑		morning rise	-4560 Sep 15 j 19:06	3°♊55'10		
	-4565 Dec 06 j 13:57	0°♒			-4560 Oct 21 j 20:39	0°♐		
	-4564 Jan 18 j 15:06	0°♑			-4560 Dec 01 j 01:27	0°♑		
	-4564 Mar 03 j 06:49	0°♑		desc. node	-4559 Jan 07 j 19:15	28°♑43'08		
evening set	-4564 Mar 27 j 03:01	15°♑37'22			-4559 Jan 09 j 11:31	0°♒		
asc. node	-4564 Apr 03 j 01:18	20°♑07'20			-4559 Feb 17 j 22:18	0°♑		
	-4564 Apr 18 j 08:17	0°♑			-4559 Mar 30 j 13:16	0°♒		
					-4559 May 13 j 08:26	0°♑		
conjunction	-4564 May 15 j 02:25	17°♑09'30	0°23'18		-4559 Jul 06 j 02:50	0°♑		
minimum elong	-4564 May 15 j 01:34	17°♑08'09	0°23'21	retrograde	-4559 Aug 19 j 23:28	11°♑17'06		
max. Earth dist.	-4564 May 18 j 23:27	19°♑38'09	2.66608 AU	min. Earth dist.	-4559 Sep 22 j 17:35	3°♑41'22	0.58651 AU	
	-4564 Jun 04 j 05:12	0°♒		opposition	-4559 Sep 28 j 09:04	1°♑27'36	-2°19'36	
morning rise	-4564 Jun 30 j 09:06	16°♒41'18		greatest brilliancy	-4559 Sep 27 j 22:38	1°♑37'54	-1.7m	
	-4564 Jul 21 j 04:55	0°♓			-4559 Oct 02 j 03:08	30°♒		
	-4564 Sep 05 j 20:27	0°♈		direct	-4559 Nov 04 j 05:27	22°♒58'02		
	-4564 Oct 22 j 03:12	0°♊		asc. node	-4559 Nov 23 j 22:06	25°♒12'18		
	-4564 Dec 07 j 13:14	0°♐			-4559 Dec 10 j 22:42	0°♑		
	-4563 Jan 24 j 12:17	0°♑			-4558 Feb 13 j 15:59	0°♑		
	-4563 Mar 21 j 21:03	0°♒			-4558 Apr 07 j 01:53	0°♒		
desc. node	-4563 Apr 04 j 19:36	5°♒10'25			-4558 May 25 j 14:44	0°♓		
retrograde	-4563 May 02 j 23:25	9°♒56'36			-4558 Jul 10 j 06:58	0°♈		
min. Earth dist.	-4563 Jun 01 j 04:33	5°♒09'02	0.37759 AU	evening set	-4558 Jul 24 j 00:56	9°♈23'07		
opposition	-4563 Jun 02 j 17:33	4°♒44'14	-4°14'41	max. Earth dist.	-4558 Aug 08 j 15:15	20°♈14'05	2.49954 AU	
greatest brilliancy	-4563 Jun 02 j 09:28	4°♒49'39	-2.9m		-4558 Aug 22 j 09:51	0°♊		
	-4563 Jun 26 j 08:59	30°♒						
direct	-4563 Jul 02 j 17:44	29°♒44'12		conjunction	-4558 Sep 13 j 08:11	15°♒53'13	0°47'00	
	-4563 Jul 09 j 01:37	0°♒		minimum elong	-4558 Sep 13 j 10:11	15°♒56'51	0°47'09	
	-4563 Sep 21 j 22:19	0°♑			-4558 Oct 02 j 09:10	0°♐		
	-4563 Nov 09 j 16:29	0°♒		morning rise	-4558 Nov 08 j 08:11	28°♐06'32		
	-4563 Dec 26 j 09:30	0°♑			-4558 Nov 10 j 19:01	0°♑		
	-4562 Feb 11 j 05:18	0°♑		desc. node	-4558 Nov 25 j 17:46	11°♑34'40		
asc. node	-4562 Feb 18 j 22:21	4°♑54'24			-4558 Dec 19 j 09:12	0°♒		
	-4562 Mar 30 j 12:49	0°♑			-4557 Jan 26 j 23:41	0°♑		
evening set	-4562 May 06 j 02:08	23°♑07'02			-4557 Mar 07 j 12:10	0°♒		
	-4562 May 16 j 22:34	0°♒			-4557 Apr 17 j 23:26	0°♑		
max. Earth dist.	-4562 Jun 11 j 16:31	16°♒25'25	2.66125 AU		-4557 Jun 01 j 20:18	0°♑		
					-4557 Jul 24 j 05:09	0°♑		
conjunction	-4562 Jun 21 j 22:24	23°♒00'19	0°58'44	retrograde	-4557 Sep 25 j 12:42	18°♑55'10		
minimum elong	-4562 Jun 21 j 21:12	22°♒58'22	0°58'54	asc. node	-4557 Oct 11 j 23:11	17°♑04'29		
	-4562 Jul 02 j 18:17	0°♓		min. Earth dist.	-4557 Nov 02 j 13:30	9°♑50'02	0.65773 AU	
morning rise	-4562 Aug 06 j 07:46	22°♓37'16		opposition	-4557 Nov 04 j 13:55	9°♑01'16	0°53'58	
	-4562 Aug 17 j 10:21	0°♈		greatest brilliancy	-4557 Nov 04 j 11:52	9°♑03'20	-1.4m	
	-4562 Sep 30 j 16:45	0°♊			-4557 Dec 05 j 16:35	30°♒		
	-4562 Nov 12 j 15:38	0°♐		direct	-4557 Dec 14 j 03:39	29°♒32'34		
	-4562 Dec 24 j 14:16	0°♑			-4557 Dec 22 j 22:14	0°♑		
	-4561 Feb 04 j 03:04	0°♒			-4556 Mar 12 j 16:16	0°♒		
desc. node	-4561 Feb 20 j 20:26	11°♒59'40			-4556 May 04 j 02:04	0°♓		
	-4561 Mar 18 j 11:57	0°♑			-4556 Jun 19 j 22:50	0°♈		
	-4561 May 04 j 10:07	0°♒			-4556 Aug 02 j 07:20	0°♊		
retrograde	-4561 Jul 07 j 06:19	21°♒59'08		evening set	-4556 Sep 11 j 13:55	29°♊36'40		
min. Earth dist.	-4561 Aug 04 j 14:34	16°♒30'18	0.46759 AU		-4556 Sep 12 j 02:18	0°♐		
greatest brilliancy	-4561 Aug 11 j 04:12	14°♒12'35	-2.3m	desc. node	-4556 Oct 12 j 14:23	23°♐20'35		
opposition	-4561 Aug 12 j 16:26	13°♒40'41	-5°46'54	max. Earth dist.	-4556 Oct 19 j 08:46	28°♐35'57	2.38321 AU	
direct	-4561 Sep 14 j 13:59	6°♒55'55			-4556 Oct 21 j 03:55	0°♑		
	-4561 Nov 25 j 16:15	0°♑						
asc. node	-4560 Jan 06 j 21:34	22°♒57'43		conjunction	-4556 Nov 10 j 20:31	16°♑11'51	-0°20'58	
	-4560 Jan 19 j 02:09	0°♑		minimum elong	-4556 Nov 10 j 18:45	16°♑08'21	0°20'58	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 35

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4556 Nov 28 j 09:37	0°♌	direct	-4550 Apr 05 j 13:35	23°♊56'13	
	-4555 Jan 05 j 17:00	0°♈		-4550 May 07 j 02:24	0°♌	
morning rise	-4555 Jan 17 j 03:51	8°♈51'34	desc. node	-4550 Jun 04 j 10:33	12°♌54'10	
	-4555 Feb 13 j 22:50	0°♊		-4550 Jul 03 j 03:09	0°♍	
	-4555 Mar 26 j 22:15	0°♋		-4550 Aug 15 j 13:27	0°♎	
	-4555 May 09 j 08:28	0°♌		-4550 Sep 25 j 01:06	0°♏	
	-4555 Jun 25 j 04:11	0°♍		-4550 Nov 04 j 02:03	0°♐	
	-4555 Aug 17 j 09:12	0°♎		-4550 Dec 14 j 22:29	0°♑	
asc. node	-4555 Aug 29 j 00:02	5°♎37'40		-4549 Jan 26 j 07:47	0°♒	
retrograde	-4555 Oct 29 j 08:55	22°♎45'48	evening set	-4549 Mar 11 j 03:24	29°♒45'33	
opposition	-4555 Dec 07 j 20:03	13°♎21'00 3°23'50		-4549 Mar 11 j 12:05	0°♓	
greatest brilliancy	-4555 Dec 07 j 23:21	13°♎17'43 -1.3m	asc. node	-4549 Apr 20 j 17:39	26°♓24'46	
min. Earth dist.	-4555 Dec 09 j 14:02	12°♎39'11 0.66754 AU		-4549 Apr 26 j 06:39	0°♈	
direct	-4554 Jan 17 j 19:36	3°♎23'23				
	-4554 Apr 08 j 11:26	0°♏	conjunction	-4549 Apr 30 j 16:40	2°♈51'10 0°05'41	
	-4554 May 29 j 12:10	0°♐	minimum elong	-4549 Apr 30 j 16:26	2°♈50'48 0°05'41	
	-4554 Jul 13 j 02:09	0°♑	behind sun begin	-4549 Apr 29 j 21:20	2°♈20'00	
	-4554 Aug 23 j 05:23	0°♒	behind sun end	-4549 May 01 j 11:32	3°♈21'36	
desc. node	-4554 Aug 30 j 11:25	5°♒28'29	max. Earth dist.	-4549 May 10 j 10:53	9°♈08'14 2.65321 AU	
	-4554 Oct 01 j 07:58	0°♓		-4549 Jun 12 j 02:06	0°♉	
	-4554 Nov 08 j 13:07	0°♌	morning rise	-4549 Jun 17 j 02:46	3°♉12'00	
evening set	-4554 Nov 15 j 17:46	5°♌39'32		-4549 Jul 29 j 07:45	0°♊	
	-4554 Dec 16 j 21:02	0°♈		-4549 Sep 14 j 16:16	0°♋	
				-4549 Nov 01 j 11:28	0°♌	
conjunction	-4553 Jan 19 j 18:34	25°♈55'22 -1°08'07		-4549 Dec 21 j 04:52	0°♍	
minimum elong	-4553 Jan 19 j 18:14	25°♈54'45 1°08'21		-4548 Feb 18 j 00:28	0°♎	
	-4553 Jan 25 j 04:55	0°♊	retrograde	-4548 Apr 01 j 02:07	9°♎47'44	
	-4553 Mar 07 j 05:48	0°♋	desc. node	-4548 Apr 21 j 11:13	7°♎19'26	
max. Earth dist.	-4553 Mar 07 j 18:13	0°♋22'09 2.46499 AU	opposition	-4548 May 01 j 19:51	4°♎38'56 -0°46'12	
morning rise	-4553 Mar 23 j 03:55	11°♋14'44	greatest brilliancy	-4548 May 01 j 22:01	4°♎37'26 -2.9m	
	-4553 Apr 19 j 10:26	0°♌	min. Earth dist.	-4548 May 05 j 14:59	3°♎36'34 0.38763 AU	
	-4553 Jun 04 j 00:36	0°♍		-4548 May 21 j 14:54	30°♎♐	
asc. node	-4553 Jul 17 j 00:11	26°♍45'49	direct	-4548 Jun 02 j 11:35	29°♐03'30	
	-4553 Jul 22 j 09:22	0°♎		-4548 Jun 14 j 09:36	0°♑	
	-4553 Sep 13 j 14:38	0°♏		-4548 Aug 21 j 17:41	0°♒	
retrograde	-4553 Dec 06 j 09:06	27°♏43'44		-4548 Oct 07 j 04:05	0°♓	
opposition	-4552 Jan 13 j 04:36	19°♏11'37 5°00'17		-4548 Nov 20 j 13:29	0°♑	
greatest brilliancy	-4552 Jan 14 j 01:51	18°♏51'09 -1.5m		-4547 Jan 04 j 06:17	0°♒	
min. Earth dist.	-4552 Jan 18 j 17:16	17°♏04'10 0.61385 AU		-4547 Feb 18 j 23:35	0°♓	
direct	-4552 Feb 23 j 02:09	9°♏18'18	asc. node	-4547 Mar 07 j 14:46	10°♓44'38	
	-4552 Apr 29 j 13:56	0°♐		-4547 Apr 06 j 16:17	0°♈	
	-4552 Jun 18 j 16:16	0°♑	evening set	-4547 Apr 20 j 23:23	9°♈06'34	
desc. node	-4552 Jul 17 j 10:13	19°♑49'09		-4547 May 23 j 19:17	0°♉	
	-4552 Jul 31 j 12:03	0°♒	max. Earth dist.	-4547 Jun 02 j 13:50	6°♉13'44 2.66972 AU	
	-4552 Sep 09 j 08:00	0°♓				
	-4552 Oct 17 j 23:52	0°♌	conjunction	-4547 Jun 07 j 07:49	9°♉15'39 0°47'06	
	-4552 Nov 25 j 17:31	0°♈	minimum elong	-4547 Jun 07 j 06:32	9°♉13'36 0°47'14	
	-4551 Jan 04 j 11:43	0°♊		-4547 Jul 09 j 15:14	0°♋	
evening set	-4551 Jan 19 j 03:26	10°♊45'49	morning rise	-4547 Jul 22 j 16:48	8°♋27'37	
	-4551 Feb 14 j 22:40	0°♋		-4547 Aug 24 j 14:16	0°♌	
				-4547 Oct 08 j 11:04	0°♍	
conjunction	-4551 Mar 17 j 06:29	21°♋04'40 -0°42'19		-4547 Nov 21 j 08:29	0°♎	
minimum elong	-4551 Mar 17 j 08:21	21°♋07'52 0°42'27		-4546 Jan 03 j 15:20	0°♏	
	-4551 Mar 30 j 09:49	0°♌		-4546 Feb 16 j 04:24	0°♐	
max. Earth dist.	-4551 Apr 13 j 19:04	9°♌38'05 2.58276 AU	desc. node	-4546 Mar 09 j 13:52	14°♐16'05	
morning rise	-4551 May 09 j 00:52	26°♌14'32		-4546 Apr 03 j 15:40	0°♈	
	-4551 May 14 j 19:45	0°♍	retrograde	-4546 Jun 15 j 04:21	26°♈56'41	
asc. node	-4551 Jun 02 j 21:36	12°♍16'38	min. Earth dist.	-4546 Jul 11 j 21:50	22°♈15'26 0.41995 AU	
	-4551 Jun 30 j 21:22	0°♎	greatest brilliancy	-4546 Jul 17 j 19:16	20°♈24'41 -2.6m	
	-4551 Aug 18 j 12:57	0°♏	opposition	-4546 Jul 19 j 09:11	19°♈54'42 -6°25'57	
	-4551 Oct 08 j 20:49	0°♐	direct	-4546 Aug 19 j 12:49	14°♈04'02	
	-4551 Dec 09 j 06:41	0°♑		-4546 Oct 14 j 23:56	0°♒	
retrograde	-4550 Jan 22 j 09:19	9°♑39'26		-4546 Dec 09 j 11:05	0°♓	
opposition	-4550 Feb 26 j 05:00	2°♑35'23 4°46'59	asc. node	-4545 Jan 23 j 12:46	27°♓00'30	
greatest brilliancy	-4550 Feb 27 j 16:33	2°♑04'26 -2.1m		-4545 Jan 28 j 10:32	0°♈	
	-4550 Mar 05 j 15:56	30°♒♓		-4545 Mar 18 j 05:48	0°♍	
min. Earth dist.	-4550 Mar 06 j 15:24	29°♓40'07 0.50253 AU		-4545 May 05 j 08:13	0°♉	

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 36

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

evening set	-4545 May 29 j 12:28	15°♄19'11		-4540 Jan 14 j 06:58	0°♄	
	-4545 Jun 21 j 08:34	0°♄		-4540 Feb 22 j 14:04	0°♄	
max. Earth dist.	-4545 Jun 26 j 20:47	3°♄34'41	2.63246 AU	-4540 Apr 03 j 15:34	0°♄	
				-4540 May 17 j 09:21	0°♄	
conjunction	-4545 Jul 15 j 07:24	15°♄39'54	1°09'50	-4540 Jul 04 j 08:24	0°♄	
minimum elong	-4545 Jul 15 j 06:51	15°♄39'00	1°10'03	-4540 Sep 01 j 15:06	0°♄	
	-4545 Aug 05 j 19:28	0°♄		-4540 Sep 14 j 15:46	4°♄36'34	
morning rise	-4545 Aug 30 j 17:02	16°♄57'03		-4540 Oct 15 j 17:26	9°♄54'00	
	-4545 Sep 18 j 11:50	0°♄		-4540 Nov 24 j 13:13	0°♄15'08	2°31'09
	-4545 Oct 30 j 12:32	0°♄		-4540 Nov 24 j 12:28	0°♄15'53	-1.3m
	-4545 Dec 10 j 06:00	0°♄		-4540 Nov 24 j 19:31	0°♄08'49	0.67116 AU
	-4544 Jan 19 j 05:46	0°♄		-4540 Nov 25 j 04:19	30°♄	
desc. node	-4544 Jan 25 j 14:12	4°♄46'33		-4539 Jan 04 j 03:30	20°♄25'43	
	-4544 Feb 28 j 08:31	0°♄		-4539 Feb 17 j 07:09	0°♄	
	-4544 Apr 10 j 00:59	0°♄		-4539 Apr 19 j 06:09	0°♄	
	-4544 May 26 j 19:10	0°♄		-4539 Jun 06 j 23:55	0°♄	
retrograde	-4544 Aug 04 j 01:20	24°♄18'05		-4539 Jul 20 j 22:35	0°♄	
min. Earth dist.	-4544 Sep 04 j 18:33	17°♄28'03	0.54371 AU	-4539 Aug 30 j 21:07	0°♄	
opposition	-4544 Sep 11 j 16:28	14°♄48'39	-3°43'47	-4539 Sep 16 j 05:35	12°♄25'58	
greatest brilliancy	-4544 Sep 10 j 20:07	15°♄08'13	-1.9m	-4539 Oct 08 j 22:23	0°♄	
direct	-4544 Oct 17 j 02:30	6°♄53'33		-4539 Oct 19 j 20:02	8°♄31'51	
asc. node	-4544 Dec 10 j 12:10	20°♄58'34		-4539 Nov 16 j 02:43	0°♄	
	-4544 Dec 29 j 22:13	0°♄				
	-4543 Feb 23 j 09:18	0°♄		conjunction	-4539 Dec 23 j 23:28	29°♄40'56 -0°59'27
	-4543 Apr 14 j 21:42	0°♄		minimum elong	-4539 Dec 23 j 20:39	29°♄35'28 0°59'36
	-4543 Jun 01 j 19:10	0°♄			-4539 Dec 24 j 09:17	0°♄
evening set	-4543 Jul 07 j 06:12	23°♄14'24			-4538 Feb 01 j 15:07	0°♄
	-4543 Jul 17 j 07:22	0°♄		max. Earth dist.	-4538 Feb 09 j 13:46	5°♄56'06 2.41331 AU
max. Earth dist.	-4543 Jul 25 j 04:21	5°♄21'17	2.54495 AU	morning rise	-4538 Feb 28 j 04:59	19°♄38'27
					-4538 Mar 14 j 13:48	0°♄
conjunction	-4543 Aug 25 j 10:54	27°♄07'25	1°01'44		-4538 Apr 26 j 18:21	0°♄
minimum elong	-4543 Aug 25 j 12:22	27°♄10'01	1°01'55		-4538 Jun 11 j 14:56	0°♄
	-4543 Aug 29 j 12:02	0°♄			-4538 Jul 31 j 02:06	0°♄
morning rise	-4543 Oct 09 j 16:16	0°♄		asc. node	-4538 Aug 02 j 15:26	1°♄28'01
	-4543 Oct 16 j 10:06	5°♄01'54			-4538 Sep 27 j 06:34	0°♄
	-4543 Nov 18 j 08:27	0°♄		retrograde	-4538 Nov 20 j 21:04	13°♄52'29
desc. node	-4543 Dec 12 j 11:37	18°♄35'43		opposition	-4538 Dec 29 j 11:36	4°♄56'35 4°30'51
	-4543 Dec 27 j 04:55	0°♄		greatest brilliancy	-4538 Dec 30 j 00:54	4°♄43'33 -1.4m
	-4542 Feb 04 j 01:13	0°♄		min. Earth dist.	-4537 Jan 02 j 13:09	3°♄21'09 0.64234 AU
	-4542 Mar 15 j 20:09	0°♄			-4537 Jan 11 j 14:55	30°♄
	-4542 Apr 26 j 19:11	0°♄		direct	-4537 Feb 08 j 15:07	24°♄56'26
	-4542 Jun 12 j 03:20	0°♄			-4537 Mar 10 j 22:36	0°♄
	-4542 Aug 12 j 21:01	0°♄			-4537 May 13 j 09:10	0°♄
retrograde	-4542 Sep 11 j 19:30	5°♄13'31			-4537 Jun 29 j 04:58	0°♄
	-4542 Oct 09 j 14:00	30°♄		desc. node	-4537 Aug 04 j 03:15	25°♄35'11
min. Earth dist.	-4542 Oct 18 j 07:18	26°♄39'48	0.63664 AU		-4537 Aug 10 j 02:33	0°♄
opposition	-4542 Oct 21 j 18:53	25°♄15'52	-0°16'06		-4537 Sep 18 j 13:06	0°♄
greatest brilliancy	-4542 Oct 21 j 18:14	25°♄16'32	-1.5m		-4537 Oct 26 j 22:59	0°♄
asc. node	-4542 Oct 28 j 13:44	22°♄36'26			-4537 Dec 04 j 11:16	0°♄
direct	-4542 Nov 29 j 10:53	16°♄06'18		evening set	-4537 Dec 27 j 05:54	17°♄25'11
	-4541 Jan 23 j 10:08	0°♄			-4536 Jan 12 j 23:55	0°♄
	-4541 Mar 23 j 17:57	0°♄			-4536 Feb 23 j 05:17	0°♄
	-4541 May 13 j 02:33	0°♄				
	-4541 Jun 28 j 08:55	0°♄		conjunction	-4536 Feb 25 j 20:52	1°♄52'46 -0°57'46
	-4541 Aug 10 j 13:57	0°♄		minimum elong	-4536 Feb 25 j 22:56	1°♄56'25 0°57'56
evening set	-4541 Aug 22 j 08:51	8°♄30'17		max. Earth dist.	-4536 Apr 01 j 10:21	26°♄33'21 2.54133 AU
max. Earth dist.	-4541 Sep 09 j 19:03	22°♄03'36	2.42339 AU		-4536 Apr 06 j 12:13	0°♄
	-4541 Sep 20 j 09:45	0°♄		morning rise	-4536 Apr 21 j 22:03	10°♄20'22
					-4536 May 21 j 21:27	0°♄
conjunction	-4541 Oct 17 j 14:37	20°♄44'14	0°09'10	asc. node	-4536 Jun 19 j 13:46	18°♄18'35
minimum elong	-4541 Oct 17 j 15:18	20°♄45'32	0°09'12		-4536 Jul 08 j 06:40	0°♄
behind sun begin	-4541 Oct 16 j 18:00	20°♄04'32			-4536 Aug 27 j 01:05	0°♄
behind sun end	-4541 Oct 18 j 12:35	21°♄26'34			-4536 Oct 21 j 05:10	0°♄
	-4541 Oct 29 j 13:47	0°♄		retrograde	-4535 Jan 01 j 20:20	22°♄08'10
desc. node	-4541 Oct 30 j 08:15	0°♄35'54		opposition	-4535 Feb 07 j 01:07	14°♄24'01 5°13'31
	-4541 Dec 06 j 21:50	0°♄		greatest brilliancy	-4535 Feb 08 j 09:56	13°♄53'53 -1.8m
morning rise	-4541 Dec 20 j 07:15	10°♄30'21		min. Earth dist.	-4535 Feb 14 j 15:18	11°♄37'32 0.55155 AU

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 37

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

direct	-4535 Mar 18 j 19:35	5° $\mathfrak{D}$ 03'08			-4530 Jun 28 j 04:41	0° $\mathbb{I}$		
	-4535 May 29 j 20:04	0° $\mathcal{Q}$						
desc. node	-4535 Jun 21 j 03:00	13° $\mathcal{Q}$ 35'05		conjunction	-4530 Jun 30 j 08:49	1° $\mathbb{I}$ 24'29	1°03'57	
	-4535 Jul 15 j 13:18	0° $\mathfrak{M}$		minimum elong	-4530 Jun 30 j 07:46	1° $\mathbb{I}$ 22'47	1°04'08	
	-4535 Aug 25 j 19:25	0° $\mathfrak{L}$			-4530 Aug 12 j 18:51	0° $\mathfrak{D}$		
	-4535 Oct 04 j 06:18	0° $\mathfrak{M}$		morning rise	-4530 Aug 14 j 22:54	1° $\mathfrak{D}$ 27'07		
	-4535 Nov 12 j 14:24	0° $\mathfrak{J}$			-4530 Sep 25 j 20:03	0° $\mathcal{Q}$		
	-4535 Dec 22 j 21:21	0° $\mathfrak{Z}$			-4530 Nov 07 j 10:04	0° $\mathfrak{M}$		
	-4534 Feb 02 j 19:23	0° $\approx$			-4530 Dec 18 j 20:36	0° $\mathfrak{L}$		
evening set	-4534 Feb 20 j 19:33	12° $\approx$ 29'09			-4529 Jan 28 j 16:47	0° $\mathfrak{M}$		
	-4534 Mar 18 j 15:06	0° $\mathfrak{K}$		desc. node	-4529 Feb 11 j 06:39	9° $\mathfrak{M}$ 57'22		
					-4529 Mar 10 j 23:12	0° $\mathfrak{J}$		
conjunction	-4534 Apr 14 j 11:19	17° $\mathfrak{K}$ 47'43	-0°13'07		-4529 Apr 23 j 22:45	0° $\mathfrak{Z}$		
minimum elong	-4534 Apr 14 j 11:53	17° $\mathfrak{K}$ 48'40	0°13'10		-4529 Jun 21 j 02:35	0° $\approx$		
behind sun begin	-4534 Apr 14 j 00:12	17° $\mathfrak{K}$ 29'30		retrograde	-4529 Jul 18 j 08:34	4° $\approx$ 50'37		
behind sun end	-4534 Apr 14 j 23:35	18° $\mathfrak{K}$ 07'51			-4529 Aug 13 j 15:26	30° $\mathfrak{R}$ $\mathfrak{Z}$		
max. Earth dist.	-4534 Apr 30 j 16:46	28° $\mathfrak{K}$ 23'07	2.63195 AU	min. Earth dist.	-4529 Aug 16 j 22:06	28° $\mathfrak{Z}$ 51'45	0.49545 AU	
	-4534 May 03 j 04:32	0° $\mathfrak{Y}$		greatest brilliancy	-4529 Aug 23 j 10:50	26° $\mathfrak{Z}$ 28'36	-2.2m	
asc. node	-4534 May 07 j 10:13	2° $\mathfrak{Y}$ 44'31		opposition	-4529 Aug 24 j 18:06	25° $\mathfrak{Z}$ 59'56	-5°06'23	
morning rise	-4534 Jun 02 j 12:26	19° $\mathfrak{Y}$ 30'05		direct	-4529 Sep 27 j 13:17	18° $\mathfrak{Z}$ 47'38		
	-4534 Jun 19 j 00:20	0° $\mathfrak{B}$			-4529 Nov 13 j 11:40	0° $\approx$		
	-4534 Aug 05 j 15:07	0° $\mathbb{I}$		asc. node	-4529 Dec 28 j 03:40	21° $\approx$ 38'58		
	-4534 Sep 23 j 00:36	0° $\mathfrak{D}$			-4528 Jan 12 j 09:08	0° $\mathfrak{K}$		
	-4534 Nov 12 j 08:16	0° $\mathcal{Q}$			-4528 Mar 04 j 01:57	0° $\mathfrak{Y}$		
	-4533 Jan 09 j 07:03	0° $\mathfrak{M}$			-4528 Apr 22 j 09:04	0° $\mathfrak{B}$		
retrograde	-4533 Mar 02 j 18:24	13° $\mathfrak{M}$ 17'26			-4528 Jun 08 j 20:02	0° $\mathbb{I}$		
opposition	-4533 Apr 03 j 20:30	7° $\mathfrak{M}$ 28'39	2°20'29	evening set	-4528 Jun 21 j 09:16	8° $\mathbb{I}$ 09'02		
greatest brilliancy	-4533 Apr 04 j 14:56	7° $\mathfrak{M}$ 14'35	-2.6m	max. Earth dist.	-4528 Jul 12 j 19:54	22° $\mathbb{I}$ 18'38	2.58475 AU	
min. Earth dist.	-4533 Apr 11 j 04:50	5° $\mathfrak{M}$ 14'34	0.42414 AU		-4528 Jul 24 j 06:36	0° $\mathfrak{D}$		
direct	-4533 May 08 j 13:27	0° $\mathfrak{M}$ 35'39						
desc. node	-4533 May 09 j 04:57	0° $\mathfrak{M}$ 35'49		conjunction	-4528 Aug 08 j 04:50	10° $\mathfrak{D}$ 10'14	1°09'30	
	-4533 Jul 24 j 04:06	0° $\mathfrak{L}$		minimum elong	-4528 Aug 08 j 05:29	10° $\mathfrak{D}$ 11'21	1°09'42	
	-4533 Sep 07 j 06:39	0° $\mathfrak{M}$			-4528 Sep 05 j 14:55	0° $\mathcal{Q}$		
	-4533 Oct 19 j 14:59	0° $\mathfrak{J}$		morning rise	-4528 Sep 26 j 06:28	14° $\mathcal{Q}$ 47'18		
	-4533 Dec 01 j 00:11	0° $\mathfrak{Z}$			-4528 Oct 17 j 01:45	0° $\mathfrak{M}$		
	-4532 Jan 13 j 11:45	0° $\approx$			-4528 Nov 26 j 01:57	0° $\mathfrak{L}$		
	-4532 Feb 27 j 10:39	0° $\mathfrak{K}$		desc. node	-4528 Dec 29 j 05:46	25° $\mathfrak{L}$ 21'58		
asc. node	-4532 Mar 24 j 05:46	16° $\mathfrak{K}$ 49'07			-4527 Jan 04 j 06:28	0° $\mathfrak{M}$		
evening set	-4532 Apr 05 j 10:05	24° $\mathfrak{K}$ 41'09			-4527 Feb 12 j 10:44	0° $\mathfrak{J}$		
	-4532 Apr 13 j 16:25	0° $\mathfrak{Y}$			-4527 Mar 24 j 15:55	0° $\mathfrak{Z}$		
					-4527 May 06 j 12:16	0° $\approx$		
conjunction	-4532 May 23 j 16:35	25° $\mathfrak{Y}$ 34'43	0°32'44		-4527 Jun 24 j 23:57	0° $\mathfrak{K}$		
minimum elong	-4532 May 23 j 15:30	25° $\mathfrak{Y}$ 33'00	0°32'49	retrograde	-4527 Aug 28 j 12:56	20° $\mathfrak{K}$ 37'59		
max. Earth dist.	-4532 May 24 j 09:20	26° $\mathfrak{Y}$ 01'26	2.66981 AU	min. Earth dist.	-4527 Oct 02 j 07:49	12° $\mathfrak{K}$ 40'17	0.60675 AU	
	-4532 May 30 j 14:56	0° $\mathfrak{B}$		opposition	-4527 Oct 07 j 05:39	10° $\mathfrak{K}$ 43'02	-1°32'40	
morning rise	-4532 Jul 08 j 12:16	24° $\mathfrak{B}$ 50'59		greatest brilliancy	-4527 Oct 06 j 23:39	10° $\mathfrak{K}$ 49'00	-1.6m	
	-4532 Jul 16 j 12:53	0° $\mathbb{I}$		direct	-4527 Nov 13 j 19:16	1° $\mathfrak{K}$ 57'30		
	-4532 Aug 31 j 21:34	0° $\mathfrak{D}$		asc. node	-4527 Nov 14 j 04:10	1° $\mathfrak{K}$ 57'33		
	-4532 Oct 16 j 14:10	0° $\mathcal{Q}$			-4526 Feb 06 j 10:46	0° $\mathfrak{Y}$		
	-4532 Nov 30 j 21:15	0° $\mathfrak{M}$			-4526 Apr 01 j 14:40	0° $\mathfrak{B}$		
	-4531 Jan 15 j 12:44	0° $\mathfrak{L}$			-4526 May 20 j 17:07	0° $\mathbb{I}$		
	-4531 Mar 04 j 21:24	0° $\mathfrak{M}$			-4526 Jul 05 j 14:12	0° $\mathfrak{D}$		
desc. node	-4531 Mar 26 j 06:23	11° $\mathfrak{M}$ 36'53		evening set	-4526 Aug 03 j 05:53	19° $\mathfrak{D}$ 43'11		
retrograde	-4531 May 19 j 15:51	27° $\mathfrak{M}$ 44'09			-4526 Aug 17 j 18:13	0° $\mathcal{Q}$		
min. Earth dist.	-4531 Jun 16 j 02:42	23° $\mathfrak{M}$ 15'45	0.38571 AU	max. Earth dist.	-4526 Aug 18 j 12:16	0° $\mathcal{Q}$ 32'17	2.47258 AU	
opposition	-4531 Jun 20 j 11:14	22° $\mathfrak{M}$ 02'38	-5°37'12					
greatest brilliancy	-4531 Jun 19 j 13:14	22° $\mathfrak{M}$ 18'03	-2.9m	conjunction	-4526 Sep 25 j 01:26	28° $\mathcal{Q}$ 01'48	0°35'10	
direct	-4531 Jul 20 j 09:18	16° $\mathfrak{M}$ 55'26		minimum elong	-4526 Sep 25 j 03:21	28° $\mathcal{Q}$ 05'21	0°35'17	
	-4531 Sep 07 j 18:51	0° $\mathfrak{J}$			-4526 Sep 27 j 16:36	0° $\mathfrak{M}$		
	-4531 Nov 01 j 18:08	0° $\mathfrak{Z}$			-4526 Nov 06 j 00:40	0° $\mathfrak{L}$		
	-4531 Dec 20 j 06:52	0° $\approx$		desc. node	-4526 Nov 16 j 02:32	7° $\mathfrak{L}$ 49'03		
	-4530 Feb 05 j 22:47	0° $\mathfrak{K}$		morning rise	-4526 Nov 22 j 16:53	12° $\mathfrak{L}$ 57'13		
asc. node	-4530 Feb 09 j 03:45	2° $\mathfrak{K}$ 01'06			-4526 Dec 14 j 12:35	0° $\mathfrak{M}$		
	-4530 Mar 25 j 16:33	0° $\mathfrak{Y}$			-4525 Jan 22 j 00:42	0° $\mathfrak{J}$		
	-4530 May 12 j 07:24	0° $\mathfrak{B}$			-4525 Mar 02 j 10:20	0° $\mathfrak{Z}$		
evening set	-4530 May 14 j 15:53	1° $\mathfrak{B}$ 29'30			-4525 Apr 12 j 16:07	0° $\approx$		
max. Earth dist.	-4530 Jun 17 j 05:07	22° $\mathfrak{B}$ 54'34	2.65327 AU		-4525 May 26 j 23:02	0° $\mathfrak{K}$		

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 38

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4525 Jul 16 j 00:06	0°♊			-4520 Sep 03 j 23:16	0°♊	
asc. node	-4525 Oct 02 j 05:50	26°♊55'39			-4520 Oct 12 j 20:26	0°♊	
retrograde	-4525 Oct 03 j 06:19	26°♊56'04			-4520 Nov 20 j 17:48	0°♊	
min. Earth dist.	-4525 Nov 11 j 01:50	17°♊35'46	0.66519 AU		-4520 Dec 30 j 15:07	0°♊	
opposition	-4525 Nov 12 j 07:02	17°♊06'24	1°31'37	evening set	-4519 Jan 31 j 14:09	23°♊11'37	
greatest brilliancy	-4525 Nov 12 j 04:37	17°♊08'50	-1.4m		-4519 Feb 10 j 04:26	0°♊	
direct	-4525 Dec 22 j 07:12	7°♊29'08			-4519 Mar 25 j 17:16	0°♊	
	-4524 Mar 05 j 01:35	0°♊					
	-4524 Apr 28 j 12:22	0°♊		conjunction	-4519 Mar 27 j 23:46	1°♊31'42	-0°31'57
	-4524 Jun 14 j 22:54	0°♊		minimum elong	-4519 Mar 28 j 01:13	1°♊34'08	0°32'03
	-4524 Jul 28 j 12:15	0°♊		max. Earth dist.	-4519 Apr 20 j 10:11	17°♊07'10	2.60233 AU
	-4524 Sep 07 j 08:26	0°♊			-4519 May 10 j 03:08	0°♊	
evening set	-4524 Sep 24 j 17:43	13°♊13'39		morning rise	-4519 May 18 j 06:11	5°♊15'26	
desc. node	-4524 Oct 02 j 23:07	19°♊33'39		asc. node	-4519 May 24 j 01:57	9°♊00'25	
	-4524 Oct 16 j 09:54	0°♊			-4519 Jun 26 j 01:26	0°♊	
	-4524 Nov 23 j 14:48	0°♊			-4519 Aug 13 j 05:46	0°♊	
					-4519 Oct 02 j 04:58	0°♊	
conjunction	-4524 Nov 26 j 05:12	2°♊02'52	-0°37'27		-4519 Nov 26 j 09:28	0°♊	
minimum elong	-4524 Nov 26 j 02:13	1°♊57'00	0°37'31	retrograde	-4518 Feb 04 j 12:27	21°♊09'04	
max. Earth dist.	-4524 Dec 10 j 02:23	12°♊57'58	2.37699 AU	opposition	-4518 Mar 10 j 09:29	14°♊30'54	4°11'35
	-4524 Dec 31 j 21:24	0°♊		greatest brilliancy	-4518 Mar 11 j 18:44	14°♊03'06	-2.3m
morning rise	-4523 Feb 02 j 03:03	24°♊44'20		min. Earth dist.	-4518 Mar 18 j 21:51	11°♊40'45	0.47377 AU
	-4523 Feb 09 j 02:37	0°♊		direct	-4518 Apr 16 j 16:39	6°♊23'58	
	-4523 Mar 22 j 00:41	0°♊		desc. node	-4518 May 25 j 20:40	15°♊34'29	
	-4523 May 04 j 07:15	0°♊			-4518 Jun 23 j 04:39	0°♊	
	-4523 Jun 19 j 15:09	0°♊			-4518 Aug 08 j 07:32	0°♊	
	-4523 Aug 09 j 22:56	0°♊			-4518 Sep 18 j 19:24	0°♊	
asc. node	-4523 Aug 19 j 07:03	4°♊55'48			-4518 Oct 29 j 10:09	0°♊	
	-4523 Oct 27 j 02:30	0°♊			-4518 Dec 09 j 16:23	0°♊	
retrograde	-4523 Nov 06 j 08:39	0°♊38'04			-4517 Jan 21 j 08:42	0°♊	
	-4523 Nov 16 j 05:37	30°♊			-4517 Mar 06 j 17:59	0°♊	
opposition	-4523 Dec 15 j 14:03	21°♊22'28	3°50'48	evening set	-4517 Mar 20 j 23:41	9°♊24'03	
greatest brilliancy	-4523 Dec 15 j 20:27	21°♊16'08	-1.4m	asc. node	-4517 Apr 10 j 23:07	23°♊05'32	
min. Earth dist.	-4523 Dec 18 j 03:38	20°♊21'29	0.66145 AU		-4517 Apr 21 j 15:15	0°♊	
direct	-4522 Jan 25 j 17:13	11°♊22'27					
	-4522 Mar 31 j 02:31	0°♊		conjunction	-4517 May 09 j 14:41	11°♊33'48	0°16'05
	-4522 May 23 j 15:08	0°♊		minimum elong	-4517 May 09 j 14:04	11°♊32'48	0°16'07
	-4522 Jul 07 j 20:56	0°♊		max. Earth dist.	-4517 May 16 j 00:39	15°♊40'28	2.66133 AU
	-4522 Aug 18 j 05:55	0°♊			-4517 Jun 07 j 11:00	0°♊	
desc. node	-4522 Aug 20 j 22:02	2°♊00'11		morning rise	-4517 Jun 25 j 08:17	11°♊23'46	
	-4522 Sep 26 j 10:59	0°♊			-4517 Jul 24 j 13:04	0°♊	
	-4522 Nov 03 j 17:09	0°♊			-4517 Sep 09 j 11:35	0°♊	
evening set	-4522 Dec 01 j 02:07	21°♊27'43			-4517 Oct 26 j 08:51	0°♊	
	-4522 Dec 12 j 01:39	0°♊			-4517 Dec 12 j 23:12	0°♊	
	-4521 Jan 20 j 10:11	0°♊			-4516 Feb 01 j 19:18	0°♊	
				desc. node	-4516 Apr 11 j 22:44	26°♊30'30	
conjunction	-4521 Feb 02 j 23:42	10°♊04'15	-1°07'07	retrograde	-4516 Apr 19 j 04:43	26°♊50'20	
minimum elong	-4521 Feb 03 j 00:41	10°♊06'04	1°07'20	opposition	-4516 May 19 j 14:21	21°♊47'30	-2°48'39
	-4521 Mar 02 j 11:26	0°♊		greatest brilliancy	-4516 May 19 j 14:40	21°♊47'17	-2.9m
max. Earth dist.	-4521 Mar 18 j 12:20	11°♊19'29	2.49354 AU	min. Earth dist.	-4516 May 20 j 13:32	21°♊32'05	0.37811 AU
morning rise	-4521 Apr 04 j 00:27	22°♊45'19		direct	-4516 Jun 19 j 02:14	16°♊39'26	
	-4521 Apr 14 j 15:40	0°♊			-4516 Aug 06 j 23:37	0°♊	
	-4521 May 30 j 02:27	0°♊			-4516 Sep 28 j 15:54	0°♊	
asc. node	-4521 Jul 07 j 05:08	24°♊00'38			-4516 Nov 14 j 00:02	0°♊	
	-4521 Jul 16 j 23:56	0°♊			-4516 Dec 29 j 15:54	0°♊	
	-4521 Sep 06 j 13:03	0°♊			-4515 Feb 13 j 22:13	0°♊	
	-4521 Nov 10 j 07:17	0°♊		asc. node	-4515 Feb 25 j 20:06	7°♊38'32	
retrograde	-4521 Dec 15 j 19:46	6°♊31'11			-4515 Apr 01 j 22:10	0°♊	
	-4520 Jan 17 j 10:04	30°♊		evening set	-4515 Apr 29 j 16:34	17°♊36'53	
opposition	-4520 Jan 22 j 03:29	28°♊14'22	5°10'29		-4515 May 19 j 04:41	0°♊	
greatest brilliancy	-4520 Jan 23 j 05:12	27°♊49'57	-1.6m	max. Earth dist.	-4515 Jun 07 j 23:24	12°♊36'36	2.66604 AU
min. Earth dist.	-4520 Jan 28 j 10:58	25°♊50'59	0.59417 AU				
direct	-4520 Mar 02 j 18:44	18°♊29'10		conjunction	-4515 Jun 15 j 17:04	17°♊33'47	0°54'14
	-4520 Apr 18 j 12:14	0°♊		minimum elong	-4515 Jun 15 j 15:47	17°♊31'44	0°54'23
	-4520 Jun 11 j 22:46	0°♊			-4515 Jul 05 j 00:43	0°♊	
desc. node	-4520 Jul 07 j 20:58	17°♊19'54		morning rise	-4515 Jul 31 j 00:53	16°♊55'56	
	-4520 Jul 25 j 17:40	0°♊			-4515 Aug 19 j 20:12	0°♊	

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Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4515 Oct 03 j 09:23	0°♊	opposition	-4510 Oct 29 j 19:17	3°♊40'06	0°25'27
	-4515 Nov 15 j 17:58	0°♋	greatest brilliancy	-4510 Oct 29 j 18:06	3°♊41'17	-1.5m
	-4515 Dec 28 j 05:47	0°♌		-4510 Nov 08 j 06:55	30°♋	
	-4514 Feb 08 j 12:04	0°♍	direct	-4510 Dec 08 j 00:28	24°♋19'19	
desc. node	-4514 Feb 28 j 00:12	13°♍38'35		-4509 Jan 09 j 23:00	0°♌	
	-4514 Mar 24 j 03:13	0°♎		-4509 Mar 17 j 09:12	0°♍	
	-4514 May 14 j 10:21	0°♏		-4509 May 07 j 21:27	0°♎	
retrograde	-4514 Jun 28 j 03:11	11°♏59'55		-4509 Jun 23 j 13:05	0°♏	
min. Earth dist.	-4514 Jul 25 j 15:13	6°♏53'57	0.44535 AU	-4509 Aug 05 j 21:30	0°♐	
greatest brilliancy	-4514 Aug 01 j 00:37	4°♏45'37	-2.4m	-4509 Sep 03 j 01:35	20°♐31'29	
opposition	-4514 Aug 02 j 15:05	4°♏13'07	-6°11'03	-4509 Sep 15 j 17:49	0°♑	
	-4514 Aug 16 j 21:07	30°♑		-4509 Sep 28 j 18:38	9°♑52'34	2.39891 AU
direct	-4514 Sep 03 j 17:41	27°♑52'21		-4509 Oct 20 j 18:39	26°♑48'41	
	-4514 Sep 22 j 06:53	0°♒		-4509 Oct 24 j 21:09	0°♒	
	-4514 Dec 01 j 10:04	0°♓				
asc. node	-4513 Jan 13 j 18:43	24°♓48'59	conjunction	-4509 Oct 31 j 12:02	5°♓09'32	-0°07'46
	-4513 Jan 22 j 12:29	0°♈	minimum elong	-4509 Oct 31 j 11:24	5°♓08'16	0°07'47
	-4513 Mar 13 j 03:14	0°♉	behind sun begin	-4509 Oct 30 j 11:49	4°♓22'17	
	-4513 Apr 30 j 14:35	0°♊	behind sun end	-4509 Nov 01 j 10:58	5°♓54'16	
evening set	-4513 Jun 07 j 02:31	23°♊46'15		-4509 Dec 02 j 03:58	0°♋	
	-4513 Jun 16 j 18:29	0°♋	morning rise	-4508 Jan 05 j 12:55	26°♋56'03	
max. Earth dist.	-4513 Jul 02 j 19:02	10°♋26'20	2.61742 AU	-4508 Jan 09 j 11:32	0°♌	
				-4508 Feb 17 j 16:55	0°♍	
conjunction	-4513 Jul 24 j 03:09	24°♋34'08	1°11'13	-4508 Mar 29 j 15:39	0°♎	
minimum elong	-4513 Jul 24 j 02:59	24°♋33'52	1°11'26	-4508 May 12 j 02:49	0°♏	
	-4513 Aug 01 j 05:15	0°♏		-4508 Jun 28 j 06:02	0°♐	
morning rise	-4513 Sep 09 j 06:44	26°♏50'25		-4508 Aug 22 j 03:12	0°♑	
	-4513 Sep 13 j 18:45	0°♐	asc. node	-4508 Sep 04 j 21:05	6°♑05'35	
	-4513 Oct 25 j 14:06	0°♑	retrograde	-4508 Oct 23 j 12:28	17°♑44'01	
	-4513 Dec 05 j 00:47	0°♒	opposition	-4508 Dec 02 j 04:32	8°♒12'28	3°02'37
	-4512 Jan 13 j 16:35	0°♓	greatest brilliancy	-4508 Dec 02 j 05:46	8°♒11'15	-1.3m
desc. node	-4512 Jan 15 j 22:44	1°♓42'47	min. Earth dist.	-4508 Dec 03 j 06:32	7°♒46'31	0.67049 AU
	-4512 Feb 22 j 09:13	0°♈		-4508 Dec 26 j 20:00	30°♒	
	-4512 Apr 03 j 08:34	0°♉	direct	-4507 Jan 12 j 01:15	28°♒17'59	
	-4512 May 18 j 00:09	0°♊		-4507 Jan 29 j 06:29	0°♋	
	-4512 Jul 17 j 02:49	0°♋		-4507 Apr 12 j 13:33	0°♌	
retrograde	-4512 Aug 13 j 07:25	4°♋38'26		-4507 Jun 01 j 13:59	0°♍	
	-4512 Sep 08 j 00:44	30°♋		-4507 Jul 15 j 22:35	0°♎	
min. Earth dist.	-4512 Sep 15 j 04:23	27°♋22'45	0.56827 AU	-4507 Aug 26 j 00:40	0°♏	
opposition	-4512 Sep 21 j 10:30	24°♋56'12	-2°55'05	-4507 Sep 06 j 15:24	8°♏47'18	
greatest brilliancy	-4512 Sep 20 j 20:05	25°♋10'17	-1.8m	-4507 Oct 04 j 03:20	0°♐	
direct	-4512 Oct 27 j 16:39	16°♋41'06		-4507 Nov 03 j 20:55	24°♐06'57	
asc. node	-4512 Nov 30 j 19:05	22°♋53'55		-4507 Nov 11 j 08:11	0°♑	
	-4512 Dec 19 j 14:02	0°♈		-4507 Dec 19 j 14:58	0°♉	
	-4511 Feb 17 j 05:16	0°♉				
	-4511 Apr 09 j 18:30	0°♊	conjunction	-4506 Jan 08 j 08:04	15°♉11'43	-1°06'04
	-4511 May 28 j 01:22	0°♋	minimum elong	-4506 Jan 08 j 06:34	15°♉08'52	1°06'16
	-4511 Jul 12 j 16:52	0°♌		-4506 Jan 27 j 21:02	0°♍	
evening set	-4511 Jul 16 j 16:15	2°♌41'33	max. Earth dist.	-4506 Feb 26 j 03:04	21°♌35'03	2.44146 AU
max. Earth dist.	-4511 Aug 02 j 00:26	13°♌54'23	2.52051 AU	-4506 Mar 09 j 19:34	0°♎	
	-4511 Aug 24 j 21:44	0°♏	morning rise	-4506 Mar 13 j 14:07	2°♎41'29	
				-4506 Apr 21 j 22:26	0°♏	
conjunction	-4511 Sep 04 j 22:22	7°♏54'55	0°54'12	-4506 Jun 06 j 13:17	0°♐	
minimum elong	-4511 Sep 05 j 00:11	7°♏58'13	0°54'22	-4506 Jul 23 j 21:04	29°♐11'10	
	-4511 Oct 04 j 24:00	0°♑	asc. node	-4506 Jul 25 j 06:04	0°♑	
morning rise	-4511 Oct 28 j 23:54	18°♑05'42		-4506 Sep 17 j 22:59	0°♒	
	-4511 Nov 13 j 13:06	0°♒	retrograde	-4506 Nov 29 j 13:47	22°♒09'35	
desc. node	-4511 Dec 02 j 21:31	14°♒57'23	opposition	-4505 Jan 06 j 19:03	13°♒26'08	4°49'03
	-4511 Dec 22 j 06:00	0°♓	greatest brilliancy	-4505 Jan 07 j 12:41	13°♒09'02	-1.5m
	-4510 Jan 29 j 22:23	0°♈	min. Earth dist.	-4505 Jan 11 j 16:22	11°♒32'31	0.62790 AU
	-4510 Mar 10 j 12:31	0°♉	direct	-4505 Feb 16 j 21:01	3°♒28'45	
	-4510 Apr 21 j 02:34	0°♊		-4505 May 05 j 19:20	0°♋	
	-4510 Jun 05 j 09:28	0°♋		-4505 Jun 23 j 08:02	0°♌	
	-4510 Jul 30 j 00:42	0°♌	desc. node	-4505 Jul 25 j 13:42	22°♌33'13	
retrograde	-4510 Sep 19 j 17:35	13°♌36'18		-4505 Aug 04 j 18:16	0°♍	
asc. node	-4510 Oct 18 j 20:14	7°♌57'04		-4505 Sep 13 j 10:21	0°♎	
min. Earth dist.	-4510 Oct 27 j 02:59	4°♌44'45	0.64959 AU	-4505 Oct 21 j 23:21	0°♏	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4505 Nov 29 j 13:47	0°♊	morning rise	-4500 Jul 16 j 15:18	3°♊03'13	
	-4504 Jan 08 j 04:27	0°♊		-4500 Aug 27 j 01:07	0°♊	
evening set	-4504 Jan 10 j 02:00	1°♊24'31		-4500 Oct 11 j 06:30	0°♊	
	-4504 Feb 18 j 11:35	0°♊		-4500 Nov 24 j 17:25	0°♊	
				-4499 Jan 07 j 21:15	0°♊	
conjunction	-4504 Mar 08 j 18:06	13°♊31'20 -0°49'22		-4499 Feb 21 j 22:08	0°♊	
minimum elong	-4504 Mar 08 j 20:10	13°♊34'55 0°49'30	desc. node	-4499 Mar 16 j 16:42	14°♊18'16	
	-4504 Apr 01 j 19:26	0°♊		-4499 Apr 13 j 17:42	0°♊	
max. Earth dist.	-4504 Apr 08 j 20:24	4°♊44'34 2.56513 AU	retrograde	-4499 Jun 04 j 06:53	15°♊04'56	
morning rise	-4504 May 01 j 21:33	20°♊02'45	min. Earth dist.	-4499 Jun 30 j 21:22	10°♊35'58 0.40213 AU	
	-4504 May 17 j 03:41	0°♊	greatest brilliancy	-4499 Jul 05 j 23:07	9°♊05'48 -2.7m	
asc. node	-4504 Jun 09 j 18:57	15°♊10'34	opposition	-4499 Jul 07 j 08:21	8°♊41'01 -6°19'31	
	-4504 Jul 03 j 07:13	0°♊	direct	-4499 Aug 06 j 19:16	3°♊12'56	
	-4504 Aug 21 j 07:54	0°♊		-4499 Oct 23 j 01:45	0°♊	
	-4504 Oct 12 j 21:51	0°♊		-4499 Dec 13 j 15:46	0°♊	
	-4504 Dec 24 j 02:59	0°♊	asc. node	-4498 Jan 30 j 09:50	29°♊20'41	
retrograde	-4503 Jan 13 j 03:27	2°♊16'31		-4498 Jan 31 j 11:14	0°♊	
	-4503 Feb 01 j 03:58	30°♊03'58		-4498 Mar 20 j 18:09	0°♊	
opposition	-4503 Feb 17 j 15:03	24°♊53'32 5°02'17		-4498 May 07 j 15:23	0°♊	
greatest brilliancy	-4503 Feb 19 j 02:09	24°♊22'10 -2.0m	evening set	-4498 May 23 j 04:19	9°♊50'33	
min. Earth dist.	-4503 Feb 25 j 18:43	21°♊59'33 0.52518 AU	max. Earth dist.	-4498 Jun 22 j 19:53	29°♊29'24 2.64284 AU	
direct	-4503 Mar 28 j 17:30	15°♊53'09		-4498 Jun 23 j 14:47	0°♊	
	-4503 May 18 j 13:58	0°♊				
desc. node	-4503 Jun 11 j 13:50	13°♊00'24	conjunction	-4498 Jul 08 j 20:44	9°♊55'34 1°07'51	
	-4503 Jul 08 j 08:15	0°♊	minimum elong	-4498 Jul 08 j 19:57	9°♊54'16 1°08'03	
	-4503 Aug 19 j 16:00	0°♊		-4498 Aug 08 j 03:56	0°♊	
	-4503 Sep 28 j 15:19	0°♊	morning rise	-4498 Aug 23 j 19:45	10°♊34'27	
	-4503 Nov 07 j 07:16	0°♊		-4498 Sep 21 j 01:02	0°♊	
	-4503 Dec 17 j 20:11	0°♊		-4498 Nov 02 j 08:08	0°♊	
	-4502 Jan 28 j 22:53	0°♊		-4498 Dec 13 j 09:10	0°♊	
evening set	-4502 Mar 03 j 10:58	22°♊58'34		-4497 Jan 22 j 17:13	0°♊	
	-4502 Mar 13 j 21:56	0°♊	desc. node	-4497 Feb 01 j 17:40	7°♊28'01	
				-4497 Mar 04 j 05:34	0°♊	
conjunction	-4502 Apr 23 j 21:13	26°♊58'32 -0°02'11		-4497 Apr 15 j 15:01	0°♊	
minimum elong	-4502 Apr 23 j 21:21	26°♊58'43 0°02'12		-4497 Jun 03 j 20:21	0°♊	
behind sun begin	-4502 Apr 23 j 00:59	26°♊25'40	retrograde	-4497 Jul 28 j 16:56	16°♊41'54	
behind sun end	-4502 Apr 24 j 17:43	27°♊31'46	min. Earth dist.	-4497 Aug 28 j 11:09	10°♊14'43 0.52257 AU	
asc. node	-4502 Apr 27 j 15:06	29°♊24'19	opposition	-4497 Sep 04 j 21:07	7°♊27'02 -4°19'55	
	-4502 Apr 28 j 13:07	0°♊	greatest brilliancy	-4497 Sep 03 j 19:55	7°♊50'49 -2.0m	
max. Earth dist.	-4502 May 06 j 11:49	5°♊08'12 2.64469 AU		-4497 Oct 04 j 14:34	30°♊03'58	
morning rise	-4502 Jun 10 j 23:20	27°♊51'35	direct	-4497 Oct 09 j 14:20	29°♊50'05	
	-4502 Jun 14 j 08:03	0°♊		-4497 Oct 14 j 16:46	0°♊	
	-4502 Jul 31 j 17:01	0°♊	asc. node	-4497 Dec 18 j 08:57	21°♊09'03	
	-4502 Sep 17 j 11:12	0°♊		-4496 Jan 04 j 20:01	0°♊	
	-4502 Nov 05 j 04:26	0°♊		-4496 Feb 27 j 10:48	0°♊	
	-4502 Dec 27 j 07:50	0°♊		-4496 Apr 17 j 10:17	0°♊	
retrograde	-4501 Mar 19 j 08:48	28°♊07'53		-4496 Jun 04 j 03:49	0°♊	
opposition	-4501 Apr 19 j 15:51	22°♊44'04 0°42'40	evening set	-4496 Jun 30 j 08:58	17°♊05'40	
greatest brilliancy	-4501 Apr 19 j 20:46	22°♊40'32 -2.8m		-4496 Jul 19 j 16:20	0°♊	
min. Earth dist.	-4501 Apr 25 j 08:29	21°♊06'22 0.40145 AU	max. Earth dist.	-4496 Jul 19 j 16:25	0°♊00'08 2.56362 AU	
desc. node	-4501 Apr 29 j 14:17	19°♊57'18				
direct	-4501 May 22 j 14:45	16°♊36'14	conjunction	-4496 Aug 17 j 20:30	20°♊02'46 1°05'49	
	-4501 Jul 09 j 20:05	0°♊	minimum elong	-4496 Aug 17 j 21:38	20°♊04'45 1°06'01	
	-4501 Aug 29 j 16:26	0°♊		-4496 Aug 31 j 23:43	0°♊	
	-4501 Oct 12 j 20:18	0°♊	morning rise	-4496 Oct 07 j 09:16	26°♊21'04	
	-4501 Nov 25 j 04:06	0°♊		-4496 Oct 12 j 07:43	0°♊	
	-4500 Jan 08 j 05:36	0°♊		-4496 Nov 21 j 03:57	0°♊	
	-4500 Feb 22 j 13:06	0°♊	desc. node	-4496 Dec 19 j 15:20	21°♊52'11	
asc. node	-4500 Mar 14 j 12:03	13°♊36'31		-4496 Dec 30 j 04:08	0°♊	
	-4500 Apr 08 j 23:58	0°♊		-4495 Feb 07 j 03:22	0°♊	
evening set	-4500 Apr 14 j 09:54	3°♊27'49		-4495 Mar 19 j 01:21	0°♊	
	-4500 May 26 j 00:43	0°♊		-4495 Apr 30 j 06:24	0°♊	
max. Earth dist.	-4500 May 29 j 18:30	2°♊23'06 2.67084 AU		-4495 Jun 16 j 11:50	0°♊	
			retrograde	-4495 Sep 05 j 19:38	29°♊33'25	
conjunction	-4500 Jun 01 j 02:52	3°♊52'58 0°41'23	min. Earth dist.	-4495 Oct 11 j 13:57	21°♊15'22 0.62432 AU	
minimum elong	-4500 Jun 01 j 01:38	3°♊51'00 0°41'29	opposition	-4495 Oct 15 j 17:08	19°♊36'10 -0°47'27	
	-4500 Jul 11 j 21:35	0°♊	greatest brilliancy	-4495 Oct 15 j 14:36	19°♊38'42 -1.6m	



## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 41

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

asc. node	-4495 Nov 04 j 10:06	12° $\text{X}$ 52'00			-4489 Jan 15 j 16:15	0° $\text{Z}$	
direct	-4495 Nov 22 j 22:31	10° $\text{X}$ 36'37					
	-4494 Jan 29 j 02:32	0° $\text{Y}$		conjunction	-4489 Feb 16 j 06:26	23° $\text{Z}$ 11'24	-1°02'43
	-4494 Mar 26 j 21:26	0° $\text{X}$		minimum elong	-4489 Feb 16 j 08:14	23° $\text{Z}$ 14'39	1°02'55
	-4494 May 15 j 17:27	0° $\text{II}$			-4489 Feb 25 j 18:30	0° $\approx$	
	-4494 Jun 30 j 21:01	0° $\text{D}$		max. Earth dist.	-4489 Mar 27 j 11:42	20° $\approx$ 48'35	2.52059 AU
evening set	-4494 Aug 13 j 21:05	0° $\Omega$ 32'27			-4489 Apr 09 j 22:38	0° $\text{X}$	
	-4494 Aug 13 j 02:56	0° $\Omega$		morning rise	-4489 Apr 15 j 00:43	3° $\text{X}$ 26'13	
max. Earth dist.	-4494 Aug 29 j 21:31	12° $\Omega$ 07'18	2.44519 AU		-4489 May 25 j 07:05	0° $\text{Y}$	
	-4494 Sep 23 j 00:48	0° $\text{M}$		asc. node	-4489 Jun 27 j 10:50	21° $\text{Y}$ 04'50	
					-4489 Jul 11 j 19:44	0° $\text{X}$	
conjunction	-4494 Oct 07 j 11:28	10° $\text{M}$ 55'16	0°21'07		-4489 Aug 31 j 04:21	0° $\text{II}$	
minimum elong	-4494 Oct 07 j 12:52	10° $\text{M}$ 57'55	0°21'11		-4489 Oct 27 j 22:55	0° $\text{D}$	
	-4494 Nov 01 j 07:06	0° $\text{D}$		retrograde	-4489 Dec 25 j 19:29	15° $\text{D}$ 40'26	
desc. node	-4494 Nov 06 j 12:15	4° $\text{D}$ 02'51		opposition	-4488 Jan 31 j 13:27	7° $\text{D}$ 40'53	5°14'35
morning rise	-4494 Dec 07 j 22:53	28° $\text{D}$ 37'28		greatest brilliancy	-4488 Feb 01 j 19:25	7° $\text{D}$ 12'56	-1.7m
	-4494 Dec 09 j 17:00	0° $\text{M}$		min. Earth dist.	-4488 Feb 07 j 15:21	5° $\text{D}$ 03'01	0.57156 AU
	-4493 Jan 17 j 02:57	0° $\text{X}$			-4488 Feb 24 j 02:19	30° $\text{X}$ II	
	-4493 Feb 25 j 10:10	0° $\text{Z}$		direct	-4488 Mar 11 j 19:17	28° $\text{II}$ 07'20	
	-4493 Apr 07 j 12:00	0° $\approx$			-4488 Mar 29 j 04:18	0° $\text{D}$	
	-4493 May 21 j 08:37	0° $\text{X}$			-4488 Jun 04 j 07:51	0° $\Omega$	
	-4493 Jul 08 j 22:10	0° $\text{Y}$		desc. node	-4488 Jun 28 j 06:08	15° $\Omega$ 17'12	
	-4493 Sep 11 j 12:26	0° $\text{X}$			-4488 Jul 19 j 14:02	0° $\text{M}$	
asc. node	-4493 Sep 22 j 12:28	2° $\text{X}$ 49'14			-4488 Aug 29 j 08:29	0° $\text{D}$	
retrograde	-4493 Oct 10 j 23:41	4° $\text{X}$ 50'56			-4488 Oct 07 j 12:49	0° $\text{M}$	
	-4493 Nov 07 j 03:32	30° $\text{X}$ Y			-4488 Nov 15 j 15:15	0° $\text{X}$	
opposition	-4493 Nov 19 j 22:45	25° $\text{Y}$ 06'53	2°07'06		-4488 Dec 25 j 16:43	0° $\text{Z}$	
greatest brilliancy	-4493 Nov 19 j 20:55	25° $\text{Y}$ 08'43	-1.4m		-4487 Feb 05 j 09:40	0° $\approx$	
min. Earth dist.	-4493 Nov 19 j 13:14	25° $\text{Y}$ 16'26	0.66973 AU	evening set	-4487 Feb 12 j 08:31	4° $\approx$ 52'19	
direct	-4493 Dec 30 j 07:57	15° $\text{Y}$ 22'21			-4487 Mar 21 j 00:55	0° $\text{X}$	
	-4492 Feb 24 j 22:29	0° $\text{X}$					
	-4492 Apr 22 j 14:58	0° $\text{II}$		conjunction	-4487 Apr 07 j 03:41	11° $\text{X}$ 25'30	-0°21'08
	-4492 Jun 09 j 20:06	0° $\text{D}$		minimum elong	-4487 Apr 07 j 04:38	11° $\text{X}$ 27'05	0°21'12
	-4492 Jul 23 j 16:09	0° $\Omega$		max. Earth dist.	-4487 Apr 26 j 13:43	24° $\text{X}$ 11'47	2.61973 AU
	-4492 Sep 02 j 14:42	0° $\text{M}$			-4487 May 05 j 11:41	0° $\text{Y}$	
desc. node	-4492 Sep 23 j 09:35	15° $\text{M}$ 49'32		asc. node	-4487 May 14 j 08:00	5° $\text{Y}$ 43'36	
evening set	-4492 Oct 08 j 14:12	27° $\text{M}$ 35'05		morning rise	-4487 May 27 j 02:33	13° $\text{Y}$ 56'26	
	-4492 Oct 11 j 16:37	0° $\text{D}$			-4487 Jun 21 j 07:36	0° $\text{X}$	
	-4492 Nov 18 j 21:17	0° $\text{M}$			-4487 Aug 08 j 03:12	0° $\text{II}$	
					-4487 Sep 26 j 02:43	0° $\text{D}$	
conjunction	-4492 Dec 11 j 19:55	18° $\text{M}$ 02'47	-0°51'19		-4487 Nov 17 j 00:56	0° $\Omega$	
minimum elong	-4492 Dec 11 j 16:36	17° $\text{M}$ 56'17	0°51'26		-4486 Jan 24 j 07:01	0° $\text{M}$	
	-4492 Dec 27 j 03:17	0° $\text{X}$		retrograde	-4486 Feb 18 j 19:03	3° $\text{M}$ 36'12	
max. Earth dist.	-4491 Jan 22 j 10:52	20° $\text{X}$ 15'42	2.39278 AU		-4486 Mar 15 j 02:28	30° $\text{X}$ $\Omega$	
	-4491 Feb 04 j 07:47	0° $\text{Z}$		opposition	-4486 Mar 23 j 16:01	27° $\Omega$ 25'06	3°17'04
morning rise	-4491 Feb 17 j 05:26	9° $\text{Z}$ 37'32		greatest brilliancy	-4486 Mar 24 j 18:40	27° $\Omega$ 03'49	-2.5m
	-4491 Mar 17 j 04:53	0° $\approx$		min. Earth dist.	-4486 Mar 31 j 18:30	24° $\Omega$ 50'24	0.44555 AU
	-4491 Apr 29 j 08:26	0° $\text{X}$		direct	-4486 Apr 28 j 15:11	19° $\Omega$ 56'35	
	-4491 Jun 14 j 07:33	0° $\text{Y}$		desc. node	-4486 May 16 j 08:02	22° $\Omega$ 02'37	
	-4491 Aug 03 j 08:21	0° $\text{X}$			-4486 Jun 08 j 13:16	0° $\text{M}$	
asc. node	-4491 Aug 09 j 12:34	3° $\text{X}$ 26'55			-4486 Jul 30 j 22:26	0° $\text{D}$	
	-4491 Oct 04 j 05:34	0° $\text{II}$			-4486 Sep 12 j 00:40	0° $\text{M}$	
retrograde	-4491 Nov 14 j 14:02	8° $\text{II}$ 37'16			-4486 Oct 23 j 10:58	0° $\text{X}$	
	-4491 Dec 22 j 07:50	30° $\text{X}$ $\text{D}$			-4486 Dec 04 j 05:39	0° $\text{Z}$	
opposition	-4491 Dec 23 j 12:15	29° $\text{X}$ 32'05	4°14'58		-4485 Jan 16 j 06:56	0° $\approx$	
greatest brilliancy	-4491 Dec 23 j 22:20	29° $\text{X}$ 22'11	-1.4m		-4485 Mar 01 j 22:17	0° $\text{X}$	
min. Earth dist.	-4491 Dec 26 j 21:59	28° $\text{X}$ 11'44	0.65212 AU	evening set	-4485 Mar 30 j 12:29	18° $\text{X}$ 42'56	
direct	-4490 Feb 02 j 16:58	19° $\text{X}$ 31'21		asc. node	-4485 Apr 01 j 03:52	19° $\text{X}$ 46'48	
	-4490 Mar 20 j 08:47	0° $\text{II}$			-4485 Apr 16 j 23:26	0° $\text{Y}$	
	-4490 May 17 j 07:04	0° $\text{D}$					
	-4490 Jul 02 j 10:30	0° $\Omega$		conjunction	-4485 May 18 j 07:50	20° $\text{Y}$ 05'48	0°26'00
desc. node	-4490 Aug 11 j 07:12	28° $\Omega$ 37'42		minimum elong	-4485 May 18 j 06:55	20° $\text{Y}$ 04'20	0°26'02
	-4490 Aug 13 j 03:27	0° $\text{M}$		max. Earth dist.	-4485 May 21 j 11:04	22° $\text{Y}$ 05'56	2.66715 AU
	-4490 Sep 21 j 12:06	0° $\text{D}$			-4485 Jun 02 j 20:17	0° $\text{X}$	
	-4490 Oct 29 j 20:27	0° $\text{M}$		morning rise	-4485 Jul 03 j 11:45	19° $\text{X}$ 33'02	
	-4490 Dec 07 j 06:29	0° $\text{X}$			-4485 Jul 19 j 19:51	0° $\text{II}$	
evening set	-4490 Dec 16 j 01:45	6° $\text{X}$ 47'23			-4485 Sep 04 j 10:33	0° $\text{D}$	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4485 Oct 20 j 14:46	0°♏			-4479 Feb 10 j 11:31	0°♑		
	-4485 Dec 05 j 18:45	0°♐			-4479 Apr 04 j 10:19	0°♐		
	-4484 Jan 22 j 02:46	0°♑			-4479 May 23 j 04:48	0°♑		
	-4484 Mar 15 j 12:12	0°♒			-4479 Jul 08 j 00:40	0°♒		
desc. node	-4484 Apr 02 j 09:51	7°♒39'17		evening set	-4479 Jul 26 j 12:43	12°♒37'59		
retrograde	-4484 May 06 j 16:23	14°♒35'42		max. Earth dist.	-4479 Aug 10 j 21:31	23°♒21'36	2.49451 AU	
min. Earth dist.	-4484 Jun 04 j 12:53	9°♒53'34	0.37840 AU		-4479 Aug 20 j 06:14	0°♏		
opposition	-4484 Jun 06 j 15:56	9°♒19'03	-4°36'54					
greatest brilliancy	-4484 Jun 06 j 05:10	9°♒26'20	-2.9m	conjunction	-4479 Sep 16 j 01:58	19°♏26'44	0°44'14	
direct	-4484 Jul 06 j 14:11	4°♒18'54		minimum elong	-4479 Sep 16 j 03:57	19°♏30'23	0°44'21	
	-4484 Sep 17 j 23:04	0°♑			-4479 Sep 30 j 07:26	0°♐		
	-4484 Nov 06 j 18:16	0°♒			-4479 Nov 08 j 18:18	0°♑		
	-4484 Dec 23 j 18:47	0°♒		morning rise	-4479 Nov 11 j 13:10	2°♑09'02		
	-4483 Feb 08 j 17:28	0°♑		desc. node	-4479 Nov 23 j 06:50	11°♑14'28		
asc. node	-4483 Feb 16 j 01:09	4°♑39'04			-4479 Dec 17 j 08:39	0°♒		
	-4483 Mar 28 j 02:26	0°♑			-4478 Jan 24 j 22:17	0°♑		
evening set	-4483 May 08 j 07:36	26°♑02'36			-4478 Mar 05 j 08:45	0°♒		
	-4483 May 14 j 13:25	0°♐			-4478 Apr 15 j 16:15	0°♒		
max. Earth dist.	-4483 Jun 13 j 10:09	19°♐02'29	2.66009 AU		-4478 May 30 j 05:28	0°♑		
					-4478 Jul 20 j 13:12	0°♑		
conjunction	-4483 Jun 24 j 02:24	25°♐54'27	1°00'18	retrograde	-4478 Sep 27 j 12:50	21°♑45'15		
minimum elong	-4483 Jun 24 j 01:13	25°♐52'33	1°00'27	asc. node	-4478 Oct 09 j 02:41	20°♑50'58		
	-4483 Jun 30 j 10:27	0°♑		min. Earth dist.	-4478 Nov 04 j 18:02	12°♑37'19	0.65939 AU	
morning rise	-4483 Aug 08 j 11:59	25°♑34'38		opposition	-4478 Nov 06 j 14:57	11°♑52'09	1°04'48	
	-4483 Aug 15 j 03:39	0°♒		greatest brilliancy	-4478 Nov 06 j 12:38	11°♑54'29	-1.4m	
	-4483 Sep 28 j 10:34	0°♏		direct	-4478 Dec 16 j 07:43	2°♑21'37		
	-4483 Nov 10 j 08:58	0°♐			-4477 Mar 10 j 08:45	0°♐		
	-4483 Dec 22 j 05:56	0°♑			-4477 May 02 j 11:24	0°♑		
	-4482 Feb 01 j 15:12	0°♒			-4477 Jun 18 j 14:55	0°♒		
desc. node	-4482 Feb 18 j 10:11	12°♒06'45			-4477 Aug 01 j 03:18	0°♏		
	-4482 Mar 15 j 16:15	0°♑			-4477 Sep 11 j 00:35	0°♐		
retrograde	-4482 Apr 30 j 12:44	0°♒		evening set	-4477 Sep 15 j 14:15	3°♐26'55		
min. Earth dist.	-4482 Jul 09 j 22:48	25°♒49'21		desc. node	-4477 Oct 11 j 03:13	23°♐00'22		
greatest brilliancy	-4482 Aug 07 j 13:37	20°♒14'42	0.47281 AU		-4477 Oct 20 j 03:23	0°♑		
opposition	-4482 Aug 14 j 03:25	17°♒55'18	-2.3m	max. Earth dist.	-4477 Oct 28 j 11:52	6°♑31'07	2.38029 AU	
direct	-4482 Aug 15 j 14:47	17°♒23'53	-5°38'19					
	-4482 Sep 17 j 15:11	10°♒33'48		conjunction	-4477 Nov 15 j 07:59	20°♑30'51	-0°25'02	
	-4482 Nov 21 j 13:28	0°♒		minimum elong	-4477 Nov 15 j 05:53	20°♑26'43	0°25'05	
asc. node	-4481 Jan 04 j 00:44	23°♒04'40			-4477 Nov 27 j 09:18	0°♒		
	-4481 Jan 16 j 03:45	0°♑			-4476 Jan 04 j 16:00	0°♑		
	-4481 Mar 07 j 20:29	0°♑		morning rise	-4476 Jan 21 j 20:42	13°♑17'22		
	-4481 Apr 25 j 18:47	0°♐			-4476 Feb 12 j 20:23	0°♒		
	-4481 Jun 12 j 03:13	0°♑			-4476 Mar 24 j 17:30	0°♒		
evening set	-4481 Jun 15 j 19:30	2°♑22'41			-4476 May 07 j 00:07	0°♑		
max. Earth dist.	-4481 Jul 09 j 01:00	17°♑35'10	2.60038 AU		-4476 Jun 22 j 13:13	0°♑		
	-4481 Jul 27 j 14:59	0°♒			-4476 Aug 13 j 22:17	0°♐		
				asc. node	-4476 Aug 26 j 04:02	6°♐07'19		
conjunction	-4481 Aug 02 j 04:43	3°♒46'10	1°10'53	retrograde	-4476 Oct 31 j 09:15	25°♐32'51		
minimum elong	-4481 Aug 02 j 05:00	3°♒46'39	1°11'07	opposition	-4476 Dec 09 j 20:34	16°♐09'43	3°31'25	
	-4481 Sep 09 j 02:35	0°♏		greatest brilliancy	-4476 Dec 10 j 00:27	16°♐05'52	-1.3m	
morning rise	-4481 Sep 19 j 07:00	7°♏13'24		min. Earth dist.	-4476 Dec 11 j 18:23	15°♐24'12	0.66680 AU	
	-4481 Oct 20 j 18:02	0°♐		direct	-4475 Jan 19 j 22:17	6°♐11'32		
	-4481 Nov 29 j 23:09	0°♑			-4475 Apr 05 j 01:30	0°♑		
desc. node	-4480 Jan 06 j 09:20	28°♑29'46			-4475 May 26 j 22:46	0°♒		
	-4480 Jan 08 j 08:32	0°♒			-4475 Jul 10 j 20:10	0°♏		
	-4480 Feb 16 j 17:20	0°♑			-4475 Aug 21 j 03:07	0°♐		
	-4480 Mar 28 j 04:07	0°♒		desc. node	-4475 Aug 28 j 01:35	5°♐13'20		
	-4480 May 10 j 13:19	0°♒			-4475 Sep 29 j 07:29	0°♑		
	-4480 Jul 01 j 10:45	0°♑			-4475 Nov 06 j 13:01	0°♒		
retrograde	-4480 Aug 22 j 04:09	14°♑24'38		evening set	-4475 Nov 19 j 06:11	10°♒00'12		
min. Earth dist.	-4480 Sep 25 j 03:10	6°♑45'06	0.59051 AU		-4475 Dec 14 j 20:11	0°♑		
opposition	-4480 Sep 30 j 16:01	4°♑33'57	-2°06'54					
greatest brilliancy	-4480 Sep 30 j 06:46	4°♑43'05	-1.7m	conjunction	-4474 Jan 23 j 04:30	0°♒03'41	-1°08'11	
	-4480 Oct 13 j 04:23	30°♑		minimum elong	-4474 Jan 23 j 04:32	0°♒03'45	1°08'23	
direct	-4480 Nov 06 j 16:48	26°♑01'02			-4474 Jan 23 j 02:32	0°♒		
asc. node	-4480 Nov 21 j 01:19	27°♑14'46			-4474 Mar 05 j 01:20	0°♒		
	-4480 Dec 03 j 11:41	0°♑		max. Earth dist.	-4474 Mar 10 j 18:25	4°♑04'07	2.47057 AU	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

morning rise	-4474 Mar 26 j 03:06	14° $\approx$ 52'20		desc. node	-4469 Apr 20 j 01:31	13° $\approx$ 01'01	
	-4474 Apr 17 j 03:25	0° $\text{H}$		opposition	-4469 May 06 j 16:11	9° $\approx$ 07'17	-1°14'24
	-4474 Jun 01 j 14:20	0° $\text{Y}$		greatest brilliancy	-4469 May 06 j 19:04	9° $\approx$ 05'19	-2.9m
asc. node	-4474 Jul 14 j 02:25	26° $\text{Y}$ 35'35		min. Earth dist.	-4469 May 10 j 00:43	8° $\approx$ 12'41	0.38505 AU
	-4474 Jul 19 j 17:30	0° $\text{B}$		direct	-4469 Jun 07 j 01:53	3° $\approx$ 38'28	
	-4474 Sep 10 j 06:42	0° $\text{II}$			-4469 Aug 18 j 18:50	0° $\text{M}$	
	-4474 Nov 27 j 23:30	0° $\text{E}$			-4469 Oct 05 j 05:45	0° $\text{J}$	
retrograde	-4474 Dec 08 j 15:41	0° $\text{E}$ 40'45			-4469 Nov 18 j 22:58	0° $\text{Z}$	
	-4474 Dec 18 j 23:23	30° $\text{R}$ $\text{II}$			-4468 Jan 02 j 18:50	0° $\approx$	
opposition	-4473 Jan 15 j 10:17	22° $\text{II}$ 11'21	5°02'49		-4468 Feb 17 j 13:17	0° $\text{H}$	
greatest brilliancy	-4473 Jan 16 j 08:26	21° $\text{II}$ 50'07	-1.6m	asc. node	-4468 Mar 04 j 17:24	10° $\text{H}$ 26'28	
min. Earth dist.	-4473 Jan 21 j 03:11	20° $\text{II}$ 00'25	0.61052 AU		-4468 Apr 04 j 06:33	0° $\text{Y}$	
direct	-4473 Feb 25 j 08:09	12° $\text{II}$ 19'27		evening set	-4468 Apr 23 j 06:02	12° $\text{Y}$ 05'02	
	-4473 Apr 26 j 17:05	0° $\text{E}$			-4468 May 21 j 10:05	0° $\text{B}$	
	-4473 Jun 17 j 01:03	0° $\Omega$		max. Earth dist.	-4468 Jun 04 j 04:15	8° $\text{B}$ 46'03	2.66921 AU
desc. node	-4473 Jul 16 j 00:31	19° $\Omega$ 47'27					
	-4473 Jul 30 j 05:26	0° $\text{M}$		conjunction	-4468 Jun 09 j 12:38	12° $\text{B}$ 11'05	0°49'12
	-4473 Sep 08 j 05:03	0° $\text{E}$		minimum elong	-4468 Jun 09 j 11:20	12° $\text{B}$ 09'01	0°49'19
	-4473 Oct 16 j 22:18	0° $\text{M}$			-4468 Jul 07 j 06:37	0° $\text{II}$	
	-4473 Nov 24 j 15:49	0° $\text{J}$		morning rise	-4468 Jul 24 j 21:07	11° $\text{II}$ 24'19	
	-4472 Jan 03 j 08:51	0° $\text{Z}$			-4468 Aug 22 j 06:00	0° $\text{E}$	
evening set	-4472 Jan 23 j 03:37	14° $\text{Z}$ 30'44			-4468 Oct 06 j 02:24	0° $\Omega$	
	-4472 Feb 13 j 18:01	0° $\approx$			-4468 Nov 18 j 22:15	0° $\text{M}$	
					-4467 Jan 01 j 01:38	0° $\text{E}$	
conjunction	-4472 Mar 19 j 23:19	24° $\approx$ 27'45	-0°39'37		-4467 Feb 13 j 07:16	0° $\text{M}$	
minimum elong	-4472 Mar 20 j 01:06	24° $\approx$ 30'47	0°39'43	desc. node	-4467 Mar 07 j 03:29	14° $\text{M}$ 45'32	
	-4472 Mar 28 j 03:08	0° $\text{H}$			-4467 Mar 30 j 20:36	0° $\text{J}$	
max. Earth dist.	-4472 Apr 15 j 19:49	12° $\text{H}$ 31'09	2.58662 AU		-4467 Jun 05 j 04:18	0° $\text{Z}$	
morning rise	-4472 May 11 j 10:31	29° $\text{H}$ 20'10		retrograde	-4467 Jun 18 j 07:01	1° $\text{Z}$ 11'46	
	-4472 May 12 j 11:03	0° $\text{Y}$			-4467 Jul 01 j 03:46	30° $\text{R}$ $\text{J}$	
asc. node	-4472 May 30 j 23:13	11° $\text{Y}$ 56'08		min. Earth dist.	-4467 Jul 15 j 04:09	26° $\text{J}$ 25'37	0.42442 AU
	-4472 Jun 28 j 10:22	0° $\text{B}$		greatest brilliancy	-4467 Jul 21 j 03:32	24° $\text{J}$ 31'40	-2.6m
	-4472 Aug 15 j 21:53	0° $\text{II}$		opposition	-4467 Jul 22 j 17:41	24° $\text{J}$ 00'59	-6°25'11
	-4472 Oct 05 j 18:54	0° $\text{E}$		direct	-4467 Aug 23 j 02:07	18° $\text{J}$ 04'39	
	-4472 Dec 03 j 18:28	0° $\Omega$			-4467 Oct 09 j 16:22	0° $\text{Z}$	
retrograde	-4471 Jan 25 j 10:00	13° $\Omega$ 04'59			-4467 Dec 06 j 07:31	0° $\approx$	
opposition	-4471 Mar 01 j 00:41	6° $\Omega$ 05'56	4°38'43	asc. node	-4466 Jan 20 j 15:28	26° $\approx$ 54'44	
greatest brilliancy	-4471 Mar 02 j 11:56	5° $\Omega$ 35'28	-2.1m		-4466 Jan 25 j 17:41	0° $\text{H}$	
min. Earth dist.	-4471 Mar 09 j 12:08	3° $\Omega$ 10'49	0.49705 AU		-4466 Mar 15 j 17:07	0° $\text{Y}$	
	-4471 Mar 20 j 03:33	30° $\text{R}$ $\text{E}$			-4466 May 02 j 22:00	0° $\text{B}$	
direct	-4471 Apr 08 j 05:48	27° $\text{E}$ 32'14		evening set	-4466 May 31 j 17:26	18° $\text{B}$ 14'43	
	-4471 Apr 27 j 16:55	0° $\Omega$			-4466 Jun 19 j 00:23	0° $\text{II}$	
desc. node	-4471 Jun 01 j 23:58	13° $\Omega$ 54'00		max. Earth dist.	-4466 Jun 28 j 14:14	6° $\text{II}$ 13'03	2.62970 AU
	-4471 Jun 29 j 22:12	0° $\text{M}$					
	-4471 Aug 12 j 23:55	0° $\text{E}$		conjunction	-4466 Jul 17 j 12:57	18° $\text{II}$ 39'36	1°10'21
	-4471 Sep 22 j 16:56	0° $\text{M}$		minimum elong	-4466 Jul 17 j 12:30	18° $\text{II}$ 38'51	1°10'34
	-4471 Nov 01 j 19:56	0° $\text{J}$			-4466 Aug 03 j 13:02	0° $\text{E}$	
	-4471 Dec 12 j 16:42	0° $\text{Z}$		morning rise	-4466 Sep 02 j 01:52	20° $\text{E}$ 07'29	
	-4470 Jan 24 j 01:23	0° $\approx$			-4466 Sep 16 j 06:35	0° $\Omega$	
	-4470 Mar 09 j 04:35	0° $\text{H}$			-4466 Oct 28 j 07:45	0° $\text{M}$	
evening set	-4470 Mar 13 j 15:18	2° $\text{H}$ 57'33			-4466 Dec 08 j 00:53	0° $\text{E}$	
asc. node	-4470 Apr 17 j 20:35	26° $\text{H}$ 04'15			-4465 Jan 16 j 23:27	0° $\text{M}$	
	-4470 Apr 23 j 22:07	0° $\text{Y}$		desc. node	-4465 Jan 23 j 02:10	4° $\text{M}$ 36'22	
					-4465 Feb 25 j 23:26	0° $\text{J}$	
conjunction	-4470 May 03 j 00:11	5° $\text{Y}$ 52'03	0°08'37		-4465 Apr 08 j 09:31	0° $\text{Z}$	
minimum elong	-4470 May 02 j 23:50	5° $\text{Y}$ 51'30	0°08'37		-4465 May 24 j 07:26	0° $\approx$	
behind sun begin	-4470 May 02 j 06:42	5° $\text{Y}$ 23'54		retrograde	-4465 Aug 07 j 09:24	27° $\approx$ 38'04	
behind sun end	-4470 May 03 j 16:58	6° $\text{Y}$ 19'05		min. Earth dist.	-4465 Sep 08 j 08:03	20° $\approx$ 43'42	0.54860 AU
max. Earth dist.	-4470 May 12 j 03:41	11° $\text{Y}$ 45'03	2.65486 AU	greatest brilliancy	-4465 Sep 14 j 09:04	18° $\approx$ 24'12	-1.9m
	-4470 Jun 09 j 16:43	0° $\text{B}$		opposition	-4465 Sep 15 j 03:57	18° $\approx$ 06'02	-3°31'16
morning rise	-4470 Jun 19 j 06:53	6° $\text{B}$ 06'19		direct	-4465 Oct 20 j 18:45	10° $\approx$ 06'55	
	-4470 Jul 26 j 21:27	0° $\text{II}$		asc. node	-4465 Dec 08 j 15:45	21° $\approx$ 51'55	
	-4470 Sep 12 j 03:56	0° $\text{E}$			-4465 Dec 26 j 23:43	0° $\text{H}$	
	-4470 Oct 29 j 17:56	0° $\Omega$			-4464 Feb 21 j 12:27	0° $\text{Y}$	
	-4470 Dec 17 j 21:09	0° $\text{M}$			-4464 Apr 12 j 08:35	0° $\text{B}$	
	-4469 Feb 11 j 18:20	0° $\text{E}$			-4464 May 30 j 10:21	0° $\text{II}$	
retrograde	-4469 Apr 06 j 02:54	14° $\text{E}$ 13'21		evening set	-4464 Jul 09 j 13:28	26° $\text{II}$ 17'32	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4464 Jul 15 j 01:45	0°☾		max. Earth dist.	-4459 Feb 13 j 19:57	10°☾38'24	2.41835 AU
max. Earth dist.	-4464 Jul 26 j 23:46	8°☾06'15	2.54053 AU	morning rise	-4459 Mar 03 j 09:26	23°☾29'54	
					-4459 Mar 12 j 10:03	0°≈	
conjunction	-4464 Aug 27 j 22:16	0°♂24'02	1°00'01		-4459 Apr 24 j 11:33	0°✕	
minimum elong	-4464 Aug 27 j 23:51	0°♂26'50	1°00'12		-4459 Jun 09 j 03:44	0°♀	
	-4464 Aug 27 j 08:45	0°♂			-4459 Jul 28 j 06:10	0°♄	
	-4464 Oct 07 j 14:27	0°♍		asc. node	-4459 Jul 30 j 17:51	1°♄26'38	
morning rise	-4464 Oct 19 j 06:40	8°♍43'31			-4459 Sep 22 j 23:08	0°♂	
	-4464 Nov 16 j 07:07	0°♂		retrograde	-4459 Nov 23 j 00:45	16°♂44'41	
desc. node	-4464 Dec 10 j 00:53	18°♂17'51		opposition	-4459 Dec 31 j 14:48	7°♂50'55	4°35'45
	-4464 Dec 25 j 03:09	0°♂		greatest brilliancy	-4458 Jan 01 j 04:59	7°♂37'05	-1.4m
	-4463 Feb 01 j 22:02	0°♄		min. Earth dist.	-4458 Jan 04 j 20:36	6°♂11'41	0.64004 AU
	-4463 Mar 13 j 14:15	0°♄			-4458 Jan 23 j 16:39	30°♄	
	-4463 Apr 24 j 08:16	0°≈		direct	-4458 Feb 10 j 19:39	27°♄51'04	
	-4463 Jun 09 j 04:23	0°✕			-4458 Mar 01 j 22:48	0°♂	
	-4463 Aug 06 j 12:46	0°♀			-4458 May 10 j 08:35	0°☾	
retrograde	-4463 Sep 13 j 21:14	8°♀09'51			-4458 Jun 26 j 18:56	0°♂	
	-4463 Oct 19 j 10:37	30°♄		desc. node	-4458 Aug 01 j 17:11	25°♂25'42	
min. Earth dist.	-4463 Oct 20 j 14:10	29°♄32'32	0.63955 AU		-4458 Aug 07 j 22:14	0°♍	
opposition	-4463 Oct 23 j 21:57	28°♄12'30	-0°04'13		-4458 Sep 16 j 11:22	0°♂	
greatest brilliancy	-4463 Oct 23 j 21:51	28°♄12'36	-1.5m		-4458 Oct 24 j 22:06	0°♂	
asc. node	-4463 Oct 25 j 16:55	27°♄29'32			-4458 Dec 02 j 10:02	0°♄	
direct	-4463 Dec 01 j 17:28	19°♄00'26		evening set	-4458 Dec 30 j 11:59	21°♄27'01	
	-4462 Jan 18 j 14:00	0°♀			-4457 Jan 10 j 21:30	0°♄	
	-4462 Mar 20 j 19:15	0°♄			-4457 Feb 21 j 01:08	0°≈	
	-4462 May 10 j 14:20	0°♂					
	-4462 Jun 26 j 02:07	0°☾		conjunction	-4457 Feb 28 j 18:32	5°≈28'22	-0°55'44
	-4462 Aug 08 j 10:44	0°♂		minimum elong	-4457 Feb 28 j 20:38	5°≈32'06	0°55'54
evening set	-4462 Aug 25 j 01:03	11°♂58'47		max. Earth dist.	-4457 Apr 04 j 10:29	29°≈26'54	2.54607 AU
max. Earth dist.	-4462 Sep 13 j 10:54	26°♂19'03	2.41868 AU		-4457 Apr 05 j 06:01	0°✕	
	-4462 Sep 18 j 08:55	0°♍		morning rise	-4457 Apr 25 j 10:49	13°♄32'49	
					-4457 May 20 j 12:53	0°♀	
conjunction	-4462 Oct 20 j 16:26	24°♍38'58	0°05'15	asc. node	-4457 Jun 17 j 16:17	18°♀01'02	
minimum elong	-4462 Oct 20 j 16:51	24°♍39'45	0°05'18		-4457 Jul 06 j 18:47	0°♄	
behind sun begin	-4462 Oct 19 j 16:25	23°♍52'34			-4457 Aug 25 j 06:24	0°♂	
behind sun end	-4462 Oct 21 j 17:17	25°♍26'59			-4457 Oct 18 j 11:20	0°☾	
desc. node	-4462 Oct 27 j 22:45	0°♂16'40		retrograde	-4456 Jan 05 j 11:35	25°☾19'23	
	-4462 Oct 27 j 14:10	0°♂		opposition	-4456 Feb 10 j 13:40	17°☾39'08	5°10'36
	-4462 Dec 04 j 22:21	0°♂		greatest brilliancy	-4456 Feb 11 j 23:01	17°☾08'43	-1.9m
morning rise	-4462 Dec 23 j 21:23	14°♂52'40		min. Earth dist.	-4456 Feb 18 j 07:28	14°☾50'16	0.54685 AU
	-4461 Jan 12 j 06:31	0°♄		direct	-4456 Mar 21 j 06:46	8°☾21'32	
	-4461 Feb 20 j 11:35	0°♄			-4456 May 26 j 04:47	0°♂	
	-4461 Apr 02 j 09:59	0°≈		desc. node	-4456 Jun 18 j 17:08	13°♂56'45	
	-4461 May 15 j 22:50	0°✕			-4456 Jul 12 j 22:47	0°♍	
	-4461 Jul 02 j 11:46	0°♀			-4456 Aug 23 j 12:21	0°♂	
	-4461 Aug 28 j 18:29	0°♄			-4456 Oct 02 j 02:06	0°♂	
asc. node	-4461 Sep 12 j 17:46	5°♄48'23			-4456 Nov 10 j 10:57	0°♄	
retrograde	-4461 Oct 18 j 17:44	12°♄42'44			-4456 Dec 20 j 17:22	0°♄	
opposition	-4461 Nov 27 j 13:57	3°♄05'09	2°40'17		-4455 Jan 31 j 14:12	0°≈	
greatest brilliancy	-4461 Nov 27 j 13:32	3°♄05'34	-1.3m	evening set	-4455 Feb 23 j 10:57	15°≈50'14	
min. Earth dist.	-4461 Nov 28 j 00:16	2°♄54'50	0.67148 AU		-4455 Mar 16 j 08:28	0°✕	
	-4461 Dec 05 j 10:34	30°♄					
direct	-4460 Jan 07 j 06:41	23°♀14'27		conjunction	-4455 Apr 16 j 20:57	20°♄53'10	-0°10'07
	-4460 Feb 12 j 12:04	0°♄		minimum elong	-4455 Apr 16 j 21:23	20°♄53'54	0°10'09
	-4460 Apr 16 j 07:18	0°♂		behind sun begin	-4455 Apr 16 j 05:09	20°♄27'20	
	-4460 Jun 04 j 13:19	0°☾		behind sun end	-4455 Apr 17 j 13:38	21°♄20'28	
	-4460 Jul 18 j 17:37	0°♂			-4455 Apr 30 j 20:34	0°♀	
	-4460 Aug 28 j 19:18	0°♍		max. Earth dist.	-4455 May 02 j 12:45	1°♀05'08	2.63453 AU
desc. node	-4460 Sep 13 j 19:23	12°♍08'19		asc. node	-4455 May 04 j 12:53	2°♀23'05	
	-4460 Oct 06 j 22:14	0°♂		morning rise	-4455 Jun 04 j 17:22	22°♀25'14	
evening set	-4460 Oct 23 j 04:10	12°♂42'57			-4455 Jun 16 j 15:03	0°♄	
	-4460 Nov 14 j 03:04	0°♂			-4455 Aug 03 j 03:56	0°♂	
	-4460 Dec 22 j 09:09	0°♄			-4455 Sep 20 j 09:07	0°☾	
					-4455 Nov 09 j 05:14	0°♂	
conjunction	-4460 Dec 27 j 11:08	3°♄56'44	-1°01'22		-4454 Jan 04 j 01:52	0°♍	
minimum elong	-4460 Dec 27 j 08:34	3°♄51'45	1°01'32	retrograde	-4454 Mar 06 j 08:22	17°♍20'32	
	-4459 Jan 30 j 13:34	0°♄		opposition	-4454 Apr 07 j 08:09	11°♍36'35	1°58'45

## Planetary Phenomena of Mars from -4900 through -4398 (UT), Astrodienst AG 18-Feb-2025 14:23, page 45

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

greatest brilliancy	-4454 Apr 07 j 23:25	11° $\mathbb{M}$ 25'03	-2.6m			-4449 Jun 07 j 11:32	0° $\mathbb{I}$	
min. Earth dist.	-4454 Apr 14 j 09:52	9° $\mathbb{M}$ 29'10	0.41952 AU	evening set		-4449 Jun 24 j 15:28	11° $\mathbb{I}$ 08'29	
desc. node	-4454 May 06 j 17:44	5° $\mathbb{M}$ 02'34		max. Earth dist.		-4449 Jul 15 j 13:44	24° $\mathbb{I}$ 59'30	2.58099 AU
direct	-4454 May 11 j 15:53	4° $\mathbb{M}$ 52'22				-4449 Jul 23 j 00:42	0° $\mathbb{S}$	
	-4454 Jul 20 j 07:01	0° $\mathbb{L}$						
	-4454 Sep 04 j 10:25	0° $\mathbb{M}$		conjunction		-4449 Aug 11 j 13:06	13° $\mathbb{S}$ 18'18	1°08'42
	-4454 Oct 17 j 02:42	0° $\mathbb{J}$		minimum elong		-4449 Aug 11 j 13:52	13° $\mathbb{S}$ 19'37	1°08'55
	-4454 Nov 28 j 14:58	0° $\mathbb{Z}$				-4449 Sep 04 j 10:59	0° $\mathbb{Q}$	
	-4453 Jan 11 j 03:28	0° $\approx$		morning rise		-4449 Sep 29 j 20:35	18° $\mathbb{Q}$ 12'34	
	-4453 Feb 25 j 02:17	0° $\mathbb{H}$				-4449 Oct 15 j 23:07	0° $\mathbb{M}$	
asc. node	-4453 Mar 22 j 09:53	16° $\mathbb{H}$ 30'43				-4449 Nov 24 j 23:51	0° $\mathbb{L}$	
evening set	-4453 Apr 08 j 16:53	27° $\mathbb{H}$ 40'20		desc. node		-4449 Dec 27 j 19:19	25° $\mathbb{L}$ 06'19	
	-4453 Apr 12 j 07:50	0° $\mathbb{Y}$				-4448 Jan 03 j 04:02	0° $\mathbb{M}$	
						-4448 Feb 11 j 06:52	0° $\mathbb{J}$	
conjunction	-4453 May 26 j 20:14	28° $\mathbb{Y}$ 27'20	0°35'12			-4448 Mar 22 j 08:46	0° $\mathbb{Z}$	
minimum elong	-4453 May 26 j 19:06	28° $\mathbb{Y}$ 25'31	0°35'16			-4448 May 03 j 21:47	0° $\approx$	
max. Earth dist.	-4453 May 26 j 20:52	28° $\mathbb{Y}$ 28'20	2.67024 AU			-4448 Jun 21 j 09:34	0° $\mathbb{H}$	
	-4453 May 29 j 06:22	0° $\mathbb{B}$		retrograde		-4448 Aug 30 j 16:43	23° $\mathbb{H}$ 40'45	
morning rise	-4453 Jul 11 j 14:19	27° $\mathbb{B}$ 41'40		min. Earth dist.		-4448 Oct 04 j 16:22	15° $\mathbb{H}$ 39'11	0.61019 AU
	-4453 Jul 15 j 04:29	0° $\mathbb{I}$		opposition		-4448 Oct 09 j 10:38	13° $\mathbb{H}$ 45'28	-1°20'07
	-4453 Aug 30 j 12:55	0° $\mathbb{S}$		greatest brilliancy		-4448 Oct 09 j 05:38	13° $\mathbb{H}$ 50'27	-1.6m
	-4453 Oct 15 j 03:52	0° $\mathbb{Q}$		asc. node		-4448 Nov 11 j 07:06	5° $\mathbb{H}$ 06'10	
	-4453 Nov 29 j 06:53	0° $\mathbb{M}$		direct		-4448 Nov 16 j 04:10	4° $\mathbb{H}$ 56'59	
	-4452 Jan 13 j 13:21	0° $\mathbb{L}$				-4447 Feb 02 j 21:36	0° $\mathbb{Y}$	
	-4452 Feb 29 j 21:03	0° $\mathbb{M}$				-4447 Mar 29 j 20:44	0° $\mathbb{B}$	
desc. node	-4452 Mar 23 j 19:40	13° $\mathbb{M}$ 03'49				-4447 May 18 j 06:25	0° $\mathbb{I}$	
	-4452 May 03 j 22:11	0° $\mathbb{J}$				-4447 Jul 03 j 07:51	0° $\mathbb{S}$	
retrograde	-4452 May 23 j 10:24	2° $\mathbb{J}$ 28'47		evening set		-4447 Aug 05 j 18:11	23° $\mathbb{S}$ 00'40	
	-4452 Jun 12 j 00:39	30° $\mathbb{K}$ $\mathbb{M}$				-4447 Aug 15 j 14:50	0° $\mathbb{Q}$	
min. Earth dist.	-4452 Jun 19 j 12:52	28° $\mathbb{M}$ 02'24	0.38827 AU	max. Earth dist.		-4447 Aug 20 j 20:47	3° $\mathbb{Q}$ 45'24	2.46742 AU
greatest brilliancy	-4452 Jun 23 j 09:06	26° $\mathbb{M}$ 57'32	-2.8m			-4447 Sep 25 j 15:07	0° $\mathbb{M}$	
opposition	-4452 Jun 24 j 09:52	26° $\mathbb{M}$ 40'02	-5°51'21					
direct	-4452 Jul 24 j 08:27	21° $\mathbb{M}$ 29'56		conjunction		-4447 Sep 27 j 21:02	1° $\mathbb{M}$ 40'59	0°31'56
	-4452 Sep 01 j 03:09	0° $\mathbb{J}$		minimum elong		-4447 Sep 27 j 22:50	1° $\mathbb{M}$ 44'22	0°32'00
	-4452 Oct 29 j 09:24	0° $\mathbb{Z}$				-4447 Nov 04 j 00:04	0° $\mathbb{L}$	
	-4452 Dec 17 j 12:29	0° $\approx$		desc. node		-4447 Nov 13 j 16:30	7° $\mathbb{L}$ 30'34	
	-4451 Feb 03 j 09:31	0° $\mathbb{H}$		morning rise		-4447 Nov 26 j 01:20	17° $\mathbb{L}$ 08'37	
asc. node	-4451 Feb 06 j 07:21	1° $\mathbb{H}$ 49'35				-4447 Dec 12 j 11:57	0° $\mathbb{M}$	
	-4451 Mar 23 j 05:39	0° $\mathbb{Y}$				-4446 Jan 19 j 23:09	0° $\mathbb{J}$	
	-4451 May 09 j 22:04	0° $\mathbb{B}$				-4446 Feb 28 j 06:53	0° $\mathbb{Z}$	
evening set	-4451 May 16 j 20:15	4° $\mathbb{B}$ 23'06				-4446 Apr 10 j 09:22	0° $\approx$	
max. Earth dist.	-4451 Jun 18 j 22:43	25° $\mathbb{B}$ 31'50	2.65164 AU			-4446 May 24 j 10:08	0° $\mathbb{H}$	
	-4451 Jun 25 j 20:52	0° $\mathbb{I}$				-4446 Jul 12 j 18:33	0° $\mathbb{Y}$	
				asc. node		-4446 Sep 29 j 09:13	29° $\mathbb{Y}$ 32'48	
conjunction	-4451 Jul 02 j 12:10	4° $\mathbb{I}$ 18'13	1°05'08	retrograde		-4446 Oct 05 j 06:50	29° $\mathbb{Y}$ 46'07	
minimum elong	-4451 Jul 02 j 11:11	4° $\mathbb{I}$ 16'37	1°05'18	min. Earth dist.		-4446 Nov 13 j 06:55	20° $\mathbb{Y}$ 22'51	0.66631 AU
	-4451 Aug 10 j 12:28	0° $\mathbb{S}$		opposition		-4446 Nov 14 j 08:01	19° $\mathbb{Y}$ 57'39	1°41'57
morning rise	-4451 Aug 17 j 03:29	4° $\mathbb{S}$ 26'22		greatest brilliancy		-4446 Nov 14 j 05:35	20° $\mathbb{Y}$ 00'05	-1.4m
	-4451 Sep 23 j 14:37	0° $\mathbb{Q}$		direct		-4446 Dec 24 j 10:39	10° $\mathbb{Y}$ 18'48	
	-4451 Nov 05 j 04:50	0° $\mathbb{M}$				-4445 Mar 02 j 06:40	0° $\mathbb{B}$	
	-4451 Dec 16 j 14:30	0° $\mathbb{L}$				-4445 Apr 26 j 18:47	0° $\mathbb{I}$	
	-4450 Jan 26 j 08:19	0° $\mathbb{M}$				-4445 Jun 13 j 13:55	0° $\mathbb{S}$	
desc. node	-4450 Feb 08 j 21:12	9° $\mathbb{M}$ 57'57				-4445 Jul 27 j 08:02	0° $\mathbb{Q}$	
	-4450 Mar 08 j 09:26	0° $\mathbb{J}$				-4445 Sep 06 j 07:09	0° $\mathbb{M}$	
	-4450 Apr 20 j 18:55	0° $\mathbb{Z}$		evening set		-4445 Sep 28 j 19:25	17° $\mathbb{M}$ 08'09	
	-4450 Jun 13 j 20:18	0° $\approx$		desc. node		-4445 Oct 01 j 13:41	19° $\mathbb{M}$ 15'46	
retrograde	-4450 Jul 20 j 22:13	8° $\approx$ 31'05				-4445 Oct 15 j 10:06	0° $\mathbb{L}$	
min. Earth dist.	-4450 Aug 19 j 16:54	2° $\approx$ 27'49	0.50052 AU			-4445 Nov 22 j 15:17	0° $\mathbb{M}$	
greatest brilliancy	-4450 Aug 26 j 06:39	0° $\approx$ 02'58	-2.1m					
	-4450 Aug 26 j 09:52	30° $\mathbb{K}$ $\mathbb{Z}$		conjunction		-4445 Nov 30 j 15:59	6° $\mathbb{M}$ 19'27	-0°40'55
opposition	-4450 Aug 27 j 12:42	29° $\mathbb{Z}$ 35'18	-4°55'28	minimum elong		-4445 Nov 30 j 12:51	6° $\mathbb{M}$ 13'17	0°41'00
direct	-4450 Sep 30 j 12:14	22° $\mathbb{Z}$ 18'19		max. Earth dist.		-4445 Dec 21 j 07:16	22° $\mathbb{M}$ 31'41	2.37839 AU
	-4450 Nov 07 j 09:12	0° $\approx$				-4445 Dec 30 j 21:06	0° $\mathbb{J}$	
asc. node	-4450 Dec 25 j 06:08	21° $\approx$ 57'55		morning rise		-4444 Feb 06 j 14:43	28° $\mathbb{J}$ 56'09	
	-4449 Jan 09 j 04:18	0° $\mathbb{H}$				-4444 Feb 08 j 00:38	0° $\mathbb{Z}$	
	-4449 Mar 02 j 09:02	0° $\mathbb{Y}$				-4444 Mar 19 j 20:16	0° $\approx$	
	-4449 Apr 20 j 21:15	0° $\mathbb{B}$				-4444 May 01 j 23:25	0° $\mathbb{H}$	

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	-4444 Jun 17 j 01:44	0°♈				-4439 Aug 05 j 12:40	0°♎		
	-4444 Aug 06 j 19:32	0°♉				-4439 Sep 16 j 08:26	0°♏		
asc. node	-4444 Aug 16 j 09:38	5°♊10'05				-4439 Oct 27 j 02:07	0°♐		
	-4444 Oct 14 j 12:14	0°♋				-4439 Dec 07 j 09:14	0°♑		
retrograde	-4444 Nov 08 j 10:54	3°♌27'50				-4438 Jan 19 j 01:22	0°♒		
	-4444 Dec 01 j 14:21	30°♍				-4438 Mar 04 j 10:06	0°♓		
opposition	-4444 Dec 17 j 15:53	24°♎14'16	3°57'38	evening set		-4438 Mar 23 j 10:45	12°♈32'57		
greatest brilliancy	-4444 Dec 17 j 23:03	24°♉07'11	-1.4m	asc. node		-4438 Apr 08 j 01:38	22°♈44'10		
min. Earth dist.	-4444 Dec 20 j 09:58	23°♉09'00	0.65991 AU			-4438 Apr 19 j 06:50	0°♈		
direct	-4443 Jan 27 j 20:22	14°♊13'59							
	-4443 Mar 27 j 00:38	0°♋		conjunction		-4438 May 11 j 21:05	14°♈31'41	0°18'54	
	-4443 May 20 j 21:41	0°♌		minimum elong		-4438 May 11 j 20:22	14°♈30'33	0°18'57	
	-4443 Jul 05 j 12:50	0°♍		max. Earth dist.		-4438 May 17 j 15:02	18°♈12'29	2.66277 AU	
	-4443 Aug 16 j 02:26	0°♎				-4438 Jun 05 j 02:13	0°♉		
desc. node	-4443 Aug 18 j 11:00	1°♎45'40		morning rise		-4438 Jun 27 j 11:23	14°♉15'45		
	-4443 Sep 24 j 09:55	0°♏				-4438 Jul 22 j 03:52	0°♊		
	-4443 Nov 01 j 17:03	0°♐				-4438 Sep 07 j 01:04	0°♋		
evening set	-4443 Dec 04 j 12:30	25°♐42'03				-4438 Oct 23 j 18:50	0°♌		
	-4443 Dec 10 j 01:20	0°♐				-4438 Dec 10 j 00:42	0°♍		
	-4442 Jan 18 j 08:39	0°♑				-4437 Jan 28 j 19:32	0°♎		
						-4437 Apr 08 j 22:18	0°♏		
conjunction	-4442 Feb 06 j 03:20	13°♑55'40	-1°06'16	desc. node		-4437 Apr 10 j 12:54	0°♏16'50		
minimum elong	-4442 Feb 06 j 04:35	13°♑57'57	1°06'28	retrograde		-4437 Apr 24 j 00:28	1°♏25'43		
	-4442 Feb 28 j 07:54	0°♒				-4437 May 09 j 03:09	30°♎		
max. Earth dist.	-4442 Mar 20 j 19:36	14°♒27'44	2.49865 AU	opposition		-4437 May 24 j 12:55	26°♎21'38	-3°15'27	
morning rise	-4442 Apr 06 j 17:33	26°♒08'16		greatest brilliancy		-4437 May 24 j 11:44	26°♎22'25	-2.9m	
	-4442 Apr 12 j 09:40	0°♓		min. Earth dist.		-4437 May 24 j 21:51	26°♎15'40	0.37738 AU	
	-4442 May 27 j 17:26	0°♈		direct		-4437 Jun 23 j 21:56	21°♎16'17		
asc. node	-4442 Jul 04 j 07:56	23°♈47'04				-4437 Aug 01 j 10:04	0°♏		
	-4442 Jul 14 j 10:20	0°♉				-4437 Sep 26 j 07:30	0°♐		
	-4442 Sep 03 j 12:14	0°♊				-4437 Nov 12 j 05:55	0°♑		
	-4442 Nov 04 j 05:50	0°♋				-4437 Dec 28 j 02:48	0°♌		
retrograde	-4442 Dec 18 j 05:14	9°♌31'36				-4436 Feb 12 j 11:07	0°♍		
opposition	-4441 Jan 24 j 11:06	1°♌18'01	5°11'28	asc. node		-4436 Feb 23 j 22:08	7°♍20'42		
greatest brilliancy	-4441 Jan 25 j 13:48	0°♌52'48	-1.6m			-4436 Mar 30 j 12:05	0°♈		
	-4441 Jan 27 j 21:37	30°♌		evening set		-4436 May 01 j 23:06	20°♈34'24		
min. Earth dist.	-4441 Jan 30 j 23:22	28°♌50'48	0.58999 AU			-4436 May 16 j 19:35	0°♉		
direct	-4441 Mar 06 j 01:53	21°♌34'37		max. Earth dist.		-4436 Jun 09 j 14:03	15°♉08'53	2.66528 AU	
	-4441 Apr 14 j 03:32	0°♍							
	-4441 Jun 10 j 01:55	0°♎		conjunction		-4436 Jun 17 j 21:38	20°♉28'36	0°56'02	
desc. node	-4441 Jul 06 j 09:24	17°♎22'11		minimum elong		-4436 Jun 17 j 20:23	20°♉26'35	0°56'11	
	-4441 Jul 24 j 08:11	0°♏				-4436 Jul 02 j 16:42	0°♊		
	-4441 Sep 02 j 18:15	0°♐		morning rise		-4436 Aug 02 j 05:01	19°♊52'27		
	-4441 Oct 11 j 17:15	0°♑				-4436 Aug 17 j 13:01	0°♋		
	-4441 Nov 19 j 15:00	0°♒				-4436 Oct 01 j 02:19	0°♌		
	-4441 Dec 29 j 11:44	0°♓				-4436 Nov 13 j 09:56	0°♍		
evening set	-4440 Feb 04 j 11:19	26°♓47'49				-4436 Dec 25 j 19:22	0°♎		
	-4440 Feb 08 j 23:51	0°♒				-4435 Feb 05 j 20:49	0°♏		
	-4440 Mar 23 j 11:08	0°♓		desc. node		-4435 Feb 25 j 13:22	13°♏53'01		
						-4435 Mar 21 j 00:30	0°♐		
conjunction	-4440 Mar 30 j 13:00	4°♓45'41	-0°29'06			-4435 May 09 j 04:37	0°♑		
minimum elong	-4440 Mar 30 j 14:20	4°♓47'55	0°29'11	retrograde		-4435 Jun 30 j 23:12	16°♑02'18		
max. Earth dist.	-4440 Apr 22 j 05:27	19°♓49'03	2.60593 AU	min. Earth dist.		-4435 Jul 28 j 17:34	10°♑50'53	0.45041 AU	
	-4440 May 07 j 19:20	0°♈		greatest brilliancy		-4435 Aug 04 j 04:04	8°♑39'55	-2.4m	
morning rise	-4440 May 20 j 12:48	8°♈13'58		opposition		-4435 Aug 05 j 18:11	8°♑07'22	-6°05'00	
asc. node	-4440 May 21 j 05:36	8°♈41'02		direct		-4435 Sep 06 j 23:49	1°♑40'58		
	-4440 Jun 23 j 15:46	0°♉				-4435 Nov 27 j 19:44	0°♒		
	-4440 Aug 10 j 17:04	0°♊		asc. node		-4434 Jan 10 j 21:19	24°♒49'32		
	-4440 Sep 29 j 08:54	0°♋				-4434 Jan 19 j 16:27	0°♓		
	-4440 Nov 22 j 10:41	0°♌				-4434 Mar 10 j 13:07	0°♈		
retrograde	-4439 Feb 07 j 17:20	24°♌42'31				-4434 Apr 28 j 03:37	0°♉		
opposition	-4439 Mar 13 j 08:56	18°♌09'12	3°59'26	evening set		-4434 Jun 09 j 08:21	26°♉44'02		
greatest brilliancy	-4439 Mar 14 j 16:55	17°♌42'35	-2.3m			-4434 Jun 14 j 10:01	0°♊		
min. Earth dist.	-4439 Mar 21 j 19:30	15°♌21'27	0.46833 AU	max. Earth dist.		-4434 Jul 04 j 14:41	13°♊09'05	2.61453 AU	
direct	-4439 Apr 19 j 10:19	10°♌08'33							
desc. node	-4439 May 23 j 11:04	17°♌16'12		conjunction		-4434 Jul 26 j 09:38	27°♊36'38	1°11'17	
	-4439 Jun 19 j 05:01	0°♍		minimum elong		-4434 Jul 26 j 09:35	27°♊36'32	1°11'29	

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	-4434 Jul 29 j 23:02	0°☾					-4429 Jun 26 j 13:06	0°♊	
morning rise	-4434 Sep 11 j 16:40	0°♊04'10					-4429 Aug 19 j 07:38	0°♋	
	-4434 Sep 11 j 14:18	0°♊			asc. node		-4429 Sep 03 j 00:30	6°♋49'30	
	-4434 Oct 23 j 10:40	0°♌			retrograde		-4429 Oct 26 j 12:41	20°♋31'19	
	-4434 Dec 02 j 21:28	0°♌			opposition		-4429 Dec 05 j 04:50	11°♋01'25	3°10'52
	-4433 Jan 11 j 12:21	0°♌			greatest brilliancy		-4429 Dec 05 j 06:35	10°♋59'40	-1.3m
desc. node	-4433 Jan 13 j 12:41	1°♌31'56			min. Earth dist.		-4429 Dec 06 j 11:11	10°♋31'10	0.67016 AU
	-4433 Feb 20 j 02:39	0°♌			direct		-4428 Jan 15 j 03:29	1°♋05'53	
	-4433 Apr 01 j 20:57	0°♍					-4428 Apr 09 j 08:51	0°♌	
	-4433 May 15 j 23:34	0°♍					-4428 May 30 j 01:39	0°♍	
	-4433 Jul 11 j 04:43	0°♍					-4428 Jul 13 j 16:49	0°♎	
retrograde	-4433 Aug 16 j 14:53	7°♍53'01					-4428 Aug 23 j 22:19	0°♏	
min. Earth dist.	-4433 Sep 18 j 16:45	0°♍32'52	0.57269 AU		desc. node		-4428 Sep 04 j 04:59	8°♏30'45	
	-4433 Sep 20 j 02:37	30°♏					-4428 Oct 02 j 02:36	0°♏	
opposition	-4433 Sep 24 j 19:57	28°♏09'00	-2°42'13		evening set		-4428 Nov 07 j 08:56	28°♏27'42	
greatest brilliancy	-4433 Sep 24 j 06:54	28°♏21'45	-1.8m				-4428 Nov 09 j 07:47	0°♐	
direct	-4433 Oct 31 j 06:39	19°♏50'04					-4428 Dec 17 j 13:52	0°♑	
asc. node	-4433 Nov 28 j 22:04	24°♏22'24							
	-4433 Dec 15 j 09:39	0°♑			conjunction		-4427 Jan 11 j 20:24	19°♑27'55	-1°06'56
	-4432 Feb 15 j 03:32	0°♒			minimum elong		-4427 Jan 11 j 19:16	19°♑25'46	1°07'09
	-4432 Apr 07 j 03:11	0°♒					-4427 Jan 25 j 18:28	0°♓	
	-4432 May 25 j 15:06	0°♓			max. Earth dist.		-4427 Mar 01 j 14:44	25°♓40'41	2.44715 AU
	-4432 Jul 10 j 10:05	0°♓					-4427 Mar 07 j 14:56	0°♔	
evening set	-4432 Jul 19 j 02:46	5°♓53'29			morning rise		-4427 Mar 16 j 16:28	6°♔27'28	
max. Earth dist.	-4432 Aug 04 j 03:13	16°♓55'08	2.51575 AU				-4427 Apr 19 j 15:15	0°♕	
	-4432 Aug 22 j 17:36	0°♔					-4427 Jun 04 j 02:36	0°♖	
					asc. node		-4427 Jul 20 j 23:40	29°♖04'30	
conjunction	-4432 Sep 07 j 13:52	11°♔22'51	0°51'52				-4427 Jul 22 j 12:52	0°♗	
minimum elong	-4432 Sep 07 j 15:45	11°♔26'16	0°52'01				-4427 Sep 14 j 08:39	0°♘	
	-4432 Oct 02 j 21:44	0°♘			retrograde		-4427 Dec 01 j 19:20	25°♘03'59	
morning rise	-4432 Nov 01 j 01:13	21°♘59'51			opposition		-4426 Jan 08 j 23:37	16°♘23'07	4°52'37
	-4432 Nov 11 j 11:54	0°♙			greatest brilliancy		-4426 Jan 09 j 18:14	16°♘05'08	-1.5m
desc. node	-4432 Nov 30 j 10:38	14°♙38'18			min. Earth dist.		-4426 Jan 14 j 01:25	14°♘25'34	0.62502 AU
	-4432 Dec 20 j 04:54	0°♙			direct		-4426 Feb 19 j 01:58	6°♘26'30	
	-4431 Jan 27 j 20:21	0°♚					-4426 May 02 j 09:13	0°♙	
	-4431 Mar 08 j 08:16	0°♚					-4426 Jun 20 j 19:19	0°♑	
	-4431 Apr 18 j 18:04	0°♛			desc. node		-4426 Jul 23 j 03:58	22°♑27'51	
	-4431 Jun 02 j 15:52	0°♛					-4426 Aug 02 j 12:48	0°♒	
	-4431 Jul 25 j 19:05	0°♜					-4426 Sep 11 j 08:09	0°♓	
retrograde	-4431 Sep 21 j 19:06	16°♜29'29					-4426 Oct 19 j 22:17	0°♔	
asc. node	-4431 Oct 15 j 23:09	12°♜32'13					-4426 Nov 27 j 12:29	0°♕	
min. Earth dist.	-4431 Oct 29 j 08:51	7°♜34'30	0.65166 AU				-4425 Jan 06 j 01:56	0°♖	
opposition	-4431 Oct 31 j 21:05	6°♜33'59	0°36'51		evening set		-4425 Jan 13 j 05:03	5°♖17'15	
greatest brilliancy	-4431 Oct 31 j 19:26	6°♜35'38	-1.5m				-4425 Feb 16 j 07:11	0°♗	
	-4431 Nov 19 j 09:52	30°♜							
direct	-4431 Dec 10 j 04:59	27°♜11'00			conjunction		-4425 Mar 12 j 13:18	17°♜00'14	-0°46'52
	-4430 Jan 01 j 16:00	0°♜			minimum elong		-4425 Mar 12 j 15:19	17°♜03'44	0°47'01
	-4430 Mar 14 j 05:08	0°♝					-4425 Mar 31 j 12:59	0°♞	
	-4430 May 05 j 07:08	0°♞			max. Earth dist.		-4425 Apr 11 j 20:03	7°♞36'29	2.56942 AU
	-4430 Jun 21 j 04:54	0°♟			morning rise		-4425 May 05 j 08:48	23°♞11'42	
	-4430 Aug 03 j 17:01	0°♟					-4425 May 15 j 19:06	0°♠	
evening set	-4430 Sep 05 j 23:35	24°♟15'42			asc. node		-4425 Jun 07 j 20:38	14°♠50'32	
	-4430 Sep 13 j 15:39	0°♠					-4425 Jul 01 j 20:05	0°♡	
max. Earth dist.	-4430 Oct 03 j 19:34	15°♠18'24	2.39464 AU				-4425 Aug 19 j 15:55	0°♢	
desc. node	-4430 Oct 18 j 07:08	26°♠28'19					-4425 Oct 10 j 15:37	0°♣	
	-4430 Oct 22 j 20:15	0°♣					-4425 Dec 15 j 12:28	0°♤	
					retrograde		-4424 Jan 16 j 23:59	5°♤33'54	
conjunction	-4430 Nov 03 j 20:58	9°♣22'55	-0°11'58				-4424 Feb 16 j 06:11	30°♤	
minimum elong	-4430 Nov 03 j 19:58	9°♣20'59	0°11'59		opposition		-4424 Feb 21 j 07:00	28°♤15'31	4°56'35
behind sun begin	-4430 Nov 03 j 01:35	8°♣45'02			greatest brilliancy		-4424 Feb 22 j 18:16	27°♤44'12	-2.0m
behind sun end	-4430 Nov 04 j 14:22	9°♣56'57			min. Earth dist.		-4424 Feb 29 j 12:22	25°♤20'47	0.51993 AU
	-4430 Nov 30 j 03:20	0°♤			direct		-4424 Mar 31 j 06:19	19°♤19'27	
	-4429 Jan 07 j 10:17	0°♥					-4424 May 13 j 12:50	0°♥	
morning rise	-4429 Jan 09 j 06:29	1°♥25'53			desc. node		-4424 Jun 09 j 03:25	13°♥39'15	
	-4429 Feb 15 j 14:10	0°♦					-4424 Jul 05 j 11:06	0°♦	
	-4429 Mar 28 j 10:24	0°♧					-4424 Aug 17 j 05:47	0°♧	
	-4429 May 10 j 17:37	0°♨					-4424 Sep 26 j 09:15	0°♨	

Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4424 Nov 05 j 02:43	0°♊			-4419 Aug 05 j 21:35	0°♎		
	-4424 Dec 15 j 15:40	0°♋		morning rise	-4419 Aug 26 j 03:05	13°♎40'20		
	-4423 Jan 26 j 17:31	0°♌			-4419 Sep 18 j 19:40	0°♏		
evening set	-4423 Mar 06 j 00:39	26°♌14'05			-4419 Oct 31 j 03:03	0°♐		
	-4423 Mar 11 j 15:19	0°♍			-4419 Dec 11 j 03:35	0°♑		
asc. node	-4423 Apr 24 j 18:08	29°♍03'03			-4418 Jan 20 j 10:06	0°♒		
				desc. node	-4418 Jan 30 j 06:00	7°♒20'38		
conjunction	-4423 Apr 26 j 05:53	0°♑01'01	0°00'52		-4418 Mar 01 j 19:06	0°♓		
minimum elong	-4423 Apr 26 j 05:48	0°♑00'53	0°00'52		-4418 Apr 12 j 20:18	0°♈		
behind sun begin	-4423 Apr 25 j 09:28	29°♍27'56			-4418 May 30 j 17:45	0°♉		
behind sun end	-4423 Apr 27 j 02:08	0°♑33'49		retrograde	-4418 Jul 31 j 03:14	20°♉07'32		
	-4423 Apr 26 j 05:15	0°♑		min. Earth dist.	-4418 Aug 31 j 02:29	13°♉35'42	0.52763 AU	
max. Earth dist.	-4423 May 08 j 07:32	7°♑49'03	2.64674 AU	greatest brilliancy	-4418 Sep 06 j 10:58	11°♉11'45	-2.0m	
	-4423 Jun 11 j 23:08	0°♒		opposition	-4418 Sep 07 j 10:38	10°♉49'22	-4°07'58	
morning rise	-4423 Jun 13 j 03:44	0°♒45'30		direct	-4418 Oct 12 j 09:07	3°♉07'58		
	-4423 Jul 29 j 06:51	0°♓		asc. node	-4418 Dec 15 j 12:47	21°♉44'49		
	-4423 Sep 14 j 22:17	0°♎			-4417 Jan 01 j 07:28	0°♊		
	-4423 Nov 02 j 08:30	0°♏			-4417 Feb 24 j 16:09	0°♋		
	-4423 Dec 23 j 13:56	0°♐			-4417 Apr 15 j 21:59	0°♌		
	-4422 Mar 03 j 05:11	0°♑			-4417 Jun 02 j 19:20	0°♍		
retrograde	-4422 Mar 23 j 05:52	2°♑20'36		evening set	-4417 Jul 03 j 15:22	20°♍06'02		
	-4422 Apr 11 j 23:08	30°♒			-4417 Jul 18 j 10:45	0°♎		
opposition	-4422 Apr 23 j 07:53	27°♒01'18	0°16'44	max. Earth dist.	-4417 Jul 22 j 11:19	2°♎43'07	2.55941 AU	
greatest brilliancy	-4422 Apr 23 j 09:47	26°♒59'57	-2.8m					
desc. node	-4422 Apr 27 j 04:35	25°♒55'46		conjunction	-4417 Aug 21 j 06:26	23°♎15'02	1°04'31	
min. Earth dist.	-4422 Apr 28 j 16:53	25°♒30'24	0.39769 AU	minimum elong	-4417 Aug 21 j 07:41	23°♎17'12	1°04'42	
direct	-4422 May 25 j 23:11	21°♒01'53			-4417 Aug 30 j 20:17	0°♏		
	-4422 Jul 03 j 12:26	0°♑		morning rise	-4417 Oct 11 j 03:03	29°♏55'23		
	-4422 Aug 26 j 09:33	0°♒			-4417 Oct 11 j 05:32	0°♐		
	-4422 Oct 10 j 03:22	0°♓			-4417 Nov 20 j 02:07	0°♑		
	-4422 Nov 22 j 16:23	0°♈		desc. node	-4417 Dec 18 j 04:33	21°♑35'29		
	-4421 Jan 05 j 19:53	0°♉			-4417 Dec 29 j 01:45	0°♒		
	-4421 Feb 20 j 04:02	0°♊			-4416 Feb 05 j 23:28	0°♓		
asc. node	-4421 Mar 12 j 15:14	13°♊17'24			-4416 Mar 16 j 18:35	0°♈		
	-4421 Apr 07 j 15:05	0°♋			-4416 Apr 27 j 17:56	0°♉		
evening set	-4421 Apr 17 j 16:37	6°♋26'00			-4416 Jun 13 j 08:18	0°♊		
	-4421 May 24 j 16:04	0°♌			-4416 Aug 18 j 17:57	0°♋		
max. Earth dist.	-4421 Jun 01 j 06:36	4°♌50'55	2.67071 AU	retrograde	-4416 Sep 07 j 22:44	2°♋31'58		
					-4416 Sep 27 j 00:59	30°♌		
conjunction	-4421 Jun 04 j 07:13	6°♌46'44	0°43'39	min. Earth dist.	-4416 Oct 13 j 21:56	24°♌09'43	0.62760 AU	
minimum elong	-4421 Jun 04 j 05:58	6°♌44'43	0°43'46	opposition	-4416 Oct 17 j 20:51	22°♌34'46	-0°35'18	
	-4421 Jul 10 j 13:18	0°♍		greatest brilliancy	-4416 Oct 17 j 19:04	22°♌36'33	-1.6m	
morning rise	-4421 Jul 19 j 18:37	5°♍56'51		asc. node	-4416 Nov 01 j 14:06	17°♌12'11		
	-4421 Aug 25 j 16:55	0°♎		direct	-4416 Nov 25 j 05:15	13°♌32'26		
	-4421 Oct 09 j 21:33	0°♏			-4415 Jan 24 j 23:34	0°♍		
	-4421 Nov 23 j 06:10	0°♐			-4415 Mar 24 j 00:57	0°♎		
	-4420 Jan 06 j 05:02	0°♑			-4415 May 13 j 05:49	0°♒		
	-4420 Feb 19 j 18:25	0°♒			-4415 Jun 28 j 14:16	0°♓		
desc. node	-4420 Mar 14 j 06:48	15°♒05'02			-4415 Aug 10 j 23:33	0°♈		
	-4420 Apr 08 j 17:23	0°♓		evening set	-4415 Aug 16 j 10:37	3°♏54'23		
retrograde	-4420 Jun 07 j 15:01	19°♓30'46		max. Earth dist.	-4415 Sep 01 j 21:11	15°♏50'13	2.44027 AU	
min. Earth dist.	-4420 Jul 04 j 06:03	14°♓58'39	0.40587 AU		-4415 Sep 20 j 23:39	0°♐		
greatest brilliancy	-4420 Jul 09 j 11:42	13°♓24'13	-2.7m					
opposition	-4420 Jul 10 j 22:09	12°♓58'04	-6°24'22	conjunction	-4415 Oct 10 j 09:44	14°♐41'39	0°17'29	
direct	-4420 Aug 10 j 13:52	7°♓25'00		minimum elong	-4415 Oct 10 j 10:56	14°♐43'55	0°17'31	
	-4420 Oct 19 j 00:23	0°♈			-4415 Oct 30 j 07:07	0°♑		
	-4420 Dec 10 j 17:20	0°♉		desc. node	-4415 Nov 04 j 02:59	3°♑44'41		
asc. node	-4419 Jan 27 j 12:45	29°♉11'12			-4415 Dec 07 j 17:03	0°♒		
	-4419 Jan 28 j 20:24	0°♊		morning rise	-4415 Dec 11 j 10:40	2°♒55'45		
	-4419 Mar 18 j 06:32	0°♋			-4414 Jan 15 j 01:58	0°♓		
	-4419 May 05 j 05:49	0°♌			-4414 Feb 23 j 07:06	0°♈		
evening set	-4419 May 25 j 09:01	12°♌44'41			-4414 Apr 05 j 05:39	0°♉		
	-4419 Jun 21 j 06:58	0°♍			-4414 May 18 j 20:51	0°♊		
max. Earth dist.	-4419 Jun 24 j 14:17	2°♍08'19	2.64048 AU		-4414 Jul 05 j 22:16	0°♋		
					-4414 Sep 04 j 23:44	0°♌		
conjunction	-4419 Jul 11 j 01:34	12°♍52'36	1°08'40	asc. node	-4414 Sep 19 j 14:40	4°♌30'50		
minimum elong	-4419 Jul 11 j 00:51	12°♍51'27	1°08'51	retrograde	-4414 Oct 13 j 00:39	7°♌40'39		



Attention, astronomical year style is used: The year -4899 in astronomical counting style is the year 4900 BCE in historical counting style.

	-4414 Nov 16 j 20:48	30° $\kappa$ $\Upsilon$			-4408 Feb 04 j 04:33	0° $\approx$	
opposition	-4414 Nov 21 j 23:40	27° $\Upsilon$ 57'51	2°16'46	evening set	-4408 Feb 16 j 02:01	8° $\approx$ 19'33	
greatest brilliancy	-4414 Nov 21 j 22:03	27° $\Upsilon$ 59'28	-1.3m		-4408 Mar 18 j 18:15	0° $\mathcal{H}$	
min. Earth dist.	-4414 Nov 21 j 18:30	28° $\Upsilon$ 03'02	0.67049 AU				
direct	-4413 Jan 01 j 10:40	18° $\Upsilon$ 11'46		conjunction	-4408 Apr 09 j 14:46	14° $\mathcal{H}$ 34'53	-0°18'09
	-4413 Feb 20 j 07:16	0° $\mathcal{B}$		minimum elong	-4408 Apr 09 j 15:35	14° $\mathcal{H}$ 36'15	0°18'12
	-4413 Apr 20 j 18:14	0° $\Pi$		max. Earth dist.	-4408 Apr 28 j 09:12	26° $\mathcal{H}$ 53'57	2.62274 AU
	-4413 Jun 08 j 09:48	0° $\mathcal{E}$			-4408 May 03 j 03:31	0° $\Upsilon$	
	-4413 Jul 22 j 11:04	0° $\Omega$		asc. node	-4408 May 11 j 10:41	5° $\Upsilon$ 22'48	
	-4413 Sep 01 j 12:40	0° $\mathcal{M}$		morning rise	-4408 May 29 j 08:24	16° $\Upsilon$ 53'49	
desc. node	-4413 Sep 21 j 23:32	15° $\mathcal{M}$ 32'09			-4408 Jun 18 j 21:55	0° $\mathcal{B}$	
	-4413 Oct 10 j 16:16	0° $\mathcal{E}$			-4408 Aug 05 j 15:08	0° $\Pi$	
evening set	-4413 Oct 12 j 19:23	1° $\mathcal{E}$ 39'34			-4408 Sep 23 j 09:10	0° $\mathcal{E}$	
	-4413 Nov 17 j 21:28	0° $\mathcal{M}$			-4408 Nov 13 j 15:22	0° $\Omega$	
					-4407 Jan 15 j 09:05	0° $\mathcal{M}$	
conjunction	-4413 Dec 16 j 07:42	22° $\mathcal{M}$ 20'52	-0°53'59	retrograde	-4407 Feb 22 j 05:10	7° $\mathcal{M}$ 28'00	
minimum elong	-4413 Dec 16 j 04:29	22° $\mathcal{M}$ 14'35	0°54'07	opposition	-4407 Mar 26 j 23:02	1° $\mathcal{M}$ 21'47	2°59'33
	-4413 Dec 26 j 02:57	0° $\mathcal{A}$		greatest brilliancy	-4407 Mar 27 j 23:07	1° $\mathcal{M}$ 02'41	-2.5m
max. Earth dist.	-4412 Jan 28 j 13:52	25° $\mathcal{A}$ 43'01	2.39707 AU		-4407 Mar 31 j 06:01	30° $\kappa$ $\Omega$	
	-4412 Feb 03 j 06:00	0° $\mathcal{Z}$		min. Earth dist.	-4407 Apr 03 j 21:16	28° $\Omega$ 52'04	0.44048 AU
morning rise	-4412 Feb 21 j 13:12	13° $\mathcal{Z}$ 38'31		direct	-4407 May 01 j 13:26	24° $\Omega$ 01'27	
	-4412 Mar 15 j 00:45	0° $\approx$		desc. node	-4407 May 13 j 21:13	25° $\Omega$ 03'16	
	-4412 Apr 27 j 01:03	0° $\mathcal{H}$			-4407 Jun 01 j 09:27	0° $\mathcal{M}$	
	-4412 Jun 11 j 19:16	0° $\Upsilon$			-4407 Jul 27 j 16:31	0° $\mathcal{E}$	
	-4412 Jul 31 j 09:37	0° $\mathcal{B}$			-4407 Sep 09 j 09:36	0° $\mathcal{M}$	
asc. node	-4412 Aug 06 j 14:43	3° $\mathcal{B}$ 31'10			-4407 Oct 21 j 01:15	0° $\mathcal{A}$	
	-4412 Sep 28 j 23:36	0° $\Pi$			-4407 Dec 01 j 21:56	0° $\mathcal{Z}$	
retrograde	-4412 Nov 16 j 16:52	11° $\Pi$ 28'12			-4406 Jan 13 j 23:32	0° $\approx$	
opposition	-4412 Dec 25 j 14:27	2° $\Pi$ 25'10	4°20'44		-4406 Feb 27 j 14:29	0° $\mathcal{H}$	
greatest brilliancy	-4412 Dec 26 j 01:25	2° $\Pi$ 14'25	-1.4m	asc. node	-4406 Mar 29 j 07:19	19° $\mathcal{H}$ 26'42	
min. Earth dist.	-4412 Dec 29 j 04:45	1° $\Pi$ 00'33	0.65022 AU	evening set	-4406 Apr 01 j 20:38	21° $\mathcal{H}$ 44'58	
	-4412 Dec 31 j 19:14	30° $\kappa$ $\mathcal{B}$			-4406 Apr 14 j 15:08	0° $\Upsilon$	
direct	-4411 Feb 04 j 20:17	22° $\mathcal{B}$ 24'12					
	-4411 Mar 14 j 20:22	0° $\Pi$		conjunction	-4406 May 20 j 12:25	22° $\Upsilon$ 59'56	0°28'36
	-4411 May 14 j 09:54	0° $\mathcal{E}$		minimum elong	-4406 May 20 j 11:26	22° $\Upsilon$ 58'21	0°28'41
	-4411 Jun 30 j 01:16	0° $\Omega$		max. Earth dist.	-4406 May 23 j 01:23	24° $\Upsilon$ 37'13	2.66791 AU
desc. node	-4411 Aug 08 j 20:43	28° $\Omega$ 26'18			-4406 May 31 j 11:48	0° $\mathcal{B}$	
	-4411 Aug 10 j 23:18	0° $\mathcal{M}$		morning rise	-4406 Jul 05 j 14:16	22° $\mathcal{B}$ 24'00	
	-4411 Sep 19 j 10:23	0° $\mathcal{E}$			-4406 Jul 17 j 11:17	0° $\Pi$	
	-4411 Oct 27 j 19:33	0° $\mathcal{M}$			-4406 Sep 02 j 01:18	0° $\mathcal{E}$	
	-4411 Dec 05 j 05:15	0° $\mathcal{A}$			-4406 Oct 18 j 03:09	0° $\Omega$	
evening set	-4411 Dec 19 j 10:29	10° $\mathcal{A}$ 57'12			-4406 Dec 03 j 01:25	0° $\mathcal{M}$	
	-4410 Jan 13 j 13:52	0° $\mathcal{Z}$			-4405 Jan 18 j 19:51	0° $\mathcal{E}$	
					-4405 Mar 11 j 01:34	0° $\mathcal{M}$	
conjunction	-4410 Feb 19 j 07:06	26° $\mathcal{Z}$ 55'14	-1°01'08	desc. node	-4405 Mar 31 j 22:18	9° $\mathcal{M}$ 52'54	
minimum elong	-4410 Feb 19 j 09:02	26° $\mathcal{Z}$ 58'43	1°01'18	retrograde	-4405 May 11 j 14:48	19° $\mathcal{M}$ 23'23	
	-4410 Feb 23 j 14:20	0° $\approx$		min. Earth dist.	-4405 Jun 08 j 23:07	14° $\mathcal{M}$ 47'00	0.37960 AU
max. Earth dist.	-4410 Mar 29 j 11:36	23° $\approx$ 43'20	2.52555 AU	opposition	-4405 Jun 11 j 17:32	14° $\mathcal{M}$ 02'03	-4°58'10
	-4410 Apr 07 j 16:15	0° $\mathcal{H}$		greatest brilliancy	-4405 Jun 11 j 03:46	14° $\mathcal{M}$ 11'22	-2.9m
morning rise	-4410 Apr 17 j 15:35	6° $\mathcal{H}$ 44'07		direct	-4405 Jul 11 j 12:52	9° $\mathcal{M}$ 01'31	
	-4410 May 22 j 22:01	0° $\Upsilon$			-4405 Sep 14 j 12:43	0° $\mathcal{A}$	
asc. node	-4410 Jun 24 j 13:46	20° $\Upsilon$ 49'54			-4405 Nov 04 j 17:19	0° $\mathcal{Z}$	
	-4410 Jul 09 j 06:48	0° $\mathcal{B}$			-4405 Dec 22 j 03:20	0° $\approx$	
	-4410 Aug 28 j 07:05	0° $\Pi$			-4404 Feb 07 j 05:42	0° $\mathcal{H}$	
	-4410 Oct 23 j 16:06	0° $\mathcal{E}$		asc. node	-4404 Feb 14 j 04:26	4° $\mathcal{H}$ 24'22	
retrograde	-4410 Dec 28 j 08:17	18° $\mathcal{E}$ 47'00			-4404 Mar 25 j 16:23	0° $\Upsilon$	
opposition	-4409 Feb 02 j 23:35	10° $\mathcal{E}$ 51'02	5°13'25	evening set	-4404 May 10 j 12:42	28° $\Upsilon$ 56'44	
greatest brilliancy	-4409 Feb 04 j 06:21	10° $\mathcal{E}$ 22'29	-1.8m		-4404 May 12 j 04:38	0° $\mathcal{B}$	
min. Earth dist.	-4409 Feb 10 j 05:07	8° $\mathcal{E}$ 10'21	0.56722 AU	max. Earth dist.	-4404 Jun 15 j 01:23	21° $\mathcal{B}$ 35'06	2.65882 AU
direct	-4409 Mar 15 j 04:14	1° $\mathcal{E}$ 19'46					
	-4409 Jun 02 j 02:49	0° $\Omega$		conjunction	-4404 Jun 26 j 06:05	28° $\mathcal{B}$ 47'34	1°01'44
desc. node	-4409 Jun 26 j 20:28	15° $\Omega$ 30'13		minimum elong	-4404 Jun 26 j 04:58	28° $\mathcal{B}$ 45'45	1°01'54
	-4409 Jul 18 j 02:22	0° $\mathcal{M}$			-4404 Jun 28 j 02:57	0° $\Pi$	
	-4409 Aug 28 j 02:46	0° $\mathcal{E}$		morning rise	-4404 Aug 10 j 16:08	28° $\Pi$ 31'31	
	-4409 Oct 06 j 09:23	0° $\mathcal{M}$			-4404 Aug 12 j 21:19	0° $\mathcal{E}$	
	-4409 Nov 14 j 12:13	0° $\mathcal{A}$			-4404 Sep 26 j 04:54	0° $\Omega$	
	-4409 Dec 24 j 12:58	0° $\mathcal{Z}$			-4404 Nov 08 j 03:05	0° $\mathcal{M}$	

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	-4404 Dec 19 j 22:38	0°♄	
	-4403 Jan 30 j 04:38	0°♍	
desc. node	-4403 Feb 16 j 00:12	12°♍11'47	
	-4403 Mar 12 j 22:26	0°♊	
	-4403 Apr 26 j 21:19	0°♋	
retrograde	-4403 Jul 12 j 16:27	29°♋40'50	
min. Earth dist.	-4403 Aug 10 j 11:58	24°♋01'43	0.47797 AU
greatest brilliancy	-4403 Aug 17 j 03:29	21°♋39'50	-2.3m
opposition	-4403 Aug 18 j 13:55	21°♋09'05	-5°28'47
direct	-4403 Sep 20 j 18:57	14°♋13'53	
	-4403 Nov 17 j 00:23	0°♌	
asc. node	-4402 Jan 01 j 02:59	23°♌13'56	
	-4402 Jan 13 j 03:18	0°♐	
	-4402 Mar 05 j 05:08	0°♑	
	-4402 Apr 23 j 07:41	0°♒	
	-4402 Jun 09 j 19:00	0°♓	
evening set	-4402 Jun 18 j 01:18	5°♓20'26	
max. Earth dist.	-4402 Jul 10 j 21:03	20°♓18'40	2.59697 AU
	-4402 Jul 25 j 09:08	0°♈	
conjunction	-4402 Aug 04 j 11:54	6°♈50'42	1°10'28
minimum elong	-4402 Aug 04 j 12:18	6°♈51'23	1°10'40
	-4402 Sep 06 j 22:36	0°♉	
morning rise	-4402 Sep 21 j 18:52	10°♉32'22	
	-4402 Oct 18 j 15:16	0°♊	
	-4402 Nov 27 j 20:51	0°♋	
desc. node	-4401 Jan 03 j 22:59	28°♋15'05	
	-4401 Jan 06 j 05:49	0°♌	
	-4401 Feb 14 j 12:55	0°♍	
	-4401 Mar 26 j 19:52	0°♎	
	-4401 May 08 j 19:58	0°♏	
	-4401 Jun 28 j 05:41	0°♐	
retrograde	-4401 Aug 25 j 10:28	17°♐32'30	
min. Earth dist.	-4401 Sep 28 j 14:06	9°♐48'28	0.59436 AU
opposition	-4401 Oct 03 j 23:05	7°♐40'55	-1°54'04
greatest brilliancy	-4401 Oct 03 j 15:01	7°♐48'54	-1.7m
	-4401 Oct 29 j 07:49	30°♑	
direct	-4401 Nov 10 j 03:25	29°♑04'41	
asc. node	-4401 Nov 19 j 03:43	29°♑34'45	
	-4401 Nov 22 j 11:24	0°♒	
	-4400 Feb 08 j 03:58	0°♓	
	-4400 Apr 01 j 17:43	0°♔	
	-4400 May 20 j 18:31	0°♕	
	-4400 Jul 05 j 18:22	0°♖	
evening set	-4400 Jul 28 j 23:50	15°♖51'42	
max. Earth dist.	-4400 Aug 13 j 03:16	26°♖28'08	2.48945 AU
	-4400 Aug 18 j 02:44	0°♗	
conjunction	-4400 Sep 18 j 19:24	22°♗59'48	0°41'22
minimum elong	-4400 Sep 18 j 21:22	23°♗03'25	0°41'29
	-4400 Sep 28 j 05:43	0°♘	
	-4400 Nov 06 j 17:29	0°♙	
morning rise	-4400 Nov 14 j 18:33	6°♙12'55	
desc. node	-4400 Nov 20 j 20:08	10°♙55'06	
	-4400 Dec 15 j 07:51	0°♚	
	-4399 Jan 22 j 20:36	0°♛	
	-4399 Mar 03 j 05:06	0°♜	
	-4399 Apr 13 j 09:03	0°♝	
	-4399 May 27 j 15:09	0°♞	
	-4399 Jul 17 j 01:12	0°♟	
retrograde	-4399 Sep 29 j 14:29	24°♟36'50	
asc. node	-4399 Oct 06 j 05:29	24°♟19'22	
min. Earth dist.	-4399 Nov 06 j 23:52	15°♟25'29	0.66091 AU
opposition	-4399 Nov 08 j 16:18	14°♟44'50	1°15'38
greatest brilliancy	-4399 Nov 08 j 13:48	14°♟47'22	-1.4m
direct	-4399 Dec 18 j 10:48	5°♟12'28	