Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12399 Oct 02 j 16:45 16°546'52 0°06'31 -12394 Jun 08 i 00:34 0°≈ conjunction -12399 Oct 02 j 17:23 16°5548'06 -12394 Jul 18 j 23:08 25°≈27'26 minimum elong asc. node -12399 Oct 01 j 17:18 16°502'01 -12394 Jul 26 j 09:14 behind sun begin 0°)(-12394 Sep 15 j 14:48 $0^{\circ}\Upsilon$ behind sun end -12399 Oct 03 j 17:29 17°534'08 -12399 Oct 11 j 06:10 23°518'13 desc. node -12394 Nov 27 j 09:03 0°8 -12399 Oct 20 j 02:43 $0^{\circ}\Omega$ retrograde -12394 Dec 12 j 07:12 1°**8**19'24 max. Earth dist. -12399 Nov 15 j 21:50 19° **Ω**53'45 2.43704 AU -12394 Dec 26 j 21:02 30°₹**Y** -12399 Nov 29 j 20:02 0° m opposition -12393 Jan 12 j 17:20 25°**Y**48'33 7°08'34 morning rise -12399 Dec 03 j 17:33 2°m47'49 greatest brilliancy -12393 Jan 14 j 04:10 25° **Y** 23'12 -2.6m -12398 Jan 11 j 15:32 0∘**⊽** min. Earth dist. -12393 Jan 18 j 16:28 24°**Y**′04'47 0.41215 AU -12398 Feb 25 j 21:30 0°M direct -12393 Feb 15 j 05:13 19°**Υ**29'42 -12398 Apr 15 j 02:06 0° **₹** -12393 Mar 29 j 11:47 0°8 -12398 Jun 07 j 11:17 0°ರ -12393 May 21 j 13:19 $0^{\circ}\Pi$ retrograde -12398 Aug 26 j 09:45 26°**⋜**03'46 desc. node -12393 Jun 03 j 15:25 8°**Ⅲ**34'17 opposition -12398 Oct 03 j 10:58 17°♂17'42 -0°28'08 -12393 Jul 05 j 05:21 0ಂತಾ greatest brilliancy -12398 Oct 03 j 13:12 17°♂15'32 -12393 Aug 17 j 13:40 $0^{\circ}\Omega$ min. Earth dist. -12398 Oct 08 j 01:30 15°**⋜**29'44 0.62319 AU -12393 Sep 30 j 07:29 0° m asc. node -12398 Oct 14 j 05:31 13°**♂**10'22 -12393 Nov 14 j 03:09 0∘**ত** direct -12398 Nov 13 j 04:36 7°る21'42 -12393 Dec 30 j 02:21 -12397 Jan 22 j 17:06 0°**≈** evening set -12392 Jan 07 j 00:13 5°ML06'07 -12397 Mar 13 j 19:08 0°**₩** -12392 Feb 14 j 19:34 -12397 Apr 26 j 01:43 $0^{\circ}\Upsilon$ -12397 Jun 05 i 08:09 0°8 conjunction -12392 Feb 24 i 15:02 6° ₹ 16'49 -0°54'44 -12397 Jul 14 j 06:11 $0^{\circ}\Pi$ minimum elong -12392 Feb 24 i 16:36 6°**х** 19'20 0°55'24 -12397 Aug 22 j 00:15 0°© max. Earth dist. -12392 Feb 23 j 12:39 5°**х** 34'36 2.66350 AU -12397 Aug 29 j 05:58 5°933'21 -12392 Apr 01 j 14:17 0°궁 desc node -12397 Sep 30 j 12:57 -12392 Apr 11 j 19:59 6°**ප**36'16 0 $^{\circ}\Omega$ morning rise -12397 Oct 03 j 22:27 -12392 May 17 j 19:04 2°**Ω**31'56 0°≈≈ evening set -12397 Nov 10 j 13:24 -12392 Jun 04 j 14:14 11°≈42'44 asc node -12392 Jul 02 j 02:19 0°\ -12392 Aug 15 j 14:05 -12397 Nov 30 j 03:32 13° m 51'37 -0°58'36 $0^{\circ}\Upsilon$ conjunction -12392 Sep 28 j 18:46 -12397 Nov 30 j 01:09 13° m/47'25 0°58'22 minimum elong 0° 8 -12397 Dec 23 j 12:03 0°**♀** -12392 Nov 12 j 21:52 $0^{\circ}\Pi$ -12397 Dec 31 j 23:37 5°**2**45'51 2.55534 AU -12391 Jan 02 j 15:27 max. Earth dist. 0ಂತಾ -12396 Jan 23 j 12:15 20°**£**49'58 -12391 Feb 25 j 20:04 16°508'25 morning rise retrograde -12391 Mar 25 j 12:15 11°527'11 0.40294 AU -12396 Feb 06 j 10:47 0°M min. Earth dist. -12396 Mar 24 j 06:00 0° ₹ opposition -12391 Mar 30 j 22:57 9°551'17 1°34'20 -12396 May 11 j 21:07 0°る greatest brilliancy -12391 Mar 30 j 17:01 9°555'39 -12396 Jul 02 j 13:09 0°≈ desc. node -12391 Apr 20 j 21:02 5°501'47 -12396 Aug 31 j 05:22 28°≈21'25 direct -12391 Apr 30 j 19:39 4°9523'20 asc. node -12396 Sep 04 j 23:48 0°**米** -12391 Jul 15 j 01:27 $0^{\circ}\Omega$ -12396 Oct 09 j 16:57 6°**米**21'12 -12391 Sep 04 j 13:52 retrograde -12396 Nov 10 j 22:06 30°R≈ -12391 Oct 22 j 22:09 -12396 Nov 13 j 23:47 28°≈54'21 3°33'29 -12391 Dec 09 j 17:03 opposition -12396 Nov 14 j 20:47 28°≈35'22 -12390 Jan 26 j 06:53 0° ⊀ greatest brilliancy min. Earth dist. -12396 Nov 21 i 13:23 26°≈10'21 0.52723 AU evening set -12390 Feb 14 i 17:54 12° ₹21'52 direct -12396 Dec 23 j 00:09 19°≈50'00 -12390 Mar 14 i 05:27 0°る -12395 Feb 03 i 06:21 0°**** max. Earth dist. -12390 Mar 19 j 16:31 3°る32'07 2.63861 AU -12395 Mar 29 j 01:16 -12395 May 11 i 08:40 0°8 conjunction -12390 Apr 03 j 22:36 13°5 28'31 -0°11'18 -12395 Jun 20 j 20:54 0°**Ⅱ** -12390 Apr 03 j 23:06 13°る29'20 0°12'02 minimum elong -12395 Jul 16 j 09:34 19°**Ⅲ**12'15 -12390 Apr 03 j 09:52 13°♂07'41 desc node behind sun begin -12395 Jul 30 j 18:32 0ംഉ behind sun end -12390 Apr 04 j 12:20 13°₹50'59 -12395 Sep 09 j 06:06 $0^{\circ}\Omega$ asc. node -12390 Apr 22 j 06:45 25°る33'56 -12390 Apr 28 j 22:37 -12395 Oct 21 j 01:27 0° m -12395 Nov 24 j 12:00 23° m 50'34 morning rise -12390 May 21 j 13:26 15°≈14'08 evening set -12395 Dec 03 j 13:51 0°**♀** -12390 Jun 12 j 01:37 0°**)** -12390 Jul 24 j 13:58 $0^{\circ}\Upsilon$ -12394 Jan 14 j 23:27 28°**♀**10'33 -1°15'22 0°8 conjunction -12390 Sep 03 j 19:21 -12394 Jan 14 j 23:43 28°**2**10'59 1°15'42 $0^{\circ}\Pi$ minimum elong -12390 Oct 14 j 07:19 -12394 Jan 17 j 18:25 0°M -12390 Nov 23 j 23:53 0ಂತಾ max. Earth dist. -12394 Jan 29 j 13:36 7°**M**.40'48 2.63517 AU -12389 Jan 05 j 12:33 0 $^{\circ}\Omega$ morning rise -12394 Mar 05 j 07:22 0°**х** 02′34 -12389 Feb 23 j 13:17 0° M -12394 Mar 05 j 05:46 0°**∡**¹ desc. node -12389 Mar 08 j 21:07 6° My 32'26 -12394 Apr 21 j 10:27 0°ಕ retrograde -12389 Apr 22 j 08:16 17° M 58'52

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12389 May 22 j 20:46 11° m 43'36 0.51653 AU evening set -12384 Jul 06 j 20:30 2°**8**31'15 min. Earth dist. -12389 May 29 j 07:02 9° mp 21'34 -2.1m -12384 Aug 11 j 01:24 greatest brilliancy 0°Π -12389 May 30 j 11:45 8° m 55'00 -4°21'07 opposition direct -12389 Jul 04 j 03:02 -12384 Sep 06 j 19:06 20°**П**56'44 0°37'32 conjunction 1° m 26'32 -12389 Sep 25 j 17:04 -12384 Sep 06 j 22:10 21°**Д**02'42 0°38'15 0∘**⊽** minimum elong -12384 Sep 18 j 09:57 -12389 Nov 18 j 02:29 0°M 0ಂತಾ -12388 Jan 06 j 20:32 0°**∡**¹ -12384 Oct 08 j 06:52 15°520'42 2.39471 AU max. Earth dist. -12388 Feb 23 j 14:54 0°₹ -12384 Oct 27 j 13:20 $0^{\circ}\Omega$ asc. node -12388 Mar 09 j 04:55 9°**る**24'40 desc. node -12384 Oct 28 j 02:08 0°**£**24′06 evening set -12388 Mar 26 j 05:53 20°**궁**34'20 morning rise -12384 Nov 09 j 22:19 10°**Ω**00'45 -12388 Apr 09 j 09:48 0°**≈** -12384 Dec 07 j 05:58 0° m -12388 Apr 16 j 06:07 max. Earth dist. 4°≈36'25 2.56314 AU -12383 Jan 19 j 02:43 0°Ω -12383 Mar 05 j 16:31 0°M conjunction -12388 May 15 j 10:29 24°≈38'25 0°40'39 -12383 Apr 24 j 01:07 0°**⊼** minimum elong -12388 May 15 j 08:46 24°≈35'25 0°40'10 -12383 Jun 21 j 20:12 0°궁 -12388 May 23 j 02:05 0°**)**€ retrograde -12383 Aug 11 j 09:11 12°**궁**19'59 -12388 Jul 03 j 18:18 $0^{\circ}\Upsilon$ opposition -12383 Sep 19 j 03:07 3°る12'27 -1°43'17 morning rise -12388 Jul 05 j 18:47 1°Y29'13 greatest brilliancy -12383 Sep 19 j 08:24 3°**る**07'13 -1.5m -12388 Aug 12 j 20:43 0°8 min. Earth dist. -12383 Sep 22 j 07:50 1°る56'25 0.64623 AU -12388 Sep 21 j 00:51 $0^{\circ}\Pi$ -12383 Sep 27 j 07:43 30°R ✓ -12388 Oct 30 j 02:28 0ಂತಾ direct -12383 Oct 29 j 21:19 23° ₹14'21 -12388 Dec 09 i 01:23 $0^{\circ}\Omega$ asc. node -12383 Oct 30 j 20:01 23° ₹ 14'42 -12387 Jan 20 i 04:54 0° m -12383 Dec 04 i 08:31 desc. node -12387 Jan 23 i 16:16 2° m 21'58 -12382 Feb 03 i 23:08 0°≈ -12387 Mar 08 i 01:37 -12382 Mar 23 j 02:58 0°) -12387 May 15 j 12:41 -12382 May 04 j 12:54 $0^{\circ}\Upsilon$ o°m. -12387 Jun 01 j 14:10 1°ML49'27 -12382 Jun 13 j 10:16 0°8 retrograde -12387 Jun 17 j 17:48 30°R ₽ -12382 Jul 22 j 02:35 0°П min. Earth dist. -12387 Jul 07 j 01:16 23°**2**39'17 0.61792 AU -12382 Aug 29 j 15:43 0ಂತಾ -12387 Jul 11 j 09:21 21°**2**55'37 -5°20'40 -12382 Sep 10 j 03:44 opposition evening set 8°951'38 -12387 Jul 10 j 14:57 22°**2**13'58 -1.5m -12382 Sep 14 j 22:43 12°531'59 greatest brilliancy desc. node -12387 Aug 18 j 03:47 13°**♀**04'04 -12382 Oct 07 j 23:47 direct $0^{\circ}\Omega$ -12387 Oct 18 j 11:08 0°M -12387 Dec 14 j 20:54 0° ₹ -12382 Nov 08 j 23:51 23°Ω37'01 -0°38'39 conjunction -12386 Jan 25 j 07:54 24°**х** 40'02 -12382 Nov 08 j 21:24 23° **Ω**32'34 0°38'10 asc. node minimum elong -12386 Feb 02 j 22:27 0°る -12382 Nov 17 j 20:07 0° M -12382 Dec 17 j 10:14 20° m 53'01 2.51202 AU -12386 Mar 21 j 10:56 0°≈ max. Earth dist. -12386 May 04 j 04:08 0°**ℋ** -12382 Dec 30 j 15:58 0°**♀** evening set -12386 May 11 j 10:50 5° ¥ 10'10 morning rise -12381 Jan 05 j 04:40 3°**≏**46'01 max. Earth dist. -12381 Feb 13 j 15:16 0°M -12386 Jun 14 j 12:45 0°**Υ** -12381 Apr 01 j 18:34 0°**∡**7 -12381 May 21 j 12:49 -12386 Jul 05 j 20:12 16°**Y**'00'31 1°13'16 -12381 Jul 16 j 06:47 conjunction -12386 Jul 05 j 19:40 15°**Υ**59'30 1°13'28 -12381 Sep 17 j 22:06 19°≈40'52 minimum elong asc. node -12386 Jul 24 j 03:27 0°8 -12381 Sep 21 j 14:17 19°≈45'50 retrograde -12386 Aug 31 i 18:30 0°**Ⅱ** opposition -12381 Oct 28 i 03:05 11°≈42'58 1°52'01 -12381 Oct 28 j 12:41 11°≈33'56 morning rise -12386 Sep 03 j 14:56 2° II 13'39 greatest brilliancy -1.8m -12386 Oct 09 i 06:38 0°5 min. Earth dist. -12381 Nov 03 j 17:17 9°≈14'02 0.57043 AU -12386 Nov 17 i 13:23 0°Ω direct -12381 Dec 07 i 03:56 2°≈07'36 desc. node -12386 Dec 11 j 09:41 $17^{\circ}\Omega$ 39'44 -12380 Feb 23 j 00:35 0°**₩** -12386 Dec 28 j 12:06 0° Mg -12380 Apr 09 j 15:56 $0^{\circ}\Upsilon$ -12385 Feb 10 j 02:41 -12380 May 21 j 04:41 0°8 0∘⊽ -12385 Mar 30 j 02:15 0°M -12380 Jun 29 j 19:58 0°**П** -12385 May 29 j 18:53 0° **₹** desc. node -12380 Aug 02 j 01:15 25°**Ⅲ**23'04 7°**∡**¹56'57 0ಂಪ retrograde -12385 Jul 07 j 11:19 -12380 Aug 08 j 02:51 -12385 Aug 11 j 19:10 30°RML -12380 Sep 17 j 02:30 $0^{\circ}\Omega$ opposition -12385 Aug 16 j 06:50 28°M 12'12 -4°09'42 -12380 Oct 28 j 12:08 -12385 Aug 16 j 05:34 28°M 13'29 -12380 Nov 05 j 10:24 5° m 36'14 greatest brilliancy -1.4m evening set -12385 Aug 15 j 17:47 28°M25'21 0.66295 AU -12380 Dec 10 j 17:16 0∘**⊽** min. Earth dist. -12385 Sep 25 j 02:41 18°M233'34 direct -12385 Nov 12 j 17:34 conjunction -12380 Dec 28 j 19:25 12°**2**11'23 -1°14'13 asc. node -12385 Dec 13 j 14:08 14° ₹ 19'25 minimum elong -12380 Dec 28 j 18:36 12°**△**10'02 1°14'21 -12384 Jan 11 j 06:34 0°ಕ max. Earth dist. -12379 Jan 18 j 22:54 26°**£**11'58 2.60990 AU -12384 Feb 29 j 03:53 0°≈ -12379 Jan 24 j 17:58

morning rise

-12379 Feb 17 j 17:06 15°ML33'22

-12379 Mar 12 j 06:20

-12379 Apr 28 j 20:08

-12384 Apr 13 j 14:29

-12384 May 25 j 02:05

-12384 Jul 03 j 14:17 0°8

0°**∀**

 $0^{\circ}\Upsilon$

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12379 Jun 16 j 11:14 0°≈ -12374 Oct 07 i 08:44 0∘**⊽** -12379 Aug 04 j 18:30 29°≈01'12 -12374 Nov 26 j 15:35 oom. asc. node -12379 Aug 06 j 12:24 -12373 Jan 14 j 07:20 0°×7 0°¥ -12379 Oct 07 j 21:30 $0^{\circ}\Upsilon$ 0°궁 -12373 Mar 02 j 15:44 -12379 Nov 14 j 12:12 7°**Y**28′18 -12373 Mar 11 j 04:03 retrograde evening set 5°**る**29'54 -12379 Dec 17 j 12:51 1°**Y**11'01 opposition 6°11'29 asc. node -12373 Mar 26 j 20:28 15°₹43'51 -12379 Dec 19 j 01:54 greatest brilliancy 0°**Y**40'58 -2.4m max. Earth dist. -12373 Apr 05 j 12:15 22°**⋜**05'57 2.59833 AU -12379 Dec 21 j 04:23 30°R₩ -12373 Apr 17 j 08:52 min. Earth dist. -12379 Dec 25 j 06:33 28° **★**41'36 0.45383 AU 0°20'45 direct -12378 Jan 22 j 15:02 23°₩35'15 conjunction -12373 Apr 29 j 05:56 8°**≈**00′10 -12378 Feb 23 j 20:02 $0^{\circ}\Upsilon$ minimum elong -12373 Apr 29 j 05:02 7°≈58'39 0°20'08 -12378 Apr 21 j 02:57 -12373 May 31 j 04:18 0°8 0°\ -12378 Jun 04 j 03:11 Π $^{\circ}$ 0 morning rise -12373 Jun 17 j 14:38 12° **∺** 18'58 desc. node -12378 Jun 20 j 06:45 11°**Ⅲ**31'30 -12373 Jul 12 j 03:02 $0^{\circ}\Upsilon$ -12378 Jul 15 j 22:01 0ಂತಾ -12373 Aug 21 j 13:55 0°8 -12378 Aug 26 j 16:24 $0^{\circ}\Omega$ -12373 Sep 30 j 03:38 $0^{\circ}\Pi$ -12378 Oct 08 j 10:02 0° m -12373 Nov 08 j 15:38 0ಂತಾ -12378 Nov 21 j 13:50 -12373 Dec 19 j 04:30 $0^{\circ}\Omega$ evening set -12378 Dec 21 j 19:47 20° **2**00'11 -12372 Jan 31 j 12:28 0° m -12377 Jan 06 j 03:31 0°M desc. node -12372 Feb 10 j 13:27 6° Mp 28'28 -12372 Mar 22 j 16:22 conjunction -12377 Feb 09 i 05:25 21°ML59'59 -1°06'09 retrograde -12372 May 17 i 14:12 16° **△**17'51 minimum elong -12377 Feb 09 i 06:47 22° ML02'10 1°06'44 min. Earth dist. -12372 Jun 20 i 05:09 8°**£**48'48 0.58377 AU max. Earth dist. -12377 Feb 14 i 03:31 25° ML09'26 2.65882 AU opposition -12372 Jun 25 j 23:35 6°**△**33'23 -5°19'14 -12377 Feb 21 i 16:51 0° ₹ greatest brilliancy -12372 Jun 24 j 22:38 6°**£**57'51 -1.7m -12377 Mar 28 j 22:44 22° ₹33'19 -12372 Jul 16 j 01:35 30°R Mp morning rise -12377 Apr 09 j 13:41 0°る -12372 Aug 01 j 15:25 28° m 09'15 direct -12377 May 26 j 04:13 0°≈ -12372 Aug 19 j 06:51 0∘⊽ -12377 Jun 22 j 10:21 17°≈41'19 -12372 Oct 31 j 15:14 o°m. asc node -12377 Jul 11 j 07:44 0°**)** -12372 Dec 23 j 15:03 0° 🗸 -12377 Aug 26 j 08:28 0°**Υ** -12371 Feb 10 j 21:46 0°る14'41 asc. node -12377 Oct 12 j 10:56 0°8 -12371 Feb 10 j 12:28 0°궁 -12377 Dec 04 j 02:43 0°**Ц** -12371 Mar 28 j 16:06 0°≈ -12376 Jan 29 j 11:39 16°**Ⅲ**27'35 -12371 Apr 22 j 11:10 16°≈50'03 retrograde evening set -12376 Feb 29 j 15:21 11°**Д**09'29 4°59'03 -12371 May 09 j 02:49 28°≈26'17 2.49632 AU opposition max. Earth dist. -12376 Feb 28 j 12:35 11°**II**27'29 0.38497 AU -12371 May 11 j 08:00 0°**米** min. Earth dist. -12376 Feb 29 j 15:45 11°**Д**09'13 -2.9m greatest brilliancy direct -12376 Mar 31 j 00:38 6°**II**02'44 conjunction -12371 Jun 14 j 09:22 24°\ 32'40 1°05'53 desc. node -12376 May 07 j 11:49 14°**Ⅲ**04'01 minimum elong -12371 Jun 14 j 07:29 24°**∺**29'13 1°05'46 -12376 Jun 09 j 19:42 0°១ -12371 Jun 21 j 18:47 0°**Υ** -12376 Jul 30 j 00:17 0°**Ω** -12371 Jul 31 j 13:02 0°8 -12376 Sep 14 j 19:10 0° Mp -12371 Aug 09 j 09:41 6°**8**48'29 morning rise -12376 Oct 31 j 06:14 0°**♀** -12371 Sep 08 j 08:03 0°**Ц** -12376 Dec 17 j 03:14 0°M -12371 Oct 16 j 23:56 0°5 -12375 Jan 30 j 11:49 28°M 13'25 -12371 Nov 25 j 10:42 0°**Ω** evening set -12371 Dec 28 i 05:36 $24^{\circ}\Omega00'03$ -12375 Feb 02 i 06:46 0° ₹ desc. node -12370 Jan 05 j 16:09 0° Mp max. Earth dist. -12375 Mar 09 i 18:34 22° ₹ 41'57 2.65477 AU -12370 Feb 18 i 23:27 conjunction -12375 Mar 19 j 13:49 29° ₹00'54 -0°30'01 -12370 Apr 10 i 10:25 0° M -12375 Mar 19 i 14:58 29° ₹02'46 0°30'45 -12370 Jun 23 j 19:36 24°M33'02 minimum elong retrograde -12375 Mar 21 j 02:25 0°る min. Earth dist. -12370 Jul 31 j 17:15 15°ML29'48 0.65253 AU -12375 May 05 j 16:34 29°る49'38 -12370 Aug 02 j 17:59 14°ML40'41 -4°47'34 morning rise opposition -12375 May 05 j 22:49 0°≈ -12370 Aug 02 j 10:37 14°M 48'06 -1.4m greatest brilliancy asc. node -12375 May 09 j 01:23 2°≈03'52 direct -12370 Sep 10 j 21:12 5°M-17'18 -12375 Jun 19 j 10:36 0°**∀** -12370 Nov 27 j 13:38 0°×7 -12375 Aug 01 j 13:11 $0^{\circ}\Upsilon$ asc. node -12370 Dec 30 j 03:14 17°**尽**33'13 -12375 Sep 12 j 13:54 0° 8 -12369 Jan 20 j 09:30 0°ಕ -12375 Oct 24 j 03:08 $0^{\circ}\Pi$ -12369 Mar 09 j 01:22 0°≈ -12375 Dec 05 j 08:51 0 \circ \odot -12369 Apr 22 j 03:06 0°**∀** -12374 Jan 20 j 07:39 $0^{\circ}\Omega$ -12369 Jun 02 j 12:40 $0^{\circ}\Upsilon$ 8°**Y**33'40 desc. node -12374 Mar 25 j 15:53 $26^{\circ}\Omega$ 21'18 evening set -12369 Jun 13 j 23:04 retrograde -12374 Apr 03 j 02:51 26° Ω51'19 -12369 Jul 12 j 01:03 0°8 min. Earth dist. -12374 May 01 j 18:04 21°**Ω**24'48 0.46754 AU max. Earth dist. -12369 Jul 26 j 06:52 11°**8**02'38 2.38780 AU opposition -12374 May 09 j 19:01 18°**Q**38'43 -2°49'49 greatest brilliancy -12374 May 08 j 21:38 $18^{\circ}\Omega$ 57'12 -2.3m conjunction -12369 Aug 12 j 18:47 24°**8**42'38 1°01'26 -12374 Jun 11 j 20:11 11° **Ω**56'19 -12369 Aug 12 j 21:46 24°**8**48'28 direct minimum elong 1°02'00 -12374 Aug 12 j 18:52 0° Mp -12369 Aug 19 j 12:50 0°**Ⅱ**

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. opposition -12369 Sep 26 j 21:39 0°ഇ -12364 Nov 25 j 04:52 10°\tag{00'32} 4°33'01 -12369 Oct 15 j 22:37 14°542'30 -12364 Nov 26 j 08:43 greatest brilliancy 9°\ 36'05 -2.1m morning rise -12369 Nov 05 j 00:53 min. Earth dist. -12364 Dec 03 j 01:50 7°**¥**15'14 $0^{\circ}\Omega$ 0.50161 AU -12363 Jan 02 j 08:49 desc. node -12369 Nov 14 j 21:58 7°**Ω**24'27 direct 1°**)**21'17 $0^{\circ}\Upsilon$ -12369 Dec 15 j 18:00 0° mb -12363 Mar 20 j 07:10 0°8 -12368 Jan 27 j 18:10 0∘ಹ -12363 May 04 j 14:51 -12368 Mar 13 j 21:21 0°M -12363 Jun 14 j 22:29 $0^{\circ}\Pi$ 0°**∡**¹ -12368 May 04 j 06:29 desc. node -12363 Jul 06 j 22:00 16°**Ⅱ**19'31 retrograde -12368 Jul 28 j 03:35 29°**х** 03'41 -12363 Jul 25 j 07:28 0ಂಲ opposition -12368 Sep 05 j 10:18 19° ₹38'46 -2°48'01 -12363 Sep 04 j 02:56 0° Ω greatest brilliancy -12368 Sep 05 j 15:01 19°**尽** 34'03 -1.4m -12363 Oct 16 j 04:08 0° m -12368 Sep 07 j 04:17 18° ₹ 56'45 min. Earth dist. 0.66007 AU -12363 Nov 28 j 20:25 0°Ω -12368 Oct 15 j 23:12 direct 9°**х** 44'42 evening set -12363 Dec 04 j 19:29 4°**£**00'22 asc. node -12368 Nov 16 j 09:51 15° ₹05'52 -12362 Jan 13 j 03:16 0°M -12368 Dec 22 j 15:12 0°궁 -12367 Feb 13 j 22:30 0°≈ conjunction -12362 Jan 24 j 10:10 7°M20'39 -1°13'23 -12367 Mar 31 j 14:53 0°**)**€ minimum elong -12362 Jan 24 j 10:56 7°M21'54 1°13'49 -12367 May 12 j 13:07 $0^{\circ}\Upsilon$ max. Earth dist. -12362 Feb 04 j 12:11 14°ML30'53 2.64595 AU -12367 Jun 21 j 05:25 0°8 -12362 Feb 28 j 14:31 0°×7 -12367 Jul 29 j 18:40 $0^{\circ}\Pi$ morning rise -12362 Mar 14 j 01:10 8°×35'40 evening set -12367 Aug 15 j 19:50 13°**Ⅲ**20'35 -12362 Apr 16 j 15:31 -12367 Sep 06 i 04:53 0ಂತಾ -12362 Jun 02 j 19:36 0°≈ desc. node -12367 Oct 01 j 17:13 19°537'44 asc. node -12362 Jul 09 i 05:36 23°≈05'42 -12367 Oct 15 j 09:49 -12362 Jul 20 i 04:34 0°**)** -12362 Sep 06 j 20:26 $0^{\circ}\Upsilon$ -12367 Oct 16 j 17:30 $0^{\circ}\Omega$ 59'34 -0°11'16 -12362 Oct 31 j 06:34 0°8 conjunction -12367 Oct 16 j 16:37 -12362 Dec 29 j 09:39 16°857'27 0°Ω57'54 0°10'36 retrograde minimum elong -12367 Oct 15 j 20:43 $0^{\circ}\Omega$ 20'30 -12361 Jan 29 j 06:49 11°**8**43'37 6°59'03 behind sun begin opposition -12361 Jan 30 j 07:51 11°**8**26'13 -2.7m behind sun end -12367 Oct 17 j 12:31 1°**Ω**35'16 greatest brilliancy -12367 Nov 25 j 03:16 0° Mp -12361 Feb 02 j 04:19 10°\(\delta 38'45 min. Earth dist. 0.39572 AU -12367 Nov 29 j 03:43 -12361 Mar 02 j 09:24 6°**8**02'22 max. Earth dist. 2° m 53'11 2.46401 AU direct -12367 Dec 16 j 02:08 14° m 53'38 -12361 May 10 j 08:04 0°**Ц** morning rise -12361 May 25 j 04:53 -12366 Jan 06 j 21:29 0∘**⊽** 8°**Ⅱ**44'30 desc. node -12366 Feb 20 j 23:23 -12361 Jun 27 j 14:23 0°M 0ಂខಾ -12366 Apr 09 j 15:42 0° ₹ -12361 Aug 11 j 09:03 $0^{\circ}\Omega$ -12366 May 31 j 06:22 0°る -12361 Sep 24 j 21:27 0° m -12366 Aug 06 j 05:52 0°≈ -12361 Nov 09 j 03:38 0∘**⊽** retrograde -12366 Sep 04 j 12:32 4°≈39'05 -12361 Dec 25 j 08:55 0°M -12366 Oct 01 j 10:00 30°R궁 -12360 Jan 16 j 01:32 13°ML55'14 evening set asc. node -12366 Oct 04 j 14:31 28°**궁**54'25 -12360 Feb 10 j 04:56 0°**√** -12366 Oct 12 j 01:53 26°**궁**06'49 0°20'00 max. Earth dist. -12360 Feb 29 j 03:42 12°**尽**07'19 2.66269 AU opposition -12366 Oct 12 j 03:18 26°**⋜**05'27 -1.6m greatest brilliancy -12366 Oct 17 j 10:16 24°**정**02'37 0.60664 AU -12360 Mar 04 j 09:31 14°**₹** 50'22 -0°46'29 min. Earth dist. conjunction -12366 Nov 21 j 15:39 16°**⋜**15'01 -12360 Mar 04 j 11:02 14° ₹ 52'48 0°47'11 direct minimum elong -12365 Jan 12 j 15:15 0°≈ -12360 Mar 27 j 23:38 0°**ਰ** -12365 Mar 07 i 07:30 0°**∀** morning rise -12360 Apr 20 j 10:52 15°る12'15 -12365 Apr 20 i 10:42 -12360 May 13 j 01:13 0°≈ -12365 May 31 i 01:33 0°8 asc. node -12360 May 25 j 20:12 8°≈27'19 -12365 Jul 09 i 04:30 0°**Ⅱ** -12360 Jun 27 i 00:39 0°) -12365 Aug 17 j 02:01 0ಂತಾ -12360 Aug 09 j 22:36 desc. node -12365 Aug 19 j 16:34 1°959'50 -12360 Sep 22 j 03:56 0°8 -12365 Sep 25 j 17:32 0°**Ω** -12360 Nov 04 j 12:38 $0^{\circ}\Pi$ -12365 Oct 16 j 15:48 15° Ω 25'46 -12360 Dec 20 j 05:47 evening set 0ಂತಾ -12365 Nov 05 j 20:18 0° m -12359 Feb 22 j 02:07 $0^{\circ}\Omega$ retrograde -12359 Mar 11 j 22:54 2°**Ω**09'21 conjunction -12365 Dec 11 j 09:24 24° m 54'03 -1°06'26 -12359 Mar 29 j 18:20 30° R 55 -12365 Dec 11 j 07:29 24° m 50'45 1°06'21 min. Earth dist. -12359 Apr 08 j 13:02 27°519'18 0.42255 AU minimum elong -12365 Dec 18 j 20:08 -12359 Apr 11 j 08:51 26°526'40 0∘**⊽** desc. node max. Earth dist. -12364 Jan 08 j 06:32 13°**2**47'46 2.57693 AU opposition -12359 Apr 15 j 12:13 25°508'27 -0°17'50 -12364 Feb 01 j 18:34 0°M greatest brilliancy -12359 Apr 15 j 10:07 25°5010'06 -2.7m morning rise -12364 Feb 02 j 08:40 0°M23'04 direct -12359 May 16 j 23:31 19°515'47 -12364 Mar 19 j 09:57 0°**∡** -12359 Jul 01 j 00:44 0° Ω -12364 May 06 j 13:31 0°궁 -12359 Aug 28 j 03:27 0° m -12364 Jun 25 j 19:34 0°≈ -12359 Oct 17 j 03:48 0∘**⊽** asc. node -12364 Aug 21 j 12:57 0°**)**€03'40 -12359 Dec 04 j 15:29 0°M -12364 Aug 21 j 09:46 0°**₩** -12358 Jan 21 j 13:01

evening set

-12358 Feb 23 j 14:06 20° ₹ 59'10

-12364 Oct 21 j 16:16 17°**米**04'43

retrograde

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12358 Mar 09 i 14:38 0°る -12354 Nov 12 i 15:08 $0^{\circ}\Omega$ -12358 Mar 25 j 17:41 10°**궁**27'50 2.62646 AU -12354 Dec 01 j 18:02 $14^{\circ}\Omega$ 14'23 max Earth dist desc. node -12354 Dec 23 j 10:41 0° m -12358 Apr 12 j 23:47 22°る27'33 0°00'15 -12353 Feb 04 j 17:42 0∘Ω conjunction -12358 Apr 12 j 23:49 22°る27'36 0°M minimum elong 0°00'27 -12353 Mar 23 j 19:13 -12358 Apr 12 j 03:51 21°**궁**54'36 0° **₹** behind sun begin -12353 May 18 j 04:53 -12358 Apr 13 j 19:47 23°**⋜**00'37 behind sun end retrograde -12353 Jul 15 j 08:31 15° ₹ 56'39 -12358 Apr 12 j 13:58 22°**궁**11'21 asc. node opposition -12353 Aug 24 j 00:08 6°**≯**17'54 -3°42'39 -12358 Apr 24 j 08:00 0°**≈** greatest brilliancy -12353 Aug 24 j 01:33 6° **₹** 16′28 -1.4m morning rise -12358 May 31 j 01:27 24°≈56'48 min. Earth dist. -12353 Aug 24 j 06:33 6°**∡**11′26 0.66465 AU -12358 Jun 07 j 08:26 0°**∀** -12353 Sep 10 j 05:04 30°RM $0^{\circ}\Upsilon$ -12353 Oct 03 j 03:00 26°M32'39 -12358 Jul 19 j 15:57 direct -12358 Aug 29 j 14:03 0° 8 -12353 Oct 28 j 01:07 0° **₹** -12358 Oct 08 j 16:44 $\Pi^{\circ}0$ asc. node -12353 Dec 04 j 00:14 13° ₹ 47'41 -12358 Nov 17 j 20:11 0ಂತಾ -12352 Jan 04 j 17:10 0°궁 -12358 Dec 29 j 08:52 $0^{\circ}\Omega$ -12352 Feb 23 j 19:26 -12357 Feb 13 j 04:24 -12352 Apr 08 j 15:33 0°**)**€ desc. node -12357 Feb 27 j 08:12 8° m 06'27 -12352 May 20 j 06:58 $0^{\circ}\Upsilon$ retrograde -12357 May 02 j 09:18 29° m 08'57 -12352 Jun 28 j 20:28 0°8 min. Earth dist. -12357 Jun 03 j 00:33 22° m 26'08 0.54212 AU evening set -12352 Jul 21 j 01:05 17°**8**14'49 greatest brilliancy -12357 Jun 08 j 20:50 20° m 13'24 -1.9m -12352 Aug 06 j 07:59 $0^{\circ}\Pi$ opposition -12357 Jun 10 j 01:45 19° m 45'54 -4°52'26 -12352 Sep 13 j 16:25 direct -12357 Jul 15 j 11:29 11° m 55'27 -12357 Sep 16 i 09:54 0∘**⊽** conjunction -12352 Sep 21 j 13:21 6°≌06'22 0°20'19 -12357 Nov 12 i 01:17 0°M -12352 Sep 21 j 15:12 6°9509'58 0°21'02 minimum elong -12356 Jan 01 j 17:19 -12352 Oct 18 j 11:59 26°544'45 0°×7 desc node -12356 Feb 18 j 20:09 0°₹ -12352 Oct 22 j 19:18 0°Ω -12356 Feb 28 j 12:49 max. Earth dist. -12352 Nov 02 j 10:41 7° **Ω**58'53 2.41620 AU 6°る12'49 asc node -12356 Apr 04 j 20:58 -12352 Nov 23 j 18:05 23°Ω41'31 0°≈04'38 morning rise evening set -12356 Apr 04 j 18:12 0°≈ -12352 Dec 02 j 11:06 0° m -12356 Apr 23 j 23:52 13°≈01'28 2.54073 AU -12351 Jan 14 j 05:29 max. Earth dist. 0∘ಹ -12356 May 18 j 10:33 0°**米** -12351 Feb 28 j 12:57 0°M -12351 Apr 18 j 02:02 0° ⊀ 5°**升**16'18 0°51'08 -12356 May 25 j 21:27 -12351 Jun 12 j 01:18 0°궁 conjunction -12356 May 25 j 19:27 5° **米** 12'44 0°50'47 -12351 Aug 19 j 22:03 20°♂33'52 minimum elong retrograde -12356 Jun 29 j 01:13 0°**Υ** -12351 Sep 27 j 06:47 11°♂37'41 -1°01'04 opposition -12356 Jul 17 j 15:58 13°**Y**50'34 -12351 Sep 27 j 10:47 11° ₹33'46 -1.5m morning rise greatest brilliancy -12356 Aug 08 j 00:48 0°**8** min. Earth dist. -12351 Oct 01 j 06:02 10°**⋜**03'52 0.63468 AU -12356 Sep 16 j 01:34 0°**Ц** asc. node -12351 Oct 21 j 05:16 3°중33'14 -12356 Oct 24 j 23:07 0°9 direct -12351 Nov 07 j 00:59 1°る39'49 -12356 Dec 03 j 16:13 0°**Ω** -12350 Jan 27 j 15:50 0°**≈** desc. node -12355 Jan 14 j 02:57 29°**Ω**49'54 -12350 Mar 17 j 08:42 -12355 Jan 14 j 08:46 0° Mp -12350 Apr 29 j 06:56 -12355 Feb 28 j 21:45 0° **♀** -12350 Jun 08 j 09:45 -12355 Apr 26 j 06:27 0°M -12350 Jul 17 j 05:22 -12355 Jun 09 j 20:51 10°M 36'22 retrograde -12350 Aug 24 j 20:44 min. Earth dist. -12355 Jul 16 j 05:35 2° ML 05'56 0.63273 AU desc. node -12350 Sep 05 i 11:03 8°955'11 opposition -12355 Jul 19 j 18:06 0°ML41'11 -5°12'57 evening set -12350 Sep 23 j 20:02 22°554'18 greatest brilliancy -12355 Jul 19 i 03:41 0°M 55'39 -1.5m -12350 Oct 03 i 06:19 $0^{\circ}\Omega$ -12355 Jul 21 j 11:18 30°R ₽ -12350 Nov 13 j 03:41 0° m direct -12355 Aug 27 j 00:54 21° **△**37'04 -12355 Oct 06 j 16:10 0°M -12350 Nov 21 j 06:37 5° m 48'05 -0°51'00 conjunction 5° m 43'29 -12355 Dec 08 j 14:35 -12350 Nov 21 j 04:01 0°50'39 minimum elong -12354 Jan 15 j 17:22 22° ₹04'14 -12350 Dec 25 j 23:31 0∘∙თ asc. node 0°る -12354 Jan 28 j 17:34 max. Earth dist. -12350 Dec 26 j 02:44 0°**♀**05'30 2.53651 AU -12354 Mar 16 j 15:01 0°≈ morning rise -12349 Jan 15 j 20:50 14°**♀**07'35 -12354 Apr 29 j 11:14 0°**∀** -12349 Feb 08 j 21:05 -12354 May 23 j 01:23 16° ¥ 54'40 -12349 Mar 27 j 18:11 0°**∡**7 evening set $0^{\circ}\Upsilon$ -12354 Jun 09 j 20:23 0°궁 -12349 May 15 j 18:33 -12354 Jun 12 j 17:03 2°**Y**07'50 2.42348 AU max. Earth dist. -12349 Jul 07 j 18:19 asc. node -12349 Sep 08 j 06:07 26°≈13'07 conjunction -12354 Jul 19 j 00:53 29°**Y**42'05 1°12'42 retrograde -12349 Oct 02 j 04:31 29°≈24'58 minimum elong -12354 Jul 19 j 01:39 29°**Y**43'34 1°13'04 opposition -12349 Nov 07 j 01:17 21°≈41'00 2°48'57 -12354 Jul 19 j 10:11 0°8 greatest brilliancy -12349 Nov 07 j 17:03 21°≈26'28 -1.9m -12354 Aug 26 j 23:53 $0^{\circ}\Pi$ min. Earth dist. -12349 Nov 14 j 05:04 19°≈02'29 0.54737 AU -12354 Sep 18 j 19:42 17°**Д**50'50 -12349 Dec 16 j 13:40 12°≈20'34 morning rise direct

-12348 Feb 13 j 02:34 0°**米**

-12354 Oct 04 j 10:26

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 6

•	nical year style is used: The		•	` //		, .	le.
,	-12348 Apr 02 j 20:22	-		minimum elong	-12343 Mar 28 j 09:51		
	-12348 May 15 j 06:42	0°8		asc. node	-12343 Apr 29 j 07:57	28° る 40'39	
	-12348 Jun 24 j 08:45	Π°			-12343 May 01 j 07:43	0° ≈	
desc. node	-12348 Jul 23 j 13:47	22° I 109'06		morning rise	-12343 May 14 j 16:55	8° ≈ 57'06	
	-12348 Aug 02 j 22:54	0ං වෙ			-12343 Jun 14 j 15:04	0° ∀	
	-12348 Sep 12 j 03:51	$0^{\circ}\Omega$			-12343 Jul 27 j 10:05	0 ° Υ	
	-12348 Oct 23 j 17:36	0° m			-12343 Sep 06 j 23:40	9° 8	
evening set	-12348 Nov 16 j 11:55	16° Mp 36'43			-12343 Oct 17 j 21:41	Π $^{\circ}0$	
	-12348 Dec 06 j 01:19	0∘ ⊽			-12343 Nov 28 j 03:21	0 \circ \odot	
					-12342 Jan 10 j 16:41	0 $^{\circ}$ Ω	
conjunction	-12347 Jan 07 j 18:40				-12342 Mar 05 j 05:49	0° m	
minimum elong	-12347 Jan 07 j 18:31		1°15'50	desc. node	-12342 Mar 16 j 02:44	4° Mp 12'30	
	-12347 Jan 20 j 03:03	0°M₊		retrograde	-12342 Apr 14 j 10:07	9° m 38'43	
max. Earth dist.	-12347 Jan 25 j 05:27		2.62479 AU	min. Earth dist.	-12342 May 14 j 00:47		0.49477 AU
morning rise	-12347 Feb 26 j 18:12			opposition	-12342 May 21 j 22:43	0° m 55'05	
	-12347 Mar 07 j 13:50	0° ∡ 7		greatest brilliancy	-12342 May 20 j 19:49	1°m,19'21	-2.2m
	-12347 Apr 23 j 21:46	0°₹			-12342 May 24 j 12:32		
_	-12347 Jun 10 j 21:31	0° ≈		direct	-12342 Jun 24 j 21:55		
asc. node	-12347 Jul 26 j 00:36				-12342 Jul 28 j 10:36	0° m)	
	-12347 Jul 30 j 05:14	0° \			-12342 Sep 30 j 06:45	0∘ ⊽	
	-12347 Sep 22 j 10:34	0°Υ			-12342 Nov 21 j 03:23	0°M	
retrograde	-12347 Nov 29 j 16:28		6051140		-12341 Jan 09 j 09:20	0° ⊼	
opposition	-12347 Dec 31 j 18:56			1	-12341 Feb 25 j 23:44	0°る	
greatest brilliancy	-12346 Jan 02 j 09:08			asc. node	-12341 Mar 17 j 05:08		
min. Earth dist.	-12346 Jan 07 j 20:26	8° Υ 06'29	0.42948 AU	evening set	-12341 Mar 20 j 06:58		2 57092 ATT
direct	-12346 Feb 04 j 12:07	8° 1 06 29 0° 8		max. Earth dist.	-12341 Apr 12 j 04:51		2.57983 AU
	-12346 Apr 10 j 00:06 -12346 May 27 j 10:34	0°I			-12341 Apr 12 j 18:52	0 🌤	
desc. node	-12346 May 27 j 10.34 -12346 Jun 10 j 19:23	0 II 9°II51'24		conjunction	-12341 May 08 j 22:06	1700014127	0°32'19
desc. Hode	-12346 Jul 09 j 13:14	0°9		minimum elong	-12341 May 08 j 20:42		
	-12346 Aug 21 j 01:28	0°Ω		minimum ciong	-12341 May 06 j 20.42 -12341 May 26 j 13:29	0°) €	0 3147
	-12346 Oct 03 j 06:36	0° m)		morning rise	-12341 Jun 28 j 06:39		
	-12346 Nov 16 j 17:38	0∘ ಹ		morning rise	-12341 Jul 07 j 09:29	0°Υ	
evening set	-12346 Dec 31 i 04:51				-12341 Aug 16 j 16:00	0°8	
3	-12345 Jan 01 j 11:40	0°M			-12341 Sep 25 j 00:15	0°II	
	-12345 Feb 17 j 02:31	0° ∡ ¹			-12341 Nov 03 j 05:45	0°©	
	·				-12341 Dec 13 j 08:55	$0^{\circ}\Omega$	
conjunction	-12345 Feb 18 j 03:07	0° ∡ ³39'23	-0°59'59		-12340 Jan 24 j 20:54	0° m	
minimum elong	-12345 Feb 18 j 04:39	0° ∡ ¹41'50	1°00'36	desc. node	-12340 Jan 31 j 22:11	4° Mp43′11	
max. Earth dist.	-12345 Feb 19 j 17:40	1° ∡ ¹41'06	2.66239 AU		-12340 Mar 12 j 21:58	0∘ ⊽	
	-12345 Apr 04 j 22:01	5°0		retrograde	-12340 May 26 j 08:43	25° ≏ 47'49	
morning rise	-12345 Apr 06 j 12:24	1° る 01'42		min. Earth dist.	-12340 Jun 30 j 00:32	17° ≏ 55'07	0.60379 AU
	-12345 May 21 j 07:09	0° ≈		greatest brilliancy	-12340 Jul 04 j 02:35	16° ≏ 18′03	-1.6m
asc. node	-12345 Jun 12 j 15:50			opposition	-12340 Jul 05 j 00:05		-5°22'47
	-12345 Jul 05 j 22:56	0° ∀		direct	-12340 Aug 11 j 06:34	7° ≏ 16'43	
	-12345 Aug 20 j 01:33	0 ° Υ			-12340 Oct 23 j 17:08	0° M	
	-12345 Oct 04 j 07:14	0°8			-12340 Dec 17 j 23:17	0° ∡ ¹	
	-12345 Nov 20 j 14:04	0°II		asc. node	-12339 Feb 01 j 07:08		
_	-12344 Jan 21 j 11:49	0°©			-12339 Feb 05 j 12:56	0°⋜	
retrograde	-12344 Feb 15 j 00:10	3°545'14			-12339 Mar 23 j 22:46	0°≈	
	-12344 Mar 10 j 19:06		0.20150 155	evening set	-12339 May 03 j 01:42		
min. Earth dist.	-12344 Mar 14 j 08:29		0.39159 AU	To all II a	-12339 May 06 j 16:35	0° ∀	2 47056 444
opposition	-12344 Mar 18 j 01:20			max. Earth dist.	-12339 May 19 j 15:31	9° 升 12'54	2.47056 AU
greatest brilliancy	-12344 Mar 17 j 18:56		-2.8m		-12339 Jun 17 j 03:21	0 ° $\mathbf{\gamma}$	
direct	-12344 Apr 17 j 13:24				12220 I 26:06:20	C0 0 040110	1011112
desc. node	-12344 Apr 28 j 01:19 -12344 May 23 j 02:29	23°Ⅲ28'57 0°໑		conjunction minimum elong	-12339 Jun 26 j 06:30 -12339 Jun 26 j 05:14	6° Y 48'10 6° Y 45'47	
	• •			minimum eiong			1 11 1/
	-12344 Jul 21 j 14:12	0° Ω 0° m		morning rise	-12339 Jul 26 j 20:17 -12339 Aug 23 j 08:09	0°8	
	-12344 Sep 08 j 12:48	0ം ⊽ റപ്രി		morning rise		0° Ⅱ	
	-12344 Oct 25 j 22:03	0° M			-12339 Sep 03 j 13:16	0ಂ ತಾ ೧ೣπ	
	-12344 Dec 12 j 06:09 -12343 Jan 28 j 15:00	0°แน 0° ҂ ี			-12339 Oct 12 j 02:44 -12339 Nov 20 j 10:09	0° U	
evening set	-12343 Jan 28 j 15:00 -12343 Feb 08 j 06:28	0° x ¹ 6° x ¹46′01		desc. node	-12339 Nov 20 j 10:09 -12339 Dec 18 j 15:55		
max. Earth dist.	-12343 Feb 08 j 06:28 -12343 Mar 15 j 11:24		2.64684 AU	uese. Hout	-12339 Dec 18 j 15:55 -12339 Dec 31 j 10:01	0° m)	
max. Darui Uist.	-12343 Mar 16 j 12:30	29 X ·1927	2.01001 AU		-12339 Dec 31 j 10:01 -12338 Feb 13 j 04:41	0∘ ⊽	
	125 15 IVIGI 10 J 12.30	ÿ O			-12338 Apr 02 j 21:25	0° m .	
conjunction	-12343 Mar 28 j 09:03	7° ප 41'00	-0°19'25		-12338 Apr 02 j 21.23 -12338 Jun 10 j 02:12	0° ⊼ 7	
Jonganouon	123 13 14101 20 J 07.03	, 54100	3 17 23		12350 Juli 10 J 02.12	~ ^	

```
Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22,
Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.
retrograde
                    -12338 Jul 01 j 17:57 2° ₹ 45'16
                                                                                            -12333 Jul 04 i 00:42
                                                                                                                   0^{\circ}\Pi
                    -12338 Jul 21 j 21:06 30°RML
                                                                                            -12333 Aug 10 j 05:29 28° II 33'32
                                                                        desc. node
                                                                                            -12333 Aug 12 j 02:46
                    -12338 Aug 09 j 09:36 23°M25'51 0.65950 AU
min. Earth dist.
                                                                                                                  0ಂತಾ
                    -12338 Aug 10 j 14:45 22°M56'26 -4°26'55
                                                                                            -12333 Sep 20 j 21:36 0°Ω
opposition
                                                                                            -12333 Oct 28 j 16:47 27°\Omega33'38
                    -12338 Aug 10 j 10:55 23°ML00'18
greatest brilliancy
                                                     -1.4m
                                                                        evening set
                    -12338 Sep 19 j 03:13 13°M24'09
direct
                                                                                            -12333 Nov 01 j 02:48
                                                                                                                   0° m
                    -12338 Nov 18 j 20:27
                                                                                                                   0∘⊽
                                           0°∡7
                                                                                            -12333 Dec 14 j 04:12
asc. node
                    -12338 Dec 20 j 12:51 15° ₹ 52'09
                    -12337 Jan 14 j 13:41
                                           ೧ಂತ
                                                                        conjunction
                                                                                            -12333 Dec 22 j 02:10
                                                                                                                   5°222'27 -1°11'44
                                                                                                                   5°220'15 1°11'48
                    -12337 Mar 03 j 23:07
                                           0°≈
                                                                         minimum elong
                                                                                            -12333 Dec 22 j 00:52
                    -12337 Apr 17 j 07:02
                                           0°∀
                                                                        max. Earth dist.
                                                                                            -12332 Jan 15 j 04:07 21°228'53 2.59603 AU
                    -12337 May 28 j 18:57
                                           0^{\circ}\Upsilon
                                                                                            -12332 Jan 28 j 02:39
                                                                                                                   0°M
                    -12337 Jun 27 j 05:58 22°Y14'45
evening set
                                                                        morning rise
                                                                                            -12332 Feb 11 j 20:45
                                                                                                                   9°M36'48
                    -12337 Jul 07 j 07:55
                                           0°8
                                                                                            -12332 Mar 14 j 15:13
                                                                                                                   0°⊼
                    -12337 Aug 14 j 19:33
                                           \Pi^{\circ}0
                                                                                            -12332 May 01 j 09:55
                                                                                                                   0°₹
                                                                                            -12332 Jun 19 j 15:02
                                                                                                                   0°≈
conjunction
                    -12337 Aug 27 j 09:25
                                           9°Ц51'41 0°49'13
                                                                        asc. node
                                                                                            -12332 Aug 11 j 19:31
                                                                                                                   0°¥12'20
 minimum elong
                    -12337 Aug 27 j 12:48
                                           9°Ⅱ58'20
                                                      0°49'52
                                                                                            -12332 Aug 11 j 10:10
                                                                                                                   0°₩
max. Earth dist.
                    -12337 Sep 07 j 11:53 18°Д33'28
                                                      2.38438 AU
                                                                        retrograde
                                                                                            -12332 Nov 03 j 16:52 28° X41'29
                    -12337 Sep 22 j 03:59
                                          0ಂತಾ
                                                                        opposition
                                                                                            -12332 Dec 07 j 10:36 22°\tag{02'34} 5°30'58
morning rise
                    -12337 Oct 30 j 20:36 29°541'29
                                                                        greatest brilliancy
                                                                                            -12332 Dec 08 j 20:29 21° ★ 34'00 -2.2m
                    -12337 Oct 31 i 06:25
                                           0^{\circ}\Omega
                                                                        min. Earth dist.
                                                                                            -12332 Dec 15 j 09:42 19°\(\frac{1}{2}\)22'31
                                                                                                                              0.47506 AU
desc. node
                    -12337 Nov 05 i 08:25
                                           3°Ω49'37
                                                                        direct
                                                                                            -12331 Jan 13 j 13:03 13° \ 55'57
                    -12337 Dec 10 i 21:54
                                           0° m
                                                                                            -12331 Mar 08 i 14:07
                                                                                                                   0^{\circ}\Upsilon
                    -12336 Jan 22 j 18:18
                                           0∘⊽
                                                                                            -12331 Apr 26 j 22:56
                                                                                                                   0°8
                    -12336 Mar 08 j 11:10
                                                                                            -12331 Jun 08 j 12:52
                                           o°M.
                                                                                                                   0°П
                    -12336 Apr 27 j 10:17
                                                                                            -12331 Jun 27 j 10:48 13°Д46'35
                                           0°×7
                                                                        desc node
                    -12336 Jun 29 j 11:42 0°る
                                                                                            -12331 Jul 19 j 14:21 0°5
                    -12336 Aug 05 j 07:16 7°る05'52
                                                                                            -12331 Aug 29 j 20:43
                                                                                                                   0^{\circ}\Omega
retrograde
                    -12336 Sep 07 j 18:21 30°R ✓
                                                                                            -12331 Oct 11 j 05:25
                                                                                                                   0° m
                    -12336 Sep 13 j 06:49 27° ₹ 50'01 -2°11'34
                                                                                            -12331 Nov 24 j 02:42 0°♀
opposition
                    -12336 Sep 13 j 12:09 27°х 44'42 -1.4m
greatest brilliancy
                                                                                            -12331 Dec 14 j 16:24 13°£42'20
                                                                        evening set
                                                                                            -12330 Jan 08 j 12:17
min. Earth dist.
                    -12336 Sep 15 j 19:44 26° ₹ 49'16 0.65363 AU
                    -12336 Oct 23 j 22:50 17° ₹ 52'58
direct
                    -12336 Nov 06 j 19:13 19° ₹02'04
                                                                                            -12330 Feb 02 j 13:51 16°ML14'15 -1°09'44
asc. node
                                                                        conjunction
                    -12336 Dec 12 j 13:52 0°る
                                                                                            -12330 Feb 02 j 15:00 16°ML16'07 1°10'15
                                                                         minimum elong
                    -12335 Feb 07 j 18:00 0°≈
                                                                                            -12330 Feb 10 j 06:40 21°ML11'36 2.65409 AU
                                                                        max. Earth dist.
                    -12335 Mar 26 j 06:42 0°米
                                                                                            -12330 Feb 23 j 23:59 0° 尽
                    -12335 May 07 j 12:33 0°Υ
                                                                        morning rise
                                                                                            -12330 Mar 22 j 15:30 17°尽 02'27
                    -12335 Jun 16 j 08:09 0°႘
                                                                                            -12330 Apr 11 j 22:26 0°る
                    -12335 Jul 24 j 23:07 0°Ⅱ
                                                                                            -12330 May 28 j 18:33 0°≈
                    -12335 Aug 30 j 06:32 28°II19'13
                                                                                            -12330 Jun 29 j 11:53 20°≈24'10
evening set
                                                                        asc. node
                    -12335 Sep 01 j 10:32 0°5
                                                                                            -12330 Jul 14 j 09:49 0°米
desc. node
                    -12335 Sep 22 j 04:08 15°557'53
                                                                                            -12330 Aug 30 j 09:46 0°Υ
                    -12335 Oct 10 j 16:15 0°Ω
                                                                                            -12330 Oct 18 j 16:27 0°8
                                                                                            -12330 Dec 22 j 00:46 0°П
                    -12335 Oct 30 j 04:23 14°\Omega31'35 -0°27'38
                                                                                            -12329 Jan 15 і 23:45 3°Д43'17
conjunction
                                                                        retrograde
                    -12335 Oct 30 j 02:23 14^{\circ}\Omega27'55 0^{\circ}27'03
                                                                                            -12329 Feb 10 j 10:25 30°R&
 minimum elong
                                                                                            -12335 Nov 20 j 10:06 0° Mp
                                                                        opposition
max. Earth dist.
                    -12335 Dec 10 j 03:32 14° m 02'08 2.49087 AU
                                                                        greatest brilliancy
                                                                                           -12329 Feb 16 j 06:32 28°826'59 -2.8m
                    -12335 Dec 27 j 19:16 26° m 19'20
                                                                        min. Earth dist.
                                                                                            -12329 Feb 17 j 00:48 28° $\bigs\bigs 14'42 \quad 0.38615 AU
morning rise
                    -12334 Jan 02 j 03:48 0°♀
                                                                        direct
                                                                                            -12329 Mar 18 j 16:38 23°8 19'28
                    -12334 Feb 16 j 02:36
                                                                                            -12329 Apr 21 j 06:20 0°П
                                           o°M.
                    -12334 Apr 04 j 09:25
                                           0° ₹
                                                                        desc. node
                                                                                            -12329 May 15 j 16:07 10°Д52'13
                    -12334 May 24 j 18:16
                                           0°ರ
                                                                                            -12329 Jun 18 j 10:46 0°€
                    -12334 Jul 22 j 08:41
                                           0°≈
                                                                                            -12329 Aug 04 j 14:35
                                                                                                                   0^{\circ}\Omega
retrograde
                    -12334 Sep 14 j 02:40 13°≈35'24
                                                                                            -12329 Sep 19 j 05:06
                                                                                                                   0° m
                    -12334 Sep 24 j 22:10 12°≈49'51
                                                                                            -12329 Nov 04 j 01:32
                                                                                                                   0∘⊽
asc. node
                    -12334 Oct 21 j 02:36
opposition
                                          5°≈18'31
                                                      1°11'40
                                                                                            -12329 Dec 20 j 14:33
                                                                                                                   0°M
                    -12334 Oct 21 j 08:14
                                                                                            -12328 Jan 24 j 23:08 22°M34'49
greatest brilliancy
                                           5°≈13'08
                                                      -1.7m
                                                                        evening set
min. Earth dist.
                    -12334 Oct 27 j 03:20
                                           3°≈00'16 0.58769 AU
                                                                                            -12328 Feb 05 j 14:16 0° ₹
                    -12334 Nov 04 j 14:12 30°R♂
                                                                        max. Earth dist.
                                                                                            -12328 Mar 05 j 18:07 18°х 38'48 2.65940 AU
direct
                    -12334 Nov 30 j 09:52 25°♂34'15
                    -12334 Dec 27 j 20:43
                                           0°≈
                                                                        conjunction
                                                                                            -12328 Mar 13 j 02:42 23°尽 22'16 -0°37'17
                    -12333 Feb 28 j 01:57
                                           0°)
                                                                         minimum elong
                                                                                            -12328 Mar 13 j 04:03 23°尽24'25 0°38'00
                    -12333 Apr 14 j 12:22
                                           0^{\circ}\Upsilon
                                                                                            -12328 Mar 23 j 09:42 0°る
                    -12333 May 25 j 15:16 0°8
                                                                                            -12328 Apr 29 j 03:18 23°궁54'57
                                                                        morning rise
```

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12328 May 08 j 08:49 0°**≈** min. Earth dist. -12323 Jul 25 j 04:40 10°ML18'30 0.64477 AU 5°≈08'38 -12328 May 16 j 03:09 -12323 Jul 27 j 21:28 asc node opposition 9°M13'14 -4°59'59 -12328 Jun 22 j 02:14 -12323 Jul 27 j 11:02 0°)(greatest brilliancy 9°M23'45 -1.4m $0^{\circ}\Upsilon$ -12328 Aug 04 j 13:28 -12323 Sep 02 j 09:52 30°R € -12328 Sep 16 j 01:55 -12323 Sep 04 j 15:40 29°**£**58'04 0°8 direct -12328 Oct 28 j 07:14 Π $^{\circ}$ 0 -12323 Sep 06 j 22:02 -12328 Dec 10 j 15:25 0ಂತಾ -12323 Dec 01 j 17:49 0°×7 -12327 Jan 28 j 19:41 0 $^{\circ}\Omega$ asc. node -12322 Jan 06 j 02:24 19°**х** 43'17 retrograde -12327 Mar 24 j 23:42 17°**Ω**00'06 -12322 Jan 23 j 08:15 0ºಕ desc. node -12327 Apr 01 j 20:39 16° **Ω** 33'48 -12322 Mar 11 j 17:10 min. Earth dist. -12327 Apr 21 j 22:43 11°**Ω**52'55 0.44626 AU -12322 Apr 24 j 17:48 0°**)**€ opposition -12327 Apr 29 j 18:30 9°**Ω**17'46 -1°52'21 evening set -12322 Jun 04 j 05:13 29° **∺** 17'04 greatest brilliancy -12327 Apr 29 j 04:04 9°**£**29'43 -2.5m -12322 Jun 05 j 04:21 $0^{\circ}\Upsilon$ direct -12327 Jun 01 j 02:13 2°**Ω**57'49 max. Earth dist. -12322 Jul 02 j 15:00 20°**Υ**41'24 2.40108 AU -12327 Aug 19 j 09:51 -12322 Jul 14 j 18:07 0°8 -12327 Oct 11 j 00:44 0∘**⊽** -12327 Nov 29 j 10:41 0°M conjunction -12322 Aug 01 j 18:37 13°**8**58'18 1°08'00 -12326 Jan 16 j 18:03 0°**∡**7 minimum elong -12322 Aug 01 j 20:46 14°**8**02'29 evening set -12326 Mar 04 j 11:46 29° ₹ 40'23 -12322 Aug 22 j 06:51 $0^{\circ}\Pi$ -12326 Mar 04 j 23:57 0°궁 -12322 Sep 29 j 16:05 max. Earth dist. -12326 Mar 31 j 21:55 17°る30'46 2.61194 AU morning rise -12322 Oct 04 j 03:08 3°9527'42 asc. node -12326 Apr 02 j 21:29 18°る49'03 -12322 Nov 07 j 19:03 $0^{\circ}\Omega$ -12326 Apr 19 j 17:56 desc. node $-12322 \text{ Nov } 22 \text{ j } 04:26 \quad 10^{\circ} \Omega 46'25$ -12322 Dec 18 i 11:42 0° m conjunction -12326 Apr 22 j 04:58 1°≈38'46 0°12'02 -12321 Jan 30 j 12:51 0∘**⊽** -12326 Apr 22 j 04:28 -12321 Mar 17 j 21:58 minimum elong 1°≈37'55 0°11'23 o°m. -12326 Apr 21 j 13:57 -12321 May 09 j 11:04 behind sun begin 1°≈13'38 0°×7 -12326 Apr 22 j 18:59 2°≈02'13 -12321 Jul 23 j 07:17 23° ₹ 55'34 behind sun end retrograde -12326 Jun 02 j 16:28 -12321 Aug 31 j 17:55 14°**尽** 23'56 -3°12'04 0°**∀** opposition -12326 Jun 09 j 21:32 5°**)**€02'55 -12321 Aug 31 j 21:25 14° ₹ 20'25 -1.4m morning rise greatest brilliancy -12321 Sep 01 j 19:49 13°**尽** 57'55 0.66328 AU -12326 Jul 14 j 19:50 $0^{\circ}\Upsilon$ min. Earth dist. -12326 Aug 24 j 12:09 0° 8 direct -12321 Oct 11 j 02:19 4° ₹33'21 -12326 Oct 03 j 07:24 $0^{\circ}\Pi$ -12321 Nov 24 j 09:10 14°**尽**21'39 asc. node -12326 Nov 12 j 01:22 -12321 Dec 28 j 08:45 0°る 0ಂತಾ -12326 Dec 22 j 21:59 -12320 Feb 18 j 04:19 $0^{\circ}\Omega$ 0°≈ -12325 Feb 04 j 23:40 -12320 Apr 03 j 12:57 0° m 0°**₩** desc. node -12325 Feb 17 j 19:32 7° m 58'29 -12320 May 15 j 09:21 0°**Υ** -12325 Mar 31 j 23:07 0∘**⊽** -12320 Jun 24 j 01:12 0° 8 retrograde -12325 May 11 j 20:46 9°**£**34'59 -12320 Aug 01 j 13:50 $0^{\circ}II$ min. Earth dist. -12325 Jun 13 j 14:40 2°**2**25'50 0.56587 AU evening set -12320 Aug 04 j 13:40 2°**I**I20'42 -12325 Jun 19 j 23:14 29° m 58'16 -5°11'47 -12320 Sep 08 j 22:59 0ಂತಾ opposition -12325 Jun 18 j 19:57 0°**2**24'44 -1.8m greatest brilliancy -12325 Jun 19 j 21:27 30°R M -12320 Oct 05 j 23:17 20°548'25 0°02'19 conjunction -12325 Jul 26 j 01:18 21° Mp 48'28 -12320 Oct 05 j 23:33 20°5548'56 direct minimum elong -12325 Sep 03 j 16:58 0°**♀** -12320 Oct 04 j 21:24 19°559'06 behind sun begin -12325 Nov 05 i 12:47 behind sun end -12320 Oct 07 i 01:42 21°538'45 -12325 Dec 27 i 10:37 0°×7 desc. node -12320 Oct 08 j 23:15 23°505'26 -12324 Feb 14 i 00:32 0°궁 -12320 Oct 18 i 02:12 $0^{\circ}\Omega$ asc. node -12324 Feb 18 i 21:27 3°**る**05'55 max. Earth dist. -12320 Nov 19 j 01:25 23° **Q**42'44 2.44206 AU -12324 Mar 31 j 02:47 -12320 Nov 27 j 17:34 0°≈≈ 0° m -12324 Apr 14 j 18:32 9°≈52'53 -12320 Dec 06 j 17:07 evening set morning rise 6° m 26'29 max. Earth dist. -12324 May 02 j 07:29 21°≈56'14 2.51685 AU -12319 Jan 09 j 10:21 0∘ଫ -12319 Feb 23 j 12:42 -12324 May 13 j 20:02 0°**米** o°m. -12319 Apr 12 j 11:12 0° **₹** conjunction -12324 Jun 05 j 18:15 16° **€** 22'23 1°00'13 -12319 Jun 04 j 03:06 0°ಕ minimum elong -12324 Jun 05 j 16:12 16° **★** 18'40 1°00'01 -12319 Aug 28 j 17:55 28°**궁**58'33 retrograde $0^{\circ}\Upsilon$ -12324 Jun 24 j 09:29 -12319 Oct 05 j 15:55 20°♂14'55 -0°15'32 opposition -12324 Jul $30 \text{ j } 05:08 \ 26^{\circ} \Upsilon 53'52$ -12319 Oct 05 j 17:15 20°쥥13'37 morning rise greatest brilliancy -1.6m -12324 Aug 03 j 06:41 -12319 Oct 10 j 09:19 18°**정**24'08 0.62026 AU _0°8 min. Earth dist. -12324 Sep 11 j 04:16 Π °0 asc. node -12319 Oct 11 j 14:22 17°る56'04 -12324 Oct 19 j 22:17 0 \circ ∞ direct -12319 Nov 15 j 07:52 10°る19'19 -12324 Nov 28 j 10:48 0 $^{\circ}\Omega$ -12318 Jan 19 j 01:24 0°≈ desc. node -12323 Jan 04 j 12:16 $26^{\circ}\Omega$ 58'50 -12318 Mar 11 j 05:01 0°**)**€ -12323 Jan 08 j 18:58 0° m -12318 Apr 23 j 19:25 $0^{\circ}\Upsilon$

-12318 Jun 03 j 05:21

-12318 Jul 12 j 04:54

-12318 Aug 19 j 23:16

0°8

 $0^{\circ}\Pi$

0ಂತಾ

-12323 Feb 22 j 10:46

-12323 Apr 15 j 11:55

retrograde

-12323 Jun 17 j 23:24 19°ML07'37

0∘**⊽**

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. desc. node -12318 Aug 26 j 21:32 5°5519'12 -12313 May 16 j 12:09 0°≈ -12318 Sep 28 j 11:18 -12313 Jun 02 j 21:57 11°≈27'21 $0^{\circ}\Omega$ asc. node -12318 Oct 07 j 01:11 -12313 Jun 30 j 18:57 6°**Ω**23'16 0°)(evening set -12318 Nov 08 j 10:25 $0^{\circ}\Upsilon$ -12313 Aug 14 j 04:40 0° m -12313 Sep 27 j 04:27 0°8 conjunction -12318 Dec 02 j 23:14 17° m 20'33 -1°00'48 -12313 Nov 10 j 20:05 Π $^{\circ}$ 0 minimum elong -12318 Dec 02 j 20:55 17° m 16'31 1°00'35 -12313 Dec 29 j 19:23 0ಂತಾ -12318 Dec 21 j 07:14 0∘**⊽** retrograde -12312 Mar 01 j 03:38 20°€32'51 max. Earth dist. min. Earth dist. -12317 Jan 02 j 21:24 8°**≏**33'16 2.55967 AU -12312 Mar 28 j 18:55 15°551'14 0.40609 AU morning rise -12317 Jan 26 j 00:52 24°**♀**00'02 opposition -12312 Apr 03 j 14:18 14°507'33 1°07'09 -12317 Feb 04 j 03:50 0°M greatest brilliancy -12312 Apr 03 j 09:36 14°5511'03 -2.8m -12317 Mar 22 j 20:24 0°**∡**¹ desc. node -12312 Apr 18 j 13:42 10°514'06 -12317 May 10 j 07:08 0°ರ direct -12312 May 04 j 12:15 8°935'25 -12317 Jun 30 j 11:31 -12312 Jul 10 j 22:46 $0^{\circ}\Omega$ asc. node -12317 Aug 29 j 13:53 29°≈34'45 -12312 Sep 01 j 16:19 -12317 Aug 30 j 16:03 0°**∀** -12312 Oct 20 j 08:33 0∘**⊽** retrograde -12317 Oct 13 j 10:36 9°**)** 36′20 -12312 Dec 07 j 06:33 0°M opposition -12317 Nov 17 j 14:45 2°**)** 13'10 3°47'40 -12311 Jan 23 j 22:08 greatest brilliancy -12317 Nov 18 j 13:15 1°**)** 52'53 evening set -12311 Feb 17 i 01:51 15° ₹20'25 -12317 Nov 23 j 18:25 30°R≈ -12311 Mar 11 j 22:19 0°궁 min. Earth dist. -12317 Nov 25 j 05:38 29°≈28'50 0.52274 AU max. Earth dist. -12311 Mar 21 j 09:22 6°る07'25 2.63664 AU direct -12317 Dec 26 j 10:47 23°≈12'54 -12316 Jan 29 i 05:35 0°**米** conjunction -12311 Apr 06 i 07:15 16°₹30'18 -0°08'14 -12316 Mar 26 i 03:11 $0^{\circ}\Upsilon$ minimum elong -12311 Apr 06 j 07:37 16°**⋜**30'54 -12316 May 08 j 22:51 0°8 behind sun begin -12311 Apr 05 j 14:51 16°**⋜**03'25 -12316 Jun 18 j 15:27 0°**Ⅱ** -12311 Apr 07 j 00:23 16°る58'24 behind sun end -12316 Jul 14 j 01:44 19°**Ⅲ**05'31 -12311 Apr 19 j 14:48 25°る17'02 asc node desc node -12316 Jul 28 j 14:38 0°ഇ -12311 Apr 26 j 17:08 0°≈ -12316 Sep 07 j 02:15 0°**Ω** -12311 May 23 j 22:57 18°≈21'44 morning rise -12316 Oct 18 j 20:49 0° M -12311 Jun 09 j 21:32 0°**米** -12316 Nov 27 j 03:45 27° m 10'02 -12311 Jul 22 j 10:38 $0^{\circ}\Upsilon$ evening set -12316 Dec 01 j 08:03 0°**♀** -12311 Sep 01 j 15:48 0°8 -12315 Jan 15 j 11:30 -12311 Oct 12 j 02:18 0°**Ⅱ** -12311 Nov 21 j 15:18 0°ഇ -12315 Jan 17 j 10:53 1°ML17'24 -1°14'57 -12310 Jan 02 j 19:25 0°**Ω** conjunction -12315 Jan 17 j 11:19 1°ML18'06 1°15'20 -12310 Feb 19 j 13:24 0° Mp minimum elong -12315 Jan 31 j 07:25 10°ML18'10 2.63760 AU max. Earth dist. desc. node -12310 Mar 06 j 13:38 7° m 47'23 -12315 Mar 02 j 21:51 0° **尽** retrograde -12310 Apr 24 j 23:17 21° m/29'01 morning rise -12315 Mar 07 j 14:45 3° ₹ 00'31 min. Earth dist. -12310 May 25 j 16:32 15° Mp 07'45 0.52133 AU -12315 Apr 19j 01:24 0°る greatest brilliancy -12310 May 31 j 23:04 12° **m** 48'09 -12315 Jun 05 j 13:08 0°≈ -12310 Jun 02 j 04:13 12° m 20'57 -4°30'51 opposition -12315 Jul 16 j 07:16 25°≈27'52 -12310 Jul 06 j 22:34 4° Mp 48'04 asc. node direct -12315 Jul 23 j 15:43 0°**米** -12310 Sep 22 j 03:05 -12315 Sep 12 j 02:46 0°**Υ** -12310 Nov 15 j 08:07 -12315 Nov 14 j 16:04 0°8 -12309 Jan 04 j 08:30 0°×7 retrograde -12315 Dec 16 i 01:42 5°**8**28'02 -12309 Feb 21 i 06:22 opposition -12314 Jan 16 j 08:32 0°**8**00'47 7°08'48 asc. node -12309 Mar 07 j 12:45 9°**ට**10'50 -12314 Jan 16 i 09:38 30° R**°**Y evening set -12309 Mar 29 j 16:44 23°る41'50 greatest brilliancy -12314 Jan 17 j 18:02 29°**Υ**36'34 -12309 Apr 08 j 03:58 min. Earth dist. $-12314 \text{ Jan } 21 \text{ i } 23:02 28^{\circ} \Upsilon^{\circ} 23'49$ 0.40869 AU max. Earth dist. -12309 Apr 19 j 11:06 7°≈36'11 2.55906 AU direct -12314 Feb 18 j 15:06 23°**Y**49'05 -12314 Mar 22 j 04:35 0°8 -12309 May 19 j 00:39 27°≈57'36 0°43'26 conjunction -12314 May 18 j 06:22 -12309 May 18 j 22:51 27°≈54'26 $0^{\circ}\Pi$ minimum elong 0°43'00 desc. node -12314 Jun 01 j 09:02 9°**Ⅱ**04'03 -12309 May 21 j 22:28 0°**∀** 0ಂತಾ -12314 Jul 02 j 13:47 -12309 Jul 02 j 16:23 $0^{\circ}\Upsilon$ $0^{\circ}\Omega$ -12314 Aug 15 j 03:36 -12309 Jul 09 j 14:28 5°Y05'51 morning rise -12314 Sep 27 j 23:24 0° M -12309 Aug 11 j 19:47 0°8 -12314 Nov 11 j 19:30 0∘**⊽** $0^{\circ}\Pi$ -12309 Sep 19 j 23:59 -12314 Dec 27 j 18:38 0°M 0ಂಪ -12309 Oct 29 j 00:35 0° Ω evening set -12313 Jan 09 j 09:28 8°M08'00 -12309 Dec 07 j 20:54 -12313 Feb 12 j 11:55 0° **₹** -12308 Jan 18 j 18:52 0° m max. Earth dist. -12313 Feb 25 j 08:32 8° **₹**13'43 2.66364 AU desc. node -12308 Jan 22 j 09:11 2° m 28'06 -12308 Mar 05 j 01:21 0∘**⊽** conjunction -12313 Feb 26 j 22:47 9°**х** 14'54 -0°52'33 -12308 May 06 j 03:33 0°M minimum elong -12313 Feb 27 j 00:20 9°×17'24 0°53'13 retrograde -12308 Jun 03 j 19:41 4°M50'22 -12313 Mar 31 j 07:02 0°る -12308 Jun 30 j 09:12 30°R € -12313 Apr 15 j 02:11 9°**る**33'00 min. Earth dist. -12308 Jul 09 j 10:12 26°**2**36'18 0.62080 AU morning rise

•	omena of Mars from		•				age 10
opposition	-12308 Jul 13 j 14:44	-		desc. node	-12303 Sep 12 j 16:04		
greatest brilliancy	-12308 Jul 12 j 21:03			evening set	-12303 Sep 12 j 10:04 -12303 Sep 13 j 08:25		
direct	-12308 Aug 20 j 10:50		-1.5111	evening set	-12303 Oct 05 j 22:56		
direct	-12308 Aug 20 j 10:30	0°M			-12303 OCt 03 j 22.30	0 66	
	-12308 Dec 12 j 00:05	0° ⊼		conjunction	-12303 Nov 11 j 23:56	27°Ω18'52	-0°41'53
asc. node	-12307 Jan 22 j 16:08			minimum elong	-12303 Nov 11 j 23:36		
asc. node	-12307 Jan 31 j 10:51	0°る		minimum clong	-12303 Nov 15 j 17:19	0°m	0 41 20
	-12307 Mar 19 j 04:10	0° ≈		max. Earth dist.	-12303 Nov 13 j 17:17 -12303 Dec 19 j 19:05		2 51653 ATT
	-12307 May 02 j 00:33	0° ∺		max. Larm dist.	-12303 Dec 28 j 10:42	ე° <u>ი</u>	2.51055 AC
evening set	-12307 May 14 j 05:41	8° ∺ 40'47		morning rise	-12302 Jan 07 j 22:12	ი — 7° ჲ 08'18	
max. Earth dist.	-12307 May 14 j 03.41 -12307 Jun 01 j 01:04		2.44408 AU	morning risc	-12302 Feb 11 j 07:11	0°M	
max. Earth dist.	-12307 Jun 12 j 11:20	21 γ (3433	2.44406 AU		-12302 Feb 11 J 07:11 -12302 Mar 30 j 06:52	0° ⊼ ¹	
	-1230/Juli 12 j 11.20	0 1			-12302 May 18 j 18:02	°ਤ ਹ ×	
conjunction	-12307 Jul 08 j 22:03	100℃53'15	1013'20		-12302 Jul 12 j 10:43	0°≈	
minimum elong	-12307 Jul 08 j 21:48		1°13'42	asc. node	-12302 Sep 15 j 06:19		
minimum ciong	-12307 Jul 22 j 03:14	0° 8	1 1342	retrograde	-12302 Sep 13 j 00:19 -12302 Sep 24 j 04:15		
	-12307 Aug 29 j 18:34	0°II		opposition	-12302 Scp 24 j 04.13 -12302 Oct 30 j 14:01		2°06'16
morning rise	-12307 Aug 29 j 18:34 -12307 Sep 07 j 02:45	6° Ⅱ 31'01		greatest brilliancy	-12302 Oct 30 j 14:01 -12302 Oct 31 j 01:00		-1.8m
morning rise	-12307 Sep 07 j 02.43 -12307 Oct 07 j 06:06	0°©		min. Earth dist.	-12302 Oct 31 j 01:00 -12302 Nov 06 j 05:59		0.56637 AU
	-12307 Oct 07 j 00:00 -12307 Nov 15 j 11:18	0° U		direct	-12302 Nov 00 j 03:39 -12302 Dec 09 j 11:40	5°≈20'22	0.30037 AU
desc. node	-12307 Nov 13 j 11:18 -12307 Dec 09 j 00:43			direct	-12302 Bec 09 j 11:40 -12301 Feb 19 j 15:01	0° ∺	
desc. Hode	-12307 Dec 26 j 07:14	0° m)			-12301 Feb 19 j 13:01 -12301 Apr 08 j 03:04	0° Υ	
	-12307 Dec 20 j 07:14 -12306 Feb 07 j 16:56	0∘ ت الأثار			-12301 Apr 08 j 03:04 -12301 May 19 j 22:40	0° 8	
	-12306 Mar 27 j 05:38	0° ™			-12301 Jun 28 j 16:48	0°II	
	-12306 May 24 j 11:56	0° ⊼ 7		desc. node	-12301 Jul 31 j 18:04		
natna ana da	• •	0 x ⁴ 10° x ⁴47'44		desc. node		0°9	
retrograde	-12306 Jul 09 j 14:42	10 x · 4 / 44 1° x 03'54	4002120		-12301 Aug 07 j 00:41 -12301 Sep 16 j 00:05	0°€ 0 €	
opposition	-12306 Aug 18 j 08:43						
greatest brilliancy min. Earth dist.	-12306 Aug 18 j 07:58	1° х 04'39 1° х 13'48	0.66354 AU	evening set	-12301 Oct 27 j 08:35 -12301 Nov 09 j 04:30	0° Mp 9° Mp 03′27	
iiiii. Lattii tiist.	-12306 Aug 17 j 22:54 -12306 Aug 21 j 00:13		0.00334 AU	evening set	-12301 Nov 09 j 04:30 -12301 Dec 09 j 12:06	ე∘ ი	
direct	-12306 Aug 21 j 00:13 -12306 Sep 27 j 05:23	21°M24'03			-12301 Dec 09 J 12.00	0 ==	
direct	-12306 Sep 27 j 03:23 -12306 Nov 07 j 12:12	0° √		conjunction	-12300 Jan 01 j 08:56	15° Ω 24'10	1017172
asc. node	-12306 Nov 07 j 12:12 -12306 Dec 10 j 23:04	14° ∡ ¹45'28		minimum elong	-12300 Jan 01 j 08:18		
asc. node	-12306 Dec 10 j 23:04 -12305 Jan 08 j 09:06	14 × 43 28		max. Earth dist.	-12300 Jan 21 j 16:32		
	-12305 Feb 26 j 17:49	0° ≈		max. Earth dist.	-12300 Jan 23 j 11:01	0°M	2.01280 AU
	-12305 Apr 12 j 09:56	0° ∺		morning rise	-12300 Feb 21 j 02:24		
	-12305 Apr 12 j 09:30 -12305 May 24 j 00:47	0° Υ		morning risc	-12300 Mar 09 j 21:39	10° √	
	-12305 Jul 02 j 14:43	0°8			-12300 Mar 05 j 21:35 -12300 Apr 26 j 09:18	°ੇਠ	
evening set	-12305 Jul 11 j 02:09	6° 8 33'39			-12300 Apr 20 j 05:18 -12300 Jun 13 j 20:00	0° ≈	
evening set	-12305 Aug 10 j 02:18	0°Ⅱ		asc. node	-12300 Aug 02 j 01:48		
	12303 Aug 10 J 02.10	О Д		use. Hode	-12300 Aug 03 j 08:35	0° ∀	
conjunction	-12305 Sep 11 j 05:33	25°∏10'23	0°33'38		-12300 Oct 01 j 13:09	0°Υ	
minimum elong	-12305 Sep 11 j 08:23			retrograde	-12300 Nov 17 j 20:40		
minimum ciong	-12305 Sep 17 j 10:14	0°95	0 54 17	opposition	-12300 Dec 20 j 16:54	4° Υ 59'05	6°21'32
max. Earth dist.	-12305 Oct 15 j 08:42		2 39796 AII	greatest brilliancy	-12300 Dec 22 j 06:58	4° Υ 28'38	-2.4m
desc. node	-12305 Oct 26 j 17:39	0°Ω10'33	2.35770110	min. Earth dist.	-12300 Dec 28 j 10:03		
desc. flode	-12305 Oct 26 j 17:39	0° Ω		iiiii. Latui dist.	-12299 Jan 06 j 08:38		0.44717 AO
morning rise	-12305 Nov 14 j 06:46	14° Ω 02'57		direct	-12299 Jan 25 j 14:14		
morning rise	-12305 Dec 06 j 02:22	0° m)		direct	-12299 Feb 14 j 01:53	0° Υ	
	-12304 Jan 17 j 20:00	0∘ ⊽			-12299 Apr 17 j 19:46	0°8	
	-12304 Mar 03 j 05:17	0° ™			-12299 Apr 17 j 19:40 -12299 Jun 01 j 12:17	0°II	
	-12304 Apr 21 j 04:49	0° ⊼		desc. node	-12299 Jun 17 j 23:21		
	-12304 Jun 17 j 08:24	ੈ ਨ ਹ		dese. Hode	-12299 Jul 13 j 12:46	0°95	
retrograde	-12304 Aug 13 j 15:16				-12299 Aug 24 j 09:25	$0 {\circ} \mathcal{U}$	
opposition	-12304 Sep 21 j 06:41	6°る07'14	-1°31'53		-12299 Oct 06 j 03:36	0° m y	
greatest brilliancy	-12304 Sep 21 j 11:38	6° る 02'21			-12299 Nov 19 j 07:08	0∘ ಹ	
min. Earth dist.	-12304 Sep 24 j 14:16		0.64439 AU	evening set	-12299 Dec 24 j 06:32		
		30°R. ₹			-12298 Jan 03 j 20:16	0°M	
asc. node	-12304 Oct 28 j 04:40	26° ₹ 14'44				- 110	
direct	-12304 Nov 01 j 00:08	26°×199'02		conjunction	-12298 Feb 11 j 14:12	25°ML00'18	-1°04'34
·	-12304 Nov 27 j 02:31	0°る		minimum elong	-12298 Feb 11 j 15:38		
	-12303 Jan 31 j 23:49	0° ≈		max. Earth dist.	-12298 Feb 15 j 22:26		
	-12303 Mar 20 j 17:24	0° ∀			-12298 Feb 19 j 09:10	0° √	
	-12303 May 02 j 09:08	0° Υ		morning rise	-12298 Mar 31 j 05:28		
	-12303 Jun 11 j 09:27	0°8		5	-12298 Apr 07 j 05:38	0°ਰ	
	-12303 Jul 20 j 02:59	0°II			-12298 May 23 j 19:28	0° ≈	
	-12303 Aug 27 i 16:02			asc node	-12208 Jun 10 i 17:28		

asc. node

-12298 Jun 19 j 17:28 17°**≈**29'32

-12303 Aug 27 j 16:02 0°55

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12298 Jul 08 j 21:05 0°₩ -12293 Dec 21 j 23:17 0°×7 -12298 Aug 23 j 17:07 $0^{\circ}\Upsilon$ -12292 Feb 09 i 06:43 0°**궁**05'56 asc. node -12298 Oct 09 j 08:01 0°8 -12292 Feb 09 i 02:57 0°궁 -12298 Nov 29 j 04:37 $0^{\circ}\Pi$ -12292 Mar 26 j 10:30 0°≈≈ -12297 Feb 02 j 07:38 21°**Ⅲ**00'09 -12292 Apr 25 j 00:27 20°≈05'07 retrograde evening set 0°**)**€ min. Earth dist. -12297 Mar 03 j 23:31 16°**Ⅲ**03'35 0.38555 AU -12292 May 09 j 05:23 opposition -12297 Mar 05 j 12:58 15°**Ⅲ**38'17 4°35'22 max. Earth dist. -12292 May 11 j 15:43 1°**¥**42′50 2.49181 AU greatest brilliancy -12297 Mar 05 j 11:46 15°**Ⅲ**39'05 -2.9m direct -12297 Apr 04 j 23:02 10°**Ⅲ**31'27 conjunction -12292 Jun 17 j 03:23 28° **∺** 03'44 1°07'24 desc. node -12297 May 06 j 05:38 16°**Ⅲ**17'34 minimum elong -12292 Jun 17 j 01:37 28° **米** 00′29 1°07'21 0°**Υ** -12297 Jun 06 j 09:41 0ಂತಾ -12292 Jun 19 j 18:21 0°8 -12297 Jul 28 j 01:04 $0^{\circ}\Omega$ -12292 Jul 29 j 13:52 -12297 Sep 13 j 05:17 0° M morning rise -12292 Aug 12 j 12:24 10°**8**43'11 -12297 Oct 29 j 19:46 0∘**⊽** -12292 Sep 06 j 09:04 $0^{\circ}II$ -12297 Dec 15 j 18:10 0°M -12292 Oct 15 j 00:01 0ಂತಾ -12296 Jan 31 j 22:41 0°**∡**¹ -12292 Nov 23 j 08:37 $0^{\circ}\Omega$ evening set -12296 Feb 02 j 18:42 1°**х** 10′03 desc. node -12292 Dec 25 j 22:17 23° **Ω**55'50 max. Earth dist. -12296 Mar 11 j 09:03 25° ₹ 12'40 2.65344 AU -12291 Jan 03 j 10:14 0°m -12296 Mar 18 j 19:25 -12291 Feb 16 j 10:28 -12291 Apr 07 j 02:06 conjunction -12296 Mar 21 j 20:52 1°る58'36 -0°27'12 retrograde -12291 Jun 25 j 23:09 27° M27'16 minimum elong -12296 Mar 21 i 21:56 2°る00'20 0°27'55 min. Earth dist. -12291 Aug 02 j 23:24 18°ML21'02 0.65413 AU -12296 May 03 j 16:49 0°≈ opposition -12291 Aug 04 j 20:54 17°M 35'07 -4°42'19 asc. node -12296 May 06 j 09:27 1°≈47'16 greatest brilliancy -12291 Aug 04 j 14:13 17° ML41'52 -1.4m morning rise -12296 May 08 j 00:04 2°≈51'27 direct -12291 Sep 13 j 01:34 8°M10'01 -12296 Jun 17 i 05:10 0°₩ -12291 Nov 23 j 23:29 0°×7 -12296 Jul 30 j 07:28 $0^{\circ}\Upsilon$ -12291 Dec 27 j 12:03 17° ₹ 42'16 asc node -12296 Sep 10 j 06:45 0°8 -12290 Jan 17 j 17:39 ೧೦೯ -12296 Oct 21 j 16:51 -12290 Mar 06 j 17:14 0°П 0°≈≈ -12290 Apr 19 j 23:18 -12296 Dec 02 j 15:48 0°ഇ 0°¥ -12295 Jan 16 j 18:26 0°**Ω** -12290 May 31 j 11:38 0°**Υ** -12295 Mar 23 j 08:08 29°**Ω**24'01 -12290 Jun 16 j 23:52 12°**Υ**22'10 desc. node evening set -12295 Mar 27 j 03:15 0° Mp -12290 Jul 10 j 01:42 0°8 -12295 Apr 06 j 00:09 0° Mp 40'14 -12290 Aug 02 j 07:36 18°**8**03'07 2.38588 AU retrograde max. Earth dist. -12295 Apr 15 j 15:43 30°RΩ min. Earth dist. -12295 May 04 j 18:25 $25^{\circ}\Omega$ 08'28 0.47281 AU -12290 Aug 16 j 01:39 28°848'34 0°58'56 conjunction -12295 May 12 j 19:05 $22^{\circ}\Omega 21'15 - 3^{\circ}06'11$ -12290 Aug 16 j 04:48 28°**8**54'45 0°59'32 opposition minimum elong greatest brilliancy -12295 May 11 j 20:03 $22^{\circ}\Omega$ 41'22 -2.3m -12290 Aug 17 j 14:07 0°**Ⅱ** direct -12295 Jun 15 j 01:23 15°**Ω**33'26 -12290 Sep 24 j 22:33 -12295 Aug 08 j 04:25 0° M morning rise -12290 Oct 19 j 08:44 18°551'22 -12295 Oct 04 j 09:53 0°**♀** -12290 Nov 03 j 00:25 0°**Ω** -12295 Nov 24 j 01:47 0°M desc. node -12290 Nov 12 j 15:03 7°**Ω**13'20 -12294 Jan 11 j 21:28 0° ₹ -12290 Dec 13 j 15:06 0° Mp -12294 Feb 28 j 08:32 0°る -12289 Jan 25 j 11:33 -12294 Mar 13 j 11:25 8°₹28'18 -12289 Mar 12 j 08:30 0° M evening set asc. node -12294 Mar 24 j 05:38 15°る29'18 -12289 May 02 j 02:17 0°x7 max. Earth dist. -12294 Apr 07 i 07:34 24° ₹ 46'11 2.59516 AU -12289 Jul 13 i 05:29 -12294 Apr 15 i 04:00 0°≈ retrograde -12289 Jul 31 j 08:00 1°る54'28 -12289 Aug 17 j 06:02 30°R 🗷 -12294 May 01 i 15:25 11°≈06'12 0°23'46 -12289 Sep 08 j 12:35 22° ₹30'56 -2°38'06 conjunction opposition -12294 May 01 j 14:23 11°≈04'28 0°23'10 greatest brilliancy -12289 Sep 08 j 17:22 22° ₹ 26'09 -1.4m minimum elong -12294 May 29 j 01:22 0°**米** min. Earth dist. -12289 Sep 10 j 09:22 21° ₹ 46'05 0.65919 AU -12294 Jun 20 j 03:57 15° **H** 38'07 direct -12289 Oct 19 j 01:32 12° ₹36'13 morning rise -12294 Jul 10 j 01:19 $0^{\circ}\Upsilon$ asc. node -12289 Nov 14 j 18:48 16° ₹33'55 -12294 Aug 19 j 12:33 0° 8 -12289 Dec 19 j 18:34 0°ಕ -12294 Sep 28 j 01:33 $\Pi^{\circ}0$ -12288 Feb 12 j 06:56 0°≈ -12294 Nov 06 j 11:36 0ಂತಾ -12288 Mar 29 j 08:11 0°**)** $0^{\circ}\Upsilon$ -12294 Dec 16 j 20:31 $0^{\circ}\Omega$ -12288 May 10 j 10:44 -12293 Jan 28 j 19:43 0° M -12288 Jun 19 j 05:17 0°8 -12288 Jul 27 j 19:19 $0^{\circ}\Pi$ desc. node -12293 Feb 08 j 04:06 6° Mp 45'48-12288 Aug 19 j 03:23 17°**Ц**28'32 -12293 Mar 19 j 15:43 0∘**⊽** evening set retrograde -12293 May 20 j 21:54 19°**2**28'21 -12288 Sep 04 j 05:14 0 \circ ∞ min. Earth dist. -12293 Jun 23 j 17:40 11°**⊆**54'22 0.58790 AU desc. node -12288 Sep 29 j 09:50 19°524'17 greatest brilliancy -12293 Jun 28 j 08:02 10°**♀**05'59 -1.7m -12288 Oct 13 j 09:00 0 $^{\circ}\Omega$ opposition -12293 Jun 29 j 08:29 9°**2**41'56 -5°21'20 -12293 Aug 05 j 02:24 1°**-**214'42 -12288 Oct 19 j 22:01 4°Ω54'56 -0°15'18 direct conjunction

-12288 Oct 19 j 20:48 4°Ω52'40 0°14'40

minimum elong

-12293 Oct 29 j 07:28

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. opposition behind sun begin $-12288 \text{ Oct } 19 \text{ i } 10:00 \quad 4^{\circ} \Omega 32'26$ -12282 Feb 02 i 04:49 16°8 12'48 6°50'31 behind sun end -12288 Oct 20 j 07:37 greatest brilliancy -12282 Feb 03 j 03:01 15°**8**57'30 5°**Ω**12'54 -2.8m -12288 Nov 23 j 00:34 min. Earth dist. -12282 Feb 05 j 14:04 15°**8**17'00 0.39311 AU 0° m max. Earth dist. -12288 Dec 01 j 21:25 6° Mp 21'53 2.46910 AU direct -12282 Mar 05 j 23:07 10°**8**38'08 morning rise -12288 Dec 18 j 23:43 18° m 26'33 -12282 May 05 j 18:45 $0^{\circ}\Pi$ -12287 Jan 04 j 16:21 0∘<u>ଫ</u> desc. node -12282 May 22 j 20:36 9°**Ⅲ**37'16 -12287 Feb 18 j 15:03 0°M -12282 Jun 24 j 13:25 0ಂಲ -12287 Apr 07 j 02:19 0°**∡**¹ -12282 Aug 08 j 18:32 $0^{\circ}\Omega$ -12287 May 28 j 04:48 0°₹ -12282 Sep 22 j 11:06 0° m -12287 Jul 30 j 08:13 0°**≈** -12282 Nov 06 j 18:54 0°Ω retrograde -12287 Sep 06 j 22:39 7°≈38'59 -12282 Dec 23 j 00:43 0°M -12287 Oct 01 j 22:15 asc. node 3°**≈**36′16 evening set -12281 Jan 18 j 09:16 16°M 54'02 -12287 Oct 12 j 04:09 30°R궁 -12281 Feb 07 j 21:08 0°**∡** opposition -12287 Oct 14 j 08:56 29°る09'20 0°33'26 max. Earth dist. -12281 Mar 02 j 22:12 14°**х** 44'19 2.66235 AU greatest brilliancy -12287 Oct 14 j 11:19 29°**궁**07'02 min. Earth dist. -12287 Oct 19 j 19:25 27°**⋜**03'14 0.60342 AU conjunction -12281 Mar 07 j 16:05 17°**х** 46'44 -0°44'04 direct -12287 Nov 23 j 20:47 19°る18'46 minimum elong -12281 Mar 07 j 17:34 17°**х** 49'07 0°44'45 -12286 Jan 07 j 19:53 -12281 Mar 26 j 16:25 0°궁 -12286 Mar 04 j 13:01 0°**₩** morning rise -12281 Apr 23 j 16:32 18°る09'03 -12286 Apr 18 j 03:09 $0^{\circ}\Upsilon$ -12281 May 11 j 18:39 -12286 May 28 j 22:37 0°8 asc. node -12281 May 24 j 04:50 8°≈12'30 -12286 Jul 07 i 03:32 $0^{\circ}\Pi$ -12281 Jun 25 i 18:17 0°) -12286 Aug 15 j 01:23 0ಂತಾ -12281 Aug 08 j 15:17 $0^{\circ}\Upsilon$ desc. node -12286 Aug 17 j 10:03 1°5548'34 -12281 Sep 20 i 17:45 0°8 -12286 Sep 23 j 16:07 0°**Ω** -12281 Nov 02 j 19:50 $0^{\circ}\Pi$ -12286 Oct 19 j 14:06 19° Ω 05'15 -12281 Dec 17 j 19:04 0ಂತಾ evening set -12286 Nov 03 j 17:17 0° Mp -12280 Feb 12 j 09:09 $0^{\circ}\Omega$ -12280 Mar 15 j 03:44 $6^{\circ}\Omega$ 22'18 retrograde -12286 Dec 14 j 01:53 28° mp 15'12 -1°07'58 -12280 Apr 09 j 01:08 2°**Ω**18'46 conjunction desc. node -12286 Dec 14 j 00:06 28° m 12'07 1°07'55 -12280 Apr 11 j 16:26 $1^{\circ}\Omega$ 30'59 minimum elong min. Earth dist. 0.42646 AU -12286 Dec 16 j 15:10 0°**♀** -12280 Apr 16 j 12:11 30°RS -12285 Jan 10 j 04:48 16°**2**35'17 2.58057 AU -12280 Apr 18 j 22:16 29°\$13'57 -0°42'12 max. Earth dist. opposition -12285 Jan 30 j 11:30 0° M⋅ greatest brilliancy -12280 Apr 18 j 17:01 29°5018'06 -12285 Feb 04 j 19:37 3°M29'36 -12280 May 20 j 12:54 23°516'39 morning rise direct -12285 Mar 18 j 00:37 0° ₹ -12280 Jun 24 j 04:14 $0^{\circ}\Omega$ -12285 May 05 j 00:42 0°る -12280 Aug 24 j 21:05 0° Mp -12285 Jun 23 j 22:29 0°≈ -12280 Oct 14 j 10:58 0°₽ -12285 Aug 18 j 03:30 0°**米** -12280 Dec 02 j 03:36 0°M asc. node -12285 Aug 19 j 20:29 0°**米**49'30 -12279 Jan 19 j 03:48 0° **尽** retrograde -12285 Oct 25 j 15:19 20° **∺**33'02 -12279 Feb 25 j 21:53 23°**尽** 57'39 evening set -12285 Nov 29 j 01:38 13°**米** 33'24 4°46'59 -12279 Mar 07 j 07:28 0°る opposition -12285 Nov 30 j 06:54 13°**米**07'55 -2.1m max. Earth dist. -12279 Mar 27 j 09:26 13°**⋜**01'39 greatest brilliancy min. Earth dist. -12285 Dec 07 j 00:09 10° **X** 48'23 0.49666 AU asc. node -12279 Apr 09 j 22:21 21° 궁55'08 -12284 Jan 06 j 01:06 5°**米**00'13 direct -12284 Mar 16 j 17:24 0°**Υ** -12279 Apr 15 j 08:29 25°る30'22 0°03'25 conjunction -12284 May 01 j 23:16 0°8 minimum elong -12279 Apr 15 j 08:20 25°る30'08 -12279 Apr 14 j 12:26 24°る57'09 -12284 Jun 12 i 14:09 0°**Ⅱ** behind sun begin -12284 Jul 04 j 14:58 16°**Д**18'18 desc. node behind sun end -12279 Apr 16 j 04:15 26°る03'08 -12279 Apr 22 j 02:38 0°≈ -12284 Jul 23 i 02:06 0°€ -12284 Sep 01 j 22:30 $0^{\circ}\Omega$ -12279 Jun 02 i 11:46 28°≈07'38 morning rise -12284 Oct 13 j 23:22 -12279 Jun 05 j 04:34 0°**)**€ 0° m -12284 Nov 26 j 14:40 -12279 Jul 17 j 13:00 $0^{\circ}\Upsilon$ 0∘⊽ -12284 Dec 07 j 07:37 -12279 Aug 27 j 11:17 evening set 7°**£**11'22 0°X -12283 Jan 10 j 20:23 0°M -12279 Oct 06 j 13:08 $0^{\circ}\Pi$ -12279 Nov 15 j 14:09 000 -12283 Jan 26 j 18:59 10°M22'04 -1°12'30 conjunction -12279 Dec 26 j 21:06 $0^{\circ}\Omega$ minimum elong -12283 Jan 26 j 19:53 10°M23'31 1°12'59 -12278 Feb 09 j 23:57 -12283 Feb 06 j 04:44 17° ML05'35 2.64770 AU max. Earth dist. desc. node -12278 Feb 25 j 01:10 8° m 52'10 -12283 Feb 26 j 06:46 0° ₹ -12278 Apr 15 j 05:28 0∘ଫ morning rise -12283 Mar 16 j 07:04 11° ₹ 31'06 retrograde -12278 May 04 j 20:27 2°**₽**29'38 -12283 Apr 14 j 06:58 -12278 May 23 j 11:51 30°R M -12283 May 31 j 09:29 min. Earth dist. -12278 Jun 05 j 16:51 25° Mp41'24 0.54650 AU asc. node -12283 Jul 06 j 13:37 23°≈00'46 greatest brilliancy -12278 Jun 11 j 09:34 23° M 31'13 -12283 Jul 17 j 14:24 0°**∀** opposition -12278 Jun 12 j 14:30 23° M 03'33 -4°58'57 -12283 Sep 03 j 19:17 $0^{\circ}\Upsilon$ direct -12278 Jul 18 j 02:02 15° Mp 09'32 -12283 Oct 26 j 11:31 0°8 -12278 Sep 12 j 00:28

-12278 Nov 09 j 03:18

-12282 Jan 02 j 07:20 21°**8**24'26

retrograde

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 13

```
Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.
                    -12278 Dec 30 i 04:11 0° ₹
                                                                         desc. node
                                                                                             -12273 Oct 17 i 05:01 26°531'39
                    -12277 Feb 16 j 11:32
                                           0°ಕ
                                                                                             -12273 Oct 21 j 19:04
                                                                                                                    \Omega^{\circ}\Omega
                    -12277 Feb 25 j 21:04
                                            6°ප00'10
                                                                                             -12273 Nov 07 j 12:49 12° Q32'26 2.42081 AU
                                                                         max. Earth dist.
asc. node
                                                                                             -12273 Nov 27 j 20:35 27°\Omega27'43
                    -12277 Apr 03 j 12:51
                                           0°≈≈
                                                                         morning rise
                    -12277 Apr 08 j 08:03
                                           3°≈12'56
                                                                                             -12273 Dec 01 j 08:44
evening set
                    -12277 Apr 27 j 03:14 15°≈58'37
max. Earth dist.
                                                       2.53651 AU
                                                                                             -12272 Jan 13 j 00:10
                                                                                                                     0∘ಹ
                    -12277 May 17 j 07:45
                                           0°∀
                                                                                             -12272 Feb 27 j 03:36
                                                                                                                     0°M
                                                                                                                     0° ₹
                                                                                             -12272 Apr 15 j 09:30
conjunction
                    -12277 May 29 j 11:58
                                            8° ★37'03 0°53'32
                                                                                             -12272 Jun 08 j 09:43
                                                                                                                     0°궁
 minimum elong
                    -12277 May 29 j 09:56
                                            8°∺33'25
                                                      0°53'13
                                                                         retrograde
                                                                                             -12272 Aug 22 j 05:06 23°♂27'49
                    -12277 Jun 28 j 00:09
                                            0^{\circ}\Upsilon
                                                                         opposition
                                                                                             -12272 Sep 29 j 11:06 14°♂33'42 -0°48'57
                    -12277 Jul 21 j 13:10 17°Y31'30
morning rise
                                                                         greatest brilliancy
                                                                                             -12272 Sep 29 j 14:27 14° ₹30'24 -1.5m
                    -12277 Aug 07 j 00:37
                                           0^{\circ}8
                                                                         min. Earth dist.
                                                                                             -12272 Oct 03 j 13:09 12°₹57'10
                                                                                                                                 0.63215 AU
                    -12277 Sep 15 j 01:21
                                            0^{\circ}II
                                                                         asc. node
                                                                                             -12272 Oct 18 j 13:41
                                                                                                                     7°る43'10
                    -12277 Oct 23 j 21:51
                                            0ಂತಾ
                                                                         direct
                                                                                             -12272 Nov 09 j 04:11
                                                                                                                     4°る36'04
                    -12277 Dec 02 j 12:38
                                           0^{\circ}\Omega
                                                                                             -12271 Jan 24 j 08:27
desc. node
                    -12276 Jan 12 j 18:47 29°\Omega49'43
                                                                                             -12271 Mar 14 j 20:25
                                                                                                                     0°)€
                    -12276 Jan 13 j 00:41
                                           0° m
                                                                                             -12271 Apr 27 j 01:23
                                                                                                                     0^{\circ}\Upsilon
                    -12276 Feb 27 j 03:29
                                                                                             -12271 Jun 06 j 07:25
                                                                                                                     0°8
                    -12276 Apr 21 j 13:40
                                                                                             -12271 Jul 15 j 04:26
                                                                                                                     0^{\circ}\Pi
retrograde
                    -12276 Jun 12 j 01:09 13°M 34'24
                                                                                             -12271 Aug 22 j 20:00
min. Earth dist.
                    -12276 Jul 18 j 13:20
                                           5°ML00'35 0.63514 AU
                                                                         desc. node
                                                                                             -12271 Sep 03 i 02:38
                                                                                                                     8°9540'40
                    -12276 Jul 21 i 22:34
                                           3°M39'01 -5°10'06
                                                                         evening set
                                                                                             -12271 Sep 27 i 00:36 26°551'37
opposition
greatest brilliancy
                    -12276 Jul 21 j 08:52 3°ML52'46
                                                                                             -12271 Oct 01 i 04:52
                                                                                                                     0^{\circ}\Omega
                                                      -1.5m
                    -12276 Jul 31 j 10:26 30°R ₽
                                                                                             -12271 Nov 11 j 00:47
                    -12276 Aug 29 j 07:14 24° △32'58
direct
                    -12276 Sep 30 j 06:04 0°M
                                                                                             -12271 Nov 24 j 04:13
                                                                                                                     9° m 22'44 -0°53'39
                                                                         conjunction
                    -12276 Dec 05 j 13:10 0° ₹
                                                                                             -12271 Nov 24 j 01:39
                                                                                                                     9° mp 18'12 0°53'21
                                                                          minimum elong
                    -12275 Jan 13 j 01:15 22° ₹02'56
                                                                                             -12271 Dec 23 j 18:38
                                                                                                                     0∘ଫ
asc node
                    -12275 Jan 26 j 04:34 0°る
                                                                                             -12271 Dec 28 j 05:45
                                                                                                                     3°203'06 2.54111 AU
                                                                         max. Earth dist.
                    -12275 Mar 14 j 07:55 0°≈
                                                                                             -12270 Jan 18 j 11:04 17° 221'54
                                                                         morning rise
                                                                                             -12270 Feb 06 j 13:50 0°M
                    -12275 Apr 27 j 08:02 0°ℋ
                                                                                             -12270 Mar 25 j 07:56
                    -12275 May 25 j 21:40 20°米29'09
                                                                                                                     0°×7
evening set
                    -12275 Jun 07 j 19:51 0°Υ
                                                                                             -12270 May 13 j 02:57
                                                                                                                     o°ਤ
                    -12275 Jun 16 j 04:36 6^{\circ} Y 14'04 2.41914 AU
                                                                                             -12270 Jul 04 j 11:10 0°≈
max. Earth dist.
                    -12275 Jul 17 j 11:12 0°8
                                                                                             -12270 Sep 05 j 14:12 27°≈57'16
                                                                         asc. node
                                                                                             -12270 Sep 13 j 10:11 0°米
conjunction
                    -12275 Jul 22 j 03:19
                                           3°836'06 1°11'59
                                                                         retrograde
                                                                                             -12270 Oct 04 j 19:42 2° ∺ 36'00
                    -12275 Jul 22 j 04:25 3°838'13 1°12'22
                                                                                             -12270 Oct 24 j 21:09 30°R≈
 minimum elong
                    -12275 Aug 25 j 01:19 0°Ⅱ
                                                                         opposition
                                                                                             -12270 Nov 09 j 14:12 24°≈55'24 3°03'17
morning rise
                    -12275 Sep 22 j 06:17 22°Ц03'22
                                                                         greatest brilliancy
                                                                                             -12270 Nov 10 j 07:26 24°≈39'32
                    -12275 Oct 02 j 11:12 0°5
                                                                         min. Earth dist.
                                                                                             -12270 Nov 16 j 20:10 22°≈15'39
                                                                                                                                0.54307 AU
                    -12275 Nov 10 j 14:12 0°Ω
                                                                                             -12270 Dec 18 j 23:20 15°≈38'21
                                                                         direct
desc. node
                    -12275 Nov 29 j 10:44 14° Ω04'49
                                                                                             -12269 Feb 08 j 19:29 0°米
                    -12275 Dec 21 j 06:56 0° Mp
                                                                                             -12269 Apr 01 j 03:04
                                                                                                                     0^{\circ}\Upsilon
                    -12274 Feb 02 i 09:30 0°♀
                                                                                             -12269 May 13 j 22:33 0°8
                                                                                             -12269 Jun 23 j 04:06 0°Ⅱ
                    -12274 Mar 21 i 02:26 0°M
                                                                                             -12269 Jul 22 j 05:33 22°II00'28
                    -12274 May 14 j 05:37 0° ₹
                                                                         desc. node
retrograde
                    -12274 Jul 17 j 12:14 18° ₹ 47'43
                                                                                             -12269 Aug 01 j 19:22 0°5
                    -12274 Aug 26 j 02:24 9° ₹ 10'01 -3°34'23
                                                                                             -12269 Sep 11 i 00:10
                                                                                                                     0^{\circ}\Omega
opposition
greatest brilliancy
                    -12274 Aug 26 j 04:14
                                            9°∡ 08'12 -1.4m
                                                                                             -12269 Oct 22 j 12:58
min. Earth dist.
                                           9°∡100'23 0.66455 AU
                    -12274 Aug 26 j 11:58
                                                                                             -12269 Nov 20 j 05:31 20° m 01'52
                                                                         evening set
                    -12274 Sep 25 j 15:49 30°RML
                                                                                             -12269 Dec 04 j 19:23
                    -12274 Oct 05 j 05:51 29°M23'51
direct
                    -12274 Oct 15 j 06:13 0° ₹
                                                                         conjunction
                                                                                             -12268 Jan 11 j 07:26 25°♀03'51 -1°15'33
                    -12274 Dec 01 j 08:01 14°⊀128'36
asc. node
                                                                          minimum elong
                                                                                             -12268 Jan 11 j 07:26 25° 203'51 1°15'51
                    -12273 Jan 01 j 13:39
                                           0°₹
                                                                                             -12268 Jan 18 j 19:48
                                                                                                                     0°M
                    -12273 Feb 21 j 07:04
                                                                         max. Earth dist.
                                                                                             -12268 Jan 27 j 22:32 5°ML57'15 2.62761 AU
                                           0°≈
                    -12273 Apr 07 j 09:41
                                           0°)€
                                                                                             -12268 Mar 01 j 02:28 27° ML21'45
                                                                         morning rise
                                            0^{\circ}\Upsilon
                                                                                                                     0°∡7
                    -12273 May 19 j 04:53
                                                                                             -12268 Mar 05 j 05:23
                                                                                                                     0°궁
                    -12273 Jun 27 j 20:37
                                           0°8
                                                                                             -12268 Apr 21 j 11:49
evening set
                    -12273 Jul 25 j 09:03 21°823'10
                                                                                             -12268 Jun 08 j 08:27
                                                                                                                     0°≈
                    -12273 Aug 05 j 09:07
                                           0^{\circ}\Pi
                                                                         asc. node
                                                                                             -12268 Jul 23 j 08:37 27°≈36'56
                    -12273 Sep 12 j 17:24
                                                                                             -12268 Jul 27 j 08:00
                                                                                                                    0°∀
                                                                                             -12268 Sep 18 j 07:38
                    -12273 Sep 25 j 21:33 10°5012'37 0°16'08
                                                                                             -12268 Dec 03 j 07:30 24° Υ 47'45
conjunction
                                                                         retrograde
                    -12273 Sep 25 j 23:03 10°$15'30 0°16'50
                                                                                             -12267 Jan 04 j 05:03 19°Y'01'52 6°57'17
 minimum elong
                                                                         opposition
```

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12267 Jan 05 j 19:09 18°**Υ**33'01 -2.5m asc. node -12262 Mar 14 j 13:01 12°중11'52 greatest brilliancy min. Earth dist. -12267 Jan 11 j 00:58 16°**Υ**58'11 0.42539 AU -12262 Mar 22 j 16:46 17°る31'39 evening set -12267 Feb 07 j 17:26 12°**Y**15'34 direct -12262 Apr 10 j 13:03 0°≈≈ -12262 Apr 14 j 04:41 2°≈26'40 2.57613 AU -12267 Apr 05 j 14:05 max. Earth dist. _0°႘ -12267 May 24 j 12:33 $0^{\circ}\Pi$ -12267 Jun 08 j 12:54 10°**Д**10'37 desc. node conjunction -12262 May 11 j 10:35 20°≈58'56 0°35'16 -12267 Jul 07 j 00:51 minimum elong 0ಂಲ -12262 May 11 j 09:05 20°≈56'20 0°34'46 -12267 Aug 18 j 16:44 0° Ω -12262 May 24 j 09:50 0°**)**€ -12267 Sep 30 j 23:02 0° m morning rise -12262 Jun 30 j 23:48 26° **€** 50'51 $0^{\circ}\Upsilon$ -12267 Nov 14 j 10:04 0∘**⊽** -12262 Jul 05 j 07:29 -12267 Dec 30 j 03:46 0°M -12262 Aug 14 j 14:54 0°8 evening set -12266 Jan 02 j 15:16 2° ML15'15-12262 Sep 22 j 23:09 $0^{\circ}\Pi$ -12266 Feb 14 j 18:30 0°**∡**7 -12262 Nov 01 j 03:27 0ಂತಾ -12262 Dec 11 j 03:39 $0^{\circ}\Omega$ conjunction -12266 Feb 20 j 11:36 3°**₹**39'26 -0°58'01 -12261 Jan 22 j 09:10 0° m minimum elong -12266 Feb 20 j 13:09 3°**∡**¹41'56 0°58'40 desc. node -12261 Jan 29 j 15:12 4° m 53'56 max. Earth dist. -12266 Feb 21 j 14:07 4°**х** 21′52 2.66295 AU -12261 Mar 10 j 15:36 0∘**⊽** -12266 Apr 02 j 14:08 0°る retrograde -12261 May 29 j 14:06 28°**♀**51'24 morning rise -12266 Apr 08 j 18:44 3°る58'54 min. Earth dist. -12261 Jul 03 j 09:52 20°**£**54'52 0.60707 AU -12266 May 18 j 23:15 0°≈ greatest brilliancy -12261 Jul 07 j 09:26 19°**£**20'00 asc. node -12266 Jun 09 j 23:45 14°≈25'06 opposition -12261 Jul 08 j 06:22 18° **2**59'12 -5°22'52 -12266 Jul 03 j 14:03 0°**)** direct -12261 Aug 14 i 15:15 10° **2**16'44 -12266 Aug 17 j 13:40 -12261 Oct 20 j 21:47 0°M -12266 Oct 01 j 12:20 0°8 -12261 Dec 16 i 04:49 0° **₹** -12266 Nov 17 i 00:44 $0^{\circ}\Pi$ -12260 Jan 30 j 15:22 27° ₹ 13'44 asc. node -12265 Jan 12 j 03:34 -12260 Feb 04 i 02:15 0°ಕ 0.00 -12265 Feb 18 j 11:56 -12260 Mar 21 j 16:27 8°9017'37 0°≈ retrograde -12265 Mar 18 j 17:13 -12260 May 04 j 13:16 min. Earth dist. 3°935'46 0.39368 AU 0°)(-12260 May 05 j 18:47 -12265 Mar 22 j 20:42 2°525'11 2°39'16 0°**₩**51'57 opposition evening set -12265 Mar 22 j 14:03 2°529'54 -12260 May 22 j 09:14 12° **)** 41'34 2.46541 AU greatest brilliancy max. Earth dist. -2.8m-12265 Mar 31 j 20:32 30°RII -12260 Jun 15 j 02:07 -12265 Apr 22 j 09:41 27°**Д**09'09 direct -12265 Apr 26 j 18:24 27°**I**I16'38 -12260 Jun 29 j 05:56 10°**Υ**33'34 1°12'04 desc. node conjunction -12265 May 13 j 23:26 0°ഇ -12260 Jun 29 j 04:53 10°**Υ**31'35 1°12'11 minimum elong -12265 Jul 19 j 02:51 -12260 Jul 24 j 20:14 0°8 $0^{\circ}\Omega$ -12265 Sep 06 j 18:45 -12260 Aug 26 j 17:18 25°**8**26'51 0° m morning rise -12265 Oct 24 j 09:34 -12260 Sep 01 j 13:31 0°**П** 0∘**⊽** -12265 Dec 10 j 19:55 -12260 Oct 10 j 02:23 0°5 -12264 Jan 27 j 06:08 0°**∡**¹ -12260 Nov 18 j 08:11 0°**Ω** evening set -12264 Feb 11 j 13:59 9°**∡**¹44'22 desc. node -12260 Dec 16 j 07:42 20° Ω 42'28 -12264 Mar 14 j 05:01 0°궁 -12260 Dec 29 j 05:07 0° M -12264 Mar 17 j 04:14 1°る54'57 2.64522 AU -12259 Feb 10 j 18:21 max. Earth dist. -12259 Mar 30 j 21:59 -12264 Mar 30 j 16:49 10°₹41'09 -0°16'26 -12259 Jun 02 j 02:29 conjunction -12264 Mar 30 j 17:30 10°₹42'17 0°17'08 -12259 Jul 03 j 20:07 5°**х** 35'31 minimum elong retrograde -12264 Apr 26 j 16:03 28°る24'16 asc. node -12259 Aug 01 i 21:11 30°RM -12264 Apr 29 i 01:44 0°≈ opposition -12259 Aug 12 j 16:26 25° ML47'18 -4°20'34 morning rise -12264 May 17 j 01:09 12°≈01'44 min. Earth dist. -12259 Aug 11 j 14:14 26° ML13'44 0.66051 AU -12264 Jun 12 i 10:18 0°**∀** greatest brilliancy -12259 Aug 12 j 13:10 25°M50'35 -1.4m -12264 Jul 25 i 05:50 $0^{\circ}\Upsilon$ direct -12259 Sep 21 j 06:36 16°ML13'41 -12264 Sep 04 j 18:50 -12259 Nov 14 j 14:11 0°X -12264 Oct 15 j 14:50 -12259 Dec 17 j 22:17 16° ₹09'40 0°Π asc node -12264 Nov 25 j 15:50 -12258 Jan 11 j 19:21 0ംഉ ೧೦೯ -12263 Jan 07 j 17:29 $0^{\circ}\Omega$ -12258 Mar 01 j 14:22 0°22 -12263 Feb 27 j 20:26 0° m -12258 Apr 15 j 03:12 0°**)** $0^{\circ}\Upsilon$ desc. node -12263 Mar 13 j 18:54 6° Mp 02'39 -12258 May 26 j 18:05 -12258 Jun $30 \text{ j } 09:34 \ 26^{\circ} \Upsilon 10'52$ -12263 Apr 17 j 03:11 13° Mp 17'46 retrograde evening set -12263 May 16 j 22:53 -12258 Jul 05 j 08:36 0°8 min. Earth dist. 7° **m** 18'32 0.49978 AU $0^{\circ}\Pi$ opposition -12263 May 24 j 18:31 4° **m** $28'41 - 4^{\circ}01'07$ -12258 Aug 12 j 20:39 greatest brilliancy -12263 May 23 j 14:40 4° m 54'03 -2.2m -12263 Jun 07 j 13:34 30°RΩ conjunction -12258 Aug 30 j 19:26 14°**I**I04'37 0°45'48 direct -12263 Jun 27 j 20:41 27°**Ω**14'56 minimum elong -12258 Aug 30 j 22:47 14°**Ⅱ**11'11 0°46'27 -12263 Jul 19 j 09:17 max. Earth dist. -12258 Sep 18 j 00:01 28°**Д**17'52 2.38552 AU -12263 Sep 27 j 00:03 0∘**⊽** -12258 Sep 20 j 04:29 0 \circ \odot -12263 Nov 18 j 10:46 0°M -12258 Oct 29 j 05:25 0° Ω -12262 Jan 06 j 21:54 0°×7 -12258 Nov 02 j 23:49 3°**Ω**35'48 desc. node

-12258 Nov 03 j 07:19

3°**Ω**49'53

morning rise

-12262 Feb 23 j 15:24 0°궁

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 15

```
Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.
                    -12258 Dec 08 j 18:39
                                           0° M
                                                                         min. Earth dist.
                                                                                             -12253 Dec 19 i 10:38 23° \( \)01'28 0.47022 AU
                    -12257 Jan 20 j 11:52
                                                                                              -12252 Jan 17 j 09:01 17° X 40'58
                                            0∘⊽
                                                                         direct
                    -12257 Mar 06 j 23:52
                                                                                              -12252 Mar 03 j 16:15
                                                                                                                     0^{\circ}\Upsilon
                                            o°m.
                    -12257 Apr 25 j 12:12
                                            0°×7
                                                                                              -12252 Apr 24 j 00:57
                                                                                                                      0°8
                                                                                              -12252 Jun 06 j 01:33
                    -12257 Jun 24 j 21:42
                                            0°₹
                                                                                                                     0^{\circ}\Pi
                                                                                              -12252 Jun 25 j 03:39 13°Ⅲ49'59
retrograde
                    -12257 Aug 08 j 11:45
                                            9°る56'18
                                                                         desc. node
opposition
                    -12257 Sep 16 j 09:32
                                            0°る42'04 -2°00'54
                                                                                              -12252 Jul 17 j 07:05
                                                                                                                     0ಂತಾ
greatest brilliancy
                    -12257 Sep 16 j 14:42
                                            0°る36'55
                                                      -1.4m
                                                                                              -12252 Aug 27 j 14:55
                                                                                                                      0^{\circ}\Omega
                    -12257 Sep 18 j 03:42 30°R ✓
                                                                                              -12252 Oct 08 j 23:45
                                                                                                                      0° m
min. Earth dist.
                    -12257 Sep 19 j 01:08 29° ₹38'39
                                                        0.65228 AU
                                                                                              -12252 Nov 21 j 20:25
                                                                                                                     0∘ত
direct
                    -12257 Oct 27 j 01:28 20° ₹ 44'51
                                                                         evening set
                                                                                              -12252 Dec 17 j 03:34 16°⊆50'25
                    -12257 Nov 05 j 04:24 21° ₹ 15'21
asc. node
                                                                                              -12251 Jan 06 j 05:10
                    -12257 Dec 08 j 13:43
                                            0°ರ
                    -12256 Feb 05 j 22:54
                                                                         conjunction
                                                                                              -12251 Feb 04 j 22:42 19°ML15'16 -1°08'25
                    -12256 Mar 23 j 22:53
                                            0°)€
                                                                           minimum elong
                                                                                              -12251 Feb 04 j 23:57 19°ML17'16 1°08'58
                    -12256 May 05 j 09:54
                                            0^{\circ}\Upsilon
                                                                         max. Earth dist.
                                                                                              -12251 Feb 11 j 22:47 23°ML45'31 2.65531 AU
                    -12256 Jun 14 j 08:11
                                            0°8
                                                                                              -12251 Feb 21 j 16:08
                                                                                                                     0°∡7
                    -12256 Jul 23 j 00:14
                                                                         morning rise
                                                                                              -12251 Mar 24 j 22:05 19° ₹ 59'25
                    -12256 Aug 30 j 11:26
                                                                                              -12251 Apr 09 j 13:59
evening set
                    -12256 Sep 02 j 12:22
                                            2°521'19
                                                                                              -12251 May 26 j 09:04
desc. node
                    -12256 Sep 19 j 21:19 15°5544'11
                                                                         asc. node
                                                                                              -12251 Jun 26 j 19:20 20°≈15'13
                    -12256 Oct 08 j 15:53 0°Ω
                                                                                              -12251 Jul 11 i 21:41
                                                                                                                     0°)
                                                                                              -12251 Aug 27 j 15:06
                                                                                                                      0^{\circ}\Upsilon
conjunction
                    -12256 Nov 02 j 06:35 18^{\circ}\Omega19'01 -0°31'15
                                                                                              -12251 Oct 15 j 03:33
                                                                                                                     0°8
 minimum elong
                    -12256 Nov 02 j 04:23 18° Ω14'59 0°30'44
                                                                                              -12251 Dec 12 j 14:03
                                                                                                                     \Pi^{\circ}0
                    -12256 Nov 18 j 07:43 0° Mp
                                                                                              -12250 Jan 19 j 22:38
                                                                         retrograde
                                                                                                                     8°∏13′04
                    -12256 Dec 12 j 20:11 17° m 26'18 2.49560 AU
                                                                                              -12250 Feb 19 j 17:34 3°Д03'11 5°49'22
max Earth dist
                                                                         opposition
                    -12256 Dec 30 j 14:52 29° m 46'13
                                                                                             -12250 Feb 20 j 02:08 2°II57'28 -2.8m
morning rise
                                                                         greatest brilliancy
                    -12256 Dec 30 j 22:54 0°♀
                                                                                              -12250 Feb 20 j 11:49 2°Д50'59
                                                                         min. Earth dist.
                                                                                                                                0.38540 AU
                                                                                              -12250 Mar 03 j 21:38 30°R୪
                    -12255 Feb 13 j 18:48
                                           0°M
                                                                                              -12250 Mar 22 j 11:19 27°851'15
                    -12255 Apr 01 j 21:35
                                           0°×7
                                                                         direct
                    -12255 May 21 j 21:52 0°る
                                                                                              -12250 Apr 09 j 23:26 0°П
                                                                                              -12250 May 13 j 09:55 12^{\circ}П20'51
                    -12255 Jul 17 j 23:01 0°≈
                                                                         desc. node
                    -12255 Sep 16 j 13:29 16°≈37'16
                                                                                              -12250 Jun 14 j 21:38 0°ഇ
retrograde
                    -12255 Sep 22 j 06:33 16°≈24'39
                                                                                              -12250 Aug 01 j 20:11 0°Ω
asc. node
                                                                                              -12250 Sep 16 j 16:57
opposition
                    -12255 Oct 23 j 11:10 8°≈23'17 1°25'29
                                                                                                                     0° m
greatest brilliancy
                    -12255 Oct 23 j 17:59 8°≈16'47 -1.7m
                                                                                              -12250 Nov 01 j 15:41 0°♀
min. Earth dist.
                    -12255 Oct 29 j 14:17 6°≈03'10 0.58401 AU
                                                                                              -12250 Dec 18 j 05:39
                                                                                                                     0°M
                    -12255 Nov 18 j 19:35 30°R♂
                                                                                              -12249 Jan 27 j 06:22 25°M32'47
                                                                         evening set
direct
                    -12255 Dec 02 j 16:13 28°₹41'04
                                                                                              -12249 Feb 03 j 06:01 0° 尽
                    -12255 Dec 17 j 04:39
                                                                         max. Earth dist.
                                                                                              -12249 Mar 08 j 11:43 21° ₹ 14'54 2.65841 AU
                    -12254 Feb 25 j 00:45 0°米
                    -12254 Apr 12 j 02:22 0°Υ
                                                                                              -12249 Mar 16 j 09:46 26° ₹ 20'11 -0°34'36
                                                                         conjunction
                    -12254 May 23 j 10:55 0°8
                                                                                              -12249 Mar 16 j 11:03 26° ₹22'15 0°35'19
                                                                          minimum elong
                    -12254 Jul 01 j 22:52 0°Ⅱ
                                                                                              -12249 Mar 22 j 02:15 0°ਰ
desc. node
                    -12254 Aug 07 j 22:46 28° Ⅲ22'45
                                                                         morning rise
                                                                                              -12249 May 02 j 10:30 26°る55'55
                    -12254 Aug 10 i 01:42 0°5
                                                                                              -12249 May 07 j 02:08 0°≈
                    -12254 Sep 18 i 20:05
                                           0^{\circ}\Omega
                                                                         asc. node
                                                                                              -12249 May 14 j 10:50 4°≈52'30
                    -12254 Oct 30 i 00:00
                                                                                              -12249 Jun 20 i 19:50
                                                                                                                     0°)
                    -12254 Oct 31 j 12:46
                                                                                              -12249 Aug 03 i 06:26
evening set
                                            1° m 05'33
                    -12254 Dec 11 j 23:33
                                                                                              -12249 Sep 14 j 16:54
                                                                                                                     0°8
                                            0∘⊽
                                                                                              -12249 Oct 26 j 18:04
                                                                                                                     0^{\circ}\Pi
                    -12254 Dec 24 j 17:07
                                                                                              -12249 Dec 08 j 16:40
conjunction
                                            8° £38'22 -1°12'40
                                                                                                                     0ಂತಾ
 minimum elong
                    -12254 Dec 24 j 15:58
                                            8°♀36'27 1°12'45
                                                                                              -12248 Jan 25 j 09:14
                                                                                                                     0^{\circ}\Omega
max. Earth dist.
                    -12253 Jan 17 j 00:44 24° 212'14 2.59917 AU
                                                                         retrograde
                                                                                              -12248 Mar 27 j 23:57 20°Ω58'43
                    -12253 Jan 25 j 20:01
                                           0°M
                                                                                              -12248 Mar 30 j 13:13 20°Ω55'56
                                                                         desc. node
                    -12253 Feb 14 j 06:43 12°ML40'23
                                                                         min. Earth dist.
                                                                                              -12248 Apr 25 j 00:51 15° Ω47'01 0.45122 AU
morning rise
                    -12253 Mar 13 j 06:33
                                           0° √
                                                                         opposition
                                                                                              -12248 May 02 j 22:10 13^{\circ}\Omega09'09 -2°12'09
                    -12253 Apr 29 j 22:36
                                            0°る
                                                                         greatest brilliancy
                                                                                              -12248 May 02 j 05:23 13^{\circ}\Omega 23'14 -2.5m
                    -12253 Jun 17 j 22:07
                                            0°≈
                                                                         direct
                                                                                              -12248 Jun 04 j 11:16
                                                                                                                     6°Ω43'40
                    -12253 Aug 08 j 23:30
                                            0°)€
                                                                                              -12248 Aug 15 j 14:20
                                                                                                                      0° m
                    -12253 Aug 10 j 03:06
                                            0°) 37′18
                                                                                              -12248 Oct 08 j 04:51
                                                                                                                      0∘⊽
asc. node
                    -12253 Oct 19 j 04:11
                                            0^{\circ}\Upsilon
                                                                                              -12248 Nov 26 j 21:38
                                                                                                                     0°M
retrograde
                    -12253 Nov 07 j 20:17
                                            2°Y14'41
                                                                                              -12247 Jan 14 j 08:13
                                                                                                                      0°∡7
                    -12253 Nov 26 j 18:02 30°R光
                                                                                              -12247 Mar 02 j 16:28
                                                                                                                      0°궁
                    -12253 Dec 11 j 10:17 25° ¥ 40'51 5° 42'59
                                                                                              -12247 Mar 06 j 19:07
                                                                                                                     2°る38'51
opposition
                                                                         evening set
                    -12253 Dec 12 j 21:34 25° ¥ 11'27 -2.3m
                                                                                              -12247 Mar 31 j 05:55 18°₹33'32
greatest brilliancy
                                                                         asc. node
```

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. max. Earth dist. -12247 Apr 02 j 13:49 20°る05'30 2.60901 AU -12243 Dec 16 j 08:37 0° m -12247 Apr 17 j 12:34 0°≈ -12242 Jan 28 j 05:44 0∘Ω -12242 Mar 15 j 07:46 0°M -12247 Apr 24 j 14:04 4°≈43'40 0°15'07 -12242 May 06 j 01:20 0°×7 conjunction -12242 Jul 25 j 10:36 26°**х** 46'39 -12247 Apr 24 j 13:25 minimum elong 4°**≈**42'35 0°14'30 retrograde -12247 Apr 24 j 04:43 behind sun begin 4°≈27'59 opposition -12242 Sep 02 j 20:06 17° ₹ 16'09 -3°02'49 -12247 Apr 24 j 22:07 behind sun end 4°≈57'12 greatest brilliancy -12242 Sep 02 j 23:47 17°**尽** 12'28 -1.4m 0°**∀** -12247 May 31 j 12:48 min. Earth dist. -12242 Sep 04 j 00:41 16°**尽** 47'27 0.66282 AU morning rise -12247 Jun 12 j 09:42 8°**)** 19'07 direct -12242 Oct 13 j 05:35 7°**∡**°24'48 $0^{\circ}\Upsilon$ -12247 Jul 12 j 17:10 asc. node -12242 Nov 21 j 17:42 15° ₹25'53 -12247 Aug 22 j 09:35 0°8 -12242 Dec 24 j 21:03 0°ಕ -12247 Oct 01 j 03:56 $0^{\circ}\Pi$ -12241 Feb 15 j 14:31 -12247 Nov 09 j 19:42 0ಂತಾ -12241 Apr 02 j 06:53 0°**)**€ -12247 Dec 20 j 11:45 $0^{\circ}\Omega$ -12241 May 14 j 07:20 $0^{\circ}\Upsilon$ -12246 Feb 02 j 02:29 0° m -12241 Jun 23 j 01:19 0°8 desc. node -12246 Feb 15 j 09:59 8° m 25'29 -12241 Jul 31 j 14:45 $0^{\circ}\Pi$ -12246 Mar 26 j 19:53 0∘**⊽** evening set -12241 Aug 08 j 21:57 6°**Ⅲ**30'04 retrograde -12246 May 14 j 05:25 12°**♀**50'59 -12241 Sep 07 j 23:39 0ಂತಾ min. Earth dist. -12246 Jun 16 j 04:34 5°**Ω**36'57 0.57033 AU desc. node -12241 Oct 07 j 15:26 22°550'53 greatest brilliancy -12246 Jun 21 j 07:03 3°**₽**38'01 opposition -12246 Jun 22 j 10:03 3°**£**11'46 -5°15'32 conjunction -12241 Oct 10 j 06:10 24°\$50'13 -0°02'00 -12246 Jul 01 i 01:09 30°R M minimum elong -12241 Oct 10 j 06:00 24°\$49'53 0°01'19 direct -12246 Jul 28 j 14:47 24° m 58'38 behind sun begin -12241 Oct 09 i 03:46 24°500'01 -12246 Aug 27 j 20:11 0∘**⊽** behind sun end -12241 Oct 11 i 08:15 25°539'43 -12246 Nov 02 i 09:30 0°M -12241 Oct 17 j 01:41 $0^{\circ}\Omega$ -12246 Dec 24 j 19:44 max. Earth dist. -12241 Nov 23 j 03:29 $27^{\circ}\Omega$ 28'33 2.44706 AU 0°×7 -12245 Feb 11 j 15:02 -12241 Nov 26 j 15:07 ೧೦೯ 0° m -12245 Feb 16 j 06:14 -12241 Dec 10 j 17:22 10° m 06'00 2°る56'09 morning rise asc node -12240 Jan 08 j 05:18 -12245 Mar 29 j 20:57 0°≈ 0∘⊽ 0°M -12245 Apr 18 j 06:21 13°≈04'27 -12240 Feb 22 j 04:07 evening set -12245 May 05 j 14:05 25°≈00'52 2.51251 AU -12240 Apr 09 j 20:46 max. Earth dist. 0°×7 -12240 May 31 j 21:16 -12245 May 12 j 17:02 0°**米** 0°궁 -12240 Aug 12 j 18:04 0°≈ -12240 Aug 31 j 01:49 -12245 Jun 09 j 10:07 19° **★**48'05 1°02'10 conjunction retrograde 1°≈55'58 -12245 Jun 09 j 08:06 19°**¥**44'26 -12240 Sep 17 j 05:19 30°R 궁 minimum elong -12245 Jun 23 j 08:36 0°**Υ** -12240 Oct 07 j 21:46 23°♂14'36 -0°02'38 opposition -12245 Aug 02 j 06:58 0°**8** -12240 Oct 07 j 22:07 23°₹14'15 -1.6m greatest brilliancy morning rise -12245 Aug 03 j 05:03 0°**8**42'10 asc. node -12240 Oct 08 j 21:46 22° 궁51'10 -12245 Sep 10 j 04:40 $\Pi^{\circ}0$ min. Earth dist. -12240 Oct 12 j 17:36 21°₹21'37 0.61746 AU -12245 Oct 18 j 21:39 0ಂಣ direct -12240 Nov 17 j 12:59 13°**궁**19'52 -12245 Nov 27 j 07:48 0°**Ω** -12239 Jan 15 j 02:59 desc. node -12244 Jan 03 j 04:28 26°**Ω**56'45 -12239 Mar 08 j 14:05 -12244 Jan 07 j 11:48 0° Mp -12239 Apr 21 j 13:31 -12244 Feb 20 j 19:25 0°**♀** -12239 Jun 01 j 03:24 -12244 Apr 11 j 18:40 0°M -12239 Jul 10 j 04:36 -12244 Jun 20 j 02:56 22°ML04'49 retrograde -12239 Aug 17 i 23:07 min. Earth dist. -12244 Jul 27 i 11:27 13°ML12'48 0.64689 AU desc. node -12239 Aug 24 i 14:40 5°906'29 opposition -12244 Jul 30 j 01:27 12°ML10'21 -4°55'38 -12239 Sep 26 i 10:14 $0^{\circ}\Omega$ greatest brilliancy -12244 Jul 29 i 15:42 12°M20'10 -1.4m -12239 Oct 10 j 01:39 10° Ω08'52 evening set direct -12244 Sep 06 i 21:56 2°ML53'15 -12239 Nov 06 j 07:42 0° m -12244 Nov 28 j 09:37 0° ₹ -12243 Jan 03 j 10:53 19° ₹47'49 -12239 Dec 05 j 17:50 20° m 46'56 -1°02'47 asc node conjunction -12243 Jan 20 j 17:26 0°**ਰ** -12239 Dec 05 j 15:38 20° m 43'06 1°02'39 minimum elong -12243 Mar 09 j 09:15 0°22 -12239 Dec 19 j 02:29 0∘∙თ -12243 Apr 22 j 13:59 0°**∀** max. Earth dist. -12238 Jan 05 j 01:25 11°**⊆**31'00 2.56368 AU -12243 Jun 03 j 03:18 $0^{\circ}\Upsilon$ morning rise -12238 Jan 28 j 13:34 27°**♀**10'08 -12243 Jun 07 j 03:54 evening set 2°Y59'26 -12238 Feb 01 j 20:55 0°M -12243 Jul 08 j 09:44 26° Υ 38'10 2.39766 AU max. Earth dist. 0°**∡**7 -12238 Mar 20 j 10:56 -12243 Jul 12 j 18:43 0°궁 0° 8 -12238 May 07 j 17:28 -12238 Jun 27 j 11:08 0°≈ 0°**)**€ conjunction -12243 Aug 04 j 23:48 18°**8**00'05 1°06'15 -12238 Aug 25 j 06:17 minimum elong -12243 Aug 05 j 02:13 18°**8**04'48 1°06'46 -12238 Aug 26 j 20:49 0°**)**(40'26 asc. node -12243 Aug 20 j 08:07 $0^{\circ}\Pi$ retrograde -12238 Oct 16 j 06:55 12° **★**58'15 -12243 Sep 27 j 16:59 0 \circ \odot opposition -12238 Nov 20 j 08:49 5°**₩**39'16 4°02'12 morning rise -12243 Oct 07 j 14:28 7°9540'33 greatest brilliancy -12238 Nov 21 j 08:50 5°**)** 17'46 -2.0m

min. Earth dist.

-12238 Nov 28 j 02:13

-12238 Dec 07 j 03:32 30°R≈

2°**升**54'08 0.51798 AU

-12243 Nov 05 j 18:32

-12243 Nov 19 j 21:29 10° **Ω**35'53

desc. node

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12238 Dec 29 i 01:46 26°≈44'02 conjunction -12232 Apr 08 j 14:50 19°♂30'49 -0°05'11 direct -12237 Jan 20 j 21:01 minimum elong -12232 Apr 08 j 15:05 19°る31'13 0°05'52 0°**₩** -12237 Mar 24 j 00:25 $0^{\circ}\Upsilon$ -12232 Apr 07 j 20:17 19°**궁**00'22 behind sun begin -12232 Apr 09 j 09:52 20°**궁**02'05 -12237 May 07 j 11:12 0°8 behind sun end -12232 Apr 16 j 23:21 25°**궁**01'25 -12237 Jun 17 j 09:22 $0^{\circ}\Pi$ asc. node -12237 Jul 12 j 19:01 19°**Ⅲ**01'12 desc. node -12232 Apr 24 j 11:22 0°≈ -12237 Jul 27 j 10:48 0ംខ morning rise -12232 May 26 j 07:49 21°≈28'57 -12237 Sep 05 j 22:53 0° Ω -12232 Jun 07 j 17:07 0°**∀** -12237 Oct 17 j 16:47 0° m -12232 Jul 20 j 07:01 $0^{\circ}\Upsilon$ evening set -12237 Nov 30 j 17:20 0°**£**24'39 -12232 Aug 30 j 12:08 0°8 -12237 Nov 30 j 02:47 0∘**⊽** -12232 Oct 09 j 21:25 $0^{\circ}\Pi$ -12236 Jan 14 j 04:55 -12232 Nov 19 j 07:21 0ಂತಾ -12232 Dec 31 j 03:57 0° Ω conjunction -12236 Jan 20 j 20:52 4°M21'11 -1°14'25 -12231 Feb 15 j 21:00 0° m minimum elong -12236 Jan 20 j 21:25 4°M22'05 1°14'49 desc. node -12231 Mar 04 j 06:32 8° m 54'17 max. Earth dist. -12236 Feb 02 j 23:02 12°**M**.51'29 2.63969 AU retrograde -12231 Apr 27 j 11:57 24° m 57'33 -12236 Feb 29 j 14:10 0°**∡**7 min. Earth dist. -12231 May 28 j 10:40 18° m 31'02 0.52599 AU morning rise -12236 Mar 09 j 21:36 5°**∡**¹57'18 opposition -12231 Jun 04 j 19:46 15° m 45'27 -4°39'40 -12236 Apr 16 j 16:37 greatest brilliancy -12231 Jun 03 j 14:11 16° Mp 13'12 -12236 Jun 03 j 02:11 direct -12231 Jul 09 j 16:05 8° m 08'40 asc. node -12236 Jul 13 j 14:59 25°≈26'20 -12231 Sep 18 j 07:47 0°Ω -12236 Jul 20 j 23:12 0°**∀** -12231 Nov 12 j 12:17 0°M -12236 Sep 08 j 18:05 -12230 Jan 01 i 19:54 0°×7 -12236 Nov 06 j 19:00 0°8 -12230 Feb 18 i 21:47 0°궁 retrograde -12236 Dec 19 i 21:03 9°**8**44'40 -12230 Mar 04 j 21:05 8°**る**57'49 asc. node opposition -12235 Jan 20 j 02:44 4°**8**21'12 7°07'27 -12230 Apr 01 j 02:44 26°る47'36 evening set -12235 Jan 21 j 10:19 3°858'32 -2.7m -12230 Apr 05 j 22:22 greatest brilliancy 0°≈≈ min. Earth dist. -12230 Apr 21 j 09:01 10°≈23'34 2.55510 AU max. Earth dist. -12235 Feb 05 j 21:24 30° R**Y** -12230 May 19 j 19:14 0°)(-12235 Feb 22 j 00:49 28°**Y**17'28 direct -12235 Mar 10 j 02:55 0°**႘** -12230 May 21 j 13:28 1°**)** 14'07 0°46'05 conjunction 1°**)** 10′50 0°45′41 -12235 May 14 j 16:06 0°**П** -12230 May 21 j 11:36 minimum elong -12235 May 30 j 00:48 9°**Д**38'31 -12230 Jun 30 j 14:48 $0^{\circ}\Upsilon$ desc. node -12230 Jul 12 j 09:12 8°**Y**'40'41 -12235 Jun 29 j 19:03 0°5 morning rise -12235 Aug 12 j 15:56 0°**Ω** -12230 Aug 09 j 19:00 0° 8 -12235 Sep 25 j 14:38 0° M -12230 Sep 17 j 23:08 $0^{\circ}\Pi$ -12235 Nov 09 j 11:41 0°**♀** -12230 Oct 26 j 22:38 0°9 -12235 Dec 25 j 10:59 0°M -12230 Dec 05 j 16:25 $0^{\circ}\Omega$ -12234 Jan 11 j 18:01 11°ML08'22 -12229 Jan 16 j 09:16 0° m evening set -12234 Feb 10 j 04:20 0° **尽** desc. node -12229 Jan 20 j 01:17 2° m/32'06 max. Earth dist. -12234 Feb 27 j 03:47 10° ₹ 51'43 2.66368 AU -12229 Mar 03 j 03:08 0∘**⊽** -12229 Apr 30 j 13:46 -12234 Mar 01 j 05:40 12° ₹ 11'31 -0°50'19 -12229 Jun 06 j 23:29 7°M 50'58 conjunction retrograde -12234 Mar 01 j 07:13 12°**х** 14'00 0°51'00 -12229 Jul 11 j 15:31 30°R ₽ minimum elong -12234 Mar 28 j 23:47 0°**ਰ** min. Earth dist. -12229 Jul 12 j 18:10 29°**2**33'35 0.62364 AU -12229 Jul 16 j 19:47 27° **2**56'01 -5°17'40 morning rise -12234 Apr 17 j 07:41 12°る28'45 opposition -12229 Jul 16 j 02:48 28° **2**13'00 -1.5m -12234 May 14 i 05:14 0°≈ greatest brilliancy asc. node -12234 May 31 i 06:27 11°≈13'06 direct -12229 Aug 23 j 18:25 19° **2**00'03 -12234 Jun 28 j 11:47 0°**)**€ -12229 Oct 10 i 06:18 0° M -12234 Aug 11 i 19:51 0°Υ -12229 Dec 10 j 01:26 0° ₹ -12234 Sep 24 j 15:20 0°8 -12228 Jan 21 j 00:33 24° ₹32'21 asc node -12234 Nov 07 j 21:04 0°**Ⅱ** -12228 Jan 29 j 22:34 0°る -12228 Mar 16 j 21:16 -12234 Dec 25 i 11:40 0°5 retrograde -12233 Mar 05 j 13:02 24°557'39 -12228 Apr 29 j 21:20 0°**米** min. Earth dist. -12233 Apr 02 j 00:54 20°516'23 0.40924 AU evening set -12228 May 16 j 23:45 12° ¥ 09'16 -12228 Jun 03 j 21:23 25° **∺** 10'00 2.43942 AU opposition -12233 Apr 08 j 05:40 18°524'50 0°40'06 max. Earth dist. greatest brilliancy -12233 Apr 08 j 02:35 18°527'08 -12228 Jun 10 j 10:39 0°**Υ** -2.8m -12233 Apr 17 j 05:26 15°951'57 desc. node -12233 May 09 j 04:54 12°548'50 -12228 Jul 11 j 22:04 23°**Y**41'06 1°13'28 direct conjunction -12233 Jul 07 j 08:15 -12228 Jul 11 j 22:07 23°**Y**41'12 1°13'45 0 $^{\circ}\Omega$ minimum elong 0° 8 -12233 Aug 30 j 15:43 0° M -12228 Jul 20 j 03:58 -12233 Oct 18 j 17:31 0∘**⊽** -12228 Aug 27 j 19:34 Π $^{\circ}$ 0 -12233 Dec 05 j 19:20 0°M morning rise -12228 Sep 10 j 11:44 10°**Ⅲ**41'10 -12232 Jan 22 j 13:01 0°**∡**¹ -12228 Oct 05 j 06:21 0 \circ \odot evening set -12232 Feb 20 j 09:02 18° ₹ 18'03 -12228 Nov 13 j 09:44 0 $^{\circ}\Omega$ -12232 Mar 09 j 14:56 0°궁 desc. node -12228 Dec 06 j 17:24 17° Ω 22'04

max. Earth dist.

-12232 Mar 23 j 00:59

8°る40'59 2.63456 AU

-12228 Dec 24 j 02:43 0° Mp

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12227 Feb 05 i 07:35 0°**♀** -12222 May 17 j 16:25 0°8 -12227 Mar 24 j 10:18 -12222 Jun 26 j 13:25 0°Π -12227 May 19 j 19:52 -12222 Jul 29 j 09:58 25°**Ⅲ**03'03 0°×7 desc. node -12227 Jul 11 j 17:07 13°**х** 39'08 -12222 Aug 04 j 22:13 retrograde 0ಂತಾ -12222 Sep 13 j 21:21 -12227 Aug 20 j 10:47 opposition 3°**х** 56′11 -3°55′00 0° Ω greatest brilliancy -12227 Aug 20 j 10:32 3°**х** 56′27 -1.4m -12222 Oct 25 j 04:50 0° m min. Earth dist. -12227 Aug 20 j 04:03 4°**х** 02′59 0.66391 AU evening set -12222 Nov 11 j 23:46 12° M 32'33 -12222 Dec 07 j 06:58 -12227 Aug 30 j 13:46 30°RML 0∘ಹ -12227 Sep 29 j 09:01 24°M 15'17 direct -12227 Nov 01 j 07:22 0° **₹** conjunction -12221 Jan 03 j 22:39 18°**2**36'42 -1°15'06 asc. node -12227 Dec 08 j 07:16 15° ₹ 15'04 minimum elong -12221 Jan 03 j 22:12 18°**♀**35'57 1°15'18 -12226 Jan 05 j 09:14 -12221 Jan 21 j 04:24 0°ರ 0°M -12226 Feb 24 j 06:29 max. Earth dist. 0°≈ -12221 Jan 23 j 11:45 1°M30'44 2.61590 AU -12226 Apr 10 j 04:29 0°**)**€ morning rise -12221 Feb 23 j 10:56 21°MJ36'01 -12226 May 21 j 22:57 $0^{\circ}\Upsilon$ -12221 Mar 08 j 13:34 0°**∡**7 -12226 Jun 30 j 15:03 0° 8 -12221 Apr 24 j 23:18 evening set -12226 Jul 14 j 07:44 10°**8**36'11 -12221 Jun 12 j 06:02 0°≈ -12226 Aug 08 j 03:33 asc. node -12221 Jul 31 j 10:07 29°≈28'52 -12221 Aug 01 j 07:37 0°) conjunction -12226 Sep 14 j 13:36 29°**Ⅲ**17'46 -12221 Sep 27 j 05:52 minimum elong -12226 Sep 14 j 16:11 29°**Д**22'49 retrograde -12221 Nov 22 j 06:52 14° Υ 55'29 -12226 Sep 15 j 11:17 0ಂತಾ opposition -12221 Dec 24 i 21:46 8°**Y**48'21 6°30'31 max. Earth dist. -12226 Oct 21 j 11:30 27°543'00 2.40166 AU greatest brilliancy -12221 Dec 26 j 12:34 8°Y17'36 -2.4m desc. node -12226 Oct 24 j 11:09 29°558'43 min. Earth dist. -12220 Jan 01 i 12:10 6°**Y**24′20 0.44468 AU -12226 Oct 24 j 11:50 0° Ω direct -12220 Jan 29 j 14:49 1°Y27'10 -12226 Nov 17 j 11:28 $17^{\circ}\Omega 55'46$ -12220 Apr 14 j 08:45 0°8 morning rise -12226 Dec 03 j 23:54 -12220 May 29 j 20:41 $0^{\circ}\Pi$ 0° m -12225 Jan 15 j 14:28 -12220 Jun 15 j 16:55 11°**Д**50'27 0∘ଫ desc node -12225 Mar 01 j 19:19 -12220 Jul 11 j 03:31 o°m. 0ಂತಾ -12220 Aug 22 j 02:32 -12225 Apr 19 j 10:27 $0^{\circ}\Omega$ 0° **₹** -12225 Jun 14 j 06:05 0°る -12220 Oct 03 j 21:14 0° m -12225 Aug 16 j 20:22 18°る05'05 -12220 Nov 17 j 00:26 retrograde 0∘ Շ -12225 Sep 24 j 10:07 9°**궁**01'19 -1°20'27 -12220 Dec 26 j 17:17 26°**♀**12'24 opposition evening set -12225 Sep 24 j 14:38 8°₹56'51 -1.5m -12219 Jan 01 j 13:01 greatest brilliancy 0°M. -12225 Sep 27 j 20:34 7°る39'39 0.64232 AU min. Earth dist. -12225 Oct 23 j 05:12 30°R ✓ -12219 Feb 13 j 22:35 27°M 59'46 -1°02'52 conjunction -12225 Oct 26 j 13:16 29° ₹32'28 -12219 Feb 14 j 00:03 28° ML02'07 1°03'28 asc. node minimum elong direct -12225 Nov 04 j 03:33 29° ₹03'11 -12219 Feb 17 j 01:36 0° ₹ -12225 Nov 16 j 15:58 0°궁 max. Earth dist. -12219 Feb 17 j 15:45 0°**尽**22'40 2.66064 AU -12224 Jan 29 j 22:07 0°**≈** morning rise -12219 Apr 02 j 11:32 28° ₹ 26'17 -12224 Mar 18 j 06:41 0°**)**€ -12219 Apr 04 j 22:01 -12224 Apr 30 j 04:24 0°Υ -12219 May 21 j 11:29 -12224 Jun 09 j 07:43 0°8 -12219 Jun 17 j 01:46 17°≈18'06 asc. node -12224 Jul 18 j 02:37 0°**Ⅱ** -12219 Jul 06 j 11:30 0°**米** -12224 Aug 25 j 15:53 0°95 -12219 Aug 21 j 03:18 -12224 Sep 10 j 08:06 12°504'46 desc. node -12219 Oct 06 i 07:56 0°8 -12224 Sep 16 j 14:03 16°551'41 -12219 Nov 24 j 19:00 0°**Ⅱ** evening set -12224 Oct 03 i 22:03 $0^{\circ}\Omega$ retrograde -12218 Feb 06 i 00:12 25° **∏**34'43 -12224 Nov 13 i 14:54 min. Earth dist. -12218 Mar 07 j 09:32 20°**Д**41'39 0.38642 AU opposition -12218 Mar 09 i 10:58 20° \$\mathbb{\Pi}\$07'51 4°10'21 -12224 Nov 14 i 23:06 0° m 58'00 -0°44'58 greatest brilliancy -12218 Mar 09 j 08:11 20°**Д**09'46 -2.9m conjunction minimum elong -12224 Nov 14 i 20:30 0° m 53'19 0° 44'34 direct -12218 Apr 08 j 21:55 15°**Д**00'05 max. Earth dist. -12224 Dec 22 j 04:06 27° m 11'11 2.52135 AU desc. node -12218 May 03 j 22:58 18°**Д**49'14 -12224 Dec 26 j 06:14 0°**♀** -12218 Jun 01 j 09:49 000 -12218 Jul 24 j 23:26 morning rise -12223 Jan 10 j 13:52 10°**£**25'53 $0^{\circ}\Omega$ -12223 Feb 09 j 00:11 0°M -12218 Sep 10 j 14:36 0° m -12223 Mar 27 j 20:31 0°×7 -12218 Oct 27 j 08:57 0∘ಹ -12223 May 16 j 01:19 0°る -12218 Dec 13 j 08:55 o°m. -12223 Jul 08 j 20:57 -12217 Jan 29 j 14:25 0°**∡**7 -12223 Sep 12 j 14:38 24°≈47'31 -12217 Feb 05 j 02:15 4°×107'53 asc. node evening set -12217 Mar 14 j 04:43 27° ₹ 51'49 2.65219 AU retrograde -12223 Sep 26 j 16:23 25°≈57'52 max. Earth dist. opposition -12223 Nov 02 j 00:09 18°≈01'19 2°20'19 -12217 Mar 17 j 12:18 0°궁 greatest brilliancy -12223 Nov 02 j 12:29 17°≈49'46 -1.8m min. Earth dist. -12223 Nov 08 j 19:17 15°≈28'54 0.56230 AU conjunction -12217 Mar 25 j 04:13 4°る56'58 -0°24'19 direct -12223 Dec 11 j 20:06 8°≈31'08 minimum elong -12217 Mar 25 j 05:12 4°る58'32 0°25'03 -12222 Feb 16 j 01:44 0°**)**€ -12217 May 02 j 10:59 0°≈

-12217 May 04 j 17:09

asc. node

1°≈29'48

-12222 Apr 05 j 13:39

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. opposition -12217 May 11 j 07:36 5°≈53'12 -12212 Aug 06 j 23:19 20°M28'21 -4°36'43 morning rise -12212 Aug 06 j 17:17 20°M34'25 -1.4m -12217 Jun 16 j 00:18 0°¥ greatest brilliancy -12212 Sep 15 j 06:34 11°ML01'42 -12217 Jul 29 j 02:43 $0^{\circ}\Upsilon$ direct -12217 Sep 09 j 00:58 0°**∡**¹ 0°8 -12212 Nov 20 j 04:25 -12217 Oct 20 j 08:15 $0^{\circ}\Pi$ asc. node -12212 Dec 24 j 20:58 17° ₹ 53'57 -12217 Dec 01 j 01:00 0ಂತಾ -12211 Jan 15 j 00:29 ೧ºಕ -12216 Jan 14 j 10:27 0° Ω -12211 Mar 04 j 08:23 0°≈ -12216 Mar 13 j 12:02 0° m -12211 Apr 17 j 19:01 0°**∀** $0^{\circ}\Upsilon$ desc. node -12216 Mar 21 j 00:05 2° m 06'11 -12211 May 29 j 10:10 retrograde -12216 Apr 08 j 19:18 4° My 27'42 evening set -12211 Jun 20 j 02:01 16°**Υ**14'34 -12216 May 04 j 06:19 30°RΩ -12211 Jul 08 j 01:46 0° 8 -12211 Aug 12 j 00:13 27°**8**10'48 2.38414 AU min. Earth dist. -12216 May 07 j 18:40 $28^{\circ}\Omega$ 50'13 0.47781 AU max. Earth dist. opposition -12216 May 15 j 18:09 $26^{\circ}\Omega$ 02'12 -3°21'47 -12211 Aug 15 j 14:36 Π $^{\circ}0$ greatest brilliancy -12216 May 14 j 17:30 $26^{\circ}\Omega$ 23'58 conjunction direct -12216 Jun 18 j 03:44 19°**Ω**09'13 -12211 Aug 19 j 11:15 3°**Д**01'36 0°56'09 -12216 Aug 02 j 22:44 minimum elong -12211 Aug 19 j 14:32 3°**Ⅱ**08'01 0°56'45 -12216 Oct 01 j 08:35 0∘<u></u> σ -12211 Sep 22 j 22:30 0ಂತಾ -12216 Nov 21 j 10:49 0°M morning rise -12211 Oct 22 j 21:58 23°507'47 -12215 Jan 09 j 10:43 -12211 Oct 31 j 22:58 $0^{\circ}\Omega$ desc. node -12215 Feb 26 j 00:30 0°る -12211 Nov 10 j 05:59 6°**Ω**59'59 evening set -12215 Mar 15 j 20:54 11°る31'26 -12211 Dec 11 j 11:21 0° m asc. node -12215 Mar 21 j 13:07 15°る13'26 -12210 Jan 23 i 04:27 0°Ω max. Earth dist. -12215 Apr 09 j 03:39 27°る29'07 2.59179 AU -12210 Mar 09 j 19:51 0°M -12215 Apr 12 j 22:16 0°≈ -12210 Apr 29 i 00:17 0°×7 -12210 Jul 03 j 24:00 0°궁 -12215 May 04 j 02:50 14°≈17'12 0°26'49 -12210 Aug 02 j 11:04 4°る45'24 retrograde conjunction -12215 May 04 j 01:41 14°≈15'14 0°26'16 -12210 Aug 29 j 10:04 30°R 🗷 minimum elong -12215 May 26 j 21:40 0°**米** -12210 Sep 10 j 14:56 25° ₹ 23'20 -2°28'00 opposition -12215 Jun 22 j 18:54 19°\mathbf{H}01'42 greatest brilliancy -12210 Sep 10 j 19:43 25° ₹ 18'33 -1.4m morning rise -12215 Jul 07 j 23:07 0°**℃** min. Earth dist. -12210 Sep 12 j 14:41 24° ₹35'35 0.65824 AU -12215 Aug 17 j 11:07 -12210 Oct 21 j 04:54 15° ₹28'16 0° 8 direct -12215 Sep 25 j 23:54 -12210 Nov 12 j 03:22 18° ₹ 12'45 $0^{\circ}\Pi$ asc. node -12210 Dec 15 j 14:25 0°る 0°ಲಾ -12215 Nov 04 j 08:29 -12215 Dec 14 j 13:57 -12209 Feb 09 j 13:47 0°≈ $0^{\circ}\Omega$ -12214 Jan 26 j 05:16 -12209 Mar 28 j 00:46 0°**米** 0° m -12214 Feb 05 j 21:07 7° m 03'00 -12209 May 09 j 08:05 0°**Υ** desc. node -12214 Mar 15 j 23:03 0°**♀** -12209 Jun 18 j 05:10 0°8 retrograde -12214 May 23 j 04:02 22° **△**36'46 -12209 Jul 26 j 20:10 0°**П** min. Earth dist. -12214 Jun 26 j 04:27 14°**♀**59'00 0.59155 AU -12209 Aug 23 j 10:55 21°**Ⅲ**35'54 evening set opposition -12214 Jul 01 j 16:38 12° **2**48'55 -5°22'49 -12209 Sep 03 j 05:47 0°5 greatest brilliancy -12214 Jun 30 j 16:40 13°**♀**12'31 -1.7m -12209 Sep 28 j 02:17 19°5010'16 desc. node -12214 Aug 07 j 13:38 4°**♀**18'59 -12209 Oct 12 j 08:12 direct -12214 Oct 25 j 19:58 -12214 Dec 19 j 06:06 0° ₹ -12209 Oct 24 j 03:01 8° Ω50'57 -0°19'18 conjunction -12213 Feb 06 j 14:38 29° ₹ 57'17 -12209 Oct 24 j 01:31 8° \$\Omega 48'10 0° 18' 42 asc. node minimum elong -12213 Feb 06 i 16:22 0°る -12209 Nov 21 i 21:39 0° m -12213 Mar 25 i 03:51 max. Earth dist. -12209 Dec 05 j 22:34 10° m 04'04 2.47393 AU -12213 Apr 28 j 15:57 23°≈26'05 morning rise -12209 Dec 22 j 21:54 22° m 00'56 evening set -12213 May 08 i 01:36 0°**** -12208 Jan 03 i 10:48 max. Earth dist. -12213 May 15 j 02:23 4°**¥**57'48 2.48679 AU -12208 Feb 17 j 06:21 0°M -12213 Jun 18 j 16:36 $0^{\circ}\Upsilon$ -12208 Apr 04 j 13:00 0°×7 -12208 May 25 j 04:52 0°궁 -12213 Jun 21 j 00:24 1°Y43'06 1°08'48 -12208 Jul 24 j 17:16 conjunction -12213 Jun 20 j 22:47 minimum elong 1°Y40'06 1°08'48 retrograde -12208 Sep 09 j 07:39 10°≈39'11 -12213 Jul 28 j 13:21 0° 8 -12208 Sep 29 j 06:13 8°≈03'29 asc. node morning rise -12213 Aug 16 j 18:32 14°**8**47'26 opposition -12208 Oct 16 j 16:17 0°46'50 2°≈12'11 -12213 Sep 05 j 08:54 $0^{\circ}\Pi$ greatest brilliancy -12208 Oct 16 j 19:40 2°≈08'55 -1.7m -12213 Oct 13 j 23:16 0ಂತಾ min. Earth dist. -12208 Oct 22 j 05:53 0°**≈**03'32 0.60007 AU -12213 Nov 22 j 06:11 0 $^{\circ}\Omega$ -12208 Oct 22 j 09:35 30°Rる -12208 Nov 26 j 03:14 22°₹23'12 desc. node -12213 Dec 24 j 14:31 23° Ω 50'37 direct -12212 Jan 02 j 04:32 0° M -12207 Jan 02 j 06:15 0°≈ -12212 Feb 14 j 22:32 0∘**⊽** -12207 Mar 01 j 16:27 0°**)**€ -12212 Apr 03 j 21:34 0°M -12207 Apr 15 j 18:34 $0^{\circ}\Upsilon$ -12212 Jun 20 j 19:59 0°**∡** -12207 May 26 j 19:00 0°8

retrograde

min. Earth dist.

-12212 Jun 28 j 00:55

-12212 Jul 05 j 01:26 30°RML

0°**х** 20′02

-12212 Aug 05 j 04:48 21°ML11'13 0.65558 AU

-12207 Jul 05 j 02:06

-12207 Aug 13 j 00:33

-12207 Aug 15 j 03:21

desc. node

 $0^{\circ}\Pi$

0ಂತಾ

1°937'21

```
Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22,
Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.
                    -12207 Sep 21 i 14:43 0^{\circ}\Omega
                                                                                              -12202 Oct 31 j 03:26
                                                                                                                      0^{\circ}\Pi
                    -12207 Oct 22 j 12:01 22°\Omega43'24
                                                                                              -12202 Dec 14 j 12:04
                                                                                                                      0ಂತಾ
evening set
                    -12207 Nov 01 j 14:25
                                                                                              -12201 Feb 05 j 08:30
                                            0° m
                                                                                                                      0^{\circ}\Omega
                    -12207 Dec 14 j 10:20
                                                                                              -12201 Mar 19 j 08:02 10^{\circ}\Omega31'10
                                            0∘ଫ
                                                                          retrograde
                                                                          desc. node
                                                                                              -12201 Apr 07 j 17:54
                                                                                                                      7°Ω55'39
                    -12207 Dec 16 j 18:40
conjunction
                                            1°236'18 -1°09'20
                                                                          min. Earth dist.
                                                                                              -12201 Apr 15 j 21:07
                                                                                                                      5°Ω36'19 0.43093 AU
                    -12207 Dec 16 j 17:02
 minimum elong
                                            1°233'31 1°09'20
                                                                          opposition
                                                                                              -12201 Apr 23 j 06:38
                                                                                                                      3°Ω14'59 -1°05'23
                    -12206 Jan 12 j 06:39 19°228'32 2.58407 AU
                                                                          greatest brilliancy
max. Earth dist.
                                                                                              -12201 Apr 22 j 22:27
                                                                                                                      3°Ω21'32 -2.6m
                                                                                              -12201 May 04 j 06:15 30°Rூ
                    -12206 Jan 28 j 04:32
                                            0°M
morning rise
                    -12206 Feb 07 j 07:08
                                            6°MJ36'55
                                                                          direct
                                                                                              -12201 May 25 j 02:40 27°512'21
                    -12206 Mar 15 j 15:25
                                            0°×7
                                                                                              -12201 Jun 15 j 14:58
                                                                                                                      0^{\circ}\Omega
                    -12206 May 02 j 12:20
                                            0°궁
                                                                                              -12201 Aug 22 j 12:46
                                                                                                                      0° M
                    -12206 Jun 21 j 02:55
                                            0°≈
                                                                                              -12201 Oct 12 j 18:03
                                                                                                                      0∘⊽
                    -12206 Aug 14 j 05:31
                                            0°)€
                                                                                              -12201 Nov 30 j 15:50
                                                                                                                      0°M
asc. node
                    -12206 Aug 17 j 03:48
                                            1°\ 28'09
                                                                                              -12200 Jan 17 j 18:38
                                                                                                                      0°∡7
retrograde
                    -12206 Oct 28 j 15:34 23°米59'52
                                                                          evening set
                                                                                              -12200 Feb 29 j 04:42 26°尽 54'21
opposition
                    -12206 Dec 01 j 22:23 17°米05'05
                                                        5°00'22
                                                                                              -12200 Mar 05 j 00:20 0°궁
greatest brilliancy
                    -12206 Dec 03 j 05:18 16° ★ 38'25
                                                        -2.2m
                                                                          max. Earth dist.
                                                                                              -12200 Mar 29 j 00:57 15°⋜34'51
                                                                                                                                  2.62139 AU
min. Earth dist.
                    -12206 Dec 09 j 23:03 14° ¥ 19'40
                                                        0.49177 AU
                                                                          asc. node
                                                                                              -12200 Apr 07 j 06:24 21°る38'18
direct
                    -12205 Jan 08 j 18:50
                                           8°) 37'37
                    -12205 Mar 13 j 22:38
                                            0^{\circ}\Upsilon
                                                                          conjunction
                                                                                              -12200 Apr 17 j 16:32 28°る32'07
                    -12205 Apr 30 i 06:38
                                            0°8
                                                                           minimum elong
                                                                                              -12200 Apr 17 j 16:17 28°る31'43
                                                                                                                                  0°05'50
                    -12205 Jun 11 i 05:14 0°Ⅱ
                                                                           behind sun begin
                                                                                              -12200 Apr 16 j 21:18 28°る00'10
desc. node
                    -12205 Jul 03 j 07:44 16°Ⅱ17'42
                                                                           behind sun end
                                                                                              -12200 Apr 18 j 11:17 29°る03'16
                    -12205 Jul 21 j 20:14
                                            0\circ\odot
                                                                                              -12200 Apr 19 j 21:22
                                                                                                                      0°≈
                    -12205 Aug 31 j 17:40
                                                                                              -12200 Jun 03 j 00:48
                                                                                                                      0°₩
                                            \Omega^{\circ}\Omega
                    -12205 Oct 12 j 18:20 0° Mg
                                                                                              -12200 Jun 04 j 22:31
                                                                                                                      1° # 19'20
                                                                          morning rise
                    -12205 Nov 25 j 08:49 0°♀
                                                                                              -12200 Jul 15 j 10:01
                                                                                                                      0^{\circ}\Upsilon
                    -12205 Dec 10 j 20:03 10° $\textit{\Omega}$22'44
                                                                                              -12200 Aug 25 j 08:12
                                                                                                                      0°8
evening set
                    -12204 Jan 09 j 13:29 0°M
                                                                                              -12200 Oct 04 j 08:54
                                                                                                                      \Pi^{\circ}0
                                                                                              -12200 Nov 13 j 07:22
                                                                                                                      0ಂತಾ
                                                                                              -12200 Dec 24 j 08:55
                    -12204 Jan 30 j 04:45 13°M25'01 -1°11'31
conjunction
                                                                                                                      0^{\circ}\Omega
                    -12204 Jan 30 j 05:45 13°M26'38 1°11'59
                                                                                              -12199 Feb 06 j 21:19
                                                                                                                      0° m
 minimum elong
                    -12204 Feb 08 j 19:52 19°M 38'06 2.64930 AU
                                                                                              -12199 Feb 22 j 15:52
max. Earth dist.
                                                                          desc. node
                                                                                                                      9° m 31'42
                    -12204 Feb 24 j 22:57 0° ₹
                                                                                              -12199 Apr 06 j 08:32
                                                                                                                      0∘⊽
                    -12204 Mar 18 j 14:23 14°尽 28'58
                                                                                              -12199 May 07 j 06:12
morning rise
                                                                          retrograde
                                                                                                                      5°♀50'31
                    -12204 Apr 11 j 22:19 0°궁
                                                                                              -12199 Jun 05 j 12:32 30°R M
                    -12204 May 28 j 23:24 0°≈
                                                                          min. Earth dist.
                                                                                              -12199 Jun 08 j 08:15 28° m 57'24 0.55136 AU
asc. node
                    -12204 Jul 03 j 20:47 22°≈53'49
                                                                          greatest brilliancy
                                                                                              -12199 Jun 13 j 22:29 26° Mp 48'58 -1.9m
                    -12204 Jul 15 j 00:48 0°ℋ
                                                                          opposition
                                                                                              -12199 Jun 15 j 03:23 26° Mp 21'16 -5°04'38
                    -12204 Aug 31 j 20:29 0°Υ
                                                                          direct
                                                                                              -12199 Jul 20 j 18:15 18° Mp 23'33
                    -12204 Oct 22 j 05:10 0°8
                                                                                              -12199 Sep 07 j 04:00
                    -12203 Jan 06 j 05:44 25°846'40
                                                                                              -12199 Nov 06 j 04:07
retrograde
                    -12203 Feb 06 j 00:44 20°836'46 6°39'54
                                                                                              -12199 Dec 27 j 14:48
opposition
                    -12203 Feb 06 j 20:41 20°823'11 -2.8m
                                                                                              -12198 Feb 14 j 02:49
greatest brilliancy
                    -12203 Feb 09 i 00:17 19°848'11
min. Earth dist.
                                                        0.39106 AU
                                                                          asc. node
                                                                                              -12198 Feb 23 i 06:07
                                                                                                                      5°る49'01
                    -12203 Mar 09 j 12:40 15°807'44
direct
                                                                                              -12198 Apr 01 i 07:27
                    -12203 Apr 30 i 18:00 0°Ⅱ
                                                                          evening set
                                                                                              -12198 Apr 10 j 18:29
                                                                                                                      6°≈20'07
desc. node
                    -12203 May 20 j 13:42 10° Д35'18
                                                                          max. Earth dist.
                                                                                              -12198 Apr 29 i 03:40 18°≈50'47 2.53238 AU
                    -12203 Jun 21 j 11:18 0°ഇ
                                                                                              -12198 May 15 j 05:04
                                                                                                                      0°¥
                    -12203 Aug 06 j 03:54
                                            \Omega^{\circ}\Omega
                    -12203 Sep 20 j 00:46
                                                                                              -12198 Jun 01 j 01:54 11° X 56'47 0°55'48
                                            0° m
                                                                          conjunction
                    -12203 Nov 04 j 10:09
                                                                                              -12198 May 31 j 23:51 11° H 53'08 0°55'33
                                            0∘⊽
                                                                           minimum elong
                    -12203 Dec 20 j 16:31
                                            0°M
                                                                                              -12198 Jun 25 j 23:24 0°Υ
                    -12202 Jan 20 j 17:23 19°M 53'15
                                                                          morning rise
                                                                                              -12198 Jul 24 j 10:29 21°Υ12'25
evening set
                    -12202 Feb 05 j 13:21 0° 尽
                                                                                              -12198 Aug 05 j 00:54
                                                                                                                     0°8
max. Earth dist.
                    -12202 Mar 04 j 17:05 17° ₹21'53 2.66175 AU
                                                                                              -12198 Sep 13 j 01:35
                                                                                                                      \Pi^{\circ}0
                                                                                              -12198 Oct 21 j 20:52
                                                                                                                      0ಂತಾ
                    -12202 Mar 09 j 23:25 20° ₹ 44'22 -0°41'32
conjunction
                                                                                              -12198 Nov 30 j 09:07
                                                                                                                      0^{\circ}\Omega
                    -12202 Mar 10 j 00:51 20° ₹ 46'40 0°42'14
                                                                                              -12197 Jan 10\,\mathrm{j}\,10:33\,\,29^\circ\Omega49'30
 minimum elong
                                                                          desc. node
                                           0°る
                    -12202 Mar 24 j 09:08
                                                                                              -12197 Jan 10 j 16:31
                                                                                                                      0° m
morning rise
                    -12202 Apr 25 j 23:29 21°중08'20
                                                                                              -12197 Feb 24 j 09:44
                                                                                                                      0∘⊽
                    -12202 May 09 j 11:50
                                                                                              -12197 Apr 18 j 06:49
                                                                                                                      0°M
asc. node
                    -12202 May 21 j 12:11
                                            7°≈56'06
                                                                          retrograde
                                                                                              -12197 Jun 15 j 04:17 16°M 33'06
                    -12202 Jun 23 j 11:27
                                            0°)
                                                                          min. Earth dist.
                                                                                              -12197 Jul 21 j 20:44
                                                                                                                      7°M56'12 0.63776 AU
                    -12202 Aug 06 j 07:21
                                            0^{\circ}\Upsilon
                                                                                              -12197 Jul 25 j 03:08
                                                                          opposition
                                                                                                                      6°ML37'31 -5°06'42
```

-12197 Jul 24 j 14:11

6°M50'30 -1.5m

greatest brilliancy

-12202 Sep 18 j 07:07

0°႘

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:22, page 21

-	omena of Mars from		•	. ,,		· •	age 21
Attention, astronom	nical year style is used: The	-	in astronomical co	unting style is the year			le.
	-12197 Aug 13 j 04:10				-12192 Nov 08 j 21:58	O° my	
direct	-12197 Sep 01 j 15:02						
	-12197 Sep 22 j 15:05			conjunction	-12192 Nov 27 j 00:40		
	-12197 Dec 03 j 09:49			minimum elong	-12192 Nov 26 j 22:08	-	0°55'52
asc. node	-12196 Jan 11 j 10:12				-12192 Dec 21 j 13:45	0∘ ⊽	
	-12196 Jan 24 j 15:05	0°る		max. Earth dist.	-12192 Dec 30 j 14:31		2.54549 AU
	-12196 Mar 12 j 00:31	0° ≈		morning rise	-12191 Jan 21 j 01:17		
	-12196 Apr 25 j 04:32	0° ∀			-12191 Feb 04 j 06:40	0°M₊	
evening set	-12196 May 28 j 17:57				-12191 Mar 22 j 21:53	0° ∡ ¹	
	-12196 Jun 05 j 19:00	0 ° Υ			-12191 May 10 j 11:50	0°る	
max. Earth dist.	-12196 Jun 20 j 11:17		2.41489 AU		-12191 Jul 01 j 06:06	0° ≈	
	-12196 Jul 15 j 11:59	9° 8		asc. node	-12191 Sep 02 j 21:26	29° ≈ 30'51	
					-12191 Sep 04 j 09:21	0° ∀	
conjunction	-12196 Jul 25 j 06:03	7° 8 31'19	1°11'00	retrograde	-12191 Oct 07 j 12:11	5°) ₹51′06	
minimum elong	-12196 Jul 25 j 07:27	7° 8 34'03	1°11'27		-12191 Nov 07 j 06:38	30°R≈	
	-12196 Aug 23 j 02:42	$\Pi^{\circ}0$		opposition	-12191 Nov 12 j 04:43	28° ≈ 14′22	3°17'44
morning rise	-12196 Sep 25 j 16:48	26° Ⅱ 15'38		greatest brilliancy	-12191 Nov 12 j 23:28	27° ≈ 57'13	-1.9m
	-12196 Sep 30 j 12:04	0 \circ \odot		min. Earth dist.	-12191 Nov 19 j 13:51	25° ≈ 32'55	0.53858 AU
	-12196 Nov 08 j 13:29	$0^{\circ}\Omega$		direct	-12191 Dec 21 j 12:05	19° ≈ 01'17	
desc. node	-12196 Nov 27 j 04:09	13° Ω 56′05			-12190 Feb 03 j 20:55	0° ∀	
	-12196 Dec 19 j 03:26	0° m			-12190 Mar 29 j 06:59	0° Y	
	-12195 Jan 31 j 01:34	0∘ <u>⊽</u>			-12190 May 11 j 13:34	0°8	
	-12195 Mar 18 j 10:25	0°M			-12190 Jun 20 j 23:33	0°Щ	
	-12195 May 10 j 11:55	0° ∡ 7		desc. node	-12190 Jul 19 j 23:28		
retrograde	-12195 Jul 19 j 14:10			acco. node	-12190 Jul 30 j 16:30	0.00	
opposition	-12195 Aug 28 j 04:24		-3°25'49		-12190 Sep 08 j 21:25	$0^{\circ}\Omega$	
greatest brilliancy	-12195 Aug 28 j 06:32				-12190 Oct 20 j 09:18	0° m)	
min. Earth dist.	-12195 Aug 28 j 16:56			evening set	-12190 Nov 22 j 20:27	-•	
direct	-12195 Aug 28 j 10:36 -12195 Oct 07 j 10:05		0.00434 AC	evening set	-12190 Dec 02 j 14:14		
asc. node	-12195 Nov 28 j 16:54				-12190 DCC 02 j 14.14	0 ==	
asc. Houe	-	0°る		agniumation	12190 Ian 12;19:12	200.0.10100	1015122
	-12195 Dec 29 j 08:00	0°≈		conjunction minimum elong	-12189 Jan 13 j 18:12		
	-12194 Feb 18 j 18:32 -12194 Apr 05 j 03:58	0 ≈ 0° H		minimum elong	-12189 Jan 13 j 18:22	0°M	1 13 42
		0°Υ		Fauth diat	-12189 Jan 16 j 13:08		2 (200(AII
	-12194 May 17 j 02:51			max. Earth dist.	-12189 Jan 29 j 16:27		2.62996 AU
. ,	-12194 Jun 25 j 20:39	0°8			-12189 Mar 03 j 21:23	0° 🗷	
evening set	-12194 Jul 28 j 16:00			morning rise	-12189 Mar 04 j 09:37	0° х 19'34	
	-12194 Aug 03 j 09:58	0°Ⅱ			-12189 Apr 20 j 02:20	್ರಂ	
	-12194 Sep 10 j 18:00	0 . \odot			-12189 Jun 06 j 20:07	0° ≈	
				asc. node	-12189 Jul 21 j 16:34		
conjunction	-12194 Sep 29 j 05:13				-12189 Jul 25 j 12:15	0°) €	
minimum elong	-12194 Sep 29 j 06:21		0°12'36		-12189 Sep 15 j 10:59	0° Ƴ	
behind sun begin	-12194 Sep 28 j 13:13			retrograde	-12189 Dec 07 j 23:21		
behind sun end	-12194 Sep 29 j 23:29			opposition	-12188 Jan 08 j 18:13		7°01'35
desc. node	-12194 Oct 14 j 21:32			greatest brilliancy	-12188 Jan 10 j 07:25		-2.6m
	-12194 Oct 19 j 18:32	$0 {\circ} \Omega$		min. Earth dist.	-12188 Jan 15 j 06:56		0.42107 AU
max. Earth dist.	-12194 Nov 11 j 03:24	16° Ω 44'26	2.42554 AU	direct	-12188 Feb 11 j 22:28	16° Ƴ 33'10	
	-12194 Nov 29 j 06:14	0° m ∕			-12188 Mar 31 j 09:52	9° 8	
morning rise	-12194 Nov 30 j 22:59	1°Mp13'43			-12188 May 21 j 10:12	$\Pi^{\circ}0$	
	-12193 Jan 10 j 18:52	0० ⊽		desc. node	-12188 Jun 06 j 05:11	10° Ⅱ 32'49	
	-12193 Feb 24 j 18:24	0° M			-12188 Jul 04 j 10:37	0 \circ \odot	
	-12193 Apr 13 j 17:33	0° ∡ ¹			-12188 Aug 16 j 07:19	$0^{\circ}\Omega$	
	-12193 Jun 05 j 21:50	0° ට			-12188 Sep 28 j 15:30	0° m)	
retrograde	-12193 Aug 25 j 10:33	26° る 22'50			-12188 Nov 12 j 02:56	0∘ ⊽	
opposition	-12193 Oct 02 j 15:33	17° る 30'43	-0°36'40		-12188 Dec 27 j 20:26	0° M ₊	
greatest brilliancy	-12193 Oct 02 j 18:10	17° る 28'08	-1.5m	evening set	-12187 Jan 04 j 23:44	5°M16′10	
min. Earth dist.	-12193 Oct 06 j 20:30	15° る 51'33	0.62983 AU		-12187 Feb 12 j 11:02	0° ∡ 7	
asc. node	-12193 Oct 16 j 21:35	12° る 10'34			_		
direct	-12193 Nov 12 j 09:06	7° る 33'35		conjunction	-12187 Feb 22 j 18:08	6° ∡ ³35′29	-0°56'01
	-12192 Jan 21 j 21:08	0° ≈		minimum elong	-12187 Feb 22 j 19:41	6° ∡ ³37'58	0°56'40
	-12192 Mar 12 j 07:40	0°) €		max. Earth dist.	-12187 Feb 23 j 06:08	6° ∡ 754'41	2.66340 AU
	-12192 Apr 24 j 20:15	0° Υ			-12187 Mar 31 j 06:48	0°る	
	-12192 Jun 04 j 05:48	0°8		morning rise	-12187 Apr 10 j 23:50	6° ප 53'21	
				<i>G</i> - *		0°≈	
	-12192 Jul 13 i 04:14	Π°			-1218 / May 10 1 10:02	0~~	
	-12192 Jul 13 j 04:14 -12192 Aug 20 j 19:50	0ಂ ಲ 100		asc. node	-12187 May 16 j 16:02 -12187 Jun 07 j 08:17	0 ∞ 14° ≈ 11'49	
desc. node	-12192 Aug 20 j 19:50	0°©		asc. node	-12187 Jun 07 j 08:17	14° ≈ 11'49	
desc. node	-12192 Aug 20 j 19:50 -12192 Aug 31 j 19:43	0°ഇ 8°ഇ28'05		asc. node	-12187 Jun 07 j 08:17 -12187 Jul 01 j 06:07	14° ≈ 11'49 0°) €	
desc. node	-12192 Aug 20 j 19:50	0°©		asc. node	-12187 Jun 07 j 08:17	14° ≈ 11'49	

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12187 Nov 13 j 16:28 0°**Ⅱ** asc. node -12181 Jan 27 j 23:50 27° ₹ 07'59 -12186 Jan 05 j 10:28 -12181 Feb 01 j 15:01 ೧೦ನ -12181 Mar 20 j 10:03 -12186 Feb 22 j 01:42 12°550'46 0°≈≈ retrograde min. Earth dist. -12186 Mar 22 j 00:49 8°9511'20 0.39584 AU -12181 May 03 j 10:18 0°**)**€ opposition -12186 Mar 26 j 16:26 6°951'32 2°11'12 evening set -12181 May 09 j 10:59 4°**)** 14'49 greatest brilliancy -12186 Mar 26 j 09:57 6°956'10 -2.8m max. Earth dist. -12181 May 25 j 21:07 15°**米** 59'11 2.46066 AU desc. node -12186 Apr 24 j 09:45 1°934'04 -12181 Jun 14 j 01:31 $0^{\circ}\Upsilon$ direct -12186 Apr 26 j 04:50 1°932'47 -12181 Jul $\,$ 03 j 03:40 $\,$ 14° Υ 14'48 $\,$ 1°12'43 $\,$ -12186 Jul 15 j 09:25 $0^{\circ}\Omega$ conjunction -12186 Sep 03 j 22:51 0° M minimum elong -12181 Jul 03 j 02:51 14°**Υ**13'15 1°12'51 -12186 Oct 21 j 20:32 0∘**⊽** -12181 Jul 23 j 20:56 0° 8 -12186 Dec 08 j 09:46 0° M morning rise -12181 Aug 31 j 00:17 29°**8**32'18 -12185 Jan 24 j 21:39 0°**∡**7 -12181 Aug 31 j 14:29 $0^{\circ}\Pi$ evening set -12185 Feb 13 j 20:58 12° ₹ 41'03 -12181 Oct 09 j 02:34 0ಂತಾ -12185 Mar 12 j 21:58 0°궁 -12181 Nov 17 j 06:32 $0^{\circ}\Omega$ max. Earth dist. -12185 Mar 19 j 22:35 4°る32'05 2.64351 AU desc. node -12181 Dec 14 j 23:59 $20^{\circ}\Omega$ 34'57 -12181 Dec 28 j 00:24 conjunction -12185 Apr 02 j 23:46 13°₹39'27 -0°13'27 -12180 Feb 09 j 08:19 minimum elong -12185 Apr 03 j 00:21 13°る40'23 -12180 Mar 28 j 00:00 behind sun begin -12185 Apr 02 j 15:15 13°**3**25'34 -12180 May 26 j 23:20 behind sun end -12185 Apr 03 j 09:27 13°る55'13 retrograde -12180 Jul 05 j 22:12 8°**∡**127'44 asc. node -12185 Apr 25 j 00:19 28°る07'39 -12180 Aug 11 i 11:47 30°RML -12185 Apr 27 i 20:07 0°≈ opposition -12180 Aug 14 j 18:58 28°M 40'22 -4°13'45 morning rise -12185 May 20 j 09:05 15°≈05'28 min. Earth dist. -12180 Aug 13 j 20:05 29° ML03'26 0.66136 AU -12185 Jun 11 i 05:54 0°**∀** greatest brilliancy -12180 Aug 14 j 16:20 28° ML43'01 -1.4m -12185 Jul 24 j 02:02 $0^{\circ}\Upsilon$ direct -12180 Sep 23 j 11:35 19°M05'24 -12185 Sep 03 j 14:43 0°8 -12180 Nov 09 j 19:51 0° ₹ -12185 Oct 14 j 09:04 -12180 Dec 15 j 06:00 16° ₹29'42 0°П asc node -12185 Nov 24 i 06:02 0°ഇ -12179 Jan 08 j 22:19 0°궁 -12184 Jan 05 j 21:38 0°**Ω** -12179 Feb 27 j 03:57 0°≈ -12179 Apr 12 j 22:13 -12184 Feb 24 j 05:50 0° Mg 0°₩ $0^{\circ}\Upsilon$ -12184 Mar 11 j 11:48 7° m 39'34 -12179 May 24 j 16:32 desc. node 0°808'18 -12184 Apr 19 j 17:45 16° M 53'19 -12179 Jul 03 j 13:28 retrograde evening set -12184 May 19 j 18:54 10° m 49'00 0.50452 AU -12179 Jul 03 j 09:09 0°8 min. Earth dist. -12184 May 26 j 08:01 8° Mp 25'42 -2.1m -12179 Aug 10 j 22:06 greatest brilliancy $0^{\circ}\Pi$ -12184 May 27 j 12:52 7° m 59'16 -4°12'41 opposition -12179 Sep 03 j 03:36 18° **I**I 12'52 0°42'19 direct -12184 Jun 30 j 17:19 0° m 41'21 conjunction -12184 Sep 23 j 14:14 0°**♀** minimum elong -12179 Sep 03 j 06:51 18° II 19'14 0° 42'58 -12184 Nov 15 j 17:26 0°M -12179 Sep 18 j 05:39 0°ಅ -12183 Jan 04 j 10:30 0° ⊀ max. Earth dist. -12179 Sep 25 j 08:27 5°532'11 2.38759 AU -12183 Feb 21j07:29 0°る -12179 Oct 27 j 05:14 0°**Ω** -12183 Mar 11 j 21:06 11° ₹ 56'58 desc. node -12179 Oct 31 j 17:01 asc. node 3°Ω23'44 -12183 Mar 25 j 02:25 20°₹35'08 -12179 Nov 06 j 14:55 7°**Ω**50'28 evening set morning rise -12183 Apr 08 j 07:50 -12179 Dec 06 j 16:10 max. Earth dist. -12178 Jan 18 j 06:04 -12183 Apr 15 j 23:13 5°**≈**06'54 2.57239 AU -12178 Mar 04 j 13:08 conjunction -12183 May 13 j 22:17 24°≈11'18 0°38'06 -12178 Apr 22 i 15:22 0° **₹** minimum elong -12183 May 13 j 20:41 24°≈08'31 0°37'38 -12178 Jun 20 i 00:19 0°ಕ -12183 May 22 i 06:45 0°**米** retrograde -12178 Aug 10 j 15:37 12°る48'22 -12183 Jul 03 i 16:10 0°**Y**18'48 -12178 Sep 18 j 12:38 3°る35'52 -1°49'55 morning rise opposition greatest brilliancy -12183 Jul 03 j 05:53 $0^{\circ}\Upsilon$ -12178 Sep 18 j 17:35 3°₹30′56 -1.4m -12183 Aug 12 j 14:02 min. Earth dist. -12178 Sep 21 j 07:35 2°る29'17 0.65058 AU 0°X -12183 Sep 20 j 22:11 -12178 Sep 27 j 18:10 30°R **✗** $0^{\circ}\Pi$ -12183 Oct 30 j 01:18 0ಂತಾ direct -12178 Oct 29 j 05:47 23° ₹38'32 -12183 Dec 08 j 22:46 $0^{\circ}\Omega$ -12178 Nov 02 j 12:05 23°**尽** 45'20 asc. node -12182 Jan 19 j 22:24 0° m -12178 Dec 02 j 15:23 0°궁 desc. node -12182 Jan 27 j 07:47 5° Mp 02'13 0°≈ -12177 Feb 03 j 00:42 -12182 Mar 07 j 12:43 0∘**⊽** 0°**∀** -12177 Mar 22 j 13:01 $0^{\circ}\Upsilon$ -12182 May 14 j 10:34 0°M -12177 May 04 j 05:28 0°8 retrograde -12182 May 31 j 18:36 1°**ጤ**54'37 -12177 Jun 13 j 06:38 $0^{\circ}\Pi$ -12182 Jun 17 j 06:59 30°R ← -12177 Jul 22 j 00:05 min. Earth dist. -12182 Jul 05 j 19:01 23°**⊆**54'47 0.61027 AU -12177 Aug 29 j 11:28 0 \circ \odot opposition -12182 Jul 10 j 12:49 22°**2**01'49 -5°22'22 evening set -12177 Sep 06 j 19:49 6°927'51 greatest brilliancy -12182 Jul 09 j 16:36 22°**2**21'54 -1.6m desc. node -12177 Sep 18 j 13:21 15°929'27 direct -12182 Aug 17 j 00:56 13°**♀**16'54 -12177 Oct 07 j 15:05 $0^{\circ}\Omega$

conjunction

-12177 Nov 06 j 07:57 22° Ω 04'55 -0°34'47

-12182 Oct 16 j 19:54 -12182 Dec 13 j 08:57

•	mena of Mars from		•	* ·			age 23
minimum elong	-12177 Nov 06 j 05:37	-		opposition	-12171 Feb 23 j 16:27	7° ∏ 34'49	
minimum clong	-12177 Nov 00 j 05:37	0° m)	0 3417	greatest brilliancy	-12171 Feb 23 j 22:36	7° Ⅱ 30'41	
max. Earth dist.	-12177 Dec 16 j 11:13		2 50054 ATT	min. Earth dist.	-12171 Feb 23 j 22:37		0.38489 AU
max. Earth dist.	-12177 Dec 29 j 18:08	20°Ω 0°Ω	2.50054 AO	direct	-12171 Mar 26 j 09:39	2° ∏ 24'43	0.30407 AC
morning rise	-12176 Jan 03 j 08:18	ა _ 09'01		desc. node	-12171 May 11 j 02:54		
morning rise	-12176 Feb 12 j 11:14	0°M		desc. node	-12171 Jun 11 j 02:11	0ಂತ	
	-12176 Mar 30 j 10:07	0° ∡ ¹			-12171 Jul 30 j 00:01	0°N	
	-12176 May 19 j 02:35	0°ჳ			-12171 Sep 14 j 04:06	0° m	
	-12176 Jul 13 j 21:24	0° ≈			-12171 Oct 30 j 05:32	0∘ <u>⊽</u>	
retrograde	-12176 Sep 18 j 23:51	19°≈40′00			-12171 Dec 15 j 20:32	0° M	
asc. node	-12176 Sep 19 j 14:33	19° ≈ 39'51		evening set	-12170 Jan 29 j 14:37	28°M32'23	
opposition	-12176 Oct 25 j 19:55	11° ≈ 29′02	1°39'18		-12170 Jan 31 j 21:38	0°⊀	
greatest brilliancy	-12176 Oct 26 j 03:58	11° ≈ 21′23	-1.8m	max. Earth dist.	-12170 Mar 10 j 08:52	23° ∡ 56'45	2.65756 AU
min. Earth dist.	-12176 Nov 01 j 02:52	9° ≈ 06′01	0.58013 AU				
direct	-12176 Dec 05 j 00:31	1° ≈ 48′53		conjunction	-12170 Mar 18 j 17:05		
	-12175 Feb 21 j 20:02	0° \		minimum elong	-12170 Mar 18 j 18:16		0°32'33
	-12175 Apr 09 j 14:46	0° Ƴ			-12170 Mar 19 j 18:47		
	-12175 May 21 j 05:13	0°8		morning rise	-12170 May 04 j 17:27		
	-12175 Jun 29 j 19:37	0°II			-12170 May 04 j 19:44	0° ≈	
desc. node	-12175 Aug 05 j 14:19	28° Ⅱ 11′24		asc. node	-12170 May 11 j 18:19	4°≈35'29	
	-12175 Aug 07 j 23:12	0°©			-12170 Jun 18 j 14:06	0° ∀	
	-12175 Sep 16 j 17:14	0° Ω			-12170 Aug 01 j 00:28	$^{\circ \gamma}$	
ovening set	-12175 Oct 27 j 20:06	0°M) 4°M-41'01			-12170 Sep 12 j 09:17	0° B	
evening set	-12175 Nov 03 j 09:56 -12175 Dec 09 j 18:09	4° ዀ 41'01 0° 亞			-12170 Oct 24 j 06:39 -12170 Dec 05 j 20:35	0°©	
	-12173 Dec 07 j 10.07	· –			-12170 Dec 03 j 20:35 -12169 Jan 21 j 08:36	$0^{\circ}\Omega$	
conjunction	-12175 Dec 27 j 08:21	11° Ω 55'36	-1°13'28	desc. node	-12169 Mar 29 j 05:07		
minimum elong	-12175 Dec 27 j 07:24			retrograde	-12169 Mar 31 j 22:35		
max. Earth dist.	-12174 Jan 19 j 00:06			min. Earth dist.	-12169 Apr 29 j 04:10		0.45607 AU
	-12174 Jan 23 j 13:00	0°M₊		greatest brilliancy	-12169 May 06 j 06:37		-2.4m
morning rise	-12174 Feb 16 j 16:26	15°M43'55		opposition	-12169 May 07 j 01:42		
	-12174 Mar 10 j 21:47	0° ∡ ¹		direct	-12169 Jun 08 j 18:24		
	-12174 Apr 27 j 11:25	0°ප			-12169 Aug 12 j 11:26	0° m	
	-12174 Jun 15 j 05:52	0° ≈			-12169 Oct 06 j 07:15	0∘ ⊽	
	-12174 Aug 05 j 15:54	0° ∀			-12169 Nov 25 j 07:47	0° M	
asc. node	-12174 Aug 07 j 11:02	0° ¥ 59'32			-12168 Jan 12 j 21:50	0° ∡ ¹	
	-12174 Oct 09 j 02:58	0° Υ			-12168 Feb 29 j 08:29		
retrograde	-12174 Nov 11 j 02:44			evening set	-12168 Mar 09 j 03:43		
	-12174 Dec 12 j 13:02		505 410 5	asc. node	-12168 Mar 28 j 13:27		2 (0(05 AII
opposition greatest brilliancy	-12174 Dec 14 j 11:19 -12174 Dec 15 j 23:55			max. Earth dist.	-12168 Apr 04 j 09:12 -12168 Apr 15 j 06:48		2.60605 AU
min. Earth dist.	-12174 Dec 13 j 23:33		0.46549 AU		-12100 Apr 13 J 00.40	0 ~	
direct	-12174 Dec 22 j 10:31 -12173 Jan 20 j 06:04		0.4034) AO	conjunction	-12168 Apr 26 j 23:58	7° ≈ 50'46	0°18'13
	-12173 Feb 26 j 20:17	0° Υ		minimum elong	-12168 Apr 26 j 23:12	7°≈49'28	0°17'37
	-12173 Apr 22 j 00:12	0°8			-12168 May 29 j 08:59	0°) €	
	-12173 Jun 04 j 13:08	$\Pi^{\circ}0$		morning rise	-12168 Jun 14 j 22:30	11°) 36′50	
desc. node	-12173 Jun 23 j 20:31	13° Ⅱ 54'54			-12168 Jul 10 j 14:48	0° Υ	
	-12173 Jul 15 j 23:08	0ංම			-12168 Aug 20 j 07:49	9° 8	
	-12173 Aug 26 j 08:30	$0^{\circ}\Omega$			-12168 Sep 29 j 01:46	Π °0	
	-12173 Oct 07 j 17:26	0° m y			-12168 Nov 07 j 15:44	0 \circ \odot	
	-12173 Nov 20 j 13:29	0∘ ⊽			-12168 Dec 18 j 03:39	0 ° Ω	
evening set	-12173 Dec 20 j 15:40				-12167 Jan 30 j 08:35	0° m	
	-12172 Jan 04 j 21:32	0°M		desc. node	-12167 Feb 13 j 02:56	8° m 50'57	
. ,.	12172 F 1 00 : 07 57	220M 17I26	1007100	. 1	-12167 Mar 22 j 08:53	0° ™	
conjunction minimum elong	-12172 Feb 08 j 07:57 -12172 Feb 08 j 09:17			retrograde min. Earth dist.	-12167 May 16 j 12:43 -12167 Jun 18 j 16:57		0.57445 AU
max. Earth dist.	-12172 Feb 14 j 14:12			opposition	-12167 Jun 24 j 20:11	6° £ 23'07	
Durin dist.	-12172 Feb 20 j 08:03	0° ⊼	2.030/1710	greatest brilliancy	-12167 Jun 23 j 17:33	6° £ 49'03	
morning rise	-12172 Mar 27 j 04:48			S. I.I.I.	-12167 Jul 14 j 10:25		
<i>5</i>	-12172 Apr 07 j 05:36	0°ප		direct	-12167 Jul 31 j 04:36	-	
	-12172 May 23 j 23:58	0° ≈			-12167 Aug 18 j 01:55	0∘ ⊽	
asc. node	-12172 Jun 24 j 03:19	20° ≈ 06′07			-12167 Oct 30 j 04:00	0° M ₊	
	-12172 Jul 09 j 10:17	0° ∀			-12167 Dec 22 j 04:14	0° ∡ ¹	
	-12172 Aug 24 j 21:47	0° Ƴ			-12166 Feb 09 j 05:12	0°ප	
	-12172 Oct 11 j 18:34	0∘ 8		asc. node	-12166 Feb 13 j 14:15	2° ප් 45'46	
	-12172 Dec 05 j 18:05	0°II		•	-12166 Mar 27 j 14:43	0° ≈	
retrograde	-12171 Jan 23 j 19:47	12°Щ46'45		evening set	-12166 Apr 20 j 20:22	16*≈20'34	

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 24

```
Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.
max. Earth dist.
                    -12166 May 07 i 19:10 28°≈03'52 2.50772 AU
                                                                                              -12161 Apr 08 j 06:55
                                                                                                                       0°×7
                    -12166 May 10 j 13:31 0°米
                                                                                              -12161 May 29 j 18:14
                                                                                                                       0°궁
                                                                                              -12161 Aug 04 j 08:28
                                                                                                                       0°≈≈
                    -12166 Jun 12 j 04:54 23°米20'28 1°04'01
conjunction
                                                                          retrograde
                                                                                              -12161 Sep 03 j 08:43
                                                                                                                      4°≈52'19
                    -12166 Jun 12 j 02:58 23° ¥ 16'57
                                                                                              -12161 Sep 30 j 22:00 30°R 궁
 minimum elong
                                                        1°03'55
                                            0^{\circ}\Upsilon
                                                                                              -12161 Oct 07 j 06:09 27°정43'09
                    -12166 Jun 21 j 07:08
                                                                          asc. node
                    -12166 Jul 31 j 06:44
                                            0°8
                                                                          opposition
                                                                                              -12161 Oct 11 j 03:31 26° 중13'23
                                                                                                                                  0°10'15
morning rise
                    -12166 Aug 06 j 08:09
                                            4°837'56
                                                                          greatest brilliancy
                                                                                              -12161 Oct 11 j 04:13 26° ₹ 12'43
                                                                                                                                  -1.6m
                    -12166 Sep 08 j 04:49
                                            0^{\circ}\Pi
                                                                          min. Earth dist.
                                                                                              -12161 Oct 16 j 03:04 24°정17'16
                                                                                                                                  0.61459 AU
                    -12166 Oct 16 j 21:12
                                            0ಂತಾ
                                                                          direct
                                                                                              -12161 Nov 20 j 19:03 16°궁19'43
                    -12166 Nov 25 j 05:30
                                            0^{\circ}\Omega
                                                                                              -12160 Jan 11 j 20:27
                                                                                                                      0°≈
                    -12166 Dec 31 j 21:09 26° Ω53'19
desc. node
                                                                                              -12160 Mar 05 j 21:33
                                                                                                                       0°)€
                                                                                                                       0^{\circ}\Upsilon
                    -12165 Jan 05 j 05:56
                                            0° M
                                                                                              -12160 Apr 19 j 06:45
                    -12165 Feb 18 j 06:19
                                            0∘⊽
                                                                                              -12160 May 30 j 00:55
                                                                                                                       0°8
                    -12165 Apr 09 j 08:00
                                                                                              -12160 Jul 08 j 04:03
                                                                                                                       0^{\circ}\Pi
retrograde
                    -12165 Jun 23 j 04:32 24° ML58'09
                                                                                              -12160 Aug 15 j 22:59
                                                                                                                       0ಂತಾ
min. Earth dist.
                    -12165 Jul 30 j 17:36 16°ML03'08
                                                       0.64876 AU
                                                                          desc. node
                                                                                              -12160 Aug 22 j 08:17
                                                                                                                       4°954'37
opposition
                    -12165 Aug 02 j 04:17 15°ML04'05 -4°50'55
                                                                                              -12160 Sep 24 j 09:20
                                                                                                                      0^{\circ}\Omega
greatest brilliancy
                    -12165 Aug 01 j 19:19 15°ML13'07
                                                                          evening set
                                                                                              -12160 Oct 13 j 01:15 13°\Omega51'59
direct
                    -12165 Sep 10 j 04:05
                                            5°M45'07
                                                                                              -12160 Nov 04 j 05:14
                    -12165 Nov 25 j 22:59
                                            0°⊀
asc. node
                    -12164 Jan 01 j 19:57 19° ₹ 53'57
                                                                          conjunction
                                                                                              -12160 Dec 08 j 12:22 24° m 12'29 -1°04'38
                    -12164 Jan 19 i 02:20
                                            0°₹
                                                                           minimum elong
                                                                                              -12160 Dec 08 i 10:16 24° m 08'51
                                                                                                                                 1°04'31
                    -12164 Mar 07 i 01:23
                                            0°≈
                                                                                              -12160 Dec 16 j 21:56
                                                                                                                      0∘⊽
                    -12164 Apr 20 i 10:17
                                            0°∀
                                                                          max. Earth dist.
                                                                                              -12159 Jan 07 j 07:04 14° 231'10 2.56756 AU
                    -12164 Jun 01 i 02:14
                                            0^{\circ}\Upsilon
                                                                                              -12159 Jan 30 j 14:07
                                                                                                                      o°m.
                    -12164 Jun 10 j 04:08
                                            6°Y45'10
                                                                                              -12159 Jan 31 j 02:31
                                                                                                                      0°M20'22
evening set
                                                                          morning rise
                    -12164 Jul 10 j 19:05
                                            0°8
                                                                                              -12159 Mar 18 j 01:38
                                                                                                                       0°×7
max. Earth dist.
                    -12164 Jul 13 j 17:15
                                                                                              -12159 May 05 j 04:23
                                                                                                                       0°궁
                                           2°815'07
                                                       2.39401 AU
                                                                                              -12159 Jun 24 j 12:54
                                                                                                                      0°22
                    -12164 Aug 08 j 07:44 22°808'19 1°04'13
                                                                                              -12159 Aug 20 j 13:39
conjunction
                                                                                                                      0°₩
 minimum elong
                    -12164 Aug 08 j 10:25 22°813'32 1°04'46
                                                                                              -12159 Aug 24 j 04:48
                                                                                                                     1°) 37'21
                                                                          asc. node
                                                                                              -12159 Oct 19 j 03:02 16°米 17'11
                    -12164 Aug 18 j 08:54 0°П
                                                                          retrograde
                    -12164 Sep 25 j 17:15 0°95
                                                                                              -12159 Nov 23 j 01:50 9° ★ 02'50 4°16'03
                                                                          opposition
                    -12164 Oct 11 j 04:12 11°959'12
                                                                                              -12159 Nov 24 j 03:36 8° ∺ 39'58 -2.1m
morning rise
                                                                          greatest brilliancy
                    -12164 Nov 03 j 17:23 0°Ω
                                                                                              -12159 Nov 30 j 21:57 6° ★ 16'26 0.51319 AU
                                                                          min. Earth dist.
                                                                                              -12159 Dec 31 j 16:28 0° ★ 12'16
desc. node
                    -12164 Nov 17 j 12:36 10° Ω22'44
                                                                          direct
                    -12164 Dec 14 j 05:10 0° Mg
                                                                                              -12158 Mar 20 j 18:52
                                                                                                                      0^{\circ}\Upsilon
                    -12163 Jan 25 j 22:44
                                                                                              -12158 May 04 j 22:32
                                                                                                                      0°8
                    -12163 Mar 12 j 18:36
                                                                                              -12158 Jun 15 j 02:30
                                                                                                                      \Pi^{\circ}0
                    -12163 May 02 j 19:36 0°尽
                                                                                              -12158 Jul 10 j 12:15 18°Д58'06
                                                                          desc. node
                    -12163 Jul 27 j 12:29 29° ₹35'47
                                                                                              -12158 Jul 25 j 06:18
retrograde
                    -12163 Sep 04 j 22:00 20° ₹ 06'44 -2°53'22
                                                                                              -12158 Sep 03 j 18:59
opposition
                    -12163 Sep 05 j 01:52 20° ₹ 02'51 -1.4m
                                                                                              -12158 Oct 15 j 12:25
greatest brilliancy
                    -12163 Sep 06 j 06:01 19° ₹34'38 0.66231 AU
                                                                                              -12158 Nov 27 j 21:17
min. Earth dist.
direct
                    -12163 Oct 15 j 09:32 10° ₹ 14'42
                                                                                              -12158 Dec 03 i 06:52
                                                                                                                       3°£39'15
                                                                          evening set
asc. node
                    -12163 Nov 19 j 02:34 16° ₹37'20
                                                                                              -12157 Jan 11 j 22:06
                                                                                                                       0°M
                    -12163 Dec 21 i 05:29
                                            0°ਤ
                    -12162 Feb 13 i 00:04
                                            0°≈
                                                                          conjunction
                                                                                              -12157 Jan 23 i 07:03
                                                                                                                      7°M25'39 -1°13'45
                    -12162 Mar 31 j 00:42
                                            0°₩
                                                                           minimum elong
                                                                                              -12157 Jan 23 i 07:45
                                                                                                                      7°M26'47 1°14'10
                    -12162 May 12 j 05:26
                                            0^{\circ}\Upsilon
                                                                          max. Earth dist.
                                                                                              -12157 Feb 04 j 16:29 15°ML28'12 2.64157 AU
                    -12162 Jun 21 j 01:42
                                                                                              -12157 Feb 27 j 06:10
                                            0°X
                                                                                                                      0°×7
                    -12162 Jul 29 j 15:59
                                            0°Π
                                                                          morning rise
                                                                                              -12157 Mar 13 j 04:53
                                                                                                                      8° 27 55'20
                    -12162 Aug 12 j 05:26 10°Ⅲ37'22
                                                                                              -12157 Apr 15 j 07:29
                                                                                                                      0°궁
evening set
                                                                                              -12157 Jun 01 j 15:09
                    -12162 Sep 06 j 00:30
                                           0ಂತಾ
desc. node
                    -12162 Oct 05 j 07:43 22°536'22
                                                                                              -12157 Jul 11 j 22:27 25°≈23'27
                                                                          asc. node
                                                                                              -12157 Jul 19 j 07:28
                                                                                                                      0°)
                    -12162 Oct 13 j 13:05 28°951'41 -0°06'14
                                                                                                                       0^{\circ}\Upsilon
conjunction
                                                                                              -12157 Sep 06 j 13:08
                    -12162 Oct 13 j 12:36 28°$50'45
                                                                                                                       0°8
 minimum elong
                                                        0°05'36
                                                                                              -12157 Nov 01 j 18:27
                    -12162 Oct 12 j 11:40 28°503'30
                                                                                              -12157 Dec 24 j 15:07 13°856'05
 behind sun begin
                                                                          retrograde
 behind sun end
                    -12162 Oct 14 j 13:32 29°537'58
                                                                          opposition
                                                                                              -12156 Jan 24 j 18:35
                                                                                                                      8°836'12
                                                                                                                                  7°04'03
                    -12162 Oct 15 j 01:10
                                            0^{\circ}\Omega
                                                                          greatest brilliancy
                                                                                              -12156 Jan 26 j 00:26
                                                                                                                       8°815'06
                                                                                                                                  -2.7m
                    -12162 Nov 24 j 12:30
                                            0° m
                                                                          min. Earth dist.
                                                                                              -12156 Jan 29 j 15:40
                                                                                                                       7°813'51
                                                                                                                                  0.40194 AU
max. Earth dist.
                    -12162 Nov 26 j 15:41
                                            1° M 32'35 2.45192 AU
                                                                          direct
                                                                                              -12156 Feb 26 j 08:34
                                                                                                                       2°840'04
morning rise
                    -12162 Dec 13 j 18:01 13° Mp 46'25
                                                                                              -12156 May 10 j 21:48
                                                                                                                       0^{\circ}\Pi
                    -12161 Jan 06 j 00:01
                                                                          desc. node
                                                                                              -12156 May 27 j 17:47
                                                                                                                      10°Ⅱ16'57
                    -12161 Feb 19 j 19:30
                                                                                              -12156 Jun 26 j 23:28
```

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12156 Aug 10 i 03:45 $0^{\circ}\Omega$ morning rise -12151 Jul 15 j 03:59 12° Υ 15'24 -12156 Sep 23 j 05:19 -12151 Aug 07 j 18:38 0° m 0°X -12156 Nov 07 j 03:18 -12151 Sep 15 j 22:35 0∘⊽ 0°Π -12151 Oct 24 j 20:49 -12156 Dec 23 j 02:48 0°M₊ 0ംഉ -12155 Jan 14 j 02:10 14° ML08'42 -12151 Dec 03 j 11:54 evening set $0^{\circ}\Omega$ -12155 Feb 07 j 20:16 0° **尽** -12150 Jan 13 j 23:42 0° m max. Earth dist. -12155 Feb 28 j 20:02 13°**尽**25'40 2.66350 AU desc. node -12150 Jan 17 j 16:42 2° m 34'52 -12150 Feb 28 j 06:05 0∘ಹ conjunction -12155 Mar 03 j 12:44 15°**尽**09'13 -0°48'00 -12150 Apr 25 j 03:32 0°M minimum elong -12155 Mar 03 j 14:16 15° ₹ 11'40 0°48'40 retrograde -12150 Jun 09 j 03:33 10°M 52'17 -12155 Mar 26 j 16:01 0°る min. Earth dist. -12150 Jul 15 j 03:03 2°M31'24 0.62669 AU -12155 Apr 19 j 14:13 15°**♂**27'14 -12150 Jul 18 j 09:21 morning rise greatest brilliancy 1°M13'12 -1.5m -12155 May 11 j 21:43 -12150 Jul 19 j 01:31 0°**≈** opposition 0°M57'02 -5°15'24 asc. node -12155 May 28 j 13:49 10°≈58'08 -12150 Jul 21 j 10:59 30°R € -12155 Jun 26 j 03:54 0°**)**€ direct -12150 Aug 26 j 04:04 21°**♀**58'30 -12155 Aug 09 j 10:24 $0^{\circ}\Upsilon$ -12150 Oct 04 j 18:10 -12155 Sep 22 j 02:09 0°8 -12150 Dec 07 j 01:33 -12155 Nov 04 j 23:37 asc. node -12149 Jan 18 j 09:28 24° ₹ 30'41 -12155 Dec 21 j 13:18 0°5 -12149 Jan 27 j 09:58 retrograde -12154 Mar 08 j 21:35 29°515'48 -12149 Mar 15 j 14:08 min. Earth dist. -12154 Apr 05 j 06:47 24°532'40 0.41297 AU -12149 Apr 28 j 17:52 opposition -12154 Apr 11 j 18:04 22°535'11 0°14'07 evening set -12149 May 20 j 17:50 15° ¥ 38'26 greatest brilliancy -12154 Apr 11 j 16:55 22°536'04 -2.7m max. Earth dist. -12149 Jun 08 i 05:08 29° H 07'06 2.43486 AU desc. node -12154 Apr 14 j 22:37 21°537'43 -12149 Jun 09 i 09:49 direct -12154 May 12 j 22:04 16°554'26 -12154 Jul 02 j 06:03 0°Ω -12149 Jul 15 j 22:24 27° Υ 29'53 1°13'15 conjunction -12154 Aug 27 j 14:07 -12149 Jul 15 j 22:46 27°**Υ**30'35 0° m minimum elong 1°13'33 -12154 Oct 16 j 02:23 -12149 Jul 19 j 04:45 0°8 0∘⊽ -12154 Dec 03 j 08:04 0°M -12149 Aug 26 j 20:56 0°**П** -12153 Jan 20 j 03:48 0° ✓ -12149 Sep 14 j 21:07 14°**Д**51'24 morning rise -12153 Feb 22 j 15:44 21° ₹ 14'54 -12149 Oct 04 j 07:12 0°5 evening set -12153 Mar 08 j 07:27 0°る -12149 Nov 12 j 08:54 0°**Ω** desc. node -12149 Dec 05 j 10:30 17° **Ω**13'42 max. Earth dist. -12153 Mar 25 j 18:58 11°♂18'28 2.63224 AU -12149 Dec 22 j 22:55 0° Mg -12153 Apr 11 j 22:26 22°♂31'37 -0°02'07 -12148 Feb 03 j 23:01 conjunction 0∘**⊽** -12153 Apr 11 j 22:34 22°♂31'50 0°02'48 -12148 Mar 21 j 16:22 0° M minimum elong -12153 Apr 11 j 02:49 21°**궁**59'20 -12148 May 15 j 14:00 0° ⊀7 behind sun begin behind sun end -12153 Apr 12 j 18:19 23°る04'22 retrograde -12148 Jul 13 j 18:51 16° **₹** 30'36 asc. node -12153 Apr 15 j 06:59 24°정44'26 opposition -12148 Aug 22 j 13:05 6°**х** 48'38 -3°47'05 -12153 Apr 23 j 05:33 0°≈ min. Earth dist. -12148 Aug 22 j 09:52 6°**х** 51′52 0.66437 AU morning rise -12153 May 29 j 17:42 24°≈38'21 greatest brilliancy -12148 Aug 22 j 13:20 6° ₹ 48'23 -12153 Jun 06 j 12:36 0°**米** -12148 Sep 10 j 14:16 30°RM -12153 Jul 19 j 03:07 0°**Υ**° -12148 Oct 01 j 14:15 27° ML06'20 direct -12153 Aug 29 j 07:56 0°**8** -12148 Oct 24 j 05:49 0° ⊀ -12153 Oct 08 j 15:51 0°**П** -12148 Dec 05 j 15:34 15° ₹ 48'11 asc. node -12147 Jan 02 j 08:01 0°る -12153 Nov 17 i 22:47 0°5 -12153 Dec 29 i 12:42 0°Ω -12147 Feb 21 i 19:10 0°≈ -12152 Feb 13 i 09:15 0° m -12147 Apr 07 j 23:14 0°**)**€ desc. node -12152 Mar 01 j 21:58 9° m 53'01 -12147 May 19 j 21:12 retrograde -12152 Apr 29 j 22:54 28° m 24'09 -12147 Jun 28 i 15:19 0°8 min. Earth dist. -12152 May 31 j 03:19 21° m 52'55 0.53101 AU -12147 Jul 17 j 13:53 14°**8**40'03 evening set greatest brilliancy -12152 Jun 06 j 04:45 19° m 36'24 -2.0m -12147 Aug 06 j 04:41 $0^{\circ}\Pi$ -12152 Jun 07 j 10:38 19° Mp 08'17 -4°47'36 -12147 Sep 13 j 12:17 opposition 0ംഉ -12152 Jul 12 j 10:40 11° Mp 27'30 direct -12147 Sep 17 j 22:33 -12152 Sep 14 j 07:10 0° € conjunction 3°\$26'43 0°25'39 -12152 Nov 09 j 15:52 0°M minimum elong -12147 Sep 18 j 00:50 3°**©**31'11 0°26'21 -12152 Dec 30 j 07:18 0°**∡**7 desc. node -12147 Oct 22 j 03:30 29°544'24 -12151 Feb 16 j 13:16 0°る -12147 Oct 22 j 11:44 $0^{\circ}\Omega$ -12151 Mar 02 j 05:56 8°**る**45'35 max. Earth dist. 3°**Ω**04'43 2.40583 AU asc. node -12147 Oct 26 j 13:23 -12151 Apr 03 j 12:32 29°**궁**52'44 evening set morning rise -12147 Nov 20 j 16:57 21° Ω49'12 -12151 Apr 03 j 16:54 0°**≈** -12147 Dec 01 j 21:47 0° M max. Earth dist. -12151 Apr 23 j 06:04 13°≈09'12 2.55109 AU -12146 Jan 13 j 09:25 0∘**⊽** -12151 May 17 j 16:14 0°**∀** -12146 Feb 27 j 09:57 0°M -12146 Apr 16 j 17:10 0°**∡** conjunction -12151 May 24 j 02:06 4°**升**30′06 0°48′38 -12146 Jun 10 j 09:58 0°궁 -12151 May 24 j 00:10 4°**)** €26'42 0°48'16 -12146 Aug 19 j 00:37 20°**궁**58'12 minimum elong retrograde

opposition

-12146 Sep 26 j 13:52 11° 중56'21 -1°08'38

-12151 Jun 28 j 13:35

 $0^{\circ}\Upsilon$

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 26

```
Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.
                    -12146 Sep 26 j 17:54 11° ₹52'22 -1.5m
                                                                            conjunction
                                                                                                 -12140 Feb 17 i 05:50
                                                                                                                          0° ₹ 57'25 -1°01'06
greatest brilliancy
                                                                                                                          0°∡759'50 1°01'42
min. Earth dist.
                     -12146 Sep 30 j 03:55 10°る31'23
                                                                             minimum elong
                                                                                                 -12140 Feb 17 j 07:21
                                                         0.64034 AU
                     -12146 Oct 23 j 20:43
                                             3°る10'35
                                                                                                 -12140 Feb 20 j 05:41
                                                                                                                          2°尽52'32 2.66147 AU
asc node
                                                                            max. Earth dist.
direct
                     -12146 Nov 06 j 08:45
                                              1°る58'18
                                                                                                 -12140 Apr 02 j 14:23
                                                                                                                          0°중
                     -12145 Jan 26 j 18:04
                                                                                                 -12140 Apr 04 j 17:14
                                              0°≈
                                                                            morning rise
                                                                                                                          1°る21'32
                     -12145 Mar 16 j 19:55
                                              0°)
                                                                                                 -12140 May 19 j 03:36
                                                                                                                          0°≈
                                             0^{\circ}\Upsilon
                     -12145 Apr 29 j 00:14
                                                                            asc. node
                                                                                                 -12140 Jun 14 j 09:37
                                                                                                                        17°≈05'28
                     -12145 Jun 08 j 06:41
                                             0°8
                                                                                                 -12140 Jul 04 j 02:20
                                                                                                                         0°)€
                                                                                                                          0^{\circ}\Upsilon
                     -12145 Jul 17 j 02:52
                                             0^{\circ}\Pi
                                                                                                 -12140 Aug 18 j 14:21
                                                                                                                         0^{\circ}8
                     -12145 Aug 24 j 16:07
                                             0ಂತಾ
                                                                                                 -12140 Oct 03 j 09:51
desc. node
                     -12145 Sep 09 j 00:39 11°550'37
                                                                                                 -12140 Nov 20 j 17:40
                                                                                                                          0^{\circ}\Pi
                     -12145 Sep 20 j 18:46 20°549'58
evening set
                                                                                                 -12139 Feb 03 j 17:44
                                                                                                                         0ಂತಾ
                     -12145 Oct 02 j 21:16
                                             0^{\circ}\Omega
                                                                            retrograde
                                                                                                 -12139 Feb 09 j 17:57
                                                                                                                         0°9514'24
                     -12145 Nov 12 j 12:25
                                                                                                 -12139 Feb 15 j 18:57 30°R Ⅱ
                                                                            min. Earth dist.
                                                                                                 -12139 Mar 10 j 18:45 25°Ц26'32
                                                                                                                                      0.38729 AU
conjunction
                     -12145 Nov 18 j 21:58
                                             4° m 36'15 -0°47'56
                                                                            opposition
                                                                                                 -12139 Mar 13 j 10:29 24°II42'40
                                                                                                                                      3°43'42
 minimum elong
                     -12145 Nov 18 j 19:20
                                             4° m 31'32 0°47'34
                                                                            greatest brilliancy
                                                                                                 -12139 Mar 13 j 06:10 24°II45'38
                     -12145 Dec 25 j 01:37
                                                                            direct
                                                                                                 -12139 Apr 12 j 18:59 19°Д34'16
max. Earth dist.
                     -12145 Dec 25 j 15:52
                                             0°£24'30
                                                         2.52604 AU
                                                                            desc. node
                                                                                                 -12139 May 01 j 13:43 21°Д45'33
morning rise
                     -12144 Jan 14 j 05:48 13° △43'56
                                                                                                 -12139 May 26 j 07:59
                     -12144 Feb 07 j 17:05
                                                                                                 -12139 Jul 21 j 16:46
                                                                                                                          0^{\circ}\Omega
                     -12144 Mar 25 j 10:07
                                             0°×7
                                                                                                 -12139 Sep 07 i 21:39
                                                                                                                          0° m
                     -12144 May 13 j 08:51
                                             0°ರ
                                                                                                 -12139 Oct 24 j 21:02
                                                                                                                          0∘⊽
                     -12144 Jul 05 i 09:55
                                                                                                 -12139 Dec 10 j 23:07
                                                                                                                          0°M
                                            0°≈
asc. node
                     -12144 Sep 09 j 21:38 26°≈58'00
                                                                                                 -12138 Jan 27 j 05:50
                                                                                                                          0°×7
                     -12144 Sep 29 j 06:27 29°≈07'56
                                                                                                 -12138 Feb 07 j 09:41
                                                                                                                          7°√05'47
retrograde
                                                                            evening set
opposition
                     -12144 Nov 04 j 12:32 21°≈15'05 2°34'43
                                                                                                 -12138 Mar 15 j 04:52
                                                                                                                          0°궁
                     -12144 Nov 05 j 02:21 21°≈02'14
                                                                                                 -12138 Mar 16 j 00:43
                                                                                                                         0°る31'58 2.65086 AU
greatest brilliancy
                                                                            max. Earth dist.
                                                         -1 8m
                     -12144 Nov 11 j 11:17 18°≈40'14
min. Earth dist.
                                                         0.55806 AU
                     -12144 Dec 14 j 07:34 11°≈47'54
                                                                                                 -12138 Mar 27 j 10:54
direct
                                                                            conjunction
                                                                                                                         7°る54'51 -0°21'27
                     -12143 Feb 12 j 04:16 0°米
                                                                                                 -12138 Mar 27 j 11:46
                                                                             minimum elong
                                                                                                                         7°る56'15 0°22'08
                     -12143 Apr 02 j 22:11
                                                                                                 -12138 Apr 30 j 04:46
                                             0^{\circ}\Upsilon
                                                                                                                         0°≈
                     -12143 May 15 j 09:34 0°8
                                                                                                 -12138 May 02 j 01:18
                                                                                                                         1°≈13'44
                                                                            asc. node
                     -12143 Jun 24 j 10:07 0°Ⅱ
                                                                                                 -12138 May 13 j 14:40
                                                                                                                         8°≈54'59
                                                                            morning rise
                     -12143 Jul 27 j 03:39 24°I55'07
                                                                                                 -12138 Jun 13 j 19:07
                                                                                                                         0°∀
desc. node
                     -12143 Aug 02 j 20:11 0°95
                                                                                                 -12138 Jul 26 j 21:53
                                                                                                                         0^{\circ}\Upsilon
                                                                                                 -12138 Sep 06 j 19:26
                     -12143 Sep 11 j 19:08 0°Ω
                                                                                                                         0°8
                     -12143 Oct 23 j 01:30 0° M
                                                                                                 -12138 Oct 18 j 00:24
                                                                                                                         0^{\circ}\Pi
                     -12143 Nov 14 j 16:37 15° m 56'28
                                                                                                 -12138 Nov 28 j 11:45
                                                                                                                         0ಂತಾ
evening set
                     -12143 Dec 05 j 02:03 0°♀
                                                                                                 -12137 Jan 11 j 06:33
                                                                                                                         0^{\circ}\Omega
                                                                                                 -12137 Mar 06 j 21:13
                     -12142 Jan 06 j 11:03 21°246'44 -1°15'18
                                                                                                 -12137 Mar 19 j 16:49
conjunction
                                                                            desc. node
                                                                                                                         4° m 30'59
                     -12142 Jan 06 j 10:45 21°246'15 1°15'33
                                                                                                 -12137 Apr 12 j 13:00 8° Mp 14'19
 minimum elong
                                                                            retrograde
                     -12142 Jan 18 j 21:50 0° M
                                                                            min. Earth dist.
                                                                                                 -12137 May 11 j 17:31 2° m 32'08
max. Earth dist.
                     -12142 Jan 25 j 10:04 4°ML16'04 2.61866 AU
                                                                                                 -12137 May 18 j 21:19 30°RΩ
                     -12142 Feb 25 j 19:26 24°M 36'17
morning rise
                                                                            opposition
                                                                                                 -12137 May 19 j 16:40 29^{\circ}\Omega 42'48 - 3^{\circ}36'28
                     -12142 Mar 06 i 05:27 0° ₹
                                                                            greatest brilliancy
                                                                                                 -12137 May 18 j 14:24 0° m 06'10
                     -12142 Apr 22 i 13:19 0°る
                                                                            direct
                                                                                                 -12137 Jun 22 j 04:25 22^{\circ}\Omega 45'24
                     -12142 Jun 09 i 16:18 0°≈
                                                                                                 -12137 Jul 28 i 15:42
                     -12142 Jul 28 j 17:31 29°≈39'01
                                                                                                 -12137 Sep 29 j 04:09
asc node
                                                                                                                          0∘Ω
                     -12142 Jul 29 i 07:49 0°米
                                                                                                 -12137 Nov 19 j 18:32
                                                                                                                         0°M
                     -12142 Sep 22 j 11:22
                                            0^{\circ}\Upsilon
                                                                                                 -12136 Jan 07 j 23:21
                                                                                                                          0°×7
                                                                                                 -12136 Feb 24 j 16:13
                     -12142 Nov 25 j 19:49 18°Υ49'47
retrograde
opposition
                     -12142 \,\mathrm{Dec}\ 28\,\mathrm{j}\ 06:37\ 12^{\circ}\Upsilon47'40
                                                         6°38'59
                                                                            evening set
                                                                                                 -12136 Mar 18 j 05:40 14°궁33'33
greatest brilliancy
                     -12142 \text{ Dec } 29 \text{ j } 21:32 \quad 12^{\circ} \Upsilon 17'01
                                                                            asc. node
                                                                                                 -12136 Mar 18 j 21:18 14°⋜59'01
                                                         -2.4m
min. Earth dist.
                     -12141 Jan 04 j 15:57 10^{\circ} Y 28'44
                                                         0.43993 AU
                                                                                                 -12136 Apr 10 j 16:28
                                                                            max. Earth dist.
direct
                     -12141 Feb 01 j 16:07
                                              5°Y34'27
                                                                                                 -12136 Apr 10 j 21:59
                                                                                                                          0°≈09'11 2.58839 AU
                     -12141 Apr 11 j 12:20
                                             0^{\circ}8
                     -12141 May 28 j 01:24
                                                                                                 -12136 May 06 j 13:09 17°≈26'37 0°29'47
                                             \Pi^{\circ}0
                                                                            conjunction
                     -12141 Jun 14 j 09:09 12°Ⅲ03'27
desc. node
                                                                             minimum elong
                                                                                                 -12136 May 06 j 11:53 17°≈24'27
                                                                                                                                     0°29'15
                     -12141 Jul 09 j 16:22
                                             0\circ\odot
                                                                                                 -12136 May 24 j 17:54
                                                                                                                         0°∀
                     -12141 Aug 20 j 18:46
                                              0°\Omega
                                                                            morning rise
                                                                                                 -12136 Jun 25 j 09:07 22°∺24'36
                     -12141 Oct 02 j 14:34
                                             0° m
                                                                                                 -12136 Jul 05 j 20:47
                                                                                                                         0°\Upsilon
                     -12141 Nov 15 j 17:41
                                              0∘⊽
                                                                                                 -12136 Aug 15 j 09:29
                                                                                                                          0^{\circ}8
evening set
                     -12141 Dec 30 j 02:48 29°△16'07
                                                                                                 -12136 Sep 23 j 22:04
                                                                                                                          \Pi^{\circ}0
                     -12141 Dec 31 j 05:46
                                                                                                 -12136 Nov 02 j 05:23
                                                                                                                          0ಂತಾ
                     -12140 Feb 15 j 18:01
                                                                                                 -12136 Dec 12 j 07:43
                                                                                                                         0^{\circ}\Omega
```

```
Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23,
Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.
                    -12135 Jan 23 j 15:59 0° Mp
                                                                                            -12130 Mar 25 i 16:08
                                                                                                                    0°)€
                    -12135 Feb 03 j 14:07
                                                                                            -12130 May 07 j 04:26
                                                                                                                    0^{\circ}\Upsilon
desc node
                                           7° m 18'05
                    -12135 Mar 12 j 11:42
                                                                                            -12130 Jun 16 j 04:17
                                                                                                                    0°8
                                           0∘∙თ
                                                                                                                    0^{\circ}\Pi
                    -12135 May 25 j 09:59 25°-244'27
                                                                                            -12130 Jul 24 j 20:37
retrograde
                    -12135 Jun 28 j 15:05 18°♀03'04
                                                                                            -12130 Aug 26 j 18:34 25°\Pi43'29
min. Earth dist.
                                                       0.59519 AU
                                                                        evening set
greatest brilliancy
                    -12135 Jul 03 j 01:12 16°218'39
                                                      -1.7m
                                                                                            -12130 Sep 01 j 06:24
                                                                                                                    0ಂತಾ
opposition
                    -12135 Jul 04 j 00:30 15°-255'43 -5°23'45
                                                                        desc. node
                                                                                            -12130 Sep 25 j 19:03 18°556'06
                                                                                            -12130 Oct 10 j 07:58
direct
                    -12135 Aug 10 j 01:16
                                           7°≏22'51
                                                                                                                    0^{\circ}\Omega
                    -12135 Oct 22 j 04:04
                                           0°M
                    -12135 Dec 16 j 11:48
                                                                        conjunction
                                                                                            -12130 Oct 27 j 06:06 12° Ω41'45 -0°23'09
asc. node
                    -12134 Feb 03 j 23:13 29° ₹ 50'13
                                                                         minimum elong
                                                                                            -12130 Oct 27 j 04:20 12°\Omega38'28 0°22'35
                                                                                            -12130 Nov 19 j 19:40 0° Mp
                    -12134 Feb 04 j 05:30
                                           0°ರ
                    -12134 Mar 22 j 21:24
                                                                        max. Earth dist.
                                                                                            -12130 Dec 08 j 20:23 13° M 38'10
                                                                                                                               2.47894 AU
evening set
                    -12134 May 01 j 06:33 26°≈44'42
                                                                         morning rise
                                                                                            -12130 Dec 25 j 17:12 25° m 28'10
                    -12134 May 05 j 22:22
                                            0°)€
                                                                                            -12129 Jan 01 j 06:25
                                                                                                                    0∘⊽
max. Earth dist.
                    -12134 May 17 j 09:45
                                            8°¥06'00 2.48206 AU
                                                                                            -12129 Feb 14 j 22:55
                                                                                                                    0°M
                    -12134 Jun 16 j 15:38
                                            0^{\circ}\Upsilon
                                                                                            -12129 Apr 03 j 01:14
                                                                                                                    0°⊼
                                                                                            -12129 May 23 j 07:36
conjunction
                    -12134 Jun 23 j 20:04
                                            5°Υ18'51 1°10'00
                                                                                            -12129 Jul 20 j 21:13
 minimum elong
                    -12134 Jun 23 j 18:36
                                            5°Υ16'09
                                                       1°10'03
                                                                        retrograde
                                                                                            -12129 Sep 12 j 15:52 13°≈37'37
                    -12134 Jul 26 j 13:38
                                           0°႘
                                                                        asc. node
                                                                                            -12129 Sep 27 j 14:37 12°≈10'35
morning rise
                    -12134 Aug 19 i 23:15 18°847'49
                                                                        opposition
                                                                                            -12129 Oct 19 i 23:15
                                                                                                                    5°≈13'26
                                                                                                                                1°00'15
                    -12134 Sep 03 i 09:24
                                           \Pi^{\circ}0
                                                                        greatest brilliancy
                                                                                            -12129 Oct 20 i 03:42
                                                                                                                    5°≈09'09
                                                                                                                                -1.7m
                    -12134 Oct 11 i 22:59
                                           0ಂಣ
                                                                        min. Earth dist.
                                                                                            -12129 Oct 25 j 17:03 3°≈01'20
                                                                                                                                0.59656 AU
                    -12134 Nov 20 i 04:02 0°Ω
                                                                                            -12129 Nov 03 j 03:26 30°R ₹
desc. node
                    -12134 Dec 22 j 06:29 23°\Omega44'24
                                                                                            -12129 Nov 29 j 10:35 25°る25'46
                                                                        direct
                    -12134 Dec 30 j 23:06 0° Mg
                                                                                            -12129 Dec 27 j 10:33
                                                                                                                    0°≈≈
                    -12133 Feb 12 j 11:10
                                                                                            -12128 Feb 27 j 18:10
                                                                                                                    0°₩
                                           0∘⊽
                    -12133 Apr 01 j 19:28
                                                                                            -12128 Apr 13 j 09:14
                                           o°m.
                                                                                                                    0^{\circ}\Upsilon
                                                                                            -12128 May 24 j 14:39
                    -12133 Jun 07 j 17:30 0° ₹
                                                                                                                    0°8
                    -12133 Jul 01 j 03:08 3° ₹ 13'16
                                                                                            -12128 Jul 02 j 23:54
                                                                                                                    0^{\circ}\Pi
retrograde
                    -12133 Jul 22 j 23:11 30°RML
                                                                                            -12128 Aug 10 j 22:59
                                                                                                                    0ಂತಾ
                                                                                            -12128 Aug 12 j 19:07
min. Earth dist.
                    -12133 Aug 08 j 11:14 24°ML01'32 0.65689 AU
                                                                                                                    1°9524'34
                                                                        desc. node
                    -12133 Aug 10 j 02:04 23°M22'27 -4°30'46
                                                                                            -12128 Sep 19 j 12:47 0°Ω
opposition
                    -12133 Aug 09 j 20:48 23°M27'45 -1.4m
                                                                                            -12128 Oct 25 j 10:46 26° Ω23'00
greatest brilliancy
                                                                        evening set
                    -12133 Sep 18 j 12:07 13°M 54'05
                                                                                            -12128 Oct 30 j 11:23
direct
                                                                                                                    0° m
                                                                                            -12128 Dec 12 j 05:48
                    -12133 Nov 17 j 02:31 0° ₹
asc. node
                    -12133 Dec 23 j 04:55 18° ₹ 07'16
                    -12132 Jan 13 j 05:42 0°る
                                                                        conjunction
                                                                                            -12128 Dec 19 j 11:17 4°256'20 -1°10'35
                    -12132 Mar 01 j 22:50 0°≈
                                                                         minimum elong
                                                                                            -12128 Dec 19 j 09:49 4°£53'50 1°10'36
                    -12132 Apr 15 j 14:32 0°米
                                                                        max. Earth dist.
                                                                                            -12127 Jan 14 j 08:18 22°220'28 2.58794 AU
                    -12132 May 27 j 08:58 0°Υ°
                                                                                            -12127 Jan 25 j 22:14 0° M
                    -12132 Jun 23 j 03:41 20°Y05′26
                                                                                            -12127 Feb 09 j 17:52
                                                                                                                    9°M41'42
evening set
                                                                        morning rise
                    -12132 Jul 06 j 02:32 0°8
                                                                                            -12127 Mar 13 j 07:08
                    -12132 Aug 13 j 16:07
                                                                                            -12127 Apr 30 j 01:08
max. Earth dist.
                    -12132 Aug 19 і 15:37 4°Д41'19 2.38333 AU
                                                                                            -12127 Jun 18 j 09:20
                                                                                            -12127 Aug 10 i 14:09
conjunction
                    -12132 Aug 22 i 18:11
                                            7°I107'30 0°53'16
                                                                        asc. node
                                                                                            -12127 Aug 14 j 12:11 2° \(\mathbf{H}\) 01'38
 minimum elong
                    -12132 Aug 22 j 21:33
                                           7°I14'05 0°53'53
                                                                        retrograde
                                                                                            -12127 Oct 31 j 16:59 27°\$25'40
                    -12132 Sep 20 j 23:36 0°5
                                                                                            -12127 Dec 04 j 18:53 20° \( \frac{1}{35} \) 35'36 5°13'06
                                                                        opposition
                    -12132 Oct 26 j 06:59 27°513'36
                                                                        greatest brilliancy
                                                                                            -12127 Dec 06 j 03:25 20° ★ 07'43 -2.2m
morning rise
                    -12132 Oct 29 j 22:38 0°Ω
                                                                        min. Earth dist.
                                                                                            -12127 Dec 12 j 19:49 17° ) 50'49
                                                                                                                                0.48698 AU
desc. node
                    -12132 Nov 07 j 23:13
                                                                        direct
                                                                                            -12126 Jan 11 j 11:58 12° 光 13'22
                                           6°Ω48'49
                    -12132 Dec 09 j 08:35
                                           0° m
                                                                                            -12126 Mar 09 j 21:17
                                                                                                                    0^{\circ}\Upsilon
                    -12131 Jan 20 j 22:15
                                           0∘⊽
                                                                                            -12126 Apr 27 j 13:08
                                                                                                                    0°8
                    -12131 Mar 07 j 08:14
                                           0°M
                                                                                            -12126 Jun 08 j 20:09
                                                                                                                    0^{\circ}\Pi
                    -12131 Apr 26 j 00:36
                                           0° ₹
                                                                                            -12126 Jul 01 j 00:29 16°Ⅲ17'14
                                                                        desc. node
                    -12131 Jun 27 j 09:43
                                           0°궁
                                                                                            -12126 Jul 19 j 14:18
                                                                                                                    0°ಅ
                    -12131 Aug 04 j 14:05
                                            7°る36'22
                                                                                                                    0^{\circ}\Omega
retrograde
                                                                                            -12126 Aug 29 j 12:41
                    -12131 Sep 08 j 08:34 30°R ✓
                                                                                            -12126 Oct 10 j 13:06
                                                                                                                    0° m
                    -12131 Sep 12 j 17:41 28° ₹ 16'01 -2°17'40
opposition
                                                                                            -12126 Nov 23 j 02:46
                                                                                                                    0∘ଫ
greatest brilliancy
                    -12131 Sep 12 j 22:28 28° ₹ 11'15
                                                                        evening set
                                                                                            -12126 Dec 13 j 09:12 13°△35'13
min. Earth dist.
                    -12131 Sep 14 j 21:15 27° ₹ 24'35
                                                       0.65698 AU
                                                                                            -12125 Jan 07 j 06:32
direct
                    -12131 Oct 23 j 09:35 18°尽20'27
asc. node
                    -12131 Nov 09 j 11:04 20° ₹03'10
                                                                        conjunction
                                                                                            -12125 Feb 01 j 14:15 16°ML27'21 -1°10'24
                    -12131 Dec 11 j 00:28
                                            0°る
                                                                                            minimum elong
                    -12130 Feb 06 j 18:48
                                                                        max. Earth dist.
                                                                                            -12125 Feb 10 j 12:34 22°ML12'56 2.65104 AU
```

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 28

```
Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.
                    -12125 Feb 22 i 15:21 0° ₹
                                                                                               -12120 Mar 31 j 00:14
                                                                                                                        0∘⊽
                    -12125 Mar 21 j 20:54 17° ₹25'09
                                                                                               -12120 May 09 j 15:03
                                                                           retrograde
                                                                                                                        9°Ω09'10
morning rise
                                                                                               -12120 Jun 10 j 22:04
                                                                                                                        2°212'06
                    -12125 Apr 10 j 14:08
                                            ೧೦೯
                                                                           min. Earth dist.
                                                                                                                                   0.55579 AU
                    -12125 May 27 j 14:02
                                                                           greatest brilliancy
                                                                                               -12120 Jun 16 j 10:41
                                                                                                                        0°205'02 -1.8m
                                             0°≈
                    -12125 Jul 02 j 04:58 22°≈46'53
                                                                                               -12120 Jun 16 j 15:55 30°R M
asc. node
                    -12125 Jul 13 j 12:18
                                            0°₩
                                                                           opposition
                                                                                               -12120 Jun 17 j 15:24
                                                                                                                      29° m 37'27
                                                                                                                                   -5°09'42
                                             0^{\circ}\Upsilon
                    -12125 Aug 29 j 23:51
                                                                           direct
                                                                                               -12120 Jul 23 j 10:19 21° Mp 36'06
                    -12125 Oct 19 j 06:59
                                             0°8
                                                                                               -12120 Sep 01 j 14:07
                                                                                                                        0。<del></del>ರ
                    -12124 Jan 05 j 16:24
                                            0^{\circ}\Pi
                                                                                               -12120 Nov 03 j 02:41
                                                                                                                        0°M
retrograde
                    -12124 Jan 11 j 04:43
                                            0°Ⅱ11'22
                                                                                               -12120 Dec 25 j 00:13
                                                                                                                        0°×7
                    -12124 Jan 16 j 15:47 30°R
                                                                                               -12119 Feb 11 j 17:07
                                                                                                                        0°ಕ
opposition
                    -12124 Feb 10 j 21:33 25°802'26
                                                        6°27'11
                                                                           asc. node
                                                                                               -12119 Feb 20 j 13:53
                                                                                                                        5°る37'30
greatest brilliancy
                    -12124 Feb 11 j 15:09 24°850'31
                                                         -2.8m
                                                                                               -12119 Mar 30 j 00:58
min. Earth dist.
                    -12124 Feb 13 j 10:49 24°821'00
                                                         0.38926 AU
                                                                           evening set
                                                                                               -12119 Apr 13 j 07:33
                                                                                                                        9°≈33'37
direct
                    -12124 Mar 13 j 06:30 19°838'05
                                                                           max. Earth dist.
                                                                                               -12119 May 01 j 06:13 21°≈48'36
                                                                                                                                   2.52776 AU
                    -12124 Apr 24 j 19:03
                                            \Pi^{\circ}0
                                                                                               -12119 May 13 j 01:09
                                                                                                                       0°)€
desc. node
                    -12124 May 18 j 07:06 11°Ц40'52
                    -12124 Jun 18 j 06:16
                                                                           conjunction
                                                                                               -12119 Jun 03 j 18:45 15°) 24'13
                    -12124 Aug 03 j 12:21
                                             0^{\circ}\Omega
                                                                            minimum elong
                                                                                               -12119 Jun 03 j 16:43 15°¥20'34
                    -12124 Sep 17 j 14:01
                                                                                               -12119 Jun 23 j 21:26
                                                                                                                       0^{\circ}\Upsilon
                    -12124 Nov 02 j 01:09
                                                                           morning rise
                                                                                               -12119 Jul 27 j 10:14 25° Υ 00'32
                    -12124 Dec 18 j 08:04
                                            0°M
                                                                                               -12119 Aug 03 i 00:10
                                                                                                                       0°8
                    -12123 Jan 23 j 01:35 22°M 52'40
                                                                                               -12119 Sep 11 i 01:12
                                                                                                                        \Pi^{\circ}0
evening set
                    -12123 Feb 03 i 05:22
                                            0°⊼
                                                                                               -12119 Oct 19 i 19:49
                                                                                                                        0ಂತಾ
max. Earth dist.
                    -12123 Mar 06 j 11:13 19° ₹ 58'22 2.66133 AU
                                                                                               -12119 Nov 28 i 06:07
                                                                                                                       0^{\circ}\Omega
                                                                                               -12118 Jan 08 i 03:36 29^{\circ}\Omega 49'29
                                                                           desc node
                    -12123 Mar 12 j 06:24 23° ₹ 41'34 -0°38'57
                                                                                               -12118 Jan 08 j 09:33
conjunction
                                                                                                                       0° m
                    -12123 Mar 12 j 07:46 23° ₹ 43'47 0°39'39
                                                                                               -12118 Feb 21 j 18:17
 minimum elong
                                                                                                                        0∘Ω
                    -12123 Mar 22 j 01:53 0°る
                                                                                               -12118 Apr 14 j 09:25
                                                                                                                       o°m.
                    -12123 Apr 28 j 05:52 24°중06'30
                                                                                               -12118 Jun 17 j 07:09 19°ML29'13
                                                                           retrograde
morning rise
                    -12123 May 07 j 05:23
                                                                                               -12118 Jul 24 j 04:20 10°M 48'50 0.63999 AU
                                            0°≈
                                                                           min. Earth dist.
                    -12123 May 18 j 19:49
                                                                                               -12118 Jul 27 j 06:56
                                             7°≈39'24
                                                                                                                       9°M34'00 -5°03'01
asc. node
                                                                           opposition
                                                                                               -12118 Jul 26 j 18:52
                    -12123 Jun 21 j 05:20
                                            0°₩
                                                                           greatest brilliancy
                                                                                                                       9°™46′07
                                                                                                                                   -1.5m
                    -12123 Aug 04 j 00:29
                                             0^{\circ}\Upsilon
                                                                                               -12118 Sep 03 j 22:02
                                                                           direct
                                                                                                                       0°M23'34
                    -12123 Sep 15 j 21:52 0°8
                                                                                               -12118 Nov 30 j 03:58
                                                                                                                       0°x<sup>7</sup>
                    -12123 Oct 28 j 12:56
                                                                                               -12117 Jan 08 j 18:50 22° ₹ 06'44
                                            0^{\circ}\Pi
                                                                           asc. node
                    -12123 Dec 11 j 08:52 0°9
                                                                                               -12117 Jan 22 j 00:36 0°궁
                    -12122 Jan 30 j 17:46 0°Ω
                                                                                               -12117 Mar 10 j 16:24
retrograde
                    -12122 Mar 22 j 09:56 14°Ω38'52
                                                                                               -12117 Apr 24 j 00:17
desc. node
                    -12122 Apr 05 j 10:20 13°Ω15'03
                                                                           evening set
                                                                                               -12117 Jun 01 j 16:16 27° ★45'25
min. Earth dist.
                    -12122 Apr 19 j 02:09 9°Ω39'32 0.43540 AU
                                                                                               -12117 Jun 04 j 17:16 0°Υ
                    -12122 Apr 26 j 13:57 7^{\circ}\Omega14'19 -1°27'50
                                                                           max. Earth dist.
                                                                                               -12117 Jun 26 j 03:54 16°Y01'47 2.41034 AU
opposition
                    -12122 Apr 26 j 02:54
                                           7°Ω23'18 -2.6m
                                                                                               -12117 Jul 14 j 11:43
greatest brilliancy
                    -12122 May 28 j 13:58
                                            1°Ω06′12
direct
                    -12122 Aug 19 j 00:04
                                                                                               -12117 Jul 29 j 12:09 11°835'38 1°09'46
                                                                           conjunction
                    -12122 Oct 09 i 23:40
                                                                            minimum elong
                                                                                               -12117 Jul 29 j 13:54 11°839'01
                    -12122 Nov 28 i 03:11
                                                                                               -12117 Aug 22 i 02:54
                                                                                                                       0^{\circ}\Pi
                    -12121 Jan 15 i 08:43 0° ₹
                                                                                               -12117 Sep 29 i 11:50
                                                                                                                       0ಂತಾ
evening set
                    -12121 Mar 03 j 12:47 29° ₹ 54'02
                                                                           morning rise
                                                                                               -12117 Sep 30 j 06:41
                                                                                                                       0°936'41
                    -12121 Mar 03 j 16:30 0°る
                                                                                               -12117 Nov 07 j 11:55
                                                                                                                       0^{\circ}\Omega
max. Earth dist.
                    -12121 Mar 31 j 22:27 18°る18'48 2.61880 AU
                                                                                               -12117 Nov 25 j 19:08 13°\Omega44'04
                                                                           desc node
                    -12121 Apr 05 j 13:56 21°궁21'42
                                                                                               -12117 Dec 17 j 23:30
asc node
                                                                                                                       0° m
                    -12121 Apr 18 j 15:31 0°≈
                                                                                               -12116 Jan 29 j 17:51
                                                                                                                        0∘Ω
                                                                                               -12116 Mar 15 j 19:36
conjunction
                    -12121 Apr 21 j 01:32
                                             1°≈36'32 0°09'36
                                                                                               -12116 May 06 j 23:35
 minimum elong
                    -12121 Apr 21 j 01:08
                                             1°≈35'52
                                                         0°08'59
                                                                           retrograde
                                                                                               -12116 Jul 21 j 15:51 24° ₹ 28'19
                    -12121 Apr 20 j 08:11
                                             1°≈07'39
                                                                                               -12116 Aug 30 j 06:08 14°尽 53'06 -3°17'02
 behind sun begin
                                                                           opposition
                    -12121 Apr 21 j 18:06
                                             2°≈04'06
 behind sun end
                                                                           greatest brilliancy
                                                                                               -12116 Aug 30 j 08:39 14°尽 50'34
                                                                                                                                   -1.4m
                    -12121 Jun 01 j 20:49
                                             0°∀
                                                                           min. Earth dist.
                                                                                               -12116 Aug 30 j 22:43 14°х 36'28
                                                                                                                                    0.66447 AU
morning rise
                    -12121 Jun 08 j 09:48
                                            4°)€32'42
                                                                           direct
                                                                                               -12116 Oct 09 j 14:02
                                                                                                                       5°х 04′50
                                             0^{\circ}\Upsilon
                    -12121 Jul 14 j 07:16
                                                                           asc. node
                                                                                               -12116 Nov 26 j 01:20 16° ₹ 07'49
                    -12121 Aug 24 j 05:51
                                             0°8
                                                                                               -12116 Dec 25 j 23:19
                                                                                                                       0°궁
                    -12121 Oct 03 j 05:51
                                             0^{\circ}II
                                                                                               -12115 Feb 16 j 05:12
                                                                                                                        0°≈
                    -12121 Nov 12 j 02:05
                                             0\circ\odot
                                                                                               -12115 Apr 02 j 21:57
                                                                                                                        0°)€
                    -12121 Dec 22 j 22:40
                                             0°\Omega
                                                                                               -12115 May 15 j 00:45
                                                                                                                        0^{\circ}\Upsilon
                                                                                                                        0°8
                    -12120 Feb 04 j 22:18
                                                                                               -12115 Jun 23 j 20:42
desc. node
                    -12120 Feb 21 j 08:51 10° Mp 08'55
                                                                                               -12115 Aug 01 j 00:04 29°839'01
                                                                           evening set
```

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12115 Aug 01 i 10:47 0°**Ⅱ** -12110 Apr 17 j 16:59 0°궁 -12115 Sep 08 j 18:26 0°€ -12110 Jun 04 j 08:17 0°≈≈ -12110 Jul 18 j 23:33 27°≈41'41 asc. node -12115 Oct 02 j 14:53 18°527'42 0°07'34 -12110 Jul 22 j 18:10 0°**)**€ conjunction -12115 Oct 02 j 15:37 18°529'07 0° minimum elong 0°08'14 -12110 Sep 11 j 20:59 behind sun begin -12115 Oct 01 j 16:16 17°5544'18 -12110 Nov 19 j 06:40 0°8 behind sun end -12115 Oct 03 j 14:58 19°513'55 retrograde -12110 Dec 11 j 13:17 2°**8**53'18 desc. node -12115 Oct 12 j 13:08 26°503'23 -12109 Jan 02 j 11:04 30° R**Y** -12109 Jan 12 j 06:05 27° Υ 16'30 -12115 Oct 17 j 17:40 $0^{\circ}\Omega$ opposition 7°04'11 max. Earth dist. -12115 Nov 15 j 05:13 21° Ω 17'17 2.43029 AU greatest brilliancy -12109 Jan 13 j 18:27 26°**Y**49'31 -2.6m -12115 Nov 27 j 03:17 0° M min. Earth dist. -12109 Jan 18 j 13:27 25°**Y**24'57 0.41712 AU morning rise -12115 Dec 04 j 03:07 5° m 03'22 direct -12109 Feb 15 j 01:52 20°**Y**46'51 0∘**⊽** -12114 Jan 08 j 13:13 -12109 Mar 26 j 08:45 0°8 -12114 Feb 22 j 09:09 -12109 May 19 j 05:54 $0^{\circ}\Pi$ -12114 Apr 11 j 02:15 0°**√** desc. node -12109 Jun 04 j 21:35 10°**I**56'39 -12114 Jun 02 j 13:34 0°궁 -12109 Jul 02 j 19:41 0ಂತಾ retrograde -12114 Aug 27 j 16:22 29°**궁**17'42 -12109 Aug 14 j 21:24 $0^{\circ}\Omega$ opposition -12114 Oct 04 j 20:25 20°₹27'58 -0°24'14 -12109 Sep 27 j 07:30 0° m greatest brilliancy -12114 Oct 04 j 22:16 20°る26'10 -12109 Nov 10 j 19:23 min. Earth dist. -12114 Oct 09 j 05:32 18°る45'08 0.62731 AU -12109 Dec 26 j 12:49 asc. node -12114 Oct 14 j 05:32 16°る51'07 evening set -12108 Jan 08 j 09:02 8°M18'32 direct -12114 Nov 14 j 14:55 10°る31'21 -12108 Feb 11 i 03:21 -12113 Jan 18 i 04:43 0°**≈** -12113 Mar 10 j 17:37 0°**)**€ conjunction -12108 Feb 26 i 01:59 9°**х** 34'00 -0°53'54 -12113 Apr 23 j 14:28 $0^{\circ}\Upsilon$ -12108 Feb 26 i 03:33 9°**х** 36'30 0°54'33 minimum elong -12113 Jun 03 j 03:54 max. Earth dist. -12108 Feb 25 j 20:25 9° ₹ 25'04 2.66362 AU 0°X -12113 Jul 12 i 04:04 -12108 Mar 28 j 23:12 0°궁 0°Π -12113 Aug 19 j 19:54 -12108 Apr 13 j 06:53 9°**る**51'32 0.00 morning rise -12113 Aug 30 j 13:00 -12108 May 14 j 08:25 8°9515'19 0°≈ desc node -12113 Sep 28 j 02:55 -12108 Jun 04 j 15:03 13°≈56'20 $0^{\circ}\Omega$ asc. node -12113 Oct 04 j 05:00 -12108 Jun 28 j 21:46 4°**Ω**33'54 0°**₩** evening set -12113 Nov 07 j 19:26 -12108 Aug 12 j 16:32 $0^{\circ}\Upsilon$ 0° m -12108 Sep 26 j 03:48 0° 8 -12113 Nov 30 j 21:28 16° m 26'46 -0°58'28 -12108 Nov 10 j 11:54 conjunction $0^{\circ}\Pi$ -12113 Nov 30 j 19:02 16° m/22'28 -12108 Dec 31 j 00:39 minimum elong 0°58'15 0ಂತಾ -12113 Dec 20 j 09:01 0°**♀** -12107 Feb 25 j 14:48 17°517'10 retrograde max. Earth dist. -12112 Jan 02 j 21:38 9°**2**14'26 2.54969 AU min. Earth dist. -12107 Mar 25 j 08:08 12°538'21 0.39851 AU -12112 Jan 24 j 15:51 23° **2**50′29 -12107 Mar 30 j 09:26 11°511'06 1°43'38 morning rise opposition -12112 Feb 02 j 23:31 greatest brilliancy -12107 Mar 30 j 03:41 11°515'15 -12112 Mar 20 j 11:59 0°**∡**¹ desc. node -12107 Apr 22 j 02:52 6°ഇ13'11 -12112 May 07 j 21:26 0°る direct -12107 Apr 30 j 00:17 5°5949'01 -12112 Jun 28 j 03:52 0°≈ -12107 Jul 11 j 11:29 -12112 Aug 28 j 20:27 -12107 Sep 01 j 02:20 -12112 Aug 31 j 05:23 -12107 Oct 19 j 07:21 asc. node 0°₩52'35 -12107 Dec 05 j 23:27 retrograde -12112 Oct 10 j 06:06 9° **★**05'09 -12112 Nov 14 i 19:32 1°**)** 32'46 3°31'59 -12106 Jan 22 j 12:57 0°×7 opposition greatest brilliancy -12112 Nov 15 j 16:01 1°**)** 14'10 -2.0m -12106 Feb 16 i 04:11 15° ₹38'12 evening set -12112 Nov 19 i 01:25 30°R≈ -12106 Mar 10 j 14:41 0°정 -12106 Mar 21 j 18:45 min. Earth dist. -12112 Nov 22 i 07:50 28°≈49'21 0.53391 AU max. Earth dist. 7°る12'29 2.64154 AU direct -12112 Dec 24 j 01:12 22°≈23'23 -12111 Jan 29 j 02:30 -12106 Apr 05 j 07:13 16°る39'02 -0°10'26 0°**₩** conjunction -12111 Mar 26 j 08:55 $0^{\circ}\Upsilon$ -12106 Apr 05 j 07:40 16°る39'46 minimum elong -12111 May 09 j 03:38 0° 8 -12106 Apr 04 j 17:15 16° ₹ 16'13 behind sun begin -12106 Apr 05 j 22:06 17°**ਰ**03'19 -12111 Jun 18 j 18:15 $0^{\circ}\Pi$ behind sun end -12111 Jul 17 j 16:27 21° ${\rm I\hspace{-.1em}I}48{}^{\rm t}42$ -12106 Apr 22 j 07:42 27°**궁**50'03 desc. node asc. node -12111 Jul 28 j 13:03 0ಂತಾ -12106 Apr 25 j 14:13 -12111 Sep 06 j 18:18 0° Ω -12106 May 22 j 18:07 18°≈11'57 morning rise -12111 Oct 18 j 05:30 0°**∀** 0° m -12106 Jun 09 j 01:04 -12111 Nov 25 j 11:45 26° m 39'40 -12106 Jul 21 j 21:33 $0^{\circ}\Upsilon$ evening set -12111 Nov 30 j 09:09 0∘**⊽** -12106 Sep 01 j 09:42 0° 8 -12110 Jan 14 j 06:34 0°M -12106 Oct 12 j 02:22 $0^{\circ}\Pi$ -12106 Nov 21 j 19:40 0°9 conjunction -12110 Jan 16 j 05:47 1°M17'29 -1°15'04 -12105 Jan 03 j 02:33 0° Ω -12110 Jan 16 j 06:05 minimum elong 1°ML18'00 1°15'24 -12105 Feb 20 j 01:49 0° m max. Earth dist. -12110 Jan 31 j 14:12 11°ML18'47 2.63224 AU desc. node -12105 Mar 10 j 03:50 9° m 05'35

retrograde

min. Earth dist.

-12105 Apr 23 j 07:10 20° m 27'23

-12105 May 23 j 13:42 14° Mp 18'41 0.50968 AU

-12110 Mar 01 j 13:28

-12110 Mar 06 j 17:54

3°**х** 19′09

morning rise

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 30

```
Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.
                    -12105 May 30 j 01:22 11° m 56'01 -2.1m
                                                                                             -12100 Aug 08 j 23:08
greatest brilliancy
                    -12105 May 31 j 06:56 11° m 28'49 -4°23'14
opposition
direct
                    -12105 Jul 04 j 15:14
                                                                                             -12100 Sep 06 j 12:06 22° II 22'21 0°38'39
                                           4° m 06'36
                                                                         conjunction
                    -12105 Sep 21 j 01:01
                                                                                             -12100 Sep 06 j 15:13 22°Д28'27
                                                                          minimum elong
                                                                                                                                 0°39'19
                                            0∘∙
                                                                                             -12100 Sep 16 j 06:28
                    -12105 Nov 13 j 23:20
                                            0°M
                                                                                                                    0ಂತಾ
                                                                                             -12100 Oct 02 j 23:31
                    -12104 Jan 02 j 22:42
                                                                                                                                2.39013 AU
                                            0°×7
                                                                         max. Earth dist.
                                                                                                                    12°©58'29
                    -12104 Feb 19 j 23:14
                                           0°₹
                                                                                             -12100 Oct 25 j 04:52
                                                                                                                     0^{\circ}\Omega
asc. node
                    -12104 Mar 09 j 05:49 11°₹43'43
                                                                         desc. node
                                                                                             -12100 Oct 29 j 09:48
                                                                                                                     3°£11′06
evening set
                    -12104 Mar 27 j 11:12 23°♂37'33
                                                                         morning rise
                                                                                             -12100 Nov 09 j 22:18 11°Ω50'35
                    -12104 Apr 06 j 02:22
                                                                                             -12100 Dec 04 j 13:40
                                                                                                                     0°m
max. Earth dist.
                    -12104 Apr 17 j 19:39
                                            7°≈50'37
                                                      2.56863 AU
                                                                                             -12099 Jan 16 j 00:24
                                                                                                                     0°Ω
                                                                                             -12099 Mar 02 j 02:44
                                                                                                                     0°M
                    -12104 May 16 j 09:35 27°≈23'21
conjunction
                                                       0°40'51
                                                                                             -12099 Apr 19 j 19:40
                                                                                                                     0°×7
 minimum elong
                    -12104 May 16 j 07:53 27°≈20'25
                                                       0°40'26
                                                                                             -12099 Jun 15 j 14:18
                                                                                                                     0°궁
                    -12104 May 20 j 03:36
                                           0°)€
                                                                         retrograde
                                                                                             -12099 Aug 12 j 19:11 15°⋜40'34
                    -12104 Jul 01 j 04:19
                                            0^{\circ}\Upsilon
                                                                         opposition
                                                                                             -12099 Sep 20 j 15:49
                                                                                                                     6°ප30'00 -1°38'45
morning rise
                    -12104 Jul 06 j 08:49
                                            3°Y47'43
                                                                         greatest brilliancy
                                                                                             -12099 Sep 20 j 20:32
                                                                                                                     6°る25'19 -1.4m
                    -12104 Aug 10 j 13:10
                                            0°8
                                                                         min. Earth dist.
                                                                                             -12099 Sep 23 j 14:54
                                                                                                                     5°る19'30
                                                                                                                                 0.64902 AU
                    -12104 Sep 18 j 21:00
                                            0^{\circ}\Pi
                                                                                             -12099 Oct 08 j 11:54 30°R ⊀
                    -12104 Oct 27 j 22:41
                                                                         asc. node
                                                                                             -12099 Oct 30 j 20:00 26° ₹32'25
                    -12104 Dec 06 j 17:16
                                            0^{\circ}\Omega
                                                                         direct
                                                                                             -12099 Oct 31 j 10:33 26° ₹32'16
                    -12103 Jan 17 j 11:12
                                            0° m
                                                                                             -12099 Nov 25 i 02:16
                                                                                                                     0°궁
desc. node
                    -12103 Jan 24 i 22:45
                                            5° 10 08'26
                                                                                             -12098 Jan 31 i 01:12
                                                                                                                     0°28
                    -12103 Mar 04 i 11:09
                                            0∘⊽
                                                                                             -12098 Mar 20 i 03:22
                                                                                                                     0°)
                    -12103 May 05 j 01:13
                                           0°M
                                                                                             -12098 May 02 j 01:36
                                                                                                                     0^{\circ}\Upsilon
                    -12103 Jun 03 j 00:12 4°ML58'55
                                                                                             -12098 Jun 11 j 05:38
                                                                                                                     0°8
retrograde
                    -12103 Jun 30 j 00:35 30°R ₽
                                                                                             -12098 Jul 20 j 00:14
                                                                                                                     0°П
                    -12103 Jul 08 j 05:35 26° 254'53 0.61381 AU
                                                                                             -12098 Aug 27 j 11:33
min. Earth dist.
                                                                                                                     0ಂತಾ
                    -12103 Jul 12 j 19:37 25°♀05'37 -5°21'19
                                                                                             -12098 Sep 10 j 01:48 10°531'03
opposition
                                                                         evening set
                    -12103 Jul 12 j 00:15 25°224'52 -1.6m
                                                                                             -12098 Sep 16 j 06:05 15°5016'07
greatest brilliancy
                                                                         desc. node
                    -12103 Aug 19 j 11:40 16°♀17'44
                                                                                             -12098 Oct 05 j 14:11 0^{\circ}\Omega
direct
                    -12103 Oct 12 j 09:33 0°M
                                                                                             -12098 Nov 09 j 08:55 25°\Omega49'48 -0°38'11
                    -12103 Dec 10 j 11:44 0° ₹
                                                                         conjunction
                    -12102 Jan 25 j 08:42 27° ₹03'53
                                                                                             -12098 Nov 09 j 06:25 25°\Omega45'16 0°37'43
asc. node
                                                                          minimum elong
                    -12102 Jan 30 j 03:10 0°る
                                                                                             -12098 Nov 15 j 02:40 0° Mp
                    -12102 Mar 18 j 03:09 0°≈
                                                                                             -12098 Dec 19 j 00:28 24° m 05'03 2.50547 AU
                                                                         max. Earth dist.
                    -12102 May 01 j 06:53 0°光
                                                                                             -12098 Dec 27 j 13:19 0°♀
evening set
                    -12102 May 12 j 03:04 7° ∺ 38'20
                                                                         morning rise
                                                                                             -12097 Jan 06 j 02:02
                                                                                                                     6°£32'08
max. Earth dist.
                    -12102 May 28 j 18:07 19°米 34'05
                                                      2.45599 AU
                                                                                             -12097 Feb 10 j 03:44
                                                                                                                     0°M
                    -12102 Jun 12 j 00:38 0°Υ
                                                                                             -12097 Mar 28 j 22:54
                                                                                                                     0°∡7
                                                                                             -12097 May 17 j 08:04
                                                                                                                    0°る
                    -12102 Jul 06 j 01:41 17°Υ'57'13 1°13'09
                                                                                             -12097 Jul 11 j 01:21 0°≈
conjunction
                    -12102 Jul 06 j 01:07 17°Υ′56′09 1°13′21
                                                                                             -12097 Sep 17 j 21:59 22°≈37'25
 minimum elong
                                                                         asc. node
                    -12102 Jul 21 j 21:37 0°8
                                                                                             -12097 Sep 22 j 11:21 22°≈45'08
                                                                         retrograde
                    -12102 Aug 29 j 15:40 0°Ⅱ
                                                                                             -12097 Oct 29 j 05:42 14°≈37'31
                                                                         opposition
                    -12102 Sep 03 i 07:59 3°Д39'03
                                                                                             -12097 Oct 29 j 15:05 14°≈28'40
morning rise
                                                                         greatest brilliancy
                                                                                                                                -1.8m
                    -12102 Oct 07 i 03:05 0°95
                                                                         min. Earth dist.
                                                                                             -12097 Nov 04 j 16:31 12°≈11'29
                                                                                                                                 0.57634 AU
                    -12102 Nov 15 i 05:13 0^{\circ}\Omega
                                                                         direct
                                                                                             -12097 Dec 08 i 09:51 4°≈59'20
desc. node
                    -12102 Dec 12 j 16:36 20^{\circ}\Omega27'34
                                                                                             -12096 Feb 19 i 11:17
                                                                                                                     0°)
                    -12102 Dec 25 j 19:53 0° Mg
                                                                                             -12096 Apr 07 j 02:35
                                                                                                                     0^{\circ}\Upsilon
                    -12101 Feb 06 j 22:28
                                                                                             -12096 May 18 j 23:56
                                                                                                                     0°8
                                           0∘⊽
                    -12101 Mar 26 j 03:03
                                           0°M
                                                                                             -12096 Jun 27 j 17:16
                                                                                                                     0°П
                    -12101 May 22 j 18:23
                                                                                             -12096 Aug 03 j 08:04 28°Д02'20
                                           0°×7
                                                                         desc node
                                                                                             -12096 Aug 05 j 21:43
retrograde
                    -12101 Jul 09 j 00:20 11° ₹20'20
                                                                                                                     000
                                           1°∡33'57 -4°06'37
opposition
                    -12101 Aug 17 j 21:30
                                                                                             -12096 Sep 14 j 15:21
                                                                                                                     0^{\circ}\Omega
                    -12101 Aug 17 j 02:43
min. Earth dist.
                                            1°≯52'52 0.66230 AU
                                                                                             -12096 Oct 25 j 16:58
                                                                                                                     0° m
greatest brilliancy
                    -12101 Aug 17 j 19:31
                                            1°∡35′57 -1.4m
                                                                                             -12096 Nov 06 j 04:34
                                                                                                                     8° m 10'17
                                                                         evening set
                    -12101 Aug 21 j 19:27 30°RM
                                                                                             -12096 Dec 07 j 13:20
                                                                                                                     0∘⊽
                    -12101 Sep 26 j 16:48 21°ML57'14
direct
                    -12101 Nov 05 j 10:11
                                                                                             -12096 Dec 29 j 22:17 15°209'35 -1°14'06
                                           0° ∕™
                                                                         conjunction
asc. node
                    -12101 Dec 13 j 14:23 16° ₹ 53'20
                                                                          minimum elong
                                                                                             -12096 Dec 29 j 21:30 15°208'17 1°14'15
                    -12100 Jan 07 j 00:04
                                           0°ಕ
                                                                         max. Earth dist.
                                                                                             -12095 Jan 21 j 00:22 29°⊆50'01 2.60584 AU
                    -12100 Feb 25 j 17:20
                                            0°≈
                                                                                             -12095 Jan 21 j 06:26
                                                                                                                     0°M
                    -12100 Apr 10 j 17:09
                                            0°)€
                                                                         morning rise
                                                                                             -12095 Feb 19 j 02:03 18°ML46'34
                    -12100 May 22 j 14:47
                                            0^{\circ}\Upsilon
                                                                                             -12095 Mar 08 j 13:29
                                                                                                                     0°∡7
                    -12100 Jul 01 j 09:20
                                            0°8
                                                                                             -12095 Apr 25 j 00:49
                                                                                                                     0°る
                    -12100 Jul 06 j 17:48 4°807'26
                                                                                             -12095 Jun 12 j 14:30
evening set
```

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12095 Aug 02 j 10:52 0°**∀** -12090 Nov 22 i 17:35 0°M -12095 Aug 04 j 18:39 -12089 Jan 10 j 11:36 0°×7 asc. node 1°**升**18′25 -12095 Oct 02 j 01:06 $0^{\circ}\Upsilon$ -12089 Feb 27 j 00:53 0°궁 -12095 Nov 14 j 10:49 9°Y33'58 -12089 Mar 12 j 11:50 8°**る**39'26 retrograde evening set -12089 Mar 26 j 21:46 18°**ਰ**01'53 -12095 Dec 17 j 15:01 3°**Y**10'00 opposition 6°05'29 asc. node -12095 Dec 19 j 04:26 2°**Y**39'15 -2.3m 2.60298 AU greatest brilliancy max. Earth dist. -12089 Apr 07 j 05:29 25°₹28'27 0°**Y**35'58 min. Earth dist. -12095 Dec 25 j 11:21 0.46055 AU -12089 Apr 14 j 01:25 0°≈ -12095 Dec 27 j 09:11 30°R ★ direct -12094 Jan 23 j 03:14 25°**∺**23'28 conjunction -12089 Apr 30 j 09:22 10°≈56'29 0°21'15 $0^{\circ}\Upsilon$ -12094 Feb 19 j 01:28 minimum elong -12089 Apr 30 j 08:27 10°≈54'57 0°20'42 -12094 Apr 18 j 18:47 0°8 -12089 May 28 j 05:27 0°**₩** -12094 Jun 01 j 23:05 -12089 Jun 18 j 11:04 14° **ਮ** 54'10 Π °0 morning rise $0^{\circ}\Upsilon$ -12094 Jun 21 j 13:27 14°**Д**01'35 -12089 Jul 09 j 12:36 desc. node -12094 Jul 13 j 14:49 0ಂತಾ -12089 Aug 19 j 06:11 0°8 -12094 Aug 24 j 02:28 $0^{\circ}\Omega$ -12089 Sep 27 j 23:51 $0^{\circ}\Pi$ -12094 Oct 05 j 11:54 -12089 Nov 06 j 12:17 0ಂತಾ -12094 Nov 18 j 07:27 0∘**⊽** -12089 Dec 16 j 20:35 $0^{\circ}\Omega$ evening set -12094 Dec 23 j 01:49 23°**♀**06'05 -12088 Jan 28 j 16:53 0° m -12093 Jan 02 j 14:44 desc. node -12088 Feb 11 j 20:18 9° m 13'14 -12088 Mar 18 j 08:43 conjunction -12093 Feb 10 j 15:15 25°ML15'12 -1°05'30 retrograde -12088 May 18 j 20:30 19° **△**15'06 minimum elong -12093 Feb 10 j 16:38 25° ML17'25 1°06'04 min. Earth dist. -12088 Jun 21 i 05:07 11°**2**53'06 0.57840 AU max. Earth dist. -12093 Feb 16 i 05:19 28° ML50'28 2.65781 AU greatest brilliancy -12088 Jun 26 i 03:24 9°**£**57'59 -1.7m -12093 Feb 18 i 00:40 0° ₹ opposition -12088 Jun 27 i 05:26 9°**-**32'36 -5°21'14 morning rise -12093 Mar 30 j 10:14 25° ₹ 51'03 direct -12088 Aug 02 j 17:54 1°**£**12'55 -12093 Apr 05 j 21:54 0°る -12088 Oct 26 j 19:48 0°M -12093 May 22 j 15:41 -12088 Dec 19 j 12:06 0°**∡**7 0°≈≈ -12093 Jun 22 j 11:08 19°≈55'04 -12087 Feb 06 j 19:20 0°궁 asc node -12093 Jul 07 j 24:00 0°**米** -12087 Feb 10 j 22:40 2°る36'05 asc node -12093 Aug 23 j 06:14 0°Υ -12087 Mar 25 j 08:48 0°≈ -12093 Oct 09 j 13:23 0°8 -12087 Apr 23 j 09:42 19°≈34'49 evening set -12087 May 08 j 10:30 -12093 Dec 01 j 03:27 0°**Ц** 0°₩ -12087 May 10 j 00:16 -12092 Jan 28 j 16:30 17°**Ц**25'25 2.50299 AU max. Earth dist. 1°**₩**06'06 retrograde -12092 Feb 28 j 17:18 12°**I**I1'11 5°07'34 opposition -12092 Feb 28 j 08:44 12° **II** 16'58 0.38440 AU -12087 Jun 14 j 22:31 26° **★** 50'07 1°05'43 min. Earth dist. conjunction -12092 Feb 28 j 20:46 12°**Д**08'51 -12087 Jun 14 j 20:40 26° ¥ 46'44 1°05'37 greatest brilliancy -2.9m minimum elong -12087 Jun 19 j 06:09 0°**Υ** direct -12092 Mar 30 j 07:21 7°**Ⅲ**03'01 desc. node -12092 May 08 j 18:10 15°**Ц**56'58 -12087 Jul 29 j 06:51 0° 8 -12092 Jun 06 j 21:04 0°ഇ morning rise -12087 Aug 09 j 09:56 8°**8**30'57 -12092 Jul 27 j 01:06 $0^{\circ}\Omega$ -12087 Sep 06 j 05:08 $\Pi^{\circ}0$ -12092 Sep 11 j 14:19 -12087 Oct 14 j 20:45 0°95 -12092 Oct 27 j 19:17 -12087 Nov 23 j 03:12 0°**Ω** -12092 Dec 13 j 11:46 0°M -12087 Dec 29 j 13:01 26° **Ω**48'10 desc. node -12091 Jan 29 j 13:44 0° **尽** -12086 Jan 03 j 00:13 0° Mp -12091 Jan 31 j 21:43 1° ₹ 29'06 -12086 Feb 15 j 17:55 evening set max. Earth dist. -12091 Mar 12 i 02:04 26° ₹31'23 2.65665 AU -12086 Apr 06 i 00:54 0°M -12086 Jun 25 i 07:52 27° ML52'23 -12091 Mar 17 i 11:48 0°る retrograde min. Earth dist. -12086 Aug 02 i 01:05 18° ML53'57 0.65046 AU -12091 Mar 20 j 23:14 2°る14'23 -0°29'06 conjunction opposition -12086 Aug 04 j 07:38 17°M 59'07 -4°45'50 minimum elong -12091 Mar 21 i 00:21 2° 중16'11 0°29'48 greatest brilliancy -12086 Aug 03 j 23:30 18°ML07'17 -1.4m -12091 May 02 i 13:48 0°**≈** direct -12086 Sep 12 j 09:42 8°MJ38'08 -12091 May 06 i 23:41 2°≈54'49 -12086 Nov 22 j 07:19 morning rise 0°×7 -12091 May 09 j 02:40 4°≈19'11 -12086 Dec 30 j 03:50 20° ₹ 01'26 asc. node asc node -12091 Jun 16 j 08:56 0°**∀** -12085 Jan 16 j 09:29 0°궁 -12091 Jul 29 j 19:20 $0^{\circ}\Upsilon$ 0°≈ -12085 Mar 05 j 16:33 -12091 Sep 10 j 02:54 0°8 -12085 Apr 19 j 06:06 0°**)** -12091 Oct 21 j 21:04 $0^{\circ}\Pi$ -12085 May 31 j 01:09 -12085 Jun 14 j 03:30 10°**Y**′29′29 -12091 Dec 03 j 03:29 0ಂಣ evening set -12090 Jan 17 j 16:29 0 $^{\circ}\Omega$ -12085 Jul 09 j 19:50 0°8 -12090 Mar 26 j 21:46 $28^{\circ}\Omega$ 26'15 -12085 Jul 20 j 15:17 8°**8**20'22 2.39104 AU desc. node max. Earth dist. -12090 Apr 03 j 18:50 28° **Ω**52'38 retrograde min. Earth dist. -12090 May 02 j 04:54 23°**Ω**31'31 0.46071 AU conjunction -12085 Aug 12 j 13:20 26°**8**11'09 1°02'03 greatest brilliancy -12090 May 09 j 06:30 21°**Ω**06'45 -2.4m minimum elong -12085 Aug 12 j 16:14 26°**8**16'49 1°02'35 opposition -12090 May 10 j 03:52 20°**Ω**48'26 -2°49'18 -12085 Aug 17 j 10:18 Π $^{\circ}$ 0 direct -12090 Jun 11 j 22:34 14°**Ω**12'48 -12085 Sep 24 j 18:11 0ಂತಾ -12090 Aug 07 j 23:05 -12085 Oct 15 j 14:38 16°509'57 morning rise

-12085 Nov 02 j 16:47

-12090 Oct 03 j 07:59

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12085 Nov 16 j 05:19 $10^{\circ}\Omega$ 11'36 desc. node greatest brilliancy -12080 Nov 26 j 23:01 12°**米**03′24 -2.1m -12085 Dec 13 j 02:07 0° Mp min. Earth dist. -12080 Dec 03 j 16:55 9°**\(4**0'53 0.50837 AU -12084 Jan 24 j 16:03 0°**♀** direct -12079 Jan 03 j 07:13 3°**)** 41'28 g e d c g

	-12084 Jan 24 j 16:03	0∘ ರಾ		direct	-12079 Jan 03 j 07:13	3° ∺ 41′28	
	-12084 Mar 10 j 05:55	0° M ,			-12079 Mar 17 j 09:20	0 ° $\mathbf{\gamma}$	
	-12084 Apr 29 j 16:03	0° ⊼ ¹			-12079 May 02 j 08:37	0°B	
	-12084 Jul 09 j 03:22	0° ට			-12079 Jun 12 j 18:47	0° I I	
retrograde	-12084 Jul 29 j 15:21	2° る 26'33		desc. node	-12079 Jul 08 j 04:10		
renograde				desc. Houe			
	-12084 Aug 17 j 20:39				-12079 Jul 23 j 00:57	0°©	
opposition	-12084 Sep 07 j 00:27	22° ≯ ′59′15	-2°43'39		-12079 Sep 01 j 14:09	0 $^{\circ}$ Ω	
greatest brilliancy	-12084 Sep 07 j 04:32	22° ₹ ′55′10	-1.4m		-12079 Oct 13 j 07:09	0° m)	
min. Earth dist.	-12084 Sep 08 j 12:51	22° ₹ '22'51	0.66149 AU		-12079 Nov 25 j 15:03	0∘ ত	
direct	-12084 Oct 17 j 13:37			evening set	-12079 Dec 05 j 21:48	6° £ 57'01	
asc. node	-12084 Nov 16 j 09:50			e , e.i.i.g see	-12078 Jan 09 j 14:52	0°M	
asc. node					-120/0 Jan 07 j 14.32	O IIG	
	-12084 Dec 17 j 06:42	ರ∘ರ					
	-12083 Feb 10 j 07:05	0° ≈		conjunction	-12078 Jan 25 j 17:47		
	-12083 Mar 28 j 16:41	0° ∀		minimum elong	-12078 Jan 25 j 18:36	10°M32'46	1°13'24
	-12083 May 10 j 02:02	0° Y		max. Earth dist.	-12078 Feb 06 j 12:47	18°ML09'52	2.64372 AU
	-12083 Jun 19 j 00:56	8°			-12078 Feb 24 j 22:03	0° ∡ ¹	
	-12083 Jul 27 j 16:32	Π°		morning rise	-12078 Mar 15 j 12:09	11° -7 '53'32	
evening set	-12083 Aug 15 j 13:47	14° II 47'16		morning rise	-12078 Apr 12 j 22:30	0°る	
evening set	• •				1 3		
	-12083 Sep 04 j 01:11	0° ©			-12078 May 30 j 04:29	0° ≈	
desc. node	-12083 Oct 03 j 00:42	22° © 22'48		asc. node	-12078 Jul 09 j 06:06	25°≈19'41	
	-12083 Oct 13 j 00:53	$0^{\circ}\Omega$			-12078 Jul 16 j 16:34	0° ∀	
					-12078 Sep 03 j 10:41	0° Υ	
conjunction	-12083 Oct 16 j 18:39	2° Ω 49'50	-0°10'22		-12078 Oct 27 j 14:47	0°8	
minimum elong	-12083 Oct 16 j 17:49		0°09'44	retrograde	-12078 Dec 28 j 12:55		
•	3	2°Ω08'14	0 07 11	•	•		6°58'35
behind sun begin	-12083 Oct 15 j 20:38			opposition	-12077 Jan 28 j 12:06		
behind sun end	-12083 Oct 17 j 15:01	3° Ω 28'16		greatest brilliancy	-12077 Jan 29 j 16:20		-2.7m
	-12083 Nov 22 j 10:24	0° m ∕		min. Earth dist.	-12077 Feb 02 j 01:25		0.39909 AU
max. Earth dist.	-12083 Nov 29 j 22:32	5° m 25'33	2.45693 AU	direct	-12077 Mar 01 j 20:50	7° 8 05'16	
morning rise	-12083 Dec 16 j 16:09	17° m 21'07			-12077 May 07 j 20:01	$\Pi^{\circ}0$	
-	-12082 Jan 03 j 19:17	0∘ ত		desc. node	-12077 May 26 j 10:57	11° Ⅱ 00'19	
	-12082 Feb 17 j 11:27	0°M₊			-12077 Jun 25 j 02:06	0ංම	
	•	0° ∡ 7				0 ° Ω	
	-12082 Apr 05 j 17:47				-12077 Aug 08 j 14:53		
	-12082 May 26 j 17:13	0°ප			-12077 Sep 21 j 19:38	0° m y	
	-12082 Jul 28 j 15:35	0° ≈			-12077 Nov 05 j 18:38	0∘ ⊽	
retrograde	-12082 Sep 05 j 16:00	7° ≈ 49'29			-12077 Dec 21 j 18:24	0° M ₊	
asc. node	-12082 Oct 04 j 14:11	2° ≈ 29'58		evening set	-12076 Jan 17 j 11:28	17° M .10'48	
	-12082 Oct 11 j 09:10	30°R₹		•	-12076 Feb 06 j 12:09	0° √	
opposition	-12082 Oct 13 j 09:35		0°23'16	max. Earth dist.	-12076 Mar 02 j 11:15		2 66348 ATT
	_			max. Lartii dist.	-12070 Widi 02 j 11.13	13 × 3731	2.00540 AC
greatest brilliancy							
min. Earth dist.	-12082 Oct 13 j 11:09		-1.6m				
	-12082 Oct 18 j 13:29	27° る 13'24		conjunction	-12076 Mar 05 j 20:27		
direct	_	27° る 13'24		conjunction minimum elong	-12076 Mar 05 j 20:27 -12076 Mar 05 j 21:57		
	-12082 Oct 18 j 13:29	27° る 13'24		,			
	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30	27° ප 13'24 19° පි 20'24		minimum elong	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29	18° 丸 10'15 0° 궁	
	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37	27°♂13'24 19°♂20'24 0°≈ 0°⊁		,	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56	18°ダ10'15 0°る 18°る25'34	
	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21	27°る13'24 19°る20'24 0°≈ 0°升 0°Υ		minimum elong morning rise	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44	18°ダ10'15 0°る 18°る25'34 0°≈	
	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54	27°ব13'24 19°ব20'24 0°≈ 0°升 0°Υ 0°Υ		minimum elong	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03	18° ₹10'15 0° ♂ 18° ♂25'34 0° ≈ 10° ≈ 41'48	
	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01	27°♂13'24 19°♂20'24 0°≈ 0°升 0°↑ 0°℃ 0°Ы		minimum elong morning rise	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52	18° ҂ 10'15 0° ♂ 18° ♂ 25'34 0°≈ 10°≈41'48 0° 光	
direct	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30	27°♂13'24 19°♂20'24 0°≈ 0°升 0°↑ 0°℃ 0°Ы 0°П		minimum elong morning rise	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03	18°⊀10'15 0°♂ 18°♂25'34 0°≈ 10°≈41'48 0°升 0°Υ	
	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01	27°♂13'24 19°♂20'24 0°≈ 0°升 0°↑ 0°℃ 0°Ы		minimum elong morning rise	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52	18° ҂ 10'15 0° ♂ 18° ♂ 25'34 0°≈ 10°≈41'48 0° 光	
direct	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30	27°♂13'24 19°♂20'24 0°≈ 0°升 0°↑ 0°℃ 0°Ы 0°П		minimum elong morning rise	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03	18°⊀10'15 0°♂ 18°♂25'34 0°≈ 10°≈41'48 0°升 0°Υ	
direct desc. node	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23	27°♂13'24 19°♂20'24 0°≈ 0°升 0°Y 0°Y 0°B 0°B 0°B 4°\$41'23 0°&		minimum elong morning rise	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23	18°₹10'15 0°♂ 18°♂25'34 0°≈ 10°≈41'48 0°升 0°Υ 0°∀ 0°Ы 0°Ⅱ	
direct	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Oct 17 j 02:14	27°♂13'24 19°♂20'24 0°≈ 0°升 0°Y 0°Y 0°B 0°I 0°© 4°©41'23 0°Ω 17°Ω38'49		minimum elong morning rise	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22	18°₹10'15 0°♂ 18°♂25'34 0°≈ 10°≈41'48 0°升 0°Υ 0°∀ 0°Ы 0°Ы 0°Ы 0°Ы	
direct desc. node	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23	27°♂13'24 19°♂20'24 0°≈ 0°升 0°Y 0°Y 0°B 0°B 0°B 4°\$41'23 0°&		minimum elong morning rise asc. node	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47	18°₹10'15 0°♂ 18°♂25'34 0°≈ 10°≈41'48 0°¥ 0°Y 0°Y 0°B 0°I 0°©	
desc. node evening set	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Oct 17 j 02:14 -12081 Nov 03 j 02:05	27°云13'24 19°云20'24 0°≈ 0°光 0°Y 0°B 0°I 0°© 4°©41'23 0°& 17°&38'49 0°m	0.61136 AU	minimum elong morning rise	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47 -12075 Mar 12 j 03:58	18°₹10'15 0°♂ 18°♂25'34 0°≈ 10°≈41'48 0°¥ 0°Y 0°Y 0°Ы 0°Ы 0°Ы 0°Ы 0°Ы 0°Ы 0°Ы	
desc. node evening set conjunction	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Oct 17 j 02:14 -12081 Nov 03 j 02:05	27°丙13'24 19°丙20'24 0°≈ 0°升 0°分 0°円 0°5 4°541'23 0°凡 17°凡38'49 0°順	0.61136 AU -1°06'21	minimum elong morning rise asc. node	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47 -12075 Mar 12 j 03:58 -12075 Apr 04 j 11:21	18°₹10'15 0°ጜ 18°ጜ25'34 0°≈ 10°≈41'48 0°升 0°Υ 0°Υ 0°Β 0°Β 3°Ω34'37 30°κ©	0°46′15
desc. node evening set	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Oct 17 j 02:14 -12081 Nov 03 j 02:05	27°丙13'24 19°丙20'24 0°≈ 0°升 0°分 0°円 0°5 4°541'23 0°凡 17°凡38'49 0°順	0.61136 AU	minimum elong morning rise asc. node	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47 -12075 Mar 12 j 03:58	18°₹10'15 0°ጜ 18°ጜ25'34 0°≈ 10°≈41'48 0°升 0°Υ 0°Υ 0°Β 0°Β 3°Ω34'37 30°κ©	
desc. node evening set conjunction	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Oct 17 j 02:14 -12081 Nov 03 j 02:05	27°丙13'24 19°丙20'24 0°≈ 0°升 0°分 0°円 0°5 4°541'23 0°凡 17°凡38'49 0°順	0.61136 AU -1°06'21	minimum elong morning rise asc. node	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47 -12075 Mar 12 j 03:58 -12075 Apr 04 j 11:21	18°メ10'15 0°云 18°云25'34 0°≈ 10°≈41'48 0°升 0°Y 0°Y 0°B 0°B 0°B 3°B34'37 30°R© 28°©48'20	0°46′15
desc. node evening set conjunction	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Nov 03 j 02:05 -12081 Dec 12 j 06:33 -12081 Dec 12 j 04:37 -12081 Dec 15 j 17:04	27°♂13'24 19°♂20'24 0°≈ 0°升 0°℃ 0°出 0°© 4°©41'23 0°Ω 17°Ω38'49 0°™ 27°™37'51 27°™34'30 0°Ф	0.61136 AU -1°06'21	minimum elong morning rise asc. node retrograde min. Earth dist.	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47 -12075 Mar 12 j 03:58 -12075 Apr 04 j 11:21 -12075 Apr 08 j 14:20	18°×10'15 0°云 18°云25'34 0°≈ 10°≈41'48 0°升 0°Y 0°B 0°B 0°B 0°B 3°B34'37 30°R© 28°©48'20 27°©34'19	0°46′15 0.41681 AU
desc. node evening set conjunction minimum elong	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Oct 17 j 02:14 -12081 Nov 03 j 02:05 -12081 Dec 12 j 06:33 -12081 Dec 12 j 04:37 -12081 Dec 15 j 17:04 -12080 Jan 10 j 08:03	27°♂13'24 19°♂20'24 0°≈ 0°升 0°℃ 0°升 0°℃ 4°℃41'23 0°Ω 17°Ω38'49 0°™ 27°™37'51 27°™34'30 0°Ω 17°Ω23'46	-1°06′21 1°06′17	minimum elong morning rise asc. node retrograde min. Earth dist. desc. node opposition	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47 -12075 Mar 12 j 03:58 -12075 Apr 04 j 11:21 -12075 Apr 08 j 14:20 -12075 Apr 12 j 15:11 -12075 Apr 15 j 06:27	18°×10'15 0°云 18°云25'34 0°≈ 10°≈41'48 0°升 0°Y 0°B 0°П 0°© 0°Ω 3°Ω34'37 30°R© 28°©48'20 27°©34'19 26°©45'22	0.41681 AU -0°11'32
desc. node evening set conjunction minimum elong max. Earth dist.	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Oct 17 j 02:14 -12081 Nov 03 j 02:05 -12081 Dec 12 j 06:33 -12081 Dec 12 j 04:37 -12081 Dec 15 j 17:04 -12080 Jan 10 j 08:03 -12080 Jan 29 j 07:15	27° 古13'24 19° 古20'24 0° ※ 0° 升 0° 分 0° り 0° り 0° り 4° 541'23 0° り 17° り38'49 0° り 27° り37'51 27° り34'30 0° 丘 17° 요23'46 0° 肌	-1°06′21 1°06′17	minimum elong morning rise asc. node retrograde min. Earth dist. desc. node opposition greatest brilliancy	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47 -12075 Apr 04 j 11:21 -12075 Apr 08 j 14:20 -12075 Apr 12 j 15:11 -12075 Apr 15 j 06:27 -12075 Apr 15 j 05:11	18° ₹10'15 0° ₹ 18° ₹25'34 0° ≈ 10° ≈ 41'48 0° ¥ 0° Y 0° ¥ 0° II 0° © 0° Ω 3° Ω34'37 30° № 28° © 48'20 27° © 34'19 26° © 45'22 26° © 46'20	0.41681 AU -0°11'32
desc. node evening set conjunction minimum elong	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Nov 03 j 02:05 -12081 Dec 12 j 06:33 -12081 Dec 12 j 04:37 -12081 Dec 15 j 17:04 -12080 Jan 10 j 08:03 -12080 Jan 29 j 07:15 -12080 Feb 03 j 14:15	27°云13'24 19°云20'24 0°≈ 0°升 0°分 0°分 0°引 0°⑤ 4°⑤41'23 0°Ω 17°Ω38'49 0°阶 27°™37'51 27°™34'30 0°Ω 17°Ω23'46 0°™ 3°™28'40	-1°06′21 1°06′17	minimum elong morning rise asc. node retrograde min. Earth dist. desc. node opposition	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47 -12075 Apr 04 j 11:21 -12075 Apr 08 j 14:20 -12075 Apr 12 j 15:11 -12075 Apr 15 j 06:27 -12075 Apr 15 j 05:11 -12075 May 16 j 14:56	18° ₹10'15 0° ₹ 18° ₹25'34 0° ≈ 10° ≈ 41'48 0° ¥ 0° ¥ 0° ¥ 0° B 0° B 0° B 3° £34'37 30° № 28° \$48'20 27° \$34'19 26° \$45'22 26° \$46'20 20° \$59'26	0.41681 AU -0°11'32
desc. node evening set conjunction minimum elong max. Earth dist.	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Nov 03 j 02:05 -12081 Dec 12 j 06:33 -12081 Dec 12 j 04:37 -12081 Dec 15 j 17:04 -12080 Jan 10 j 08:03 -12080 Jan 29 j 07:15 -12080 Feb 03 j 14:15 -12080 Mar 15 j 16:26	27°云13'24 19°云20'24 0°≈ 0°升 0°分 0°分 0°引 0°⑤ 4°⑤41'23 0°Ω 17°Ω38'49 0°₥ 27°™37'51 27°™34'30 0°Ω 17°Ω23'46 0°M 3°M-28'40	-1°06′21 1°06′17	minimum elong morning rise asc. node retrograde min. Earth dist. desc. node opposition greatest brilliancy	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47 -12075 Apr 12 j 03:58 -12075 Apr 04 j 11:21 -12075 Apr 12 j 15:11 -12075 Apr 15 j 06:27 -12075 Apr 15 j 05:11 -12075 May 16 j 14:56 -12075 Jun 26 j 05:09	18° ₹10'15 0° ₹ 18° ₹25'34 0° ≈ 10° ≈ 41'48 0° ¥ 0° ¥ 0° ¥ 0° B 0° B 0° B 3° \$\Omega\$ 33'4'37 30° \$\Omega\$ 28° \$\Omega\$ 48'20 27° \$\Omega\$ 34'19 26° \$\Omega\$ 45'22 26° \$\Omega\$ 46'20 20° \$\Omega\$ 59'26 0° \$\Omega\$	0.41681 AU -0°11'32
desc. node evening set conjunction minimum elong max. Earth dist.	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Nov 03 j 02:05 -12081 Dec 12 j 06:33 -12081 Dec 12 j 04:37 -12081 Dec 15 j 17:04 -12080 Jan 10 j 08:03 -12080 Jan 29 j 07:15 -12080 Feb 03 j 14:15 -12080 Mar 15 j 16:26 -12080 May 02 j 15:43	27°云13'24 19°云20'24 0°≈ 0°升 0°分 0°円 0°3 4°341'23 0°8 17°\$38'49 0°m 27°\$37'51 27°\$34'30 0°\$ 17°\$23'46 0°M 3°M28'40 0°% 0°♂	-1°06′21 1°06′17	minimum elong morning rise asc. node retrograde min. Earth dist. desc. node opposition greatest brilliancy	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47 -12075 Mar 12 j 03:58 -12075 Apr 04 j 11:21 -12075 Apr 08 j 14:20 -12075 Apr 12 j 15:11 -12075 Apr 15 j 06:27 -12075 Apr 15 j 05:11 -12075 May 16 j 14:56 -12075 Jun 26 j 05:09 -12075 Aug 24 j 09:51	18° ₹10'15 0° ₹ 18° ₹25'34 0° ≈ 10° ≈ 41'48 0° ¥ 0° ¥ 0° ¥ 0° ¶ 0° © 0° Ω 3° Ω34'37 30° № 28° © 48'20 27° © 34'19 26° © 46'20 20° © 59'26 0° Ω 0° ¶ 0° №	0.41681 AU -0°11'32
desc. node evening set conjunction minimum elong max. Earth dist.	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Nov 03 j 02:05 -12081 Dec 12 j 06:33 -12081 Dec 12 j 04:37 -12081 Dec 15 j 17:04 -12080 Jan 10 j 08:03 -12080 Jan 29 j 07:15 -12080 Feb 03 j 14:15 -12080 Mar 15 j 16:26	27°云13'24 19°云20'24 0°≈ 0°升 0°分 0°円 0°℃ 4°ⓒ41'23 0°Ω 17°Ω38'49 0°™ 27°™37'51 27°™37'51 27°™34'30 0°Ω 17°Ω23'46 0°M 3°M28'40 0°% 0°♂ 0°♂	-1°06′21 1°06′17	minimum elong morning rise asc. node retrograde min. Earth dist. desc. node opposition greatest brilliancy	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47 -12075 Apr 12 j 03:58 -12075 Apr 04 j 11:21 -12075 Apr 12 j 15:11 -12075 Apr 15 j 06:27 -12075 Apr 15 j 05:11 -12075 May 16 j 14:56 -12075 Jun 26 j 05:09	18° ₹10'15 0° ₹ 18° ₹25'34 0° ≈ 10° ≈ 41'48 0° ¥ 0° ¥ 0° ¥ 0° B 0° B 0° B 3° \$\Omega\$ 33'4'37 30° \$\Omega\$ 28° \$\Omega\$ 48'20 27° \$\Omega\$ 34'19 26° \$\Omega\$ 45'22 26° \$\Omega\$ 46'20 20° \$\Omega\$ 59'26 0° \$\Omega\$	0.41681 AU -0°11'32
desc. node evening set conjunction minimum elong max. Earth dist.	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Nov 03 j 02:05 -12081 Dec 12 j 06:33 -12081 Dec 12 j 04:37 -12081 Dec 15 j 17:04 -12080 Jan 10 j 08:03 -12080 Jan 29 j 07:15 -12080 Feb 03 j 14:15 -12080 Mar 15 j 16:26 -12080 May 02 j 15:43	27°云13'24 19°云20'24 0°≈ 0°升 0°分 0°円 0°3 4°341'23 0°8 17°\$38'49 0°m 27°\$37'51 27°\$34'30 0°\$ 17°\$23'46 0°M 3°M28'40 0°% 0°♂	-1°06′21 1°06′17	minimum elong morning rise asc. node retrograde min. Earth dist. desc. node opposition greatest brilliancy	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47 -12075 Mar 12 j 03:58 -12075 Apr 04 j 11:21 -12075 Apr 08 j 14:20 -12075 Apr 12 j 15:11 -12075 Apr 15 j 06:27 -12075 Apr 15 j 05:11 -12075 May 16 j 14:56 -12075 Jun 26 j 05:09 -12075 Aug 24 j 09:51	18° ₹10'15 0° ₹ 18° ₹25'34 0° ≈ 10° ≈ 41'48 0° ¥ 0° ¥ 0° ¥ 0° ¶ 0° © 0° Ω 3° Ω34'37 30° № 28° © 48'20 27° © 34'19 26° © 46'20 20° © 59'26 0° Ω 0° ¶ 0° №	0.41681 AU -0°11'32
desc. node evening set conjunction minimum elong max. Earth dist.	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Oct 17 j 02:14 -12081 Nov 03 j 02:05 -12081 Dec 12 j 06:33 -12081 Dec 12 j 04:37 -12081 Dec 12 j 04:37 -12080 Jan 10 j 08:03 -12080 Jan 29 j 07:15 -12080 Feb 03 j 14:15 -12080 May 02 j 15:43 -12080 Jun 21 j 16:06	27°云13'24 19°云20'24 0°≈ 0°光 0°光 0°℃ 0°℃ 0°Ⅱ 0°⑤ 4°⑤41'23 0°₽ 17°₽38'49 0°™ 27°™37'51 27°™34'30 0°₽ 17°₽23'46 0°™ 3°™28'40 0°♂ 0°♂ 0°♂ 0°♂	-1°06′21 1°06′17	minimum elong morning rise asc. node retrograde min. Earth dist. desc. node opposition greatest brilliancy	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Apr 12 j 03:58 -12075 Apr 04 j 11:21 -12075 Apr 08 j 14:20 -12075 Apr 12 j 15:11 -12075 Apr 15 j 06:27 -12075 Apr 15 j 05:11 -12075 May 16 j 14:56 -12075 Jun 26 j 05:09 -12075 Aug 24 j 09:51 -12075 Oct 13 j 10:24	18° ₹10'15 0° ₹ 18° ₹25'34 0° ≈ 10° ≈ 41'48 0° ¥ 0° ¥ 0° ¥ 0° ¶ 0° © 0° Ω 3° Ω34'37 30° № 28° © 48'20 27° © 34'19 26° © 45'22 26° © 46'20 20° © 59'26 0° Ω 0° ¶ 0° ¶ 0° Ω	0.41681 AU -0°11'32
desc. node evening set conjunction minimum elong max. Earth dist. morning rise	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Oct 17 j 02:14 -12081 Nov 03 j 02:05 -12081 Dec 12 j 06:33 -12081 Dec 12 j 04:37 -12081 Dec 12 j 04:37 -12080 Jan 10 j 08:03 -12080 Jan 29 j 07:15 -12080 Mar 15 j 16:26 -12080 May 02 j 15:43 -12080 Aug 16 j 07:18 -12080 Aug 21 j 12:59	27° 古13'24 19° 古20'24 0° ※ 0° 光 0° Y 0° と 0° II 0° を 4° 541'23 0° 凡 17° 凡38'49 0° 順 27° 順37'51 27° 順34'30 0° 丘 17° 요23'46 0° II 3° II 28'40 0° ズ 0° ズ 0° ズ 0° ズ 0° ズ 2° 光 27'36	-1°06′21 1°06′17	minimum elong morning rise asc. node retrograde min. Earth dist. desc. node opposition greatest brilliancy direct	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47 -12075 Mar 12 j 03:58 -12075 Apr 04 j 11:21 -12075 Apr 08 j 14:20 -12075 Apr 12 j 15:11 -12075 Apr 15 j 06:27 -12075 Apr 15 j 06:27 -12075 May 16 j 14:56 -12075 Jun 26 j 05:09 -12075 Aug 24 j 09:51 -12075 Nov 30 j 20:25 -12074 Jan 17 j 18:20	18°ズ10'15 0°云 18°云25'34 0°※ 10°※41'48 0°升 0°Y 0°路 0°瓜 3°瓜34'37 30°R© 28°⑤48'20 27°⑤34'19 26°⑤45'22 26°⑤46'20 20°⑤59'26 0°瓜 0°瓜 0°瓜 0°瓜	0.41681 AU -0°11'32
desc. node evening set conjunction minimum elong max. Earth dist. morning rise asc. node retrograde	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Oct 17 j 02:14 -12081 Nov 03 j 02:05 -12081 Dec 12 j 06:33 -12081 Dec 12 j 04:37 -12081 Dec 12 j 04:37 -12081 Dec 15 j 17:04 -12080 Jan 10 j 08:03 -12080 Jan 29 j 07:15 -12080 Mar 15 j 16:26 -12080 May 02 j 15:43 -12080 Aug 16 j 07:18 -12080 Aug 21 j 12:59 -12080 Oct 22 j 01:34	27°云13'24 19°云20'24 0°≈ 0°升 0°分 0°円 0°5 4°541'23 0°Ω 17°Ω38'49 0°阶 27°™37'51 27°™34'30 0°Ω 17°Ω23'46 0°M 3°M28'40 0°% 0°% 0°% 0°% 0°% 0°% 0°% 0°% 0°% 0°	-1°06′21 1°06′17 2.57172 AU	minimum elong morning rise asc. node retrograde min. Earth dist. desc. node opposition greatest brilliancy	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47 -12075 Apr 04 j 11:21 -12075 Apr 04 j 11:21 -12075 Apr 12 j 15:11 -12075 Apr 15 j 06:27 -12075 Apr 15 j 06:27 -12075 Apr 15 j 05:11 -12075 May 16 j 14:56 -12075 Jun 26 j 05:09 -12075 Apr 3 j 10:24 -12075 Nov 30 j 20:25 -12074 Jan 17 j 18:20 -12074 Feb 24 j 23:53	18° ×10'15 0°云 18°云25'34 0°≈ 10°≈41'48 0° ¥ 0° Y 0° B 0° II 0° © 0° II 0° © 0° II 20° © 28° © 48'20 27° © 34'19 26° © 45'22 26° © 46'20 20° © 59'26 0° II 0° II 26° © 15'22 26° II 26°	0.41681 AU -0°11'32
desc. node evening set conjunction minimum elong max. Earth dist. morning rise	-12082 Oct 18 j 13:29 -12082 Nov 23 j 01:30 -12081 Jan 07 j 01:38 -12081 Mar 04 j 02:37 -12081 Apr 17 j 22:21 -12081 May 28 j 20:54 -12081 Jul 07 j 02:01 -12081 Aug 14 j 21:30 -12081 Aug 20 j 23:53 -12081 Sep 23 j 07:23 -12081 Oct 17 j 02:14 -12081 Nov 03 j 02:05 -12081 Dec 12 j 06:33 -12081 Dec 12 j 04:37 -12081 Dec 12 j 04:37 -12080 Jan 10 j 08:03 -12080 Jan 29 j 07:15 -12080 Mar 15 j 16:26 -12080 May 02 j 15:43 -12080 Aug 16 j 07:18 -12080 Aug 21 j 12:59	27°云13'24 19°云20'24 0°≈ 0°升 0°分 0°円 0°5 4°541'23 0°Ω 17°Ω38'49 0°阶 27°™37'51 27°™34'30 0°Ω 17°Ω23'46 0°M 3°M28'40 0°% 0°% 0°% 0°% 0°% 0°% 0°% 0°% 0°% 0°	-1°06′21 1°06′17 2.57172 AU	minimum elong morning rise asc. node retrograde min. Earth dist. desc. node opposition greatest brilliancy direct	-12076 Mar 05 j 21:57 -12076 Mar 24 j 08:29 -12076 Apr 21 j 20:56 -12076 May 09 j 14:44 -12076 May 25 j 21:03 -12076 Jun 23 j 20:52 -12076 Aug 07 j 02:03 -12076 Sep 19 j 14:22 -12076 Nov 02 j 04:23 -12076 Dec 17 j 21:22 -12075 Feb 16 j 16:47 -12075 Mar 12 j 03:58 -12075 Apr 04 j 11:21 -12075 Apr 08 j 14:20 -12075 Apr 12 j 15:11 -12075 Apr 15 j 06:27 -12075 Apr 15 j 06:27 -12075 May 16 j 14:56 -12075 Jun 26 j 05:09 -12075 Aug 24 j 09:51 -12075 Nov 30 j 20:25 -12074 Jan 17 j 18:20	18°ズ10'15 0°云 18°云25'34 0°※ 10°※41'48 0°升 0°Y 0°路 0°瓜 3°瓜34'37 30°R© 28°⑤48'20 27°⑤34'19 26°⑤45'22 26°⑤46'20 20°⑤59'26 0°瓜 0°瓜 0°瓜 0°瓜	0.41681 AU -0°11'32

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12074 Mar 27 j 18:05 14°る04'25 2.63004 AU -12070 Oct 02 i 07:20 max. Earth dist. -12074 Apr 12 j 14:31 24° ₹27'27 -12070 Nov 10 j 07:40 asc node $0^{\circ}\Omega$ -12070 Dec 03 j 01:38 $17^{\circ}\Omega$ 01'58 desc. node -12074 Apr 14 j 06:52 25°る33'57 0°01'03 -12070 Dec 20 j 19:12 0° m conjunction -12074 Apr 14 j 06:48 25° ₹33'51 0°00'24 minimum elong -12069 Feb 01 j 15:08 0∘ಹ -12074 Apr 13 j 10:56 25°**⋜**01'07 0°M behind sun begin -12069 Mar 20 j 00:14 -12074 Apr 15 j 02:39 26°**궁**06'37 0°×7 behind sun end -12069 May 12 j 16:47 -12074 Apr 20 j 23:43 0°≈ retrograde -12069 Jul 16 j 20:53 19°**尽** 19'49 morning rise -12074 Jun 01 j 03:34 27°≈47'39 opposition -12069 Aug 25 j 14:48 9°**х** 39'13 -3°38'58 -12074 Jun 04 j 08:24 0°**)**€ greatest brilliancy -12069 Aug 25 j 15:34 9°**х** 38′26 -1.4m 0°Υ -12074 Jul 16 j 23:59 min. Earth dist. -12069 Aug 25 j 15:59 9°**∡**38'02 0.66472 AU -12074 Aug 27 j 04:56 0°8 -12069 Oct 01 j 06:51 30°RM -12074 Oct 06 j 11:51 $0^{\circ}\Pi$ direct -12069 Oct 04 j 17:38 29°M55'26 -12074 Nov 15 j 16:03 0ಂತಾ -12069 Oct 08 j 05:26 0°**∡**7 -12074 Dec 26 j 23:46 $0^{\circ}\Omega$ asc. node -12069 Dec 04 j 00:11 16°**х** 25′22 -12073 Feb 10 j 02:37 0° m -12069 Dec 31 j 04:59 0°궁 desc. node -12073 Feb 28 j 14:32 10° Mp 46'02 -12068 Feb 20 j 07:32 0°≈ -12073 Apr 16 j 21:20 -12068 Apr 05 j 18:03 0°) retrograde -12073 May 03 j 10:52 -12068 May 17 j 19:37 $0^{\circ}\Upsilon$ -12073 May 19 j 11:35 30°R M -12068 Jun 26 j 15:37 0°8 min. Earth dist. -12073 Jun 03 j 19:46 25° m 14'29 0.53578 AU evening set -12068 Jul 20 j 21:13 18°**8**46'31 greatest brilliancy -12073 Jun 09 j 19:44 22° m 59'02 -1.9m -12068 Aug 04 i 05:37 $0^{\circ}II$ opposition -12073 Jun 11 j 01:42 22° m 30'45 -4°54'55 -12068 Sep 11 j 12:47 direct -12073 Jul 16 i 06:16 14° m 45'51 -12073 Sep 10 j 22:12 0°**♀** conjunction -12068 Sep 21 j 09:14 7°539'54 0°21'26 -12073 Nov 07 j 17:50 -12068 Sep 21 j 11:12 7°**©**43'42 0°22'06 o°M. minimum elong -12073 Dec 28 j 17:53 -12068 Oct 19 j 18:57 29°529'44 0°×7 desc node -12072 Feb 15 j 04:04 -12068 Oct 20 j 10:54 $0^{\circ}\Omega$ 0°궁 -12072 Feb 28 j 13:31 max. Earth dist. -12068 Oct 31 j 08:49 8°る32'27 8°**Ω**14'44 2.41005 AU asc node -12072 Apr 01 j 10:45 -12068 Nov 23 j 23:42 25° **Q**46'07 0°≈ morning rise -12072 Apr 06 j 00:18 3°≈02'16 -12068 Nov 29 j 18:53 0° m evening set -12072 Apr 25 j 08:07 16°≈04'30 2.54683 AU -12067 Jan 11 j 03:45 max. Earth dist. 0∘ಹ -12067 Feb 25 j 00:27 -12072 May 15 j 12:33 0°**∀** 0°M -12067 Apr 14 j 00:42 0° ⊀ -12072 May 26 j 17:05 7° **X** 51'39 0°51'09 -12067 Jun 06 j 19:13 0°궁 conjunction -12072 May 26 j 15:07 7° **X** 48'10 0°50'51 -12067 Aug 21 j 05:43 23°₹51'00 minimum elong retrograde -12072 Jun 26 j 11:50 0°**Υ** -12067 Sep 28 j 18:01 14° ₹51'31 -0°56'45 opposition -12072 Jul 18 j 00:46 15°**Y**55'08 greatest brilliancy -12067 Sep 28 j 21:32 14°정48'03 -1.5m morning rise -12072 Aug 05 j 18:04 0°8 min. Earth dist. -12067 Oct 02 j 12:23 13°る22'33 0.63825 AU -12072 Sep 13 j 22:19 $\Pi^{\circ}0$ asc. node -12067 Oct 21 j 05:01 7°る07'21 -12072 Oct 22 j 19:48 0 \circ \odot direct -12067 Nov 08 j 13:43 4°**る**53'29 -12072 Dec 01 j 08:43 0°**Ω** -12066 Jan 23 j 10:35 -12071 Jan 11 j 16:04 -12066 Mar 14 j 08:06 -12071 Jan 15 j 09:43 -12066 Apr 26 j 19:33 $0^{\circ}\Upsilon$ desc. node -12071 Feb 25 j 12:14 -12066 Jun 06 j 05:27 0°8 -12071 Apr 20 j 12:02 0°M -12066 Jul 15 i 03:08 0°П -12066 Aug 22 j 16:29 retrograde -12071 Jun 11 j 08:03 13°M 50'38 min. Earth dist. -12071 Jul 17 j 12:07 5° ML 25'38 0.62935 AU desc. node -12066 Sep 06 i 18:05 11°537'52 -12066 Sep 23 j 22:50 24°546'20 -12071 Jul 21 j 06:20 3°ML55'30 -5°12'44 evening set opposition -12071 Jul 20 i 15:05 4° ML10'44 -1.5m -12066 Sep 30 j 20:37 $0^{\circ}\Omega$ greatest brilliancy -12071 Jul 31 j 13:36 30°R ₽ -12066 Nov 10 j 09:56 O° m -12071 Aug 28 j 11:31 24° **2**54'23 direct -12071 Sep 28 j 04:05 -12066 Nov 21 j 21:00 8° m 14'29 -0°50'45 conjunction -12071 Dec 04 j 00:06 0° **₹** minimum elong -12066 Nov 21 j 18:21 8° m 09'46 0°50'26 -12066 Dec 22 j 20:49 asc. node -12070 Jan 15 j 17:33 24° ₹28'38 0∘∙თ -12066 Dec 27 j 23:14 -12070 Jan 24 j 20:54 0°₹ max. Earth dist. 3°**£**30'31 2.53053 AU -12065 Jan 16 j 22:08 17°**♀**02'56 -12070 Mar 13 j 06:42 0°≈ morning rise -12070 Apr 26 j 14:00 0°**∀** -12065 Feb 05 j 09:43 0°M -12070 May 23 j 14:17 19° **∺** 13'04 0°**∡**7 evening set -12065 Mar 23 j 23:41 $0^{\circ}\Upsilon$ -12070 Jun 07 j 08:23 -12065 May 11 j 17:05 0°궁 3°**Y**33'26 2.42988 AU max. Earth dist. -12070 Jun 12 j 03:53 -12065 Jul 03 j 02:34 0°≈ -12070 Jul 17 j 04:45 0°8 -12065 Sep 08 j 05:58 28°≈52'51 asc. node -12065 Sep 12 j 23:23 0°**)**€ conjunction -12070 Jul 19 j 02:23 1°**8**27'32 1°12'46 retrograde -12065 Oct 02 j 21:53 2°**)** 16'40 minimum elong -12070 Jul 19 j 03:04 1°**8**28'50 1°13'07 -12065 Oct 21 j 17:27 30°R≈

opposition

greatest brilliancy

-12065 Nov 08 j 00:35 24°≈27'47 2°48'48

-12065 Nov 08 j 15:58 24°≈13'32 -1.9m

-12070 Aug 24 j 21:28

morning rise

-12070 Sep 18 j 10:16 19°**Д**10'45

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 34

Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. min. Earth dist. -12065 Nov 15 j 02:35 21°≈50'30 0.55375 AU max. Earth dist. -12059 Mar 17 j 18:28 3°る08'31 2.64928 AU direct -12065 Dec 17 j 18:10 15°≈03'19 -12064 Feb 08 j 22:48 -12059 Mar 29 j 17:56 10° ₹53'27 -0°18'31 0°)(conjunction $0^{\circ}\Upsilon$ -12059 Mar 29 j 18:42 10°₹54'42 0°19'12 -12064 Mar 31 j 05:05 minimum elong -12064 May 13 j 01:46 0° 8 -12059 Apr 27 j 22:25 -12064 Jun 22 j 06:04 -12059 Apr 29 j 08:52 $0^{\circ}\Pi$ asc. node 0°≈56'58 -12064 Jul 24 j 20:52 24°**Д**47'25 desc. node morning rise -12059 May 15 j 22:49 11°≈59'10 -12064 Jul 31 j 17:35 0ംខ -12059 Jun 11 j 13:35 0°**)**€ $0^{\circ}\Upsilon$ -12064 Sep 09 j 16:35 0° Ω -12059 Jul 24 j 16:30 -12064 Oct 20 j 22:02 0° m -12059 Sep 04 j 13:14 0°8 evening set -12064 Nov 17 j 09:30 19° Mp 20'11 -12059 Oct 15 j 16:03 $0^{\circ}\Pi$ -12064 Dec 02 j 21:06 0∘**⊽** -12059 Nov 25 j 22:46 0ಂತಾ -12058 Jan 08 j 05:31 $0^{\circ}\Omega$ conjunction -12063 Jan 08 j 23:52 24° **2**57'23 -1°15'22 -12058 Mar 01 j 01:45 0° m minimum elong -12063 Jan 08 j 23:45 24°**£**57'12 1°15'38 desc. node -12058 Mar 17 j 09:29 6° m 37'09 -12063 Jan 16 j 15:13 0°M retrograde -12058 Apr 15 j 04:28 11° m 55'16 max. Earth dist. -12063 Jan 27 j 09:46 7°ML03'45 2.62134 AU min. Earth dist. -12058 May 14 j 13:42 6° Mp 09'02 0.48773 AU morning rise -12063 Feb 28 j 04:28 27° ML37'41 greatest brilliancy -12058 May 21 j 09:45 3° Mp 43'02 -2.2m -12063 Mar 03 j 21:15 0°*⊼* opposition -12058 May 22 j 13:17 3° m 18'26 -3°49'55 -12063 Apr 20 j 03:20 -12058 Jun 01 j 11:29 30°RΩ -12063 Jun 07 j 03:04 0°≈ direct -12058 Jun 25 j 05:10 $26^{\circ}\Omega$ 16'21 asc. node -12063 Jul 26 i 00:51 29°≈46'11 -12058 Jul 20 i 13:36 0° m -12063 Jul 26 i 10:10 0°\€ -12058 Sep 25 i 22:31 0∘**⊽** -12063 Sep 18 i 05:21 0°Υ -12058 Nov 17 j 02:25 0°M retrograde -12063 Nov 29 i 04:46 22° γ 40'01 -12057 Jan 05 j 12:16 0° **₹** -12063 Dec 31 i 13:39 16° Υ 42'41 -12057 Feb 22 j 08:15 0°궁 opposition 6°45'56 -12062 Jan 02 j 04:31 16° Υ 12'24 -12057 Mar 17 j 05:57 14° ₹ 44'52 greatest brilliancy -2.5m asc node min. Earth dist. -12062 Jan 07 j 19:55 14° Υ 27'56 -12057 Mar 21 j 13:39 17°る33'43 0.43545 AU evening set -12062 Feb 04 j 15:12 9°**Y**37'41 -12057 Apr 09 j 11:01 0°≈ direct -12062 Apr 07 j 09:44 0°8 -12057 Apr 13 j 19:43 max. Earth dist. 2°≈54'15 2.58487 AU -12062 May 25 j 04:57 0°**Ⅱ** -12062 Jun 12 j 01:52 12°**Ⅱ**18'30 -12057 May 09 j 23:30 20°≈35'31 0°32'41 desc. node conjunction -12062 Jul 07 j 04:35 0°ഇ -12057 May 09 j 22:07 20°≈33'09 minimum elong 0°32'12 -12057 May 23 j 14:34 0°**米** -12062 Aug 18 j 10:26 0°**Ω** -12062 Sep 30 j 07:23 0° Mp -12057 Jun 29 j 00:03 25°**)** 48'32 morning rise -12062 Nov 13 j 10:32 0°**♀** -12057 Jul 04 j 18:51 0°**Υ** -12057 Aug 14 j 08:04 0°8 -12062 Dec 28 j 22:11 0°M evening set -12061 Jan 01 j 12:32 2°M20'22 -12057 Sep 22 j 20:11 $\Pi^{\circ}0$ -12061 Feb 13 j 10:03 -12057 Nov 01 j 01:57 0ಂಣ -12057 Dec 11 j 01:09 $0^{\circ}\Omega$ conjunction -12061 Feb 19 j 13:34 3°**尽** 56'24 -0°59'13 -12056 Jan 22 j 02:54 0° m -12061 Feb 19 j 15:05 3°**₹** 58'51 0°59'49 -12056 Feb 02 j 04:54 minimum elong desc. node max. Earth dist. -12061 Feb 21 j 20:49 5° ₹24'54 2.66201 AU -12056 Mar 09 j 03:55 0°**♀** -12061 Apr 01 j 06:15 0°ਰ -12056 May 27 j 16:59 28° **2**51'08 retrograde -12061 Apr 07 j 23:42 4°쥥18'56 -12056 Jul 01 j 03:02 21°**2**04'50 0.59911 AU morning rise min. Earth dist. -12056 Jul 05 j 09:47 19° **2**23'35 -1.6m -12061 May 17 j 19:11 0°≈ greatest brilliancy -12061 Jun 12 j 16:33 16°≈52'07 -12056 Jul 06 j 08:13 19° **2**01'27 -5°24'04 asc. node opposition -12061 Jul 02 i 16:45 0°**** direct -12056 Aug 12 j 12:33 10° **2**25'14 -12061 Aug 17 j 01:37 -12056 Oct 18 j 08:12 -12061 Oct 01 i 13:38 0°8 -12056 Dec 13 i 17:16 0°×7 -12061 Nov 18 j 00:27 $0^{\circ}\Pi$ -12055 Feb 01 j 08:02 29° ₹ 43'19 asc node -12060 Jan 17 j 15:04 -12055 Feb 01 j 18:47 0°ಕ 0ಂತಾ -12060 Feb 14 j 11:00 retrograde 4°9545'35 -12055 Mar 20 j 15:07 0°≈ 0°901'07 0.38871 AU min. Earth dist. -12060 Mar 14 j 02:47 -12055 May 03 j 20:42 0°**)**€02'26 evening set -12060 Mar 14 j 04:24 30°RII -12055 May 03 j 19:19 0°) opposition -12060 Mar 17 j 06:35 29° **I** 08'50 3°17'07 max. Earth dist. -12055 May 19 j 23:49 11°**米**25'51 2.47734 AU -12060 Mar 17 j 01:29 29°**Ⅱ**12'21 -2.9m -12055 Jun 14 j 14:56 $0^{\circ}\Upsilon$ greatest brilliancy -12060 Apr 16 j 14:12 23°**I**59'09 direct -12055 Jun 26 j 15:30 8° **Y** 53'57 1° 11'02 -12060 Apr 29 j 07:22 24°**Д**59'55 desc. node conjunction -12060 May 18 j 18:47 -12055 Jun 26 j 14:14 8°**Υ**51'36 1°11'06 0ಂತಾ minimum elong -12060 Jul 18 j 08:18 -12055 Jul 24 j 14:22 0 $^{\circ}\Omega$ 0°8 -12060 Sep 05 j 04:28 0° m morning rise -12055 Aug 23 j 04:11 22°**8**47'53 -12060 Oct 22 j 09:00 0∘**⊽** -12055 Sep 01 j 10:30 $0^{\circ}\Pi$ -12060 Dec 08 j 13:11 0°M -12055 Oct 09 j 23:21 0 \circ \odot -12059 Jan 24 j 21:09 0°**∡**¹ -12055 Nov 18 j 02:30 0 $^{\circ}\Omega$ -12059 Feb 09 j 16:39 10° **₹** 02'52 desc. node -12055 Dec 19 j 22:44 23° Ω 37'37 evening set -12059 Mar 12 j 21:23 0°る -12055 Dec 28 j 18:13 0° Mp

```
Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23,
Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.
                    -12054 Feb 10 i 00:32 0°₽
                                                                                             -12049 Feb 24 i 17:15
                                                                                                                     0°∀
                    -12054 Mar 29 j 19:31
                                                                                             -12049 Apr 11 j 23:37
                                                                                                                     0^{\circ}\Upsilon
                    -12054 May 31 j 01:52
                                                                                             -12049 May 23 j 10:47
                                                                                                                     0°8
                                            0°×7
                    -12054 Jul 03 j 06:16
                                            6°х¹06′23
                                                                                             -12049 Jul 01 j 22:26
                                                                                                                     0^{\circ}\Pi
retrograde
                    -12054 Aug 02 j 17:23 30°RML
                                                                                             -12049 Aug 09 j 22:07
                                                                                                                     0°9
min. Earth dist.
                    -12054 Aug 10 j 18:47 26°ML50'56 0.65827 AU
                                                                         desc. node
                                                                                             -12049 Aug 11 j 12:26
                                                                                                                     1°9513'27
opposition
                    -12054 Aug 12 j 05:07 26°ML16'23 -4°24'23
                                                                                             -12049 Sep 18 j 11:17
                                                                                                                     0^{\circ}\Omega
greatest brilliancy
                    -12054 Aug 12 j 00:37 26°M20'54
                                                      -1.4m
                                                                         evening set
                                                                                             -12049 Oct 29 j 07:38 29°Ω58'31
direct
                    -12054 Sep 20 j 17:07 16°ML46'00
                                                                                             -12049 Oct 29 j 08:28
                                                                                                                     0° m
                    -12054 Nov 12 j 17:22
                                           0°⊼
                                                                                             -12049 Dec 11 j 01:04
                                                                                                                     0°Ω
asc. node
                    -12054 Dec 20 j 13:16 18° ₹22'32
                                                                                             -12049 Dec 23 j 02:48
                    -12053 Jan 10 j 10:25
                                           0°ಕ
                                                                         conjunction
                                                                                                                     8°214'39 -1°11'39
                    -12053 Feb 28 j 13:19
                                                                          minimum elong
                                                                                             -12049 Dec 23 j 01:30
                                                                                                                     8°212'28 1°11'44
                    -12053 Apr 14 j 10:03
                                            0°)€
                                                                         max. Earth dist.
                                                                                             -12048 Jan 17 j 07:27 25°208'46 2.59149 AU
                    -12053 May 26 j 07:38
                                            0^{\circ}\Upsilon
                                                                                             -12048 Jan 24 j 15:35
                                                                                                                     0°M
evening set
                    -12053 Jun 27 j 05:44 23°Y57'31
                                                                         morning rise
                                                                                             -12048 Feb 13 j 04:31
                                                                                                                    12°M46'56
                    -12053 Jul 05 j 03:09
                                           0°8
                                                                                             -12048 Mar 10 j 22:30
                                                                                                                     0°∡7
                    -12053 Aug 12 j 17:33
                                                                                             -12048 Apr 27 j 13:42
                                                                                             -12048 Jun 15 j 15:52
conjunction
                    -12053 Aug 27 j 01:51 11°II14'51 0°50'11
                                                                                             -12048 Aug 07 j 01:26
                                                                                                                     0°\
 minimum elong
                    -12053 Aug 27 j 05:15 11°II21'29 0°50'47
                                                                         asc. node
                                                                                             -12048 Aug 11 j 19:23
                                                                                                                     2°H31'29
max. Earth dist.
                    -12053 Aug 30 j 15:48 14°II03'18 2.38319 AU
                                                                                             -12048 Oct 21 i 20:34
                                                                                                                     0^{\circ}\Upsilon
                    -12053 Sep 20 i 00:51
                                           0ಂತಾ
                                                                                             -12048 Nov 03 j 21:40
                                                                                                                     1°Y00'30
                                                                         retrograde
                    -12053 Oct 28 i 22:39
                                           0^{\circ}\Omega
                                                                                             -12048 Nov 16 i 09:46 30°R €
morning rise
                    -12053 Oct 30 i 16:21
                                            1°Ω19'07
                                                                         opposition
                                                                                             -12048 Dec 07 j 19:00 24° \( \)15'12 5°25'56
                    -12053 Nov 06 j 16:06
                                           6°Ω36'11
                                                                                             -12048 Dec 09 j 04:46 23° \( \frac{1}{2} \) 46'24 -2.2m
desc. node
                                                                         greatest brilliancy
                    -12053 Dec 08 j 06:22
                                                                         min. Earth dist.
                                                                                             -12048 Dec 15 j 18:31 21° + 32'34 0.48198 AU
                                           0° m
                    -12052 Jan 19 j 16:43
                                                                                             -12047 Jan 14 j 06:04 15° X 59'13
                                           0∘⊽
                                                                         direct
                    -12052 Mar 04 j 21:29
                                                                                             -12047 Mar 05 j 04:56
                                           o°M.
                                                                                                                     0^{\circ}\Upsilon
                    -12052 Apr 23 j 02:52 0° ₹
                                                                                             -12047 Apr 24 j 15:52
                                                                                                                     0°8
                    -12052 Jun 21 j 23:12 0°る
                                                                                             -12047 Jun 06 j 09:27
                                                                                                                     0^{\circ}\Pi
                    -12052 Aug 06 j 17:26 10°♂26'53
                                                                                             -12047 Jun 28 j 17:28 16°Ⅲ19'02
retrograde
                                                                         desc. node
                                                                                             -12047 Jul 17 j 07:45 0°95
                    -12052 Sep 14 j 20:18 1°쥥08'25 -2°07'02
opposition
                    -12052 Sep 15 j 01:04 1°⋜03'40 -1.4m
                                                                                             -12047 Aug 27 j 07:39
greatest brilliancy
                                                                                                                     0^{\circ}\Omega
                    -12052 Sep 17 j 04:21 0°る12'36 0.65582 AU
                                                                                             -12047 Oct 08 j 08:04
min. Earth dist.
                                                                                                                     0° m
                    -12052 Sep 17 j 17:02 30°R ✓
                                                                                             -12047 Nov 20 j 20:56 0°♀
                    -12052 Oct 25 j 13:21 21° ₹ 12'00
direct
                                                                         evening set
                                                                                             -12047 Dec 15 j 20:50 16°£44'32
asc. node
                    -12052 Nov 06 j 19:04 22°₹06'28
                                                                                             -12046 Jan 04 j 23:39
                    -12052 Dec 05 j 21:30 0°る
                    -12051 Feb 03 j 23:10 0°≈
                                                                         conjunction
                                                                                             -12046 Feb 03 j 22:40 19°M27'53 -1°09'11
                    -12051 Mar 23 j 07:55 0°光
                                                                          minimum elong
                                                                                             -12046 Feb 03 j 23:52 19°M29'49 1°09'41
                    -12051 May 05 j 01:19 0°Υ
                                                                         max. Earth dist.
                                                                                             -12046 Feb 12 j 07:34 24°ML51'27 2.65248 AU
                    -12051 Jun 14 j 03:49 0°8
                                                                                             -12046 Feb 20 j 07:40 0° ⊀
                    -12051 Jul 22 j 21:15 0°Ⅱ
                                                                                             -12046 Mar 24 j 03:02 20° ₹ 21'01
                                                                         morning rise
                    -12051 Aug 30 j 02:11 29°Д50'38
                                                                                             -12046 Apr 08 j 05:51 0°ਰ
evening set
                    -12051 Aug 30 i 07:00 0°5
                                                                                             -12046 May 25 i 04:41 0°≈
                                                                                             -12046 Jun 29 j 12:08 22°≈37'56
desc. node
                    -12051 Sep 23 j 11:39 18°541'45
                                                                         asc. node
                    -12051 Oct 08 j 07:37 0°Ω
                                                                                             -12046 Jul 11 i 00:05 0° €
                                                                                             -12046 Aug 27 j 04:10
                    -12051 Oct 30 j 09:48 16^{\circ}\Omega33'24 -0^{\circ}26'58
                                                                                             -12046 Oct 15 j 13:28
                                                                                                                     0°8
conjunction
                    -12051 Oct 30 j 07:49 16^{\circ}\Omega29'42 0^{\circ}26'25
                                                                                             -12046 Dec 17 j 12:04
 minimum elong
                    -12051 Nov 17 j 17:35 0° m
                                                                                             -12045 Jan 15 і 03:47 4°Д46'12
                                                                         retrograde
max. Earth dist.
                    -12051 Dec 11 j 11:58 17° Mp 01'08 2.48402 AU
                                                                                             -12045 Feb 13 j 12:41 30°R8
morning rise
                    -12051 Dec 28 j 13:25 28° m 56'44
                                                                         opposition
                                                                                             -12045 Feb 14 j 21:51 29°837'35 6°12'02
                                                                                             -12045 Feb 15 j 12:31 29°827'39
                    -12051 Dec 30 j 02:02
                                           0∘∙თ
                                                                         greatest brilliancy
                                                                                                                                -2.8m
                    -12050 Feb 12 j 15:33
                                           0°M
                                                                         min. Earth dist.
                                                                                             -12045 Feb 16 j 21:23 29°805'25
                                                                                                                                0.38748 AU
                    -12050 Mar 31 j 13:36
                                           0° ₹
                                                                         direct
                                                                                             -12045 Mar 18 j 02:48 24°817'42
                    -12050 May 20 j 11:08
                                           0°る
                                                                                             -12045 Apr 17 j 18:21
                                                                                                                     0^{\circ}\Pi
                    -12050 Jul 16 j 11:16
                                           0°≈
                                                                         desc. node
                                                                                             -12045 May 16 j 22:31 12°I57'30
retrograde
                    -12050 Sep 15 j 02:05 16°≈38'54
                                                                                             -12045 Jun 15 j 18:48
                                                                                                                     0ಂತಾ
asc. node
                    -12050 Sep 24 j 21:53 16°≈01'48
                                                                                             -12045 Aug 01 j 18:04
                                                                                                                     0^{\circ}\Omega
                    -12050 Oct 22 j 07:24
                                            8°≈17'50
                                                                                             -12045 Sep 16 j 01:57
                                                                                                                     0° m
opposition
greatest brilliancy
                    -12050 Oct 22 j 13:00
                                            8°≈12'29
                                                       -1.7m
                                                                                             -12045 Oct 31 j 15:31
                                                                                                                     0∘⊽
min. Earth dist.
                    -12050 Oct 28 j 05:03
                                            6°≈02'27 0.59312 AU
                                                                                             -12045 Dec 16 j 23:21
                                                                                                                     0°M
                    -12050 Nov 16 j 22:42 30°R♂
                                                                         evening set
                                                                                             -12044 Jan 26 j 09:24 25°M51'29
                    -12050 Dec 01 j 18:17 28°₹31'23
                                                                                             -12044 Feb 01 j 21:13 0° ⊀
direct
                    -12050 Dec 17 j 03:09 0°≈
                                                                         max. Earth dist.
                                                                                             -12044 Mar 08 j 01:36 22°尽 29'06 2.66080 AU
```

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12044 Mar 14 i 13:03 26° ₹38'29 -0°36'20 -12039 Jan 06 i 02:57 0° m conjunction -12044 Mar 14 j 14:21 26° ₹ 40'35 0°37'01 -12039 Feb 19 i 03:58 minimum elong 0∘Ω -12044 Mar 19 j 18:29 0°궁 -12039 Apr 10 j 17:56 0°M -12044 Apr 30 j 12:08 27°**⋜**04'55 -12039 Jun 19 j 11:42 22°M25'44 morning rise retrograde -12044 May 04 j 22:48 0°≈ min. Earth dist. -12039 Jul 26 j 12:46 13°ML41'24 0.64213 AU -12039 Jul 29 j 10:53 12° $\mbox{\it IL}$ 31'02 -4° 58' 51 -12044 May 16 j 03:43 asc. node 7°≈23'21 opposition -12044 Jun 18 j 23:15 0°**)** greatest brilliancy -12039 Jul 28 j 23:43 12°ML42'14 -1.4m $0^{\circ}\Upsilon$ -12044 Aug 01 j 17:55 direct -12039 Sep 06 j 03:43 3°M18'19 0°₺ -12044 Sep 13 j 13:19 0°8 -12039 Nov 26 j 18:53 -12038 Jan 06 j 02:29 22°**尽** 09'32 -12044 Oct 25 j 23:42 $0^{\circ}\Pi$ asc. node -12044 Dec 08 j 08:33 0ಂತಾ -12038 Jan 19 j 09:14 0°궁 -12043 Jan 25 j 21:37 0 $^{\circ}\Omega$ -12038 Mar 08 j 08:08 0°≈ retrograde -12043 Mar 25 j 10:23 18°Ω47'30 -12038 Apr 21 j 20:25 0°\ desc. node -12043 Apr 03 j 02:16 18° Ω15'11 -12038 Jun 02 j 16:20 $0^{\circ}\Upsilon$ evening set min. Earth dist. -12043 Apr 22 j 06:14 13°**Ω**44'46 0.43975 AU -12038 Jun 04 j 13:34 1°Y23'27 opposition -12043 Apr 29 j 21:23 11°**Ω**14'55 -1°49'41 max. Earth dist. -12038 Jun 30 j 04:22 20°**Y**34'53 2.40634 AU greatest brilliancy -12043 Apr 29 j 07:26 11°**Ω**26'23 -12038 Jul 12 j 12:32 direct -12043 May 31 j 23:22 5°**Ω**01'52 -12043 Aug 15 j 04:54 0° m conjunction -12038 Aug 01 j 16:07 15°**8**33'58 -12043 Oct 07 j 03:14 minimum elong -12038 Aug 01 j 18:09 15°**8**37'54 -12043 Nov 25 j 13:39 0°M -12038 Aug 20 j 04:17 $0^{\circ}\Pi$ -12042 Jan 12 j 22:26 0°×7 -12038 Sep 27 i 12:39 0ಂತಾ -12042 Mar 01 i 08:29 0°궁 morning rise -12038 Oct 03 j 17:51 4°950'18 evening set -12042 Mar 05 j 20:41 2°る53'36 -12038 Nov 05 j 11:11 $0^{\circ}\Omega$ asc. node -12042 Apr 02 j 22:11 21°る06'39 desc. node -12038 Nov 23 j 11:29 13° **Ω**33'10 max. Earth dist. -12042 Apr 02 j 20:30 21°중03'54 2.61610 AU -12038 Dec 15 j 20:11 0° m -12042 Apr 16 j 09:30 -12037 Jan 27 j 10:39 0∘Ω -12037 Mar 14 j 05:38 o°m. -12042 Apr 23 j 10:09 -12037 May 04 j 14:50 conjunction 4°≈40'42 0°12'41 0°×7 -12037 Jul 24 j 19:03 27°**尽** 18'57 -12042 Apr 23 j 09:37 4°≈39'48 minimum elong 0°12'05 retrograde -12042 Apr 22 j 20:09 -12037 Sep 02 j 08:31 17° ₹ 45'23 -3°07'54 behind sun begin 4°≈17'21 opposition -12042 Apr 23 j 23:05 5°≈02'17 -12037 Sep 02 j 11:25 17°**х** 42'28 behind sun end greatest brilliancy -1.4m -12042 May 30 j 16:32 0°**米** min. Earth dist. -12037 Sep 03 j 05:34 17°**又**24'15 0.66410 AU -12042 Jun 10 j 20:43 7°**)** 46′21 -12037 Oct 12 j 17:31 7° ₹ 55'53 morning rise direct -12042 Jul 12 j 04:12 0°**Υ** -12037 Nov 24 j 08:41 17° ₹ 06'29 asc. node -12042 Aug 22 j 03:19 0° 8 -12037 Dec 23 j 10:09 0°る -12042 Oct 01 j 02:51 0°**Ⅱ** -12036 Feb 14 j 14:22 0°≈ -12042 Nov 09 j 21:15 0ಂಣ -12036 Mar 31 j 15:03 0°**)**€ -12042 Dec 20 j 13:26 $0^{\circ}\Omega$ -12036 May 12 j 22:11 $0^{\circ}\Upsilon$ -12041 Feb 02 j 01:49 0° M -12036 Jun 21 j 20:40 0°8 desc. node -12041 Feb 19 j 02:01 10° Mp 42'06 -12036 Jul 30 j 11:55 $0^{\circ}II$ -12041 Mar 26 j 18:51 0°**♀** -12036 Aug 04 j 07:39 3°**Ⅱ**46'39 evening set -12041 May 13 j 01:56 12° **2**27'09 -12036 Sep 06 j 19:35 retrograde 0ಂತಾ -12041 Jun 14 j 13:01 5°**2**25'27 0.56008 AU min. Earth dist. -12041 Jun 19 j 22:57 3°**2**20'40 -1.8m -12036 Oct 05 j 21:31 22°529'33 0°03'22 greatest brilliancy conjunction -12036 Oct 05 j 21:53 22°530'16 opposition -12041 Jun 21 i 03:15 2° **2**53'23 -5°14'09 minimum elong -12036 Oct 04 j 19:53 21°540'28 -12041 Jun 28 j 22:41 30°R M behind sun begin direct -12041 Jul 27 i 02:17 24° m 48'19 behind sun end -12036 Oct 06 i 23:53 23°520'01 -12036 Oct 10 i 06:38 25°550'27 -12041 Aug 26 j 18:01 desc. node -12041 Oct 31 j 22:47 -12036 Oct 15 j 17:46 $0^{\circ}\Omega$ -12041 Dec 23 j 08:52 0°**∡**¹ max. Earth dist. -12036 Nov 19 j 02:51 25° Ω 39'48 2.43505 AU -12040 Feb 10 j 07:15 0°ಕ -12036 Nov 25 j 01:24 0° m -12040 Feb 18 j 21:58 5°**ප**26'40 -12036 Dec 07 j 03:32 asc node morning rise 8° m 44'04 -12040 Mar 27 j 18:45 0°≈ -12035 Jan 06 j 08:38 0∘∙თ 0°M evening set -12040 Apr 15 j 19:33 12°≈44'49 -12035 Feb 20 j 00:59 -12040 May 03 j 10:31 24°≈48'45 2.52325 AU max. Earth dist. -12035 Apr 08 j 12:22 00 🗸 -12040 May 10 j 21:42 0°**⊁** -12035 May 30 j 08:46 0°궁 -12035 Aug 10 j 09:04 -12040 Jun 06 j 10:35 18° ¥49'12 1°00'07 conjunction retrograde -12035 Aug 29 j 23:17 2°≈12'39 -12040 Jun 06 j 08:34 18° **X** 45'35 0°59'56 minimum elong -12035 Sep 17 j 09:44 30°R♂ -12040 Jun 21 j 19:55 $0^{\circ}\Upsilon$ opposition -12035 Oct 07 j 01:49 23°₹25'35 -0°11'38 -12040 Jul 30 j 09:18 28°**Y**47'03 greatest brilliancy morning rise -12035 Oct 07 j 02:49 23°₹24'37 -12040 Jul 31 j 23:44 0° 8 asc. node -12035 Oct 11 j 13:39 21°₹40'15 -12040 Sep 09 j 00:58 Π °0 min. Earth dist. -12035 Oct 11 j 15:11 21°₹38'46 0.62446 AU -12040 Oct 17 j 18:50 0 \circ \odot direct -12035 Nov 16 j 20:22 13°₹29'13 -12040 Nov 26 j 03:15 0°**Ω** -12034 Jan 14 j 05:59 0°**≈**

-12034 Mar 08 j 01:56

desc. node

-12039 Jan 05 j 19:22 29°**Ω**46'32

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12034 Apr 21 i 07:33 0°**Υ** conjunction -12029 Feb 28 i 09:26 12° ₹ 31'58 -0°51'42 -12034 Jun 01 i 00:57 -12029 Feb 28 j 10:59 12° ₹34'27 0°52'20 0°8 minimum elong -12034 Jul 10 j 02:59 -12029 Mar 27 j 15:38 0°る $0^{\circ}\Pi$ -12034 Aug 17 j 19:19 0ಂತಾ -12029 Apr 16 j 12:48 12°₹47'57 morning rise -12034 Aug 28 j 05:04 desc. node 8°901'15 -12029 May 13 j 01:07 -12034 Sep 26 j 01:51 $0^{\circ}\Omega$ asc. node -12029 Jun 02 j 22:40 13°≈41'31 -12034 Oct 07 j 07:38 evening set 8°**Ω**25'12 -12029 Jun 27 j 14:00 0°**)**€ $0^{\circ}\Upsilon$ -12034 Nov 05 j 17:03 0° m -12029 Aug 11 j 06:42 -12029 Sep 24 j 13:11 0° 8 conjunction -12034 Dec 03 j 17:13 19° m 55'55 -1°00'39 -12029 Nov 08 j 10:07 $0^{\circ}\Pi$ minimum elong -12034 Dec 03 j 14:51 19° m 51'48 1°00'28 -12029 Dec 27 j 07:09 0ಂತಾ -12034 Dec 18 j 04:47 0∘**⊽** retrograde -12028 Mar 01 j 02:37 21°544'27 max. Earth dist. -12033 Jan 04 j 21:29 12°**♀**05'18 2.55409 AU min. Earth dist. -12028 Mar 28 j 17:25 17°504'20 0.40147 AU morning rise -12033 Jan 27 j 04:45 27° **2**01'01 opposition -12028 Apr 03 j 02:14 15°530'25 1°16'02 -12033 Jan 31 j 17:06 0°M greatest brilliancy -12028 Apr 02 j 21:34 15°533'50 -12033 Mar 19 j 02:59 0°**√** desc. node -12028 Apr 19 j 20:09 11°519'46 -12033 May 06 j 08:19 0°ರ direct -12028 May 03 j 21:23 10°504'08 -12033 Jun 26 j 04:24 -12028 Jul 07 j 05:02 $0^{\circ}\Omega$ -12033 Aug 24 j 11:19 0°**₩** -12028 Aug 29 j 03:53 0° m asc. node -12033 Aug 29 j 13:38 2°**₩**03'37 -12028 Oct 16 j 17:17 retrograde -12033 Oct 14 j 01:09 12° \(\) 18'17 -12028 Dec 03 j 12:34 opposition -12033 Nov 18 j 09:56 4° + 50'00 3° 45'53 -12027 Jan 20 i 03:48 0° **₹** greatest brilliancy -12033 Nov 19 i 08:07 4°**¥**29'56 -12027 Feb 18 j 11:43 18° ₹36'18 -2.0m evening set min. Earth dist. -12033 Nov 25 j 23:51 2° \(\) 05'35 0.52929 AU -12027 Mar 08 i 07:05 0°궁 -12033 Dec 02 j 04:40 30°R≈ max. Earth dist. -12027 Mar 23 j 14:43 9°る52'56 2.63975 AU direct -12033 Dec 27 j 12:36 25°≈43'59 -12032 Jan 22 j 19:24 0°**米** -12027 Apr 07 j 14:48 19°る39'08 -0°07'24 conjunction -12032 Mar 23 j 08:53 $0^{\circ}\Upsilon$ -12027 Apr 07 j 15:08 19°**ට**39'41 minimum elong -12032 May 06 j 17:02 0°8 -12027 Apr 06 j 21:44 19°정11'14 behind sun begin -12032 Jun 16 j 12:25 0°**Ⅱ** -12027 Apr 08 j 08:32 20°**궁**08'09 behind sun end -12027 Apr 19 j 15:34 27°**궁**33'28 -12032 Jul 15 j 08:06 21°**Ⅱ**41'11 desc. node asc. node -12032 Jul 26 j 08:58 0°ഇ -12027 Apr 23 j 08:15 0°≈ -12027 May 25 j 02:38 21°≈17'40 -12032 Sep 04 j 14:33 0°**Ω** morning rise -12032 Oct 16 j 01:09 -12027 Jun 06 j 20:30 0°**米** 0° m -12032 Nov 28 j 04:12 0°**♀**00'46 -12027 Jul 19 j 17:46 0°**Υ** evening set -12032 Nov 28 j 03:46 -12027 Aug 30 j 05:44 0°8 0∘**⊽** -12031 Jan 12 j 00:01 -12027 Oct 09 j 20:56 0°**П** -12027 Nov 19 j 10:47 0°ഇ conjunction -12031 Jan 18 j 17:30 4°ML24'53 -1°14'38 -12027 Dec 31 j 09:43 0°**Ω** minimum elong -12031 Jan 18 j 17:58 4°ML25'39 1°15'00 -12026 Feb 16 j 06:10 0° M max. Earth dist. -12031 Feb 02 j 11:33 14°ML01'39 2.63480 AU desc. node -12026 Mar 07 j 20:05 10° m 22'14 -12031 Feb 27 j 05:50 0° ₹ -12026 Apr 25 j 21:37 23° m 59'49 retrograde -12031 Mar 09 j 01:32 6° **₹**17'19 min. Earth dist. -12026 May 26 j 08:07 17° Mp 46'40 0.51467 AU morning rise -12031 Apr 15 j 08:05 0°ਰ -12026 Jun 01 j 18:13 15° Mp 24'55 -2.1m greatest brilliancy -12031 Jun 01 j 21:06 0°≈ -12026 Jun 03 j 00:16 14° m 57'10 -4°33'02 opposition -12026 Jul 07 i 13:35 7° m 30'21 asc. node -12031 Jul 16 i 07:23 27°≈41'41 direct -12031 Jul 20 i 01:20 0°**米** -12026 Sep 17 i 06:43 -12031 Sep 08 i 11:15 0°Υ -12026 Nov 11 i 03:43 -12031 Nov 09 i 11:00 0°8 -12026 Dec 31 i 09:56 0° **₹** -12031 Dec 15 j 06:15 6°856'07 -12025 Feb 17 i 14:08 0°궁 retrograde -12030 Jan 15 j 18:48 1°**8**23'38 7°05'00 -12025 Mar 07 j 13:31 11°♂30'15 opposition asc node -12030 Jan 17 j 06:22 0°**8**57'37 -12025 Mar 30 j 21:39 26° ₹ 44'04 greatest brilliancy -2.6m evening set -12030 Jan 20 j 13:27 30° R**Y** -12025 Apr 04 j 20:04 0°≈≈ -12030 Jan 21 j 21:26 29°**Y**37'01 0.41345 AU min. Earth dist. max. Earth dist. -12025 Apr 20 j 22:30 10°≈46'28 2.56474 AU direct -12030 Feb 18 j 08:14 25°**Y**01'51 -12025 May 18 j 23:42 0°**)**€ -12030 Mar 18 j 11:09 0°8 -12030 May 15 j 22:23 $0^{\circ}\Pi$ conjunction -12025 May 19 j 22:53 0° **★**40'22 0°43'36 -12030 Jun 02 j 15:06 11°**Ⅲ**24'46 -12025 May 19 j 21:06 0°**)** 37′16 0°43'13 desc. node minimum elong 0°Υ -12030 Jun 30 j 03:55 -12025 Jun 30 j 02:16 0ಂತಾ -12030 Aug 12 j 11:09 -12025 Jul 10 j 02:55 7°**Y**20'34 0 $^{\circ}\Omega$ morning rise 0° 8 -12030 Sep 24 j 23:16 0° M -12025 Aug 09 j 12:12 -12030 Nov 08 j 11:35 0∘**⊽** -12025 Sep 17 j 20:12 $0^{\circ}\Pi$ -12030 Dec 24 j 04:54 0°M -12025 Oct 26 j 20:54 0 \circ \odot evening set -12029 Jan 10 j 18:33 11°M21'21 -12025 Dec 05 j 13:01 0° Ω -12029 Feb 08 j 19:29 0°**∡** -12024 Jan 16 j 01:47 0° m max. Earth dist. -12029 Feb 27 j 11:28 11° ₹ 56'50 2.66393 AU -12024 Jan 23 j 15:49 5° m 15'03 desc. node

-12024 Mar 01 j 13:06

0∘**⊽**

```
Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23,
Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.
                    -12024 Apr 28 j 12:50 0° ML
                                                                                             -12019 Apr 29 j 21:45
                    -12024 Jun 05 j 05:59
                                                                                             -12019 Jun 09 j 04:56
retrograde
                                            8°ML00'34
                                                                                                                     0°X
                    -12024 Jul 10 j 07:29 30°R ₽
                                                                                             -12019 Jul 18 j 00:55
                                                                                                                     0^{\circ}\Pi
min. Earth dist.
                    -12024 Jul 10 j 15:42 29°251'54 0.61686 AU
                                                                                             -12019 Aug 25 j 12:14 0°95
                    -12024 Jul 14 j 06:50 28°225'15 -1.6m
                                                                                             -12019 Sep 13 j 08:11 14°533'33
greatest brilliancy
                                                                         evening set
                    -12024 Jul 15 j 01:16 28°206'53 -5°19'53
opposition
                                                                         desc. node
                                                                                             -12019 Sep 13 j 23:12 15°502'24
                                                                                             -12019 Oct 03 j 13:47
direct
                    -12024 Aug 21 j 19:22 19°₽16'08
                                                                                                                     0^{\circ}\Omega
                    -12024 Oct 07 j 12:25
                    -12024 Dec 07 j 13:07
                                            0°∡
                                                                         conjunction
                                                                                             -12019 Nov 12 j 10:50 29° € 35'26 -0°41'29
                                                                                             -12019 Nov 12 j 08:16 29°\Omega30'45 0°41'05
asc. node
                    -12023 Jan 22 j 16:29 26° ₹ 59'15
                                                                          minimum elong
                    -12023 Jan 27 j 14:41
                                           0°ਤ
                                                                                             -12019 Nov 13 j 00:23
                                                                                                                    0° m
                                                                                             -12019 Dec 21 j 09:42 27° m 15'33 2.51019 AU
                    -12023 Mar 15 j 19:39
                                                                         max. Earth dist.
                    -12023 Apr 29 j 02:43
                                           0°∀
                                                                                             -12019 Dec 25 j 08:38
                                                                                                                     0∘⊽
evening set
                    -12023 May 14 j 21:19 11°米07'29
                                                                         morning rise
                                                                                             -12018 Jan 08 j 20:41
                                                                                                                     9°£56'29
max. Earth dist.
                    -12023 Jun 01 j 02:16 23°∺31'09
                                                       2.45085 AU
                                                                                             -12018 Feb 07 j 20:20
                                                                                                                     0°M
                    -12023 Jun 09 j 22:47 0°℃
                                                                                             -12018 Mar 26 j 12:02
                                                                                                                     0°⊼
                                                                                             -12018 May 14 j 14:48
                                                                                                                     0°ರ
conjunction
                    -12023 Jul 09 j 02:42 21°Y'47'44 1°13'23
                                                                                             -12018 Jul 07 j 11:00
 minimum elong
                    -12023 Jul 09 j 02:25 21°Υ47'12 1°13'37
                                                                         asc. node
                                                                                             -12018 Sep 15 j 06:02 25°≈15'20
                    -12023 Jul 19 j 21:13
                                           0°8
                                                                         retrograde
                                                                                             -12018 Sep 25 j 01:04 25°≈49'47
                    -12023 Aug 27 j 15:50
                                            0^{\circ}\Pi
                                                                         opposition
                                                                                             -12018 Oct 31 j 15:54 17°≈45'45 2°07'16
morning rise
                    -12023 Sep 06 i 18:41
                                            7°Ⅱ53'50
                                                                         greatest brilliancy
                                                                                             -12018 Nov 01 i 02:42 17°≈35'36
                                                                                                                                -1.8m
                    -12023 Oct 05 i 02:52
                                            0ಂಣ
                                                                         min. Earth dist.
                                                                                             -12018 Nov 07 i 05:42 15°≈17'14
                                                                                                                                 0.57235 AU
                    -12023 Nov 13 j 03:38
                                           0^{\circ}\Omega
                                                                         direct
                                                                                             -12018 Dec 10 j 18:33 8°≈09'32
desc. node
                    -12023 Dec 10 j 08:26 20°\Omega18'26
                                                                                             -12017 Feb 15 j 22:07
                                                                                                                     0°)€
                    -12023 Dec 23 j 15:43
                                                                                             -12017 Apr 05 j 13:16
                                                                                                                     0^{\circ}\Upsilon
                                           0° m
                    -12022 Feb 04 j 13:42
                                                                                             -12017 May 17 j 18:06
                                                                                                                     0°8
                                           0∘⊽
                    -12022 Mar 23 j 08:33
                                                                                             -12017 Jun 26 j 14:39 0°Ⅱ
                                            o°M.
                    -12022 May 18 j 05:22 0° ₹
                                                                                             -12017 Aug 02 j 01:16 27°Д52'15
                                                                         desc node
                    -12022 Jul 11 j 03:05 14° ₹ 10'29
                                                                                             -12017 Aug 04 j 20:13 0°5
retrograde
                                                                                             -12017 Sep 13 j 13:39
                    -12022 Aug 19 j 23:22 4° ₹25'15 -3°59'15
opposition
                                                                                                                     0^{\circ}\Omega
                    -12022 Aug 19 j 09:00 4^{\circ} 39'44 0.66302 \text{ AU}
                                                                                             -12017 Oct 24 j 14:08 0° M
min. Earth dist.
                    -12022 Aug 19 j 22:03 4°尽 26'35 -1.4m
                                                                                             -12017 Nov 09 j 23:12 11° M 38'35
greatest brilliancy
                                                                         evening set
                    -12022 Aug 31 j 10:47 30°RM
                                                                                             -12017 Dec 06 j 08:48 0°♀
                    -12022 Sep 28 j 19:43 24°M46'51
direct
                    -12022 Oct 30 j 00:40 0° ₹
                                                                                             -12016 Jan 02 j 12:16 18°223'07 -1°14'34
                                                                         conjunction
                    -12022 Dec 10 j 23:06 17° ₹20'03
                                                                                             -12016 Jan 02 j 11:39 18° 222'06 1°14'46
asc. node
                                                                          minimum elong
                    -12021 Jan 04 j 00:29 0°3
                                                                                             -12016 Jan 20 j 00:04 0° M
                    -12021 Feb 23 j 06:24 0°≈
                                                                         max. Earth dist.
                                                                                             -12016 Jan 23 j 22:50
                                                                                                                    2°M35'59 2.60886 AU
                    -12021 Apr 09 j 12:01 0°米
                                                                         morning rise
                                                                                             -12016 Feb 22 j 11:46 21° ML 49'17
                    -12021 May 21 j 12:58 0°Υ
                                                                                             -12016 Mar 06 j 05:19 0° 尽
                    -12021 Jun 30 j 09:22 0°8
                                                                                             -12016 Apr 22 j 14:31 0°ਰ
                    -12021 Jul 10 j 23:40
                                            8°810'06
                                                                                             -12016 Jun 10 j 00:08 0°≈
evening set
                    -12021 Aug 07 j 23:47 0°П
                                                                                             -12016 Jul 30 j 09:04
                                                                                             -12016 Aug 02 j 01:49
                                                                         asc. node
                                                                                                                    1°\ 32'30
                    -12021 Sep 10 j 23:15 26° II 37'58 0°34'45
                                                                                             -12016 Sep 26 j 09:27 0°Υ
conjunction
                    -12021 Sep 11 j 02:10 26° II 43'39 0°35'23
                                                                                             -12016 Nov 17 j 16:48 13°Υ15'09
 minimum elong
                                                                         retrograde
                    -12021 Sep 15 i 06:43 0°5
                                                                                             -12016 Dec 20 j 18:28 6^{\circ} Y 56'01
                                                                         opposition
                                                                                                                                6°15'35
                                                                                             -12016 Dec 22 j 08:31 6^{\circ} \cdot \cdot 25'02 -2.4m
max. Earth dist.
                    -12021 Oct 12 i 01:54 20°545'55 2.39314 AU
                                                                         greatest brilliancy
                    -12021 Oct 24 i 03:51 0^{\circ}\Omega
                                                                         min. Earth dist.
                                                                                             -12016 Dec 28 j 13:14 4^{\circ} \( \gamma 24'59 \)
                                                                                                                                0.45574 AU
desc. node
                    -12021 Oct 28 j 01:02 2^{\circ}\Omega56'46
                                                                                             -12015 Jan 15 j 21:09 30°R €
                    -12021 Nov 14 j 07:44 15^{\circ}\Omega 55'23
                                                                         direct
                                                                                             -12015 Jan 25 j 23:10 29°) 17'11
morning rise
                    -12021 Dec 03 j 10:39 0° Mp
                                                                                             -12015 Feb 05 j 05:37
                                                                                                                     0^{\circ}\Upsilon
                                                                                             -12015 Apr 15 j 10:07
                    -12020 Jan 14 j 18:34
                                           0∘ <del>ত</del>
                                                                                                                     0°8
                    -12020 Feb 28 j 16:45
                                           0°M
                                                                                             -12015 May 30 j 07:59
                                                                                                                     0^{\circ}\Pi
                    -12020 Apr 17 j 01:35
                                            0° ₹
                                                                                             -12015 Jun 19 j 06:01 14°Д09'02
                                                                         desc. node
                    -12020 Jun 11 j 13:29
                                           0°궁
                                                                                             -12015 Jul 11 j 05:47
                                                                                                                     0ಂತಾ
                    -12020 Aug 14 j 23:42 18°궁31'38
                                                                                             -12015 Aug 21 j 19:51
                                                                                                                     0°\Omega
retrograde
                    -12020 Sep 22 j 18:58
                                           9°ට23'18 -1°27'25
opposition
                                                                                             -12015 Oct 03 j 05:57
                                                                                                                     0° m
                    -12020 Sep 22 j 23:25
                                            9°る18'54 -1.5m
greatest brilliancy
                                                                                             -12015 Nov 16 j 01:10
                                                                                                                     0∘⊽
                    -12020 Sep 25 j 22:14
                                            8°る08'45 0.64735 AU
min. Earth dist.
                                                                         evening set
                                                                                             -12015 Dec 25 j 12:47 26°△12'41
                    -12020 Oct 24 j 04:20 30°R ✓
                                                                                             -12015 Dec 31 j 07:46
asc. node
                    -12020 Oct 28 j 04:22 29° ₹36'33
direct
                    -12020 Nov 02 j 14:12 29°尽25'07
                                                                         conjunction
                                                                                             -12014 Feb 12 j 23:50 28°ML15'18 -1°03'53
                    -12020 Nov 12 j 06:47
                                            0°궁
                                                                          minimum elong
                                                                                             -12014 Feb 13 j 01:17 28°ML17'37 1°04'27
                    -12019 Jan 27 j 23:37
                                                                                             -12014 Feb 15 j 17:05
                                            0°≈
                                                                                                                     0°∡7
                    -12019 Mar 17 j 17:15 0°米
                                                                         max. Earth dist.
                                                                                             -12014 Feb 18 j 00:27
                                                                                                                     1°尽28'48 2.65871 AU
```

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12014 Apr 01 i 17:00 28° ₹ 48'11 opposition -12009 Jun 30 j 15:07 12° \(\Omega\)43'06 -5°23'09 morning rise -12014 Apr 03 j 13:53 -12009 Jun 29 j 13:50 13°**2**07'52 -1.7m 0°ನ greatest brilliancy -12014 May 20 j 07:05 -12009 Aug 06 j 06:31 0°≈≈ direct 4°**₽**19'51 -12014 Jun 19 j 17:37 19°≈42'06 asc. node -12009 Oct 24 j 07:59 oom. -12014 Jul 05 j 13:41 -12009 Dec 17 j 18:50 0°**₩** 0°×7 $0^{\circ}\Upsilon$ 0°궁 -12014 Aug 20 j 15:30 -12008 Feb 05 j 08:45 -12014 Oct 06 j 11:34 0° 8 asc. node -12008 Feb 09 j 07:06 2°る27'37 -12014 Nov 26 j 08:58 $0^{\circ}\Pi$ -12008 Mar 23 j 02:20 0°≈ -12008 Apr 25 j 22:17 22°≈48'44 retrograde -12013 Feb 01 j 11:33 21°**Д**56'55 evening set opposition -12013 Mar 04 j 14:59 16°**Ⅱ**40'05 4°44'36 -12008 May 06 j 07:07 0°**)**€ min. Earth dist. -12013 Mar 03 j 16:53 16°**Ⅲ**54'58 0.38445 AU max. Earth dist. -12008 May 12 j 10:33 4°**)**€18'08 2.49842 AU greatest brilliancy -12013 Mar 04 j 16:17 16°**Ⅲ**39'13 -2.9m 0° **Y**19'59 direct -12013 Apr 04 j 00:47 11°**Д**33'11 conjunction -12008 Jun 17 j 15:56 1°07'13 desc. node -12013 May 07 j 11:33 18°**Д**05'35 minimum elong -12008 Jun 17 j 14:12 0°Y16'49 1°07'11 -12013 Jun 03 j 07:42 0ಂತಾ -12008 Jun 17 j 05:02 $0^{\circ}\Upsilon$ -12013 Jul 25 j 00:55 $0^{\circ}\Omega$ -12008 Jul 27 j 07:03 0°8 -12013 Sep 09 j 23:57 0° m morning rise -12008 Aug 12 j 12:17 12°**8**25'16 -12013 Oct 26 j 08:32 -12008 Sep 04 j 05:36 $0^{\circ}\Pi$ -12013 Dec 12 j 02:32 -12008 Oct 12 j 20:22 -12012 Jan 28 j 05:27 -12008 Nov 21 j 00:45 $0^{\circ}\Omega$ evening set -12012 Feb 04 i 05:29 4°**∡**°27′18 desc. node -12008 Dec 27 j 04:41 $26^{\circ}\Omega 43'08$ max. Earth dist. -12012 Mar 13 i 16:52 29° ₹02'48 2.65543 AU -12008 Dec 31 i 18:13 0° m -12012 Mar 15 j 04:26 0°ਤ -12007 Feb 13 i 05:23 0∘∙თ -12007 Apr 02 i 19:40 0°M -12012 Mar 23 j 06:51 5°る13'10 -0°26'15 -12007 Jun 16 j 04:27 0°×7 conjunction -12012 Mar 23 i 07:53 5°る14'49 0°26'56 -12007 Jun 27 j 12:02 minimum elong retrograde 0° ×748'05 -12012 Apr 30 j 07:21 -12007 Jul 08 j 09:23 30°RM 0°≈≈ -12012 May 06 j 09:40 4°≈01'33 -12007 Aug 04 j 09:18 21°M 45'36 0.65230 AU asc node min. Earth dist. -12012 May 09 j 07:44 -12007 Aug 06 j 11:12 20°ML55'21 -4°40'20 morning rise 5°≈57'36 opposition -12012 Jun 14 j 03:01 0°**∀** -12007 Aug 06 j 03:56 21°ML02'41 -1.4m greatest brilliancy -12012 Jul 27 j 13:13 $0^{\circ}\Upsilon$ -12007 Sep 14 j 14:43 11°M32'13 direct -12012 Sep 07 j 19:30 0°8 d -12007 Nov 18 j 10:25 0° ₹ -12007 Dec 27 j 11:50 20° ₹ 11'05 -12012 Oct 19 j 10:48 0°**Ⅱ** asc. node -12012 Nov 30 j 10:53 0°5 -12006 Jan 13 j 15:34 0°궁 -12011 Jan 14 j 05:28 0°**Ω** -12006 Mar 03 j 07:10 0°≈ -12006 Apr 17 j 01:26 0°**米** -12011 Mar 17 j 10:53 0° Mg -12006 May 28 j 23:36 0°**Υ** desc. node -12011 Mar 24 j 14:30 1° m 33'23 retrograde -12011 Apr 06 j 14:06 2° Mp 43'32 evening set -12006 Jun 17 j 03:29 14° Υ 16'01 -12011 Apr 26 j 08:08 30°RA -12006 Jul 07 j 20:13 0°8 min. Earth dist. -12011 May 05 j 03:57 $27^{\circ}\Omega$ 18'37 0.46575 AUmax. Earth dist. -12006 Jul 27 j 23:29 15°**8**33'31 2.38857 AU greatest brilliancy -12011 May 12 j 05:18 24°**Ω**53'05 -2.4m -12011 May 13 j 04:35 24° Ω 33'01 -3°06'04 -12006 Aug 15 j 19:44 0°II16'02 0°59'38 opposition conjunction -12011 Jun 15 j 03:22 17° **Ω**52'29 -12006 Aug 15 j 22:49 0°**II**22'03 1°00'12 direct minimum elong -12011 Aug 02 j 22:58 0° Mp -12006 Aug 15 j 11:33 $\Pi^{\circ}0$ -12011 Sep 30 j 07:25 0°**♀** -12006 Sep 22 j 19:09 0°€ -12011 Nov 20 i 02:54 0°M morning rise -12006 Oct 19 j 01:33 20°521'10 -12010 Jan 08 i 00:58 0° ⊀ -12006 Oct 31 j 16:23 0°Ω -12010 Feb 24 i 16:51 0°る desc. node -12006 Nov 13 j 22:24 $10^{\circ}\Omega 00'39$ evening set -12010 Mar 14 j 19:33 11°る38'52 -12006 Dec 10 i 23:18 0° m asc. node -12010 Mar 24 j 05:51 17°**⋜**46'43 -12005 Jan 22 j 09:33 0∘ଫ max. Earth dist. -12010 Apr 09 j 04:35 28°る15'29 2.59975 AU -12005 Mar 08 j 17:35 0°M -12010 Apr 11 j 19:41 0°≈ -12005 Apr 27 j 14:16 0°×7 -12005 Jul 01 j 14:52 conjunction -12010 May 02 j 19:00 14°≈03'18 0°24'16 retrograde -12005 Aug 01 j 19:00 5°る17'43 minimum elong -12010 May 02 j 17:58 14°≈01'33 0°23'44 -12005 Aug 30 j 07:46 30°R.✓ -12010 May 26 j 01:35 0°**⊁** opposition -12005 Sep 10 j 02:52 25° ₹ 52'07 -2°33'37 morning rise -12010 Jun 21 j 00:24 18° **∺** 13'57 greatest brilliancy -12005 Sep 10 j 07:07 25° ₹ 47'52 -1.4m $0^{\circ}\Upsilon$ -12010 Jul 07 j 09:58 -12005 Sep 11 j 19:35 25° ₹ 11'24 min. Earth dist. 0.66075 AU -12010 Aug 17 j 03:54 0° 8 direct -12005 Oct 20 j 16:41 15° ₹ 58'01 -12010 Sep 25 j 21:00 -12005 Nov 14 j 18:06 19° ₹29'30 $0^{\circ}\Pi$ asc. node -12010 Nov 04 j 07:43 0ಂತಾ -12005 Dec 14 j 00:59 o°ਤ -12010 Dec 14 j 12:29 0° Ω -12004 Feb 08 j 13:36 0°≈ -12009 Jan 26 j 00:55 0° m -12004 Mar 26 j 08:55 0°**)**€ desc. node -12009 Feb 09 j 10:50 9°My31'01 -12004 May 07 j 22:58 $0^{\circ}\Upsilon$ -12009 Mar 15 j 14:06 0∘**⊽** -12004 Jun 17 j 00:20 0°8

-12004 Jul 25 j 17:01

evening set

-12004 Aug 18 j 21:34 18°**Д**56'11

-12009 May 22 j 05:41 22°**♀**27'12

-12009 Jun 24 j 19:16 14° **2**59'43 0.58270 AU

retrograde min. Earth dist.

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -12004 Sep 02 j 01:38 0°5 -11999 May 27 j 18:38 -12004 Sep 30 j 17:25 22°509'14 -11999 Jul 06 j 13:24 25°≈13'43 desc node asc. node -12004 Oct 11 j 00:21 0°**Ω** -11999 Jul 14 j 02:45 0°)($0^{\circ}\Upsilon$ -11999 Aug 31 j 10:24 -11999 Oct 22 j 23:49 -12004 Oct 19 j 23:57 0°8 conjunction 6°Ω47'28 -0°14'26 -12004 Oct 19 j 22:47 minimum elong 6°**Ω**45'17 0°13'51 retrograde -11998 Jan 01 j 12:42 22°**8**36'18 -12004 Oct 19 j 09:13 6°51'01 behind sun begin 6°**Ω**19'46 opposition -11998 Feb 01 j 09:26 17°**8**22'07 behind sun end -12004 Oct 20 j 12:20 7°**Ω**10'46 greatest brilliancy -11998 Feb 02 j 11:20 17°**8**04'07 -2.7m -12004 Nov 20 j 08:07 0° m min. Earth dist. -11998 Feb 05 j 11:41 16°**8**13'58 0.39618 AU max. Earth dist. -12004 Dec 02 j 20:20 9°**m**,02′13 2.46205 AU direct -11998 Mar 05 j 13:39 11°**8**39'17 morning rise -12004 Dec 19 j 14:30 20° M 56'04 -11998 May 03 j 04:45 Π $^{\circ}0$ -12003 Jan 01 j 14:33 0∘**⊽** desc. node -11998 May 24 j 03:07 11°**Д**50'44 -12003 Feb 15 j 03:31 0° M -11998 Jun 22 j 01:18 0ಂತಾ -12003 Apr 03 j 05:01 0°**√** -11998 Aug 06 j 00:54 $0^{\circ}\Omega$ -12003 May 23 j 17:38 0°ರ -11998 Sep 19 j 09:55 0° m -12003 Jul 23 j 02:14 -11998 Nov 03 j 10:27 0∘**⊽** retrograde -12003 Sep 08 j 01:25 10°≈48'22 -11998 Dec 19 j 10:39 0°M asc. node -12003 Oct 01 j 21:36 7°≈07'49 evening set -11997 Jan 19 j 19:00 20° ML08'47 opposition -12003 Oct 15 j 16:27 2°≈15'03 0°36'33 -11997 Feb 04 j 04:39 greatest brilliancy -12003 Oct 15 j 18:58 2°≈12'38 -1.6m max. Earth dist. -11997 Mar 05 j 01:08 18° ₹26'55 2.66327 AU min. Earth dist. -12003 Oct 20 j 23:53 0°≈11'51 0.60830 AU -12003 Oct 21 i 12:15 30°Rる conjunction -11997 Mar 09 i 02:29 21° ₹ 02'46 -0°43'09 direct -12003 Nov 25 j 07:42 22°る22'45 minimum elong -11997 Mar 09 i 03:57 21° ₹ 05'06 -12002 Jan 01 i 12:42 0°**≈** -11997 Mar 23 i 01:29 0°**ਨ** -12002 Mar 01 i 06:30 0°**∀** -11997 Apr 25 j 02:10 21° ₹ 20'48 morning rise -12002 Apr 15 j 14:18 $0^{\circ}\Upsilon$ -11997 May 08 j 08:22 0°≈ -12002 May 26 j 17:45 0°8 -11997 May 24 j 05:14 10°≈26'01 asc node -12002 Jul 05 j 00:58 -11997 Jun 22 j 14:38 0°**₩** 0°П -12002 Aug 12 j 20:53 0°5 -11997 Aug 05 j 18:48 $0^{\circ}\Upsilon$ -12002 Aug 18 j 17:01 4°9529'31 -11997 Sep 18 j 04:05 0°8 desc. node -12002 Sep 21 j 06:02 0°**Ω** -11997 Oct 31 j 11:23 $0^{\circ}\Pi$ -12002 Oct 20 j 01:09 21° **Ω**20'36 -11997 Dec 15 j 10:49 0°5 evening set -12002 Oct 31 j 23:16 0° M -11996 Feb 08 j 14:05 0°**Ω** -12002 Dec 13 j 12:21 0°**♀** -11996 Mar 15 j 09:03 $7^{\circ}\Omega$ 54'18 retrograde -11996 Apr 10 j 06:52 3°**Ω**34'31 desc. node -12002 Dec 14 j 23:43 1°**⊆**00'54 -1°07'52 conjunction min. Earth dist. -11996 Apr 11 j 21:08 3° Ω05'46 0.42065 AU -12002 Dec 14 j 21:55 0°**2**57'48 1°07'51 minimum elong opposition -11996 Apr 18 j 19:03 $0^{\circ}\Omega$ 56'24 $-0^{\circ}36$ '54 max. Earth dist. -12001 Jan 12 j 05:51 20° **2** 10'47 2.57563 AU greatest brilliancy -11996 Apr 18 j 14:36 0°**Ω**59'53 -2.7m -12001 Jan 27 j 00:33 0°M -11996 Apr 21 j 20:08 30°Rூ morning rise -12001 Feb 06 j 02:04 6°MJ36'48 direct -11996 May 20 j 05:15 25°505'40 -12001 Mar 14 j 07:31 0° ₹ -11996 Jun 18 j 07:08 0°**Ω** -12001 May 01 j 03:30 0°る -11996 Aug 21 j 01:45 0° Mp -12001 Jun 19 j 20:19 0°≈ -11996 Oct 10 j 17:18 0° ₽ -12001 Aug 13 j 07:26 0°**米** -11996 Nov 28 j 08:34 0°M -12001 Aug 19 j 19:57 3°**米**11'40 asc. node -11995 Jan 15 j 09:06 0° ₹ -11995 Feb 27 i 07:00 27° ₹11'07 retrograde -12001 Oct 26 j 01:29 23° \(\) 03'30 evening set -12001 Nov 29 j 15:19 15°\ 57'57 4°43'20 opposition -11995 Mar 03 i 16:28 0°る greatest brilliancy -12001 Nov 30 i 20:17 15° ★ 32'30 -2.1m max. Earth dist. -11995 Mar 29 i 13:34 16° ₹43'49 2.62776 AU min. Earth dist. -12001 Dec 07 j 12:17 13° \(\mathbf{H}\) 12'17 0.50356 AU asc. node -11995 Apr 09 j 23:07 24°정11'46 direct -12000 Jan 06 j 21:30 7° ¥ 16'50 -12000 Mar 13 j 17:05 0°**Υ**° -11995 Apr 16 j 14:25 28°る34'22 0°04'08 conjunction -12000 Apr 29 j 17:03 0°8 -11995 Apr 16 j 14:16 28°る34'08 0°03'31 minimum elong -11995 Apr 15 j 18:34 28°**⋜**01'36 -12000 Jun 10 j 10:54 0°**П** behind sun begin desc. node -12000 Jul 05 j 21:31 18°Д52'13 behind sun end -11995 Apr 17 j 09:58 29°る06'40 -12000 Jul 20 j 20:10 0ಂತಾ -11995 Apr 18 j 18:11 0°22 -12000 Aug 30 j 10:19 0 $^{\circ}\Omega$ -11995 Jun 02 j 04:25 0°**)**€ -12000 Oct 11 j 03:00 0° M -11995 Jun 03 j 12:49 0°\ 55'51 morning rise $0^{\circ}\Upsilon$ -12000 Nov 23 j 09:52 -11995 Jul 14 j 21:06 0∘**⊽** -12000 Dec 08 j 10:47 10°**£**09'22 0°8 evening set -11995 Aug 25 j 02:20 -11999 Jan 07 j 08:30 $0^{\circ}\Pi$ 0°M₊ -11995 Oct 04 j 08:30 -11995 Nov 13 j 10:23 0ಂತಾ conjunction -11999 Jan 28 j 03:09 13°ML33'35 -1°12'03 -11995 Dec 24 j 12:36 0 $^{\circ}\Omega$ minimum elong -11999 Jan 28 j 04:05 13°M 35'07 1°12'31 -11994 Feb 07 j 00:19 0° M max. Earth dist. -11999 Feb 08 j 09:24 20°ML50'44 2.64553 AU desc. node -11994 Feb 26 j 07:29 11° Mp 32'44 -11999 Feb 22 j 14:40 -11994 Apr 07 j 00:49 0∘**⊽** -11999 Mar 17 j 18:37 14° ₹ 49'28 -11994 May 05 j 23:44 5°**♀**12'54 morning rise retrograde

-11994 Jun 02 j 11:26 30°R M

-11999 Apr 10 j 14:13 0°ਰ

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 41

```
Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.
                    -11994 Jun 06 j 12:38 28° m 32'24 0.54034 AU
min. Earth dist.
                                                                                             -11989 Sep 10 j 13:51
                    -11994 Jun 12 j 09:37 26° Mp 19'14 -1.9m
greatest brilliancy
                    -11994 Jun 13 j 15:29 25° m 50'54 -5°01'28
                                                                                             -11989 Sep 25 j 16:35 11°5645'16 0°17'18
opposition
                                                                         conjunction
direct
                    -11994 Jul 19 j 00:01 18° mp 01'56
                                                                                             -11989 Sep 25 j 18:12 11°548'23
                                                                          minimum elong
                                                                                                                                0°17'57
                    -11994 Sep 06 j 02:05
                                                                                             -11989 Oct 18 j 12:36 29°517'47
                                           0∘⊽
                                                                         desc. node
                                                                                             -11989 Oct 19 j 10:47
                    -11994 Nov 04 j 18:14
                                           0°M
                                                                                                                   0^{\circ}\Omega
                    -11994 Dec 26 j 04:06
                                           0°∡7
                                                                                             -11989 Nov 06 j 03:11 13°\Omega20'21 2.41427 AU
                                                                         max. Earth dist.
                    -11993 Feb 12 j 19:00
                                           0°₹
                                                                         morning rise
                                                                                             -11989 Nov 28 j 02:38 29°Ω34'21
asc. node
                    -11993 Feb 25 j 21:43
                                           8°る20'01
                                                                                             -11989 Nov 28 j 16:43
                                                                                                                    0° m
                    -11993 Mar 31 j 04:59
                                           0°≈
                                                                                             -11988 Jan 09 j 22:44
                                                                                                                    0∘⊽
evening set
                    -11993 Apr 09 j 10:56
                                           6°≈09'16
                                                                                             -11988 Feb 23 j 15:33
                                                                                                                    0°M
                    -11993 Apr 28 j 12:06 19°≈02'17 2.54259 AU
                                                                                             -11988 Apr 11 j 09:10
                                                                                                                    0°∡7
max. Earth dist.
                    -11993 May 14 j 09:20
                                                                                                                    0°ಕ
                                           0°∀
                                                                                             -11988 Jun 03 j 08:19
                                                                         retrograde
                                                                                             -11988 Aug 23 j 12:09 26°₹44'45
conjunction
                    -11993 May 30 j 07:09 11° € 11'00 0°53'32
                                                                         opposition
                                                                                             -11988 Sep 30 j 22:19 17°₹47'45 -0°44'41
 minimum elong
                    -11993 May 30 j 05:10 11°米07′28 0°53′16
                                                                         greatest brilliancy
                                                                                             -11988 Oct 01 j 01:15 17°₹44′52
                    -11993 Jun 25 j 10:25
                                           0^{\circ}\Upsilon
                                                                         min. Earth dist.
                                                                                             -11988 Oct 04 j 20:37 16°쥥14'55
                                                                                                                                0.63578 AU
morning rise
                    -11993 Jul 21 j 21:02 19°Y33'48
                                                                         asc. node
                                                                                             -11988 Oct 18 j 12:58 11° ₹22'43
                    -11993 Aug 04 j 17:38
                                           0°8
                                                                         direct
                                                                                             -11988 Nov 10 j 17:34
                                                                                                                    7°る49'37
                    -11993 Sep 12 j 22:01
                                            0^{\circ}\Pi
                                                                                             -11987 Jan 19 j 22:08
                    -11993 Oct 21 j 18:41
                                                                                             -11987 Mar 11 j 18:09
                                                                                                                    0°\
                    -11993 Nov 30 i 05:31
                                           0^{\circ}\Omega
                                                                                             -11987 Apr 24 j 13:11
                                                                                                                    0^{\circ}\Upsilon
                    -11992 Jan 10 i 08:44
                                           0° m
                                                                                             -11987 Jun 04 i 02:47
                                                                                                                    0°8
desc. node
                    -11992 Jan 14 i 01:59
                                            2° m 37'10
                                                                                             -11987 Jul 13 j 02:16
                                                                                                                    \Pi^{\circ}0
                    -11992 Feb 23 i 19:42
                                                                                             -11987 Aug 20 j 16:09
                    -11992 Apr 16 j 07:19
                                                                                             -11987 Sep 04 j 10:23 11°523'56
                                                                         desc node
                    -11992 Jun 13 j 13:16 16°M 48'44
                                                                         evening set
                                                                                             -11987 Sep 27 j 03:30 28°544'00
retrograde
                    -11992 Jul 19 j 21:01 8°ML19'28 0.63186 AU
                                                                                             -11987 Sep 28 j 19:42 0°Ω
min. Earth dist.
opposition
                    -11992 Jul 23 j 10:41 6°M 53'40 -5°09'42
                                                                                             -11987 Nov 08 j 07:36
                    -11992 Jul 22 j 20:20 7°ML08'03 -1.5m
greatest brilliancy
                    -11992 Aug 12 j 16:37 30°R Ω
                                                                                             -11987 Nov 24 j 18:49 11° m 49'50 -0°53'24
                                                                         conjunction
                    -11992 Aug 30 j 17:16 27°♀50'11
                                                                                             -11987 Nov 24 j 16:13 11° m 45'13 0°53'08
                                                                          minimum elong
direct
                    -11992 Sep 19 j 01:49 0°M
                                                                                             -11987 Dec 20 j 16:26 0°♀
                    -11992 Nov 30 j 20:10 0° ₹
                                                                                             -11987 Dec 29 j 23:36 6°223'48 2.53507 AU
                                                                         max. Earth dist.
                    -11991 Jan 13 j 01:28 24° ₹27'51
                                                                                             -11986 Jan 19 j 12:32 20°♀17'48
asc. node
                                                                         morning rise
                    -11991 Jan 22 j 06:59 0°궁
                                                                                             -11986 Feb 03 j 02:52 0°M
                    -11991 Mar 10 j 23:02 0°≈
                                                                                             -11986 Mar 21 j 13:51 0° ₹
                    -11991 Apr 24 j 10:19 0°₩
                                                                                             -11986 May 09 j 02:18 0°る
evening set
                    -11991 May 26 j 09:04 22°\ 44'15
                                                                                             -11986 Jun 29 j 22:14 0°≈
                    -11991 Jun 05 j 07:27 0°Υ
                                                                                             -11986 Sep 03 j 17:06 0°米
max. Earth dist.
                    -11991 Jun 15 j 15:08 7°Y38'16 2.42535 AU
                                                                         asc. node
                                                                                             -11986 Sep 05 j 13:49 0° ∺ 33'56
                    -11991 Jul 15 j 05:23 0°8
                                                                                             -11986 Oct 05 j 14:09 5° ∺25'52
                                                                         retrograde
                                                                                             -11986 Nov 04 j 00:34 30°R≈
                    -11991 Jul 22 j 03:37 5°819'07 1°12'06
                                                                                             -11986 Nov 10 j 12:41 27°≈40'39 3°02'51
conjunction
                                                                         opposition
                    -11991 Jul 22 j 04:37 5°821'03 1°12'28
                                                                         greatest brilliancy
                                                                                             -11986 Nov 11 j 05:40 27°≈24'58
 minimum elong
                    -11991 Aug 22 j 22:34 0°Ⅱ
                                                                         min. Earth dist.
                                                                                             -11986 Nov 17 j 16:28 25°≈02'01
                                                                                                                                0.54931 AU
                    -11991 Sep 21 j 20:22 23°Д23'16
                                                                                             -11986 Dec 20 i 03:06 18°≈18'50
morning rise
                                                                         direct
                    -11991 Sep 30 i 07:52 0°5
                                                                                             -11985 Feb 04 i 05:53 0°)€
                    -11991 Nov 08 i 06:37 0^{\circ}\Omega
                                                                                             -11985 Mar 29 i 10:07
                                                                                                                    0^{\circ}\Upsilon
desc. node
                    -11991 Nov 30 i 18:08 16^{\circ}\Omega52'28
                                                                                             -11985 May 11 i 16:54
                                                                                                                    0°8
                    -11991 Dec 18 i 15:32 0° Mb
                                                                                             -11985 Jun 21 j 01:03 0°Ⅱ
                    -11990 Jan 30 j 07:19
                                                                                             -11985 Jul 23 j 12:14 24°Д38'05
                                           0∘⊽
                                                                         desc node
                    -11990 Mar 17 j 08:40 0° M
                                                                                             -11985 Jul 30 j 14:01
                                                                                                                    0ಂತಾ
                    -11990 May 09 j 00:30 0° ⊀
                                                                                             -11985 Sep 08 j 13:06
                                                                                                                    0^{\circ}\Omega
                    -11990 Jul 19 j 00:32 22° ₹ 10'51
retrograde
                                                                                             -11985 Oct 19 j 17:49
opposition
                    -11990 Aug 27 j 17:06 12° ₹31'41 -3°30'34
                                                                         evening set
                                                                                             -11985 Nov 21 j 03:19 22° m 46'00
                    -11990 Aug 27 j 18:23 12°
■30'24 -1.4m
greatest brilliancy
                                                                                             -11985 Dec 01 j 15:41
min. Earth dist.
                    -11990 Aug 27 j 22:32 12°尽 26'14 0.66477 AU
                    -11990 Oct 06 j 20:30 2° ₹ 46'36
                                                                                             -11984 Jan 12 j 12:21 28°207'39 -1°15'18
direct
                                                                         conjunction
                    -11990 Dec 01 j 07:47 17° ₹ 08'15
                                                                                             -11984 Jan 12 j 12:23 28°207'43 1°15'37
asc. node
                                                                          minimum elong
                    -11990 Dec 27 j 21:49
                                           0°る
                                                                                             -11984 Jan 15 j 08:28
                                                                                                                    0°M
                    -11989 Feb 17 j 17:55
                                           0°≈
                                                                         max. Earth dist.
                                                                                             -11984 Jan 30 j 04:46
                                                                                                                    9°M43'53 2.62425 AU
                    -11989 Apr 04 j 11:31
                                           0°∀
                                                                                             -11984 Mar 01 j 13:10
                                                                                                                    0°∡¹
                                           0^{\circ}\Upsilon
                    -11989 May 16 j 17:12
                                                                         morning rise
                                                                                             -11984 Mar 02 j 12:26
                                                                                                                    0°х 37′19
                    -11989 Jun 25 j 15:39
                                           0°8
                                                                                             -11984 Apr 17 j 17:41
                                                                                                                    0°궁
                    -11989 Jul 25 j 03:15 22°850'41
                                                                                             -11984 Jun 04 j 14:29
                                                                                                                    0°≈
evening set
                    -11989 Aug 03 j 06:46 0°П
                                                                                             -11984 Jul 23 j 08:28 29°≈51'34
                                                                         asc. node
```

```
Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23,
Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.
                    -11984 Jul 23 i 14:05 0°米
                                                                                              -11979 Sep 22 j 13:29
                                                                                                                      0∘⊽
                    -11984 Sep 14 j 06:55
                                            0^{\circ}\Upsilon
                                                                                              -11979 Nov 14 j 09:10
                                                                                                                      oom.
                    -11984 Dec 02 j 17:10 26^{\circ} \Upsilon 32'43
                                                                                              -11978 Jan 03 j 00:29
                                                                                                                      0°×7
retrograde
                    -11983 Jan 03 j 22:08 20°Υ'40'15
                                                                                                                     0°궁
                                                        6°51'40
                                                                                              -11978 Feb 19 j 23:37
opposition
                    -11983 Jan 05 j 13:05 20^{\circ}Y 10'19
greatest brilliancy
                                                        -2.5m
                                                                         asc. node
                                                                                              -11978 Mar 14 j 13:15 14°♂29'40
                    -11983 Jan 11 j 01:54 18°γ29'13
min. Earth dist.
                                                        0.43116 AU
                                                                         evening set
                                                                                              -11978 Mar 23 j 23:21 20°♂37'39
                    -11983 Feb 07 j 17:11 13°Υ43'19
direct
                                                                                              -11978 Apr 07 j 04:59
                                                                                                                      0°≈
                                                                         max. Earth dist.
                    -11983 Apr 02 j 20:39
                                            0°8
                                                                                              -11978 Apr 15 j 22:44
                                                                                                                      5°≈49'01 2.58138 AU
                    -11983 May 22 j 06:38
                                            0^{\circ}\Pi
desc. node
                    -11983 Jun 09 j 18:58 12°Ⅲ35'57
                                                                         conjunction
                                                                                              -11978 May 12 j 11:25 23°≈48'03
                                                                                                                                  0°35'35
                    -11983 Jul 04 j 16:10
                                            0ംខ
                                                                           minimum elong
                                                                                              -11978 May 12 j 09:55 23°≈45'30
                                                                                                                                  0°35'08
                                                                                              -11978 May 21 j 10:49
                    -11983 Aug 16 j 01:45
                                            0^{\circ}\Omega
                                                                                                                      0°)€
                    -11983 Sep 27 j 23:56
                                            0° M
                                                                         morning rise
                                                                                              -11978 Jul 01 j 15:44 29° ¥ 14'26
                    -11983 Nov 11 j 03:07
                                            0∘⊽
                                                                                              -11978 Jul 02 j 16:52
                                                                                                                      0^{\circ}\Upsilon
                    -11983 Dec 26 j 14:28
                                            0°M
                                                                                              -11978 Aug 12 j 07:06
                                                                                                                      0°8
evening set
                    -11982 Jan 03 j 23:07
                                            5°M25'56
                                                                                              -11978 Sep 20 j 19:14
                                                                                                                      0^{\circ}\Pi
                    -11982 Feb 11 j 02:09
                                            0°√
                                                                                              -11978 Oct 29 j 23:51
                                                                                                                      0ಂತಾ
                                                                                              -11978 Dec 08 j 20:10
                                                                                                                      0^{\circ}\Omega
conjunction
                    -11982 Feb 21 j 21:42
                                            6°₹55'47 -0°57'14
                                                                                              -11977 Jan 19 j 15:50
                                                                                                                      0° m
 minimum elong
                    -11982 Feb 21 j 23:16
                                            6°≯58'17 0°57'52
                                                                         desc. node
                                                                                              -11977 Jan 30 j 21:38
                                                                                                                      7° m 39'34
                                            8°∡°02′10
max. Earth dist.
                    -11982 Feb 23 j 15:11
                                                       2.66269 AU
                                                                                              -11977 Mar 07 j 00:25
                                                                                                                      0∘⊽
                    -11982 Mar 29 j 22:28
                                            0°궁
                                                                                              -11977 May 13 i 10:40
                                                                                                                      0°M
morning rise
                    -11982 Apr 10 i 05:48
                                            7°る15'24
                                                                                              -11977 May 31 j 00:39
                                                                                                                      1°ML57'17
                                                                         retrograde
                    -11982 May 15 j 11:21
                                                                                              -11977 Jun 16 j 16:06 30°R ₽
                                            0°≈
asc. node
                    -11982 Jun 09 i 23:55 16°≈38'17
                                                                         min. Earth dist.
                                                                                              -11977 Jul 04 j 14:54 24°೨06'03 0.60259 AU
                    -11982 Jun 30 j 08:00
                                            0°₩
                                                                                              -11977 Jul 09 j 15:46 22° 206'30 -5°23'58
                                                                         opposition
                    -11982 Aug 14 j 13:59
                                            0^{\circ}\Upsilon
                                                                         greatest brilliancy
                                                                                              -11977 Jul 08 j 18:07 22°227'58
                                                                                                                                 -1 6m
                    -11982 Sep 28 j 19:11
                                                                         direct
                                                                                              -11977 Aug 15 j 21:46 13°227'17
                                            0°8
                    -11982 Nov 14 j 12:17
                                                                                              -11977 Oct 15 j 05:38 0°M
                                            0°Π
                                                                                              -11977 Dec 11 j 21:06 0° ₹
                    -11981 Jan 09 j 02:11
                                            0.00
                    -11981 Feb 18 j 03:52 9°518'11
                                                                                              -11976 Jan 30 j 15:12 29°尽 35'29
retrograde
                                                                         asc. node
min. Earth dist.
                                                      0.39051 AU
                    -11981 Mar 18 j 12:51
                                           4°935'06
                                                                                              -11976 Jan 31j07:05 0°る
                    -11981 Mar 22 j 02:50 3°535'18 2°49'35
                                                                                              -11976 Mar 18 j 07:56 0°≈
opposition
                    -11981 Mar 21 j 21:24 3°539'06
                                                                                              -11976 May 01 j 15:16 0°米
greatest brilliancy
                                                       -2.9m
                    -11981 Apr 05 j 12:47 30°RⅡ
                                                                                              -11976 May 06 j 13:25 3°∺26'34
                                                                         evening set
                    -11981 Apr 21 j 13:13 28°Ⅲ23'16
                                                                                              -11976 May 23 j 00:09 15°) €06'02 2.47229 AU
direct
                                                                         max. Earth dist.
                                                                                              -11976 Jun 12 j 13:11 0°Υ
desc. node
                    -11981 Apr 28 j 00:40 28°Ⅲ39'19
                    -11981 May 07 j 14:57 0°ഇ
                    -11981 Jul 15 j 19:41 0°Ω
                                                                         conjunction
                                                                                              -11976 Jun 29 j 14:10 12°Υ'37'28 1°11'54
                    -11981 Sep 03 j 10:11
                                            0° M
                                                                           minimum elong
                                                                                              -11976 Jun 29 j 13:07 12°Y35′29
                                                                                                                                 1°12'02
                    -11981 Oct 20 j 20:36
                                                                                              -11976 Jul 22 j 14:06 0°8
                    -11981 Dec 07 j 03:08 0°M
                                                                                              -11976 Aug 26 j 12:21 26°856'17
                                                                         morning rise
                    -11980 Jan 23 j 12:28 0° ✗¹
                                                                                              -11976 Aug 30 j 10:49 0°П
                    -11980 Feb 13 j 00:44 13° ₹ 01'27
                                                                                              -11976 Oct 07 j 23:20 0°95
evening set
                    -11980 Mar 10 j 14:03 0°ਰ
                                                                                              -11976 Nov 16 j 01:04 0°Ω
max. Earth dist.
                    -11980 Mar 19 i 10:54 5° ₹42'40 2.64785 AU
                                                                         desc. node
                                                                                              -11976 Dec 17 j 15:03 23^{\circ}\Omega 30'00
                                                                                              -11976 Dec 26 i 13:58 0° m
conjunction
                    -11980 Apr 01 i 01:49 13°る53'00 -0°15'31
                                                                                              -11975 Feb 07 i 15:08
                                                                                                                      0∘ଫ
 minimum elong
                    -11980 Apr 01 j 02:28 13°る54'04 0°16'11
                                                                                              -11975 Mar 26 i 22:21
                                                                                                                      0°M
                    -11980 Apr 25 i 16:31 0°≈
                                                                                              -11975 May 25 i 04:37
                                                                                                                      0°∡7
asc. node
                    -11980 Apr 26 j 16:13
                                                                                              -11975 Jul 05 j 09:49
                                                                                                                     8°х 57'46
                                            0°≈39'07
                                                                         retrograde
                    -11980 May 18 j 06:51 15°≈02'33
                                                                                              -11975 Aug 12 j 04:19 30°RM
morning rise
                    -11980 Jun 09 j 08:51
                                           0°∀
                                                                         min. Earth dist.
                                                                                              -11975 Aug 13 j 01:07 29°M 39'03 0.65935 AU
                    -11980 Jul 22 j 12:12
                                            0^{\circ}\Upsilon
                                                                         opposition
                                                                                              -11975 Aug 14 j 07:18 29°ML08'37 -4°17'48
                    -11980 Sep 02 j 08:19
                                            ್ಣಿ
೧°႘
                                                                         greatest brilliancy
                                                                                              -11975 Aug 14 j 03:31 29°ML12'26 -1.4m
                    -11980 Oct 13 j 09:07
                                            0^{\circ}\Pi
                                                                         direct
                                                                                              -11975 Sep 22 j 20:05 19°M 36'32
                    -11980 Nov 23 j 11:25
                                            0ಂತಾ
                                                                                              -11975 Nov 07 j 21:24
                    -11979 Jan 05 j 07:18
                                            0^{\circ}\Omega
                                                                                              -11975 Dec 17 j 21:33 18° ₹ 40'27
                                                                         asc. node
                    -11979 Feb 24 j 03:11
                                                                                              -11974 Jan 07 j 13:36
                                                                                                                     0°궁
                                            0° m
                    -11979 Mar 15 j 01:14
desc. node
                                            8° m 29'20
                                                                                              -11974 Feb 26 j 03:07
                                                                                                                      0°≈
                                                                                                                      0°∀
retrograde
                    -11979 Apr 17 j 22:36 15° Mp 36'27
                                                                                              -11974 Apr 12 j 05:05
min. Earth dist.
                    -11979 May 17 j 11:10
                                            9° m 45'33
                                                        0.49286 AU
                                                                                              -11974 May 24 j 05:50
                                                                                                                      0^{\circ}\Upsilon
                                                                                              -11974 Jun 30 j 10:25 27°Y56'04
greatest brilliancy
                    -11979 May 24 j 05:47
                                            7^{\circ} m 20'05
                                                       -2.2m
                                                                         evening set
opposition
                    -11979 May 25 j 10:17
                                            6^{\circ} Mp 54'27 - 4^{\circ}02'40
                                                                                              -11974 Jul 03 j 03:07
                                                                                                                      0°8
                    -11979 Jun 22 j 15:40 30° RΩ
                                                                                              -11974 Aug 10 j 18:08
                                                                                                                     \Pi^{\circ}0
direct
                    -11979 Jun 28 j 07:18 29°Ω47'21
                    -11979 Jul 04 j 01:11 0° Mp
                                                                                              -11974 Aug 30 j 13:06 15°Д31'03 0°46'46
                                                                         conjunction
```

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 43 Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.

Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.											
minimum elong	-11974 Aug 30 j 16:28	15° Ⅱ 37'38	0°47'24	retrograde	-11969 Nov 07 j 23:15	4° Y 33'01					
max. Earth dist.	-11974 Sep 09 j 05:55	23° Ⅱ 07'12	2.38360 AU		-11969 Dec 05 j 05:13	30° Ŗ ₩					
	-11974 Sep 18 j 01:05	0		opposition	-11969 Dec 11 j 17:59						
	-11974 Oct 26 j 21:39	0 \circ Ω		greatest brilliancy	-11969 Dec 13 j 04:53						
morning rise	-11974 Nov 03 j 04:16	5° Ω 31′08		min. Earth dist.	-11969 Dec 19 j 17:25		0.47706 AU				
desc. node	-11974 Nov 04 j 07:08	6° Ω 21'54		direct	-11968 Jan 17 j 22:42						
	-11974 Dec 06 j 03:17	0° m			-11968 Feb 28 j 20:43	0° Υ					
	-11973 Jan 17 j 10:40	0∘ ⊽			-11968 Apr 21 j 16:21	0° 8					
	-11973 Mar 03 j 10:47	0° M 0° ∕		desc. node	-11968 Jun 03 j 21:34 -11968 Jun 26 j 10:11	0°Ⅱ 1.0°Ⅲ22100					
	-11973 Apr 21 j 06:28 -11973 Jun 18 j 04:54	0° ਠ		desc. node	-11968 Jul 26 j 10:11 -11968 Jul 15 j 00:18	10 п 22 08					
retrograde	-11973 Juli 18 j 04:54 -11973 Aug 09 j 21:51				-11968 Aug 25 j 01:58	0°€0					
opposition	-11973 Aug 05 j 21:51 -11973 Sep 17 j 22:53	4°る00'51	-1°56'19		-11968 Oct 06 j 02:37	0° m)					
greatest brilliancy	-11973 Sep 18 j 03:34	3° ප 56'11			-11968 Nov 18 j 14:54	0∘ ⊽					
min. Earth dist.	-11973 Sep 20 j 10:43		0.65456 AU	evening set	-11968 Dec 18 j 08:56						
	-11973 Sep 28 j 06:53			C	-11967 Jan 02 j 16:41	0°M					
direct	-11973 Oct 28 j 15:59	24° ₹ 03'44			-						
asc. node	-11973 Nov 05 j 03:36	24° ₹ ¹24'40		conjunction	-11967 Feb 06 j 07:56	22°M29'51	-1°07'50				
	-11973 Nov 30 j 20:13	5°0		minimum elong	-11967 Feb 06 j 09:12	22° M $_3$ 1'54	1°08'22				
	-11972 Feb 02 j 01:31	0° ≈		max. Earth dist.	-11967 Feb 14 j 04:36		2.65378 AU				
	-11972 Mar 20 j 22:55	0° ∀			-11967 Feb 17 j 23:50						
	-11972 May 02 j 21:53	0° Υ		morning rise	-11967 Mar 26 j 09:44						
	-11972 Jun 12 j 03:14	0°8			-11967 Apr 05 j 21:20						
	-11972 Jul 20 j 21:49	0°II			-11967 May 22 j 19:13	0° ≈					
	-11972 Aug 28 j 07:27	0.22		asc. node	-11967 Jun 26 j 19:02						
evening set	-11972 Sep 02 j 09:54	3°958'00			-11967 Jul 08 j 12:15	0° ℋ 0° Ƴ					
desc. node	-11972 Sep 21 j 04:10	18°92/44 0°Ω			-11967 Aug 24 j 10:12	0° ∀					
	-11972 Oct 06 j 06:55	0 86			-11967 Oct 12 j 02:13 -11967 Dec 08 j 23:47	0°II					
conjunction	-11972 Nov 02 j 14:05	20°Ω26'35	-0°30'42	retrograde	-11966 Jan 18 j 23:09	9° Ⅱ 13'52					
minimum elong	-11972 Nov 02 j 11:52			opposition	-11966 Feb 18 j 18:59	4° П 05'13	5°55'25				
g	-11972 Nov 15 j 14:56	0° m)	0 00 10	greatest brilliancy	-11966 Feb 19 j 06:50	3° П 57'13					
max. Earth dist.	-11972 Dec 14 j 01:47		2.48898 AU	min. Earth dist.	-11966 Feb 20 j 05:23	3° Ⅱ 42′03	0.38613 AU				
	-11972 Dec 27 j 20:58	0∘ ⊽			-11966 Mar 08 j 05:49						
morning rise	-11972 Dec 31 j 10:25	2° ≏ 27'36		direct	-11966 Mar 21 j 18:06	28° 8 49'15					
	-11971 Feb 10 j 07:38	0°M₊			-11966 Apr 04 j 05:52	Π $^{\circ}0$					
	-11971 Mar 29 j 01:50	0° ∡ ¹		desc. node	-11966 May 14 j 15:49	14° Ⅱ 22'43					
	-11971 May 17 j 15:37				-11966 Jun 12 j 04:03	0₀ ©					
_	-11971 Jul 12 j 09:37				-11966 Jul 29 j 23:02	$0^{\circ}\Omega$					
retrograde	-11971 Sep 17 j 14:20				-11966 Sep 13 j 13:31	0° m)					
asc. node	-11971 Sep 22 j 05:46		1007125		-11966 Oct 29 j 05:37	0∘ 亚					
opposition greatest brilliancy	-11971 Oct 24 j 16:07 -11971 Oct 24 j 22:55		1°27'35 -1.7m	evening set	-11966 Dec 14 j 14:26 -11965 Jan 28 j 16:52	0°M					
min. Earth dist.	-11971 Oct 24 j 22.33 -11971 Oct 30 j 16:18	9°≈05'28	0.58950 AU	evening set	-11965 Jan 30 j 12:55	20 11C4940					
direct	-11971 Dec 04 j 01:06	1°≈38'10	0.30730710	max. Earth dist.	-11965 Mar 10 j 15:37		2.65994 AU				
	-11970 Feb 21 j 12:42	0° ∀		man. Darun dibu	11,00 11.	2.7.0,20	2.00>> . 110				
	-11970 Apr 09 j 12:27	0° Υ		conjunction	-11965 Mar 17 j 20:03	29° ∡ ³36′10	-0°33'39				
	-11970 May 21 j 05:55	9° 8		minimum elong	-11965 Mar 17 j 21:18	29° ∡ ³38'10	0°34'19				
	-11970 Jun 29 j 20:19	$\Pi^{\circ}0$		-	-11965 Mar 18 j 10:53	8°0					
	-11970 Aug 07 j 20:55	0°©		morning rise	-11965 May 03 j 19:02	0° ≈ 05′10					
desc. node	-11970 Aug 09 j 05:44	1° © 02'52			-11965 May 03 j 15:54	0° ≈					
	-11970 Sep 16 j 09:42	0 \circ Ω		asc. node	-11965 May 14 j 11:02	7°≈06'57					
_	-11970 Oct 27 j 05:32	0° m ⁄			-11965 Jun 17 j 16:42	0°) €					
evening set	-11970 Nov 01 j 04:12	3° m 33'04			-11965 Jul 31 j 10:53	0°Ƴ					
	-11970 Dec 08 j 20:16	0∘ ত			-11965 Sep 12 j 04:30	0° Β					
conjunction	-11970 Dec 25 j 18:16	11° Q 32'52	-1°12'34		-11965 Oct 24 j 10:58 -11965 Dec 06 j 10:46	0ಂ ಲ 100					
minimum elong	-11970 Dec 25 j 18:16 -11970 Dec 25 j 17:09				-11963 Dec 06 j 10:46 -11964 Jan 22 j 15:34	0°€0					
max. Earth dist.	-11970 Dec 23 j 17.09 -11969 Jan 19 j 04:31			retrograde	-11964 Mar 28 j 09:15						
Dartii dist.	-11969 Jan 22 j 08:46	0°M	2.07 107 110	desc. node	-11964 Mar 31 j 19:25						
morning rise	-11969 Feb 15 j 15:14			min. Earth dist.	-11964 Apr 25 j 07:17		0.44447 AU				
<i>5</i>	-11969 Mar 09 j 13:43	0° ∡ 7		greatest brilliancy	-11964 May 02 j 09:41		-2.5m				
	-11969 Apr 26 j 02:26	8°0		opposition	-11964 May 03 j 02:14						
	-11969 Jun 13 j 23:25	0° ≈		direct	-11964 Jun 04 j 07:31	8° Ω 50′27					
	-11969 Aug 04 j 17:09	0° ∀			-11964 Aug 11 j 05:27	0° m/y					
asc. node	-11969 Aug 10 j 02:37	2° 升 56′03			-11964 Oct 04 j 06:37	0∘ ⊽					
	-11969 Oct 10 j 05:07	0 ° Υ			-11964 Nov 23 j 00:23	0°M₊					

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -11963 Jan 10 i 12:28 0° ₹ -11959 Sep 25 j 14:01 0ಂತಾ -11963 Feb 27 j 00:49 0°ಕ -11959 Oct 07 j 04:39 9°901'57 morning rise -11963 Mar 08 j 03:44 5°**⋜**51'04 -11959 Nov 03 j 11:08 $0^{\circ}\Omega$ evening set -11959 Nov 21 j 05:02 13°**Ω**23'04 -11963 Mar 31 j 06:16 20°る50'46 desc. node asc. node -11963 Apr 04 j 16:41 23°정45'14 2.61323 AU max. Earth dist. -11959 Dec 13 j 17:35 0° m -11963 Apr 14 j 03:51 -11958 Jan 25 j 04:10 0∘∙თ -11958 Mar 11 j 16:36 0°M -11963 Apr 25 j 18:50 0° **₹** conjunction 7°**≈**44'25 0°15'44 -11958 May 01 j 09:14 minimum elong -11963 Apr 25 j 18:11 7°**≈**43'18 0°15'10 -11958 Jul 21 j 23:50 0°ಕ behind sun begin -11963 Apr 25 j 11:44 7°≈32'33 retrograde -11958 Jul 26 j 22:59 0°**云**09'13 behind sun end -11963 Apr 26 j 00:37 7°≈54'04 -11958 Jul 31 j 19:50 30°R ✓ -11963 May 28 j 12:35 0°**)**€ opposition -11958 Sep 04 j 10:42 20° ₹37'01 -2°58'34 morning rise -11963 Jun 13 j 08:25 11°\nd 01'12 greatest brilliancy -11958 Sep 04 j 13:53 20° ₹33'48 -1.4m -11963 Jul 10 j 01:18 $0^{\circ}\Upsilon$ min. Earth dist. -11958 Sep 05 j 11:35 20° **₹** 12'01 0.66379 AU -11963 Aug 20 j 00:40 0°8 direct -11958 Oct 14 j 19:56 10° ₹ 46'19 -11963 Sep 28 j 23:28 $0^{\circ}II$ asc. node -11958 Nov 21 j 17:15 18° ₹ 12'52 -11963 Nov 07 j 15:58 0ಂತಾ -11958 Dec 19 j 17:08 0°궁 -11963 Dec 18 j 04:06 $0^{\circ}\Omega$ -11957 Feb 11 j 23:14 -11962 Jan 30 j 06:45 -11957 Mar 30 j 08:17 0°\ desc. node -11962 Feb 16 j 16:54 11° m 08'49 -11957 May 11 j 19:40 $0^{\circ}\Upsilon$ -11962 Mar 22 j 05:37 -11957 Jun 20 j 20:33 0°8 retrograde -11962 May 15 j 12:00 15° **△**42'35 -11957 Jul 29 i 12:52 $\Pi^{\circ}0$ min. Earth dist. -11962 Jun 17 j 04:14 8°**2**35'04 0.56465 AU -11957 Aug 08 i 14:44 7°**Ⅲ**53'43 evening set greatest brilliancy -11962 Jun 22 j 10:21 6°**£**33'24 -1.8m -11957 Sep 05 i 20:30 0ಂತಾ opposition -11962 Jun 23 j 14:07 6°**♀**06'29 -5°17'47 desc. node -11957 Oct 08 j 23:20 25°536'13 -11962 Jul 12 j 05:46 30°R Mp -11962 Jul 29 j 15:40 27° m 57'37 -11957 Oct 10 j 04:06 26°531'08 -0°00'55 direct conjunction -11962 Aug 17 j 04:36 0°**♀** -11957 Oct 10 j 04:01 26°530'59 0°00'17 minimum elong -11962 Oct 28 j 17:37 -11957 Oct 09 j 01:40 25°5540'40 o°m. behind sun begin -11962 Dec 20 j 17:38 0° ₹ -11957 Oct 11 j 06:23 27°521'14 behind sun end -11961 Feb 07 j 21:44 0°궁 -11957 Oct 14 j 17:45 0°**Ω** -11961 Feb 16j 06:40 5°る16'19 -11957 Nov 23 j 23:36 0° M asc. node -11961 Mar 26 j 12:58 0°≈ max. Earth dist. -11957 Nov 23 j 14:03 29° **Ω**42'34 2.44006 AU -11961 Apr 19 j 06:34 15°≈53'38 -11957 Dec 11 j 04:13 12° Mp 24'39 evening set morning rise -11961 May 06 j 17:53 27°≈53'18 2.51886 AU -11956 Jan 05 j 04:17 0°₽ max. Earth dist. -11961 May 09 j 18:49 0°**米** -11956 Feb 18 j 17:10 0° M -11956 Apr 05 j 23:03 0° ₹ conjunction -11961 Jun 10 j 01:59 22° \times 12'32 1°02'03 -11956 May 27 j 06:04 0°る -11961 Jun 10 j 00:02 22° ₩ 09'00 1°01'54 -11956 Aug 01 j 09:41 minimum elong -11961 Jun 20 j 19:07 0°**Υ** retrograde -11956 Sep 01 j 07:24 5°≈08'09 -11961 Jul 31 j 00:06 0°8 -11956 Sep 29 j 14:20 30°R♂ -11961 Aug 03 j 08:44 2°**8**33'13 -11956 Oct 08 j 21:09 26° ₹33'14 morning rise asc. node -11961 Sep 08 j 01:25 0°Ц -11956 Oct 09 j 07:01 26° ₹23'36 0°01'04 opposition -11961 Oct 16 j 18:18 0°ഇ -11956 Oct 09 j 07:08 26°**♂**23'30 -1.6m greatest brilliancy -11961 Nov 25 j 00:33 0°**Ω** min. Earth dist. -11956 Oct 13 j 23:31 24°る33'45 0.62178 AU -11960 Jan 04 j 10:59 $29^{\circ}\Omega 43'09$ -11956 Nov 19 i 00:33 16°**♂**27'31 desc. node direct -11960 Jan 04 j 20:25 0° Mp -11955 Jan 09 j 23:13 0°≈ -11960 Feb 17 i 14:07 0°**♀** -11955 Mar 05 i 09:33 0°**)** -11960 Apr 07 i 06:40 0° M -11955 Apr 19 i 00:56 -11960 Jun 21 i 16:10 25°ML21'56 -11955 May 29 i 22:37 0°8 retrograde min. Earth dist. -11960 Jul 28 j 20:56 16°MJ33'31 0.64439 AU -11955 Jul 08 j 02:27 $0^{\circ}\Pi$ -11960 Jul 31 j 14:43 15°M27'20 -4°54'20 -11955 Aug 15 j 19:06 opposition 0ಂತಾ -11955 Aug 25 j 21:53 -11960 Jul 31 j 04:23 15°M 37'43 -1.4m 7°548'04 greatest brilliancy desc node direct -11960 Sep 08 j 08:56 6°ML12'25 -11955 Sep 24 j 00:53 $0^{\circ}\Omega$ -11960 Nov 23 j 07:12 0° **√** evening set -11955 Oct 10 j 08:58 12°**Ω**13'34 asc. node -11959 Jan 03 j 10:51 22° ₹ 13'55 -11955 Nov 03 j 14:33 0° m -11959 Jan 16 j 17:39 0°궁 -11959 Mar 05 j 23:51 -11955 Dec 06 j 12:26 23° m 24'15 -1°02'39 0°≈ conjunction -11959 Apr 19 j 16:28 0°**₩** -11955 Dec 06 j 10:12 23° Mp 20'22 1°02'32 minimum elong $0^{\circ}\Upsilon$ -11959 May 31 j 15:20 -11955 Dec 16 j 00:19 0∘**⊽** -11959 Jun 07 j 10:37 5°**Y**01′19 max. Earth dist. evening set -11954 Jan 06 j 19:42 14°**⊆**53'48 2.55825 AU max. Earth dist. -11959 Jul 04 j 15:46 25°**γ**29'26 2.40259 AU morning rise -11954 Jan 29 j 17:47 0°**IL**12'12 -11959 Jul 10 j 13:25 0°8 -11954 Jan 29 j 10:25 0°M -11954 Mar 16 j 17:44 0°**∡**7 conjunction -11959 Aug 04 j 19:48 19°**8**31'33 1°06'42 -11954 May 03 j 19:03 0°궁 -11959 Aug 04 j 22:07 19°**8**36'04 1°07'11 -11954 Jun 23 j 05:29 0°**≈** minimum elong

-11954 Aug 19 j 15:31

0°**)**€

-11959 Aug 18 j 05:57 0°**П**

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -11954 Aug 26 j 20:13 3°**米**07'15 -11949 Oct 15 i 01:52 asc. node -11954 Oct 16 j 21:07 15° \(\)37'22 -11949 Dec 02 j 01:10 retrograde o°m. -11954 Nov 21 j 02:19 -11948 Jan 18 j 18:30 0°**√** 8°\mathbf{12'58} 3°59'56 opposition -11954 Nov 22 j 02:00 -11948 Feb 21 j 19:11 21° ₹34'16 greatest brilliancy 7°**升**51'37 -2.0m evening set -11954 Nov 28 j 16:55 5°**∺**28'37 0.52471 AU min. Earth dist. -11948 Mar 05 j 23:24 0°る -11954 Dec 19 j 05:10 30°R≈ max. Earth dist. -11948 Mar 25 j 06:53 12°る27'20 2.63781 AU direct -11954 Dec 30 j 00:14 29°≈11'08 -11953 Jan 10 j 02:36 0°**)**€ conjunction -11948 Apr 09 j 22:27 22°♂39'33 -0°04'21 $0^{\circ}\Upsilon$ -11953 Mar 21 j 04:34 minimum elong -11948 Apr 09 j 22:40 22°る39'54 0°05'00 -11953 May 05 j 05:11 0° 8 behind sun begin -11948 Apr 09 j 03:33 22°**⋜**08'37 -11953 Jun 15 j 06:25 $0^{\circ}\Pi$ behind sun end -11948 Apr 10 j 17:47 23°중11'13 -11953 Jul 14 j 01:40 21°**Д**36'51 desc. node asc. node -11948 Apr 16 j 23:34 27°**♂**17'21 -11953 Jul 25 j 05:15 0ಂತಾ -11948 Apr 21 j 02:09 -11953 Sep 03 j 11:16 $0^{\circ}\Omega$ morning rise -11948 May 27 j 11:07 24°≈23'51 -11953 Oct 14 j 21:10 0° m -11948 Jun 04 j 15:50 0°**)**€ -11953 Nov 26 j 22:30 0∘**⊽** -11948 Jul 17 j 13:58 $0^{\circ}\Upsilon$ evening set -11953 Dec 01 j 18:23 3°**£**17'17 -11948 Aug 28 j 02:00 0°8 -11952 Jan 10 j 17:21 -11948 Oct 07 j 16:05 $0^{\circ}\Pi$ -11948 Nov 17 j 02:55 0ಂತಾ conjunction -11952 Jan 22 j 03:43 7°ML29'55 -1°14'03 -11948 Dec 28 j 18:45 $0^{\circ}\Omega$ minimum elong -11952 Jan 22 j 04:19 7°M30'53 1°14'27 -11947 Feb 12 j 16:52 max. Earth dist. -11952 Feb 05 i 06:25 16° ML40'52 2.63698 AU desc. node -11947 Mar 05 j 12:33 11° m 30'45 -11952 Feb 25 i 21:57 0°**∡**¹ retrograde -11947 Apr 28 j 13:24 27° m 32'02 morning rise -11952 Mar 11 i 08:31 9°**∡**14'58 min. Earth dist. -11947 May 29 j 03:54 21° m 13'28 0.51944 AU -11952 Apr 12 j 23:00 0°ರ greatest brilliancy -11947 Jun 04 j 11:05 18° **m** 53'39 -2.0m -11952 May 30 j 09:52 opposition -11947 Jun 05 j 17:24 18° m 25'26 -4°42'08 0°≈≈ -11952 Jul 13 j 14:29 27°≈40'10 -11947 Jul 10 j 10:27 10° m 54'10 direct asc node -11952 Jul 17 j 08:48 0°**)** -11947 Sep 13 j 05:37 0∘ଫ -11952 Sep 05 j 03:33 $0^{\circ}\Upsilon$ -11947 Nov 08 j 06:33 o°m. -11952 Nov 02 j 08:29 0°8 -11947 Dec 28 j 20:40 0° 🛂 -11946 Feb 15 j 04:58 0°**ී** -11952 Dec 19 j 04:55 11°**8**10'50 retrograde -11951 Jan 19 j 12:21 5°**8**42'35 -11946 Mar 04 j 21:12 11°쥥16'47 7°04'17 opposition asc. node -11951 Jan 20 j 22:42 5°**8**17'44 greatest brilliancy -11946 Apr 02 j 07:33 29°る49'29 -2.6m evening set min. Earth dist. -11951 Jan 25 j 06:43 4°**8**02'44 0.40965 AU -11946 Apr 02 j 13:54 0°≈ -11951 Feb 13 j 00:24 30°R**Y** -11946 Apr 23 j 01:47 13°≈42'46 2.56081 AU max. Earth dist. -11951 Feb 21 j 20:38 29°**Y**28'44 -11946 May 16 j 19:56 direct 0°**₩** -11951 Mar 02 j 15:54 0°**8** -11951 May 12 j 07:14 0°**Ц** conjunction -11946 May 22 j 11:35 3°**升**56'18 0°46'14 desc. node -11951 May 31 j 07:30 11°**Ц**58'23 minimum elong -11946 May 22 j 09:45 3°¥53'06 0°45'53 -11951 Jun 27 j 09:11 0°១ -11946 Jun 28 j 00:15 0°**Υ** -11951 Aug 09 j 23:37 0°**Ω** morning rise -11946 Jul 12 j 20:51 10°**γ**53'26 -11951 Sep 22 j 14:34 0° Mp -11946 Aug 07 j 11:13 0°8 -11951 Nov 06 j 03:45 0°**♀** -11946 Sep 15 j 19:22 -11951 Dec 21 j 21:04 0°M -11946 Oct 24 j 19:13 -11950 Jan 13 j 02:45 14°M21'45 -11946 Dec 03 j 09:05 0°Ω evening set -11950 Feb 06 i 11:37 0° ₹ -11945 Jan 13 j 17:08 max. Earth dist. -11950 Mar 01 j 04:36 14° ₹31'53 2.66405 AU desc. node -11945 Jan 21 i 08:21 5° m 19'19 -11945 Feb 27 i 17:08 conjunction -11950 Mar 02 j 15:56 15° ₹28'23 -0°49'27 -11945 Apr 24 i 04:30 -11950 Mar 02 i 17:28 15° ₹ 30'51 0°50'06 -11945 Jun 08 i 12:19 11°ML02'41 minimum elong retrograde -11950 Mar 25 j 08:02 0°る min. Earth dist. -11945 Jul 14 j 01:40 2° ML49'39 0.61978 AU -11950 Apr 18 j 18:08 15°る43'37 -11945 Jul 18 j 07:03 1°ML08'25 -5°17'55 morning rise opposition -11950 May 10 j 17:52 0°≈ -11945 Jul 17 j 13:23 1°M26'05 -1.5m greatest brilliancy asc. node -11950 May 31 j 06:22 13°≈26'35 -11945 Jul 21 j 04:04 30°R ₽ -11950 Jun 25 j 06:31 0°¥ direct -11945 Aug 25 j 02:41 22° **△**15'14 $0^{\circ}\Upsilon$ -11950 Aug 08 j 21:30 -11945 Oct 02 j 21:36 0°M -11950 Sep 21 j 23:38 0° 8 -11945 Dec 05 j 12:33 -11950 Nov 05 j 10:35 $0^{\circ}\Pi$ -11944 Jan 21 j 00:07 26° ₹ 55'24 asc. node -11950 Dec 23 j 00:03 0°궁 0ಂತಾ -11944 Jan 26 j 01:37 -11949 Mar 05 j 12:23 26°515'32 retrograde -11944 Mar 13 j 12:13 0°≈ min. Earth dist. -11949 Apr 02 j 02:26 21°534'56 0.40445 AU -11944 Apr 26 j 23:03 0°**∀** -11949 Apr 07 j 19:49 19°553'11 0°48'03 evening set -11944 May 17 j 14:39 14° **X** 34'06 opposition greatest brilliancy -11949 Apr 07 j 16:30 19°555'39 -2.8m max. Earth dist. -11944 Jun 04 j 05:06 27° **∺** 17'44 2.44607 AU desc. node -11949 Apr 18 j 11:13 16°557'29 -11944 Jun 07 j 21:41 0°**Υ** direct -11949 May 08 j 17:04 14°522'48 -11949 Jul 03 j 08:13 -11944 Jul 12 j 02:04 25°**Y**°34′00 1°13′25 conjunction -11949 Aug 27 j 02:02 0° Mp -11944 Jul 12 j 02:04 25°**Y**'33'59 1°13'41 minimum elong

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 46

```
Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.
                                                                                                       greatest brilliancy
                            -11944 Jul 17 j 21:38 0°8
                                                                                                                                   -11939 Nov 03 j 14:29 20°≈42'49 -1.8m
                            -11944 Aug 25 j 16:44
                                                                                                       min. Earth dist.
                                                                                                                                    -11939 Nov 09 j 18:01 18°≈24'08 0.56816 AU
                                                             0°П
                            -11944 Sep 10 j 03:48 12°Д04'25
                                                                                                                                    -11939 Dec 13 j 01:38 11°≈20'12
morning rise
                                                                                                       direct
                            -11944 Oct 03 j 03:14
                                                              0ಂತಾ
                                                                                                                                    -11938 Feb 12 j 02:54
                                                                                                                                                                     0°∀
                            -11944 Nov 11 j 02:29
                                                                                                                                                                     0^{\circ}
                                                              0°\Omega
                                                                                                                                    -11938 Apr 02 j 22:05
                            -11944 Dec 08 j 00:36 20° Ω09'11
desc. node
                                                                                                                                    -11938 May 15 j 10:51
                                                                                                                                                                     0°8
                            -11944 Dec 21 j 11:53
                                                              0° m
                                                                                                                                    -11938 Jun 24 j 10:40
                                                                                                                                                                     0^{\circ}\Pi
                            -11943 Feb 02 j 05:25
                                                              0∘ಹ
                                                                                                       desc. node
                                                                                                                                    -11938 Jul 30 j 16:35 27°Ⅲ41'03
                            -11943 Mar 20 j 15:15
                                                              0°M
                                                                                                                                    -11938 Aug 02 j 17:26
                                                                                                                                                                     0ംഇ
                            -11943 May 14 j 01:32
                                                              0°∡7
                                                                                                                                    -11938 Sep 11 j 10:52
                                                                                                                                                                     0^{\circ}\Omega
retrograde
                            -11943 Jul 13 j 07:07 17°尽02'12
                                                                                                                                    -11938 Oct 22 j 10:32
                                                                                                                                                                     0° m
opposition
                            -11943 Aug 22 j 01:47
                                                              7°∡18′03 -3°51′32
                                                                                                       evening set
                                                                                                                                    -11938 Nov 12 j 18:43 15° Mp 09'01
                                                                                                                                    -11938 Dec 04 j 03:52
greatest brilliancy
                            -11943 Aug 22 j 01:00
                                                              7°∡18′50
                                                                             -1.4m
                                                                                                                                                                     0∘⊽
min. Earth dist.
                            -11943 Aug 21 j 15:13
                                                              7°∡¹28'42
                                                                              0.66348 AU
                            -11943 Sep 12 j 01:10 30°RML
                                                                                                       conjunction
                                                                                                                                    -11937 Jan 05 j 01:54 21°△36'07 -1°14'55
direct
                            -11943 Sep 30 j 22:39 27°M38'20
                                                                                                         minimum elong
                                                                                                                                    -11937 Jan 05 j 01:28 21°△35'25 1°15'08
                            -11943 Oct 21 j 07:29
                                                              0°∡¹
                                                                                                                                    -11937 Jan 17 j 17:39
                                                                                                                                                                     0°M
asc. node
                            -11943 Dec 08 j 06:24 17° ₹ 50'07
                                                                                                       max. Earth dist.
                                                                                                                                    -11937 Jan 25 j 15:49
                                                                                                                                                                     5°M13′02
                                                                                                                                                                                    2.61215 AU
                            -11943 Dec 31 j 21:59
                                                                                                       morning rise
                                                                                                                                    -11937 Feb 24 j 20:26 24°ML50'08
                            -11942 Feb 20 j 18:11
                                                                                                                                    -11937 Mar 04 j 21:23
                                                                                                                                                                     0°×7
                            -11942 Apr 07 j 06:16
                                                              0°\
                                                                                                                                    -11937 Apr 21 j 04:39
                            -11942 May 19 j 11:06
                                                                                                                                    -11937 Jun 08 j 10:35
                                                                                                                                                                     0°≈
                            -11942 Jun 28 i 09:51
                                                             0°8
                                                                                                                                    -11937 Jul 28 i 09:32
                                                                                                                                                                     0°∀
evening set
                            -11942 Jul 14 i 04:44 12°810'25
                                                                                                       asc. node
                                                                                                                                    -11937 Jul 31 j 09:25
                                                                                                                                                                      1° ) 44'06
                            -11942 Aug 06 j 01:19
                                                                                                                                    -11937 Sep 22 j 12:17
                                                                                                                                                                     0^{\circ}\Upsilon
                                                              0^{\circ}\Pi
                            -11942 Sep 13 j 08:03
                                                                                                                                    -11937 Nov 21 j 23:06 16° Υ 56'19
                                                                                                       retrograde
                                                                                                       opposition
                                                                                                                                    -11937 Dec 24 j 21:45 10^{\circ} \begin{pmatrix} \cdot 42'13 & 6\circ 24'34 \end{pmatrix}
                            -11942 Sep 14 j 07:32 0°545'50 0°30'51
                                                                                                                                    -11937 Dec 26 j 12:35 10^{\circ} \begin{pmatrix} \gamma \gmma \gamma \gam
conjunction
                                                                                                       greatest brilliancy
                                                                                                                                                                                     -2.4m
                            -11942 Sep 14 j 10:12 0°551'02 0°31'31
                                                                                                                                    -11936 Jan 01 j 16:19 8°Υ13'15 0.45107 AU
 minimum elong
                                                                                                       min. Earth dist.
                            -11942 Oct 17 j 14:43 26°531'35 2.39632 AU
max. Earth dist.
                                                                                                                                    -11936 Jan 29 j 20:57
                                                                                                                                                                     3°Y10′57
                                                                                                       direct
                                                                                                                                    -11936 Apr 11 j 20:54
                            -11942 Oct 22 j 03:57 0°Ω
                                                                                                                                                                     ್ಣಿ
೧°႘
                            -11942 Oct 25 j 18:17 2° Ω44'06
                                                                                                                                    -11936 May 27 j 15:27
desc. node
                                                                                                                                                                     \Pi^{\circ}0
                                                                                                                                    -11936 Jun 16 j 22:42 14° \mathbf{\Pi}18'31
                            -11942 Nov 17 j 13:27 19°Ω50'59
morning rise
                                                                                                       desc. node
                            -11942 Dec 01 j 08:34 0° Mp
                                                                                                                                    -11936 Jul 08 j 19:52 0°ഇ
                            -11941 Jan 12 j 13:29
                                                                                                                                    -11936 Aug 19 j 12:29
                                                              0∘⊽
                                                                                                                                                                     0^{\circ}\Omega
                            -11941 Feb 26 j 07:28
                                                                                                                                    -11936 Sep 30 j 23:18
                                                             0°M₊
                                                                                                                                                                     0° m
                            -11941 Apr 15 j 08:37 0° ₹
                                                                                                                                    -11936 Nov 13 j 18:16
                            -11941 Jun 08 j 18:38 0°₹
                                                                                                       evening set
                                                                                                                                    -11936 Dec 28 j 00:29 29° 221'00
retrograde
                            -11941 Aug 18 j 06:01 21°♂24'07
                                                                                                                                    -11936 Dec 29 j 00:21
                            -11941 Sep 25 j 22:41 12°♂17'56 -1°15'53
                                                                                                                                    -11935 Feb 13 j 09:18
                                                                                                                                                                     0°∡™
opposition
greatest brilliancy
                            -11941 Sep 26 j 02:46 12°♂13'54 -1.5m
min. Earth dist.
                            -11941 Sep 29 j 05:33 10°る59'47 0.64527 AU
                                                                                                                                    -11935 Feb 15 j 08:32
                                                                                                                                                                     1°∡15'47 -1°02'09
                                                                                                       conjunction
asc. node
                            -11941 Oct 26 j 12:00 3°♂01'00
                                                                                                                                    -11935 Feb 15 j 10:01
                                                                                                                                                                     1°∡18'09 1°02'44
                                                                                                         minimum elong
                            -11941 Nov 05 j 17:05 2°る19'28
                                                                                                       max. Earth dist.
                                                                                                                                    -11935 Feb 19 j 20:14
                                                                                                                                                                     4°₹08'26 2.65982 AU
direct
                            -11940 Jan 25 j 18:21 0°≈
                                                                                                                                    -11935 Apr 01 j 05:54
                                                                                                                                                                     0°궁
                            -11940 Mar 15 i 05:19
                                                             0°∀
                                                                                                       morning rise
                                                                                                                                    -11935 Apr 03 j 22:52
                                                                                                                                                                     1°る44'01
                            -11940 Apr 27 i 16:27
                                                                                                                                    -11935 May 17 j 22:42
                            -11940 Jun 07 i 03:03 0°₩
                                                                                                                                    -11935 Jun 17 i 01:29 19°≈30'48
                                                                                                       asc. node
                            -11940 Jul 16 i 00:44 0°Ⅱ
                                                                                                                                    -11935 Jul 03 i 03:48
                                                                                                                                                                     0°)€
                            -11940 Aug 23 i 12:28 0°5
                                                                                                                                    -11935 Aug 18 j 01:36
                                                                                                                                                                     0^{\circ}\Upsilon
desc. node
                            -11940 Sep 11 j 15:34 14°547'36
                                                                                                                                    -11935 Oct 03 j 11:50
                                                                                                                                                                     0°8
                            -11940 Sep 16 j 14:15 18°535'27
                                                                                                                                    -11935 Nov 22 j 01:29
                                                                                                                                                                     0^{\circ}\Pi
evening set
                            -11940 Oct 01 j 13:24 0°Ω
                                                                                                                                    -11934 Feb 05 j 08:45 26°Д30'18
                                                                                                       retrograde
                            -11940 Nov 10 j 22:30
                                                             0° m
                                                                                                       min. Earth dist.
                                                                                                                                    -11934 Mar 07 j 03:21 21° II 32'44 0.38489 AU
                                                                                                                                    -11934 Mar 08 j 12:58 21°Д10'04 4°20'15
                                                                                                       opposition
conjunction
                            -11940 Nov 15 j 10:36
                                                              3° Mp 16'04 -0°44'36
                                                                                                       greatest brilliancy
                                                                                                                                    -11934 Mar 08 j 12:36 21°Ⅲ10'19
                                                                                                                                                                                      -2.9m
 minimum elong
                            -11940 Nov 15 j 07:57
                                                              3° Mp 11'17 0°44'14
                                                                                                       direct
                                                                                                                                    -11934 Apr 07 j 21:58 16°Ⅲ03'30
                            -11940 Dec 23 j 04:35
                                                              0∘ଫ
                                                                                                                                    -11934 May 05 j 05:05 20°Ⅱ31'53
                                                                                                       desc. node
max. Earth dist.
                            -11940 Dec 23 j 13:29
                                                              0°215'25 2.51494 AU
                                                                                                                                    -11934 May 29 j 02:59
                                                                                                                                                                     0ಂತಾ
                            -11939 Jan 11 j 12:54 13°≏15'26
                                                                                                                                    -11934 Jul 21 j 22:02
morning rise
                                                                                                                                                                     0^{\circ}\Omega
                            -11939 Feb 05 j 13:41
                                                              0°M
                                                                                                                                    -11934 Sep 07 j 08:32
                                                                                                                                                                     0° m
                            -11939 Mar 24 j 02:05
                                                              0°∡
                                                                                                                                    -11934 Oct 23 j 21:11
                                                                                                                                                                     0∘⊽
                            -11939 May 11 j 22:55
                                                              0°궁
                                                                                                                                    -11934 Dec 09 j 16:48
                                                                                                                                                                     0°M
                            -11939 Jul 04 j 01:02
                                                                                                                                    -11933 Jan 25 j 20:44
                                                                                                                                                                     0°∡7
                                                                                                       evening set
asc. node
                            -11939 Sep 12 j 13:37 27°≈35'38
                                                                                                                                    -11933 Feb 06 j 13:04
                                                                                                                                                                     7°х 25'41
                            -11939 Sep 27 j 15:12 28°≈55'01
                                                                                                                                    -11933 Mar 13 j 20:50
retrograde
                            -11939 Nov 03 j 02:17 20°≈54'16 2°21'11
                                                                                                       max. Earth dist.
                                                                                                                                    -11933 Mar 16 j 07:39
                                                                                                                                                                     1°る34'34 2.65436 AU
opposition
```

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -11933 Mar 26 j 13:56 8°정11'21 -0°23'23 -11928 Jun 04 i 11:55 0° **₹** conjunction -11933 Mar 26 j 14:52 8°る12'51 0°24'04 -11928 Jun 29 j 15:39 3°**х** 40′41 minimum elong retrograde -11928 Jul 22 j 21:28 30° R ML -11933 Apr 29 j 00:59 0°≈≈ 3°≈44'54 min. Earth dist. asc. node -11933 May 04 j 17:23 -11928 Aug 06 j 15:15 24°M 35'06 0.65374 AU -11933 May 12 j 14:29 8°≈58'14 -11928 Aug 08 j 13:34 23°M 48'23 -4°34'35 morning rise opposition -11933 Jun 12 j 21:34 0°**∀** greatest brilliancy -11928 Aug 08 j 06:59 23°M 55'01 0°Υ -11933 Jul 26 j 07:54 direct -11928 Sep 16 j 18:10 14°ML23'33 0°8 -11928 Nov 14 j 08:08 0°**∡**¹ -11933 Sep 06 j 13:07 -11933 Oct 18 j 01:41 $0^{\circ}\Pi$ asc. node -11928 Dec 24 j 20:19 20° ₹22'43 -11933 Nov 28 j 19:49 0ಂತಾ -11927 Jan 10 j 21:01 0°궁 -11932 Jan 11 j 22:30 $0^{\circ}\Omega$ -11927 Feb 28 j 21:36 -11932 Mar 08 j 03:21 0° m -11927 Apr 14 j 20:36 0°\ $0^{\circ}\Upsilon$ desc. node -11932 Mar 22 j 06:33 4° m 20'46 -11927 May 26 j 21:43 retrograde -11932 Apr 09 j 11:18 6° m 34'22 evening set -11927 Jun 20 j 05:33 18°**Y**07'32 min. Earth dist. -11932 May 08 j 03:29 1°M 05'08 0.47087 AU -11927 Jul 05 j 20:03 0°8 -11932 May 11 j 07:34 30°RΩ max. Earth dist. -11927 Aug 03 j 22:49 22°**8**32'05 2.38620 AU greatest brilliancy -11932 May 15 j 04:15 $28^{\circ}\Omega$ 39'11 -2.3m -11927 Aug 13 j 12:05 $0^{\circ}\Pi$ opposition -11932 May 16 j 05:10 28° Ω 17'30 -3°22'04 direct -11932 Jun 18 j 09:11 21° Ω 31'36 conjunction -11927 Aug 19 j 05:11 4°**Ⅱ**28'21 0°56'55 -11932 Jul 28 j 01:56 0° m minimum elong -11927 Aug 19 j 08:24 4°**Ⅱ**34'40 0°57'29 -11932 Sep 27 j 04:14 -11927 Sep 20 j 19:25 -11932 Nov 17 j 11:04 0°M morning rise -11927 Oct 22 i 14:38 24°537'25 -11931 Jan 05 i 13:35 0°×7 -11927 Oct 29 i 15:31 $0^{\circ}\Omega$ -11931 Feb 22 i 08:15 0°る desc. node -11927 Nov 11 i 13:50 9°**Ω**47'15 evening set -11931 Mar 17 j 04:10 14°る40'34 -11927 Dec 08 j 20:23 0° m -11931 Mar 21 j 13:26 17°る31'37 -11926 Jan 20 j 03:30 0∘**⊽** asc node -11931 Apr 09 j 13:30 0°≈ -11926 Mar 06 j 06:24 0°M max. Earth dist. -11931 Apr 11 j 03:53 1°≈03'35 2.59669 AU -11926 Apr 24 j 15:26 0°×7 -11926 Jun 25 j 08:24 0°궁 -11926 Aug 03 j 23:03 -11931 May 05 j 05:21 17°≈11'58 0°27'16 conjunction retrograde 8°중06'55 -11926 Sep 08 j 23:16 30°R⊀ -11931 May 05 j 04:11 17°≈10'00 0°26'46 minimum elong -11931 May 23 j 21:35 0°**米** opposition -11926 Sep 12 j 04:48 28° ₹ 42'51 -2°23'31 -11931 Jun 23 j 13:47 21°**)** 33'59 greatest brilliancy -11926 Sep 12 j 09:06 28° ₹38'33 -1.4m morning rise -11931 Jul 05 j 07:38 0°**Υ** min. Earth dist. -11926 Sep 14 j 00:43 27° ₹ 58'52 0.65992 AU -11931 Aug 15 j 02:25 0°8 -11926 Oct 22 j 18:34 18° ₹ 47'58 direct -11931 Sep 23 j 19:23 0°**Ⅱ** -11926 Nov 12 j 02:51 21° ₹ 10'44 asc. node -11931 Nov 02 j 04:39 0°ഇ -11926 Dec 09 j 10:15 0°궁 -11931 Dec 12 j 06:05 0°Ω -11925 Feb 05 j 19:16 0°≈ -11930 Jan 23 j 11:13 0° m -11925 Mar 25 j 01:07 0°**₩** desc. node -11930 Feb 07 j 03:37 9° Mp 48'30 -11925 May 06 j 20:09 $0^{\circ}\Upsilon$ -11930 Mar 12 j 01:51 0°**♀** -11925 Jun 16 j 00:07 0°8 -11930 May 24 j 14:01 25°**♀**37'38 -11925 Jul 24 j 17:52 0°**Ⅱ** retrograde -11930 Jun 27 j 07:58 18°**2**05'02 0.58654 AU -11925 Aug 23 j 05:53 23°**Д**05'25 min. Earth dist. evening set -11930 Jul 02 j 23:48 15°**♀**51'43 -5°24'30 -11925 Sep 01 j 02:18 0°95 opposition -11930 Jul 01 j 23:07 16°**2**16'00 -1.7m -11925 Sep 29 j 09:19 21°553'54 greatest brilliancy desc. node direct -11930 Aug 08 j 17:01 7°**£**25'20 -11925 Oct 09 i 23:52 $0^{\circ}\Omega$ -11930 Oct 20 j 16:01 -11925 Oct 24 i 06:26 $10^{\circ}\Omega$ 46'50 $-0^{\circ}18'31$ -11930 Dec 15 i 00:26 0°×7 conjunction -11925 Oct 24 i 04:57 $10^{\circ}\Omega$ 44'04 $0^{\circ}17'58$ -11929 Feb 02 i 21:29 0°₹ minimum elong -11929 Feb 06 i 14:31 2°**ප**18'41 -11925 Nov 19 i 05:46 0° Mb asc node -11925 Dec 06 i 17:00 12° m 36'41 2.46717 AU -11929 Mar 21 j 19:11 max. Earth dist. 0°≈≈ -11929 Apr 29 j 13:13 26°≈08'05 -11925 Dec 23 j 14:04 24° m 32'54 evening set morning rise -11925 Dec 31 j 09:49 -11929 May 05 j 02:59 0°**)**€ 0°M max. Earth dist. -11929 May 16 j 04:14 7°**)** 44'36 2.49357 AU -11924 Feb 13 j 19:52 -11929 Jun 16 j 03:10 $0^{\circ}\Upsilon$ -11924 Mar 31 j 17:04 0° 🗸 -11924 May 20 j 20:18 0°궁 conjunction -11929 Jun 21 j 12:00 3°**Y**56'30 1°08'37 -11924 Jul 18 j 06:59 -11929 Jun 21 j 10:25 3°Y53'35 -11924 Sep 10 j 11:25 13°≈46'17 minimum elong 1°08'38 retrograde -11929 Jul 26 j 06:39 0° 8 -11924 Sep 29 j 05:22 11°≈28'26 asc. node -11929 Aug 16 j 16:53 16°**8**25'19 -11924 Oct 17 j 23:12 0°49'44 morning rise opposition 5°≈15'45 -11929 Sep 03 j 05:47 Π $^{\circ}0$ greatest brilliancy -11924 Oct 18 j 02:41 5°≈12'23 -1.6m -11929 Oct 11 j 20:08 0 \circ \odot min. Earth dist. -11924 Oct 23 j 09:00 3°≈10'18 0.60509 AU -11929 Nov 19 j 22:59 0° Ω -11924 Nov 01 j 03:46 30°R♂ desc. node -11929 Dec 25 j 21:55 $26^{\circ}\Omega 38'50$ direct -11924 Nov 27 j 12:27 25°♂24'30 -11929 Dec 30 j 13:23 0° m -11924 Dec 25 j 17:13 0°≈ -11928 Feb 11 j 18:42 0∘**⊽** -11923 Feb 26 j 08:24 0°)

-11923 Apr 13 j 05:36

 $0^{\circ}\Upsilon$

-11928 Mar 30 j 18:33

0°M

Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style. -11923 May 24 j 14:24 0°8 asc. node -11918 May 21 j 12:02 10°≈09'22 -11923 Jul 03 i 00:04 -11918 Jun 20 j 07:30 0°Π 0° H -11923 Aug 10 j 20:40 0ಂತಾ -11918 Aug 03 j 10:48 $0^{\circ}\Upsilon$ 0°8 desc. node -11923 Aug 16 j 10:28 4°9517'22 -11918 Sep 15 j 17:34 -11923 Sep 19 j 05:15 -11918 Oct 28 j 19:22 $0^{\circ}\Pi$ 0° Ω 0ಂತಾ -11923 Oct 23 j 00:02 25°**Ω**00'46 evening set -11918 Dec 12 j 04:53 -11923 Oct 29 j 21:02 0° m -11917 Feb 02 j 03:38 0 $^{\circ}\Omega$ -11923 Dec 11 j 08:06 0∘ಹ retrograde -11917 Mar 19 j 11:32 12°**Ω**05'18 desc. node -11917 Apr 08 j 23:59 9°**Ω**15'42 conjunction -11923 Dec 17 j 17:03 4°**£**23'12 -1°09'15 min. Earth dist. -11917 Apr 16 j 00:04 7°**Ω**15'09 0.42475 AU minimum elong -11923 Dec 17 j 15:25 4°**2**20'23 1°09'16 opposition -11917 Apr 23 j 04:13 4°Ω59'43 -1°00'40 -11922 Jan 14 j 04:14 22°**2**58'13 2.57927 AU max. Earth dist. greatest brilliancy -11917 Apr 22 j 20:43 5°**Ω**05'38 -2.6m -11922 Jan 24 j 18:09 0° M -11917 May 12 j 21:14 30°R 5 morning rise -11922 Feb 08 j 13:49 9°M44'27 direct -11917 May 24 j 16:48 29°504'18 -11922 Mar 11 j 22:53 0°**√** -11917 Jun 05 j 21:20 $0^{\circ}\Omega$ -11922 Apr 28 j 15:53 0°ರ -11917 Aug 18 j 14:51 -11922 Jun 17 j 02:13 -11917 Oct 08 j 23:21 0∘**⊽** -11922 Aug 09 j 14:40 0°**₩** -11917 Nov 26 j 20:08 asc. node -11922 Aug 17 j 03:11 3°**)** 48'44 -11916 Jan 13 j 23:18 retrograde -11922 Oct 28 j 23:34 26° \text{\center} 27'39 evening set -11916 Mar 01 j 14:31 0°**궁**09'27 opposition -11922 Dec 02 j 10:41 19°\(\frac{1}{2}\)26'27 4°56'24 -11916 Mar 01 j 08:37 0°정 greatest brilliancy -11922 Dec 03 j 16:59 18°\(\frac{1}{2}\)59'58 max. Earth dist. -11916 Mar 31 j 06:13 19°る19'31 2.62515 AU -2.1m min. Earth dist. -11922 Dec 10 j 09:01 16°\(\frac{1}{2}\)41'01 0.49868 AU asc. node -11916 Apr 07 i 06:11 23°る54'31 direct -11921 Jan 09 i 11:50 10° \(\)51'06 -11916 Apr 16 j 12:06 -11921 Mar 10 j 18:36 0°**Υ**° -11921 Apr 27 j 24:00 0°8 -11916 Apr 18 j 23:15 0°07'15 conjunction 1°≈37'52 -11921 Jun 09 j 02:08 0°**Ⅱ** -11916 Apr 18 j 22:58 1°≈37'24 0°06'38 minimum elong -11921 Jul 04 j 14:34 18°**Д**51'07 -11916 Apr 18 j 04:26 1°≈06'44 desc node behind sun begin -11921 Jul 19 j 14:44 0°ഇ -11916 Apr 19 j 17:30 2°≈08'05 behind sun end -11916 May 30 j 23:45 -11921 Aug 29 j 06:01 0°**Ω** 0°**)**€ -11921 Oct 09 j 22:35 0° M -11916 Jun 05 j 23:45 4°**)**(08'29 morning rise -11916 Jul 12 j 17:16 -11921 Nov 22 j 04:32 0°**♀** $0^{\circ}\Upsilon$ -11916 Aug 22 j 22:33 -11921 Dec 11 j 23:41 13°**2**21'29 0°8 evening set -11920 Jan 06 j 02:00 0°M -11916 Oct 02 j 03:51 $0^{\circ}\Pi$ -11916 Nov 11 j 03:32 0ಂತಾ -11920 Jan 31 j 13:01 16°M 36'38 -1°11'01 -11916 Dec 22 j 00:54 conjunction $0^{\circ}\Omega$ -11920 Jan 31 j 14:04 16° ML 38'19 1°11'29 minimum elong -11915 Feb 03 j 23:47 0° m max. Earth dist. -11920 Feb 11 j 04:32 23°ML29'32 2.64724 AU desc. node -11915 Feb 23 j 22:49 12° m 13'21 -11920 Feb 21 j 07:06 0° ₹ -11915 Mar 31 j 07:38 0°**♀** morning rise -11920 Mar 20 j 01:35 17° **₹** 46'41 retrograde -11915 May 08 j 11:36 8°**£**35′07 -11920 Apr 08 j 05:45 0°る min. Earth dist. -11915 Jun 09 j 05:56 1°**≏**48'39 0.54514 AU -11920 May 25 j 08:49 0°≈ -11915 Jun 14 j 00:27 30°R M -11920 Jul 03 j 20:17 25°≈06'09 greatest brilliancy -11915 Jun 14 j 23:07 29° M 38'17 -1.9m asc. node -11920 Jul 11 j 13:40 0°**米** -11915 Jun 16 j 04:45 29° Mp 10'00 -5°07'11 opposition -11920 Aug 28 j 12:41 0°**Υ** -11915 Jul 21 j 15:33 21° Mp 17'04 direct -11920 Oct 18 j 20:46 0°8 -11915 Aug 31 i 13:34 -11919 Jan 05 i 07:23 26° \$\frac{8}{56}'27 retrograde -11915 Nov 01 j 16:52 -11919 Feb 05 i 04:40 21°844'19 6°41'39 opposition -11915 Dec 23 i 13:31 0°×7 greatest brilliancy -11919 Feb 06 i 04:00 21° **8**28'11 -2.8m -11914 Feb 10 i 09:18 0°궁 min. Earth dist. -11919 Feb 08 j 19:02 20°844'46 0.39362 AU -11914 Feb 23 j 05:52 8°**⋜**08'34 asc. node direct -11919 Mar 09 j 01:55 16°807'32 -11914 Mar 28 j 22:41 -11919 Apr 27 j 23:53 0°**П** -11914 Apr 11 j 21:06 9°≈16'26 evening set -11919 May 21 j 19:56 12°**Д**46'31 desc. node max. Earth dist. -11914 Apr 30 j 16:45 22°≈02'02 2.53837 AU -11919 Jun 18 j 22:21 0ಂಪ -11914 May 12 j 05:42 0°**米** -11919 Aug 03 j 09:51 $0^{\circ}\Omega$ -11919 Sep 16 j 23:21 -11914 Jun 01 j 21:12 14°H31'14 0°55'48 0° mb conjunction -11914 Jun 01 j 19:12 14°**米**27'41 0°55'35 -11919 Nov 01 j 01:33 0∘**⊽** minimum elong -11919 Dec 17 j 02:18 -11914 Jun 23 j 08:47 $0^{\circ}\Upsilon$ 0°M -11918 Jan 22 j 03:05 23°ML08'23 -11914 Jul 24 j 18:19 23°**Υ**15'13 evening set morning rise -11918 Feb 01 j 20:34 0° ₹ 0°8 -11914 Aug 02 j 17:01 -11918 Mar 06 j 18:30 21° ₹ 02'28 2.66276 AU $0^{\circ}\Pi$ max. Earth dist. -11914 Sep 10 j 21:25 -11914 Oct 19 j 17:02 0 \circ \odot conjunction -11918 Mar 11 j 09:55 24° ₹ 00'52 -0°40'36 -11914 Nov 28 j 01:34 0 $^{\circ}\Omega$ minimum elong -11918 Mar 11 j 11:19 24° ₹03'07 0°41'16 -11913 Jan 08 j 00:39 0° m -11918 Mar 20 j 17:49 0°₹ desc. node -11913 Jan 11 j 17:01 2° m 36'30 -11918 Apr 27 j 09:04 24°**♂**20'16 -11913 Feb 21 j 03:03 0∘**ত** morning rise

-11913 Apr 13 j 08:53

0°M

-11918 May 06 j 01:09 0°≈

•	omena of Mars from nical year style is used: The		•				age 49
retrograde	-11913 Jun 16 j 18:23	-	in astronomical co	unting style is the yea	-11908 Sep 26 j 18:44		C.
min. Earth dist.	-11913 Jul 23 j 05:44		0.63461 AU	evening set	-11908 Sep 30 j 07:00	2° Ω 39'08	
opposition	-11913 Jul 26 j 15:37	9°M53'16		evening set	-11908 Nov 06 j 05:09	0°m	
greatest brilliancy	-11913 Jul 26 j 02:04				117001101 00 1 05.07	עויי	
direct	-11913 Sep 02 j 23:53	0°M47'34	1.0111	conjunction	-11908 Nov 27 j 16:18	15° m 24'25	-0°55'55
	-11913 Nov 28 j 13:22	0° × 7		minimum elong	-11908 Nov 27 j 13:44	-	
asc. node	-11912 Jan 11 j 09:33			8	-11908 Dec 18 j 12:00	0∘ <u>⊽</u>	
	-11912 Jan 20 j 15:59	0° ठ		max. Earth dist.	-11907 Jan 01 j 01:53	9° Ω 20'17	2.53958 AU
	-11912 Mar 08 j 14:35	0° ≈		morning rise	-11907 Jan 22 j 03:22	23° ≙ 33'15	
	-11912 Apr 22 j 05:58	0° ∀			-11907 Jan 31 j 20:09	0°M	
evening set	-11912 May 29 j 04:25	26°) 17'42			-11907 Mar 19 j 04:15	0° ∡ 7	
	-11912 Jun 03 j 05:59	0 ° Υ			-11907 May 06 j 11:58	5°0	
max. Earth dist.	-11912 Jun 19 j 01:41	11° Y 43'09	2.42102 AU		-11907 Jun 26 j 19:38	0° ≈	
	-11912 Jul 13 j 05:46	9° 8			-11907 Aug 27 j 23:05	0° ∀	
		4.4		asc. node	-11907 Sep 02 j 20:13	2°) €04'03	
conjunction	-11912 Jul 25 j 05:34		1°11'11	retrograde	-11907 Oct 08 j 07:00	8° ∺ 39'06	
minimum elong	-11912 Jul 25 j 06:52	9° 8 15'18	1°11'36	opposition	-11907 Nov 13 j 02:24	0°) 57′18	3°16'56
	-11912 Aug 20 j 23:43	0°II		greatest brilliancy	-11907 Nov 13 j 20:48	0°) 40′20	-1.9m
morning rise	-11912 Sep 25 j 07:26			: E 4 E 4	-11907 Nov 15 j 16:24		0.54504.411
	-11912 Sep 28 j 08:41 -11912 Nov 06 j 05:55	0ಂ ೮ 0ಂತಾ		min. Earth dist. direct	-11907 Nov 20 j 07:39 -11907 Dec 22 j 13:07		0.54504 AU
desc. node	,	16° Ω 43'17		direct	-11907 Dec 22 j 13:07 -11906 Jan 29 j 17:28	0°) €	
desc. Hode	-11912 Nov 28 j 11:09 -11912 Dec 16 j 12:09	0°M)			-11906 Jan 29 j 17.28 -11906 Mar 26 j 13:09	0° Υ	
	-11911 Jan 27 j 23:43	0∘ ʊ ○ ₩			-11906 May 09 j 07:55	0°8	
	-11911 Mar 14 j 17:36	0° M ₊			-11906 Jun 18 j 20:39	0°II	
	-11911 May 05 j 12:01	0° × 7		desc. node	-11906 Jul 21 j 05:48		
retrograde	-11911 Jul 21 j 04:37				-11906 Jul 28 j 11:21	0°95	
opposition	-11911 Aug 29 j 19:23		-3°21'49		-11906 Sep 06 j 10:31	$0^{\circ}\Omega$	
greatest brilliancy	-11911 Aug 29 j 21:02				-11906 Oct 17 j 14:22	0° m)	
min. Earth dist.	-11911 Aug 30 j 04:07	15° ∡ 15'47	0.66489 AU	evening set	-11906 Nov 23 j 19:18	26°№07'10	
direct	-11911 Oct 08 j 23:15	5° ∡ ³38′18			-11906 Nov 29 j 10:48	0∘ ⊽	
asc. node	-11911 Nov 28 j 15:47	17° ∡ 756'55			-11905 Jan 13 j 02:06	0° M	
	-11911 Dec 24 j 11:42	0° ප					
	-11910 Feb 15 j 03:46	0° ≈		conjunction	-11905 Jan 15 j 00:01	1°M15'41	
	-11910 Apr 02 j 04:47	0°)		minimum elong	-11905 Jan 15 j 00:14	1°M16'02	
	-11910 May 14 j 14:32	0°Υ		max. Earth dist.	-11905 Jan 31 j 21:54		2.62688 AU
. ,	-11910 Jun 23 j 15:19	0°8			-11905 Feb 28 j 05:27	0° ⊀ 7	
evening set	-11910 Jul 28 j 10:13	26° O 3/2/ 0° Ⅱ		morning rise	-11905 Mar 05 j 20:23	3° メ 36'23 0°る	
	-11910 Aug 01 j 07:32 -11910 Sep 08 j 14:39	0°©			-11905 Apr 16 j 08:32 -11905 Jun 03 j 02:34	0°≈	
	-11910 Sep 08 j 14.39	0 3		asc. node	-11905 Jul 21 j 15:29		
conjunction	-11910 Sep 29 j 00:45	15°9352'18	0°13'03	ase. Hode	-11905 Jul 21 j 19:12	0° ∀	
minimum elong	-11910 Sep 29 j 02:00		0°13'43		-11905 Sep 11 j 13:26	0°Υ	
behind sun begin	-11910 Sep 28 j 11:24				-11905 Nov 27 j 18:38	0°8	
behind sun end	-11910 Sep 29 j 16:36			retrograde	-11905 Dec 07 j 10:49	0° 8 33'48	
desc. node	-11910 Oct 16 j 04:59	29° © 03'35			-11905 Dec 16 j 22:00	30° ₹ Υ	
	-11910 Oct 17 j 10:35	$0^{\circ}\Omega$		opposition	-11904 Jan 08 j 10:11	24° Y 46'26	6°56'13
max. Earth dist.	-11910 Nov 10 j 16:12	18° Ω 15′03	2.41886 AU	greatest brilliancy	-11904 Jan 10 j 01:01		-2.5m
	-11910 Nov 26 j 14:37	0° m		min. Earth dist.	-11904 Jan 15 j 09:08		0.42674 AU
morning rise	-11910 Dec 01 j 06:00	3° m 22'49		direct	-11904 Feb 12 j 00:17		
	-11909 Jan 07 j 17:54	0。 ত			-11904 Mar 28 j 11:39	0° ႘	
	-11909 Feb 21 j 06:55	0° M ₊			-11904 May 19 j 04:19	0°II	
	-11909 Apr 09 j 18:14	0°⊀¹		desc. node	-11904 Jun 07 j 11:39		
	-11909 Jun 01 j 00:26	0°る			-11904 Jul 02 j 02:21	0° ©	
retrograde	-11909 Aug 26 j 19:20		0022127		-11904 Aug 13 j 16:50	0° N	
opposition	-11909 Oct 04 j 02:37				-11904 Sep 25 j 16:54	0ಂ ರ 0ಂ⊯	
greatest brilliancy min. Earth dist.	-11909 Oct 04 j 04:52 -11909 Oct 08 j 03:44		-1.5m 0.63347 AU		-11904 Nov 08 j 20:25 -11904 Dec 24 j 07:28	0°M	
asc. node	-11909 Oct 08 j 03:44 -11909 Oct 16 j 20:24		V.UJJT/ AU	evening set	-11904 Dec 24 j 07.28 -11903 Jan 06 j 08:10	8°M27'39	
direct	-11909 Nov 13 j 20:57				-11903 Feb 08 j 18:52	0° x 7	
	-11908 Jan 17 j 05:31	0° ≈				•	
	-11908 Mar 09 j 04:07	0° ∀		conjunction	-11903 Feb 24 j 04:36	9° х 52′09	-0°55'12
	-11908 Apr 22 j 07:24	0° Y		minimum elong	-11903 Feb 24 j 06:10	9° ∡ 754'38	0°55'49
	-11908 Jun 02 j 00:43	9° 8		max. Earth dist.	-11903 Feb 25 j 10:36	10° х 40′09	2.66318 AU
	-11908 Jul 11 j 01:50	Π °0			-11903 Mar 27 j 15:12	0°ರ	
	-11908 Aug 18 j 15:57	0°9		morning rise	-11903 Apr 12 j 10:53		
desc. node	-11908 Sep 02 j 02:43	11°5909'56			-11903 May 13 j 04:07	0° ≈	

```
Planetary Phenomena of Mars from -12400 through -11898 (UT), Astrodienst AG 18-Feb-2025 14:23, page 50 Attention, astronomical year style is used: The year -12399 in astronomical counting style is the year 12400 BCE in historical counting style.

asc. node

-11903 Jun 07 j 07:47 16°≈24'08

-11903 Jun 28 j 00:01 0° ₩

-11903 Aug 12 j 03:25 0° ♥

-11903 Sep 26 j 02:24 0° ₩

-11903 Nov 11 j 04:02 0° Ⅲ

-11902 Jan 02 j 14:59 0° ©

retrograde

-11902 Feb 21 j 19:18 13° © 56'09
```

0.39236 AU

min. Earth dist.

evening set

desc. node

morning rise

-11902 Jul 11 j 23.46 0 32 -11902 Aug 31 j 13:43 0° m -11902 Oct 18 j 07:28 0° Ω -11902 Dec 04 j 16:58 0° m -11901 Jan 21 j 03:52 0° ⊀ -11901 Feb 15 j 07:27 15° ⊀757'34

-11902 Mar 22 j 00:07 9°514'34

-11901 Mar 09 j 06:48 0°る max. Earth dist. -11901 Mar 22 j 01:19 8°る13'21 2.64630 AU

conjunction -11901 Apr 04 j 08:26 16°る50'23 -0°12'34 minimum elong behind sun begin -11901 Apr 04 j 08:57 16°る51'15 0°13'13 -11901 Apr 03 j 21:49 16°る33'09

behind sun end -11901 Apr 04 j 20:06 17° ₹09'21
-11901 Apr 24 j 10:41 0° ≈
asc. node -11901 Apr 25 j 00:30 0° ≈22'47
morning rise -11901 May 21 j 13:53 18° ≈04'20
-11901 Jun 08 j 04:14 0° ₩
-11901 Jul 21 j 08:16 0° ϒ
-11901 Sep 01 j 04:05 0° ℧

-11901 Jul 21 j 08:16 0° Υ'
-11901 Sep 01 j 04:05 0° ℧
-11901 Oct 12 j 03:14 0° Π
-11901 Nov 22 j 01:35 0° Φ
-11900 Jan 03 j 11:50 0° Ω
-11900 Feb 20 j 18:33 0° Πρ
-11900 Mar 12 j 17:43 10° Πρ09'32

retrograde -11900 Apr 20 j 16:47 19° m 16'59
min. Earth dist. -11900 May 20 j 09:23 13° m 20'32 0.49780 AU
greatest brilliancy -11900 May 27 j 01:19 10° m 56'23 -2 2m

> -11900 Sep 19 j 00:01 0° ♀ -11900 Nov 11 j 14:40 0° 爪 -11900 Dec 31 j 12:21 0° ⊀ -11899 Feb 17 j 15:02 0° ♂ -11899 Mar 11 j 21:10 14° ♂ 15'21

asc. node -11899 Mar 11 j 21:10 14° ₹ 15'21 evening set -11899 Mar 26 j 08:10 23° ₹ 39'57 -11899 Apr 04 j 23:06 0° ≈

max. Earth dist. $-11899 \text{ Apr } 17 \text{ j } 22:10 \quad 8^{\circ} \approx 37'35 \quad 2.57781 \text{ AU}$

conjunction -11899 May 14 j 22:30 26°≈59'12 0°38'23 minimum elong -11899 May 14 j 20:55 26°≈56'28 0°37'58

-11899 May 19 j 07:07 0° **H** -11899 Jun 30 j 14:51 0° **Υ** -11899 Jul 04 j 07:17 2° **Υ**40'28 -11899 Aug 10 j 06:02 0° **H**

-11899 Sep 18 j 18:15 0°**Π** -11899 Oct 27 j 21:55 0°**⑤** -11899 Dec 06 j 15:42 0°**Ω**