Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 1 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -400 May 01 j 20:57 5°840'41 0°05'34 -395 Apr 27 j 12:15 0°≈ conjunction -400 May 01 j 20:39 5°840'11 0°05'34 -395 Jun 19 j 16:24 0°**₩** minimum elong behind sun begin -400 Apr 30 j 22:59 5°803'03 -395 Jul 29 j 02:21 9°****37'13 retrograde -400 May 02 j 18:20 6°817'18 behind sun end min. Earth dist. -395 Aug 24 j 18:01 4°**升**58'00 0.41130 AU -400 May 30 j 01:13 24°**8**42'30 max. Earth dist. 2.58005 AU opposition -395 Aug 31 j 20:09 2°\dagger45'46 -5°25'36 -400 Jun 07 j 00:34 $0^{\circ}\Pi$ greatest brilliancy -395 Aug 30 j 15:38 3°**¥**08′06 -2.7m -400 Jun 23 j 10:52 10°**Ⅱ**46'58 -395 Sep 10 j 06:41 morning rise 30°R≈ 27°≈02'43 -395 Oct 01 j 16:38 -400 Jul 23 j 06:46 0°9 direct -400 Sep 09 j 04:32 $0^{\circ}\Omega$ -395 Oct 23 j 14:24 0°**∀** 0° Mp -400 Oct 29 j 04:33 asc. node -395 Dec 13 j 13:43 21°**)** 16'04 0°Υ -400 Dec 23 j 09:45 0∘**⊽** -395 Dec 29 j 16:43 -399 Mar 06 j 13:44 0°8 retrograde 22°**₽**20′29 -394 Feb 18 j 22:43 -399 Apr 10 j 16:38 $\Pi^{\circ}0$ opposition 15°**≙**08'48 1°30'57 -394 Apr 09 j 03:17 greatest brilliancy -399 Apr 11 j 05:31 14°**£**57'29 -2.1m -394 May 27 j 15:45 0ಂತಾ min. Earth dist. -399 Apr 19 j 01:57 12°**♀**12'20 0.50960 AU evening set -394 Jul 13 j 09:18 29°522'59 desc. node -399 May 10 j 12:14 6°**£**52'22 -394 Jul 14 j 08:35 $0^{\circ}\Omega$ direct -399 May 19 j 10:20 6°**£**19'35 max. Earth dist. -394 Aug 11 j 02:31 17°**Ω**49'18 2.63942 AU -399 Jul 26 j 16:35 $0^{\circ}M$ -399 Sep 10 j 20:33 0°×7 conjunction -394 Aug 28 j 07:33 29°Ω03'20 1°01'25 -399 Oct 21 j 20:58 0°る minimum elong -394 Aug 28 j 08:33 29°**Ω**04'59 1°01'26 -399 Nov 30 j 14:40 0°**≈** -394 Aug 29 j 18:02 0° m -398 Jan 09 i 17:27 0°**₩** -394 Oct 13 i 01:48 29° m 43'20 morning rise -398 Feb 20 i 03:49 $0^{\circ}\Upsilon$ -394 Oct 13 i 11:33 0∘**⊽** -398 Mar 10 j 15:54 13°**Y**'00'12 -394 Nov 25 i 11:29 0°M asc. node -398 Apr 04 j 09:02 0°8 -394 Dec 31 j 10:40 25°M57'44 desc. node -398 Apr 25 j 20:25 14°**8**27'19 -393 Jan 05 j 22:49 0°×7 evening set -398 May 19 j 08:55 Π °0 -393 Feb 15 j 07:11 0°궁 -393 Mar 27 j 04:34 0°≈ -398 Jun 15 j 04:44 17°**II**26'17 0°50'09 -393 May 06 j 17:38 0°**₩** conjunction -398 Jun 15 j 03:22 -393 Jun 19 j 02:30 $0^{\circ}\Upsilon$ 17°**II**24'05 0°50'08 minimum elong -398 Jun 25 j 13:03 24°**II**05'57 2.65392 AU -393 Aug 12 j 18:21 0° 8 max. Earth dist. 0°ಅ -398 Jul 04 j 17:55 -393 Sep 18 j 19:21 8°**8**21'42 retrograde -398 Jul 31 j 23:46 17°522'18 -393 Oct 20 j 03:16 morning rise min. Earth dist. 1°**8**40'03 0.53728 AU -398 Aug 20 j 21:27 -393 Oct 24 j 12:16 0 \circ Ω 30°RƳ 0° M -398 Oct 07 j 08:52 -393 Oct 27 j 08:18 28°**Y**54'44 -0°11'52 opposition -398 Nov 24 j 05:04 -395 Jan 05 j 18:40 13°ML53'15 0.5m 0∘**⊽** greatest brilliancy -397 Jan 12 j 07:07 $0^{\circ}M$ -393 Oct 31 j 12:03 27°**Y**21′05 asc. node -397 Mar 07 j 01:18 0°⊀ direct -393 Dec 01 j 17:01 21° Y 02'40 desc. node -397 Mar 28 j 10:37 9°**х** 54'45 -392 Jan 12 j 10:29 0° 8 retrograde -397 May 14 j 06:29 21°**х** 08′29 -392 Mar 14 j 23:12 $\Pi^{\circ}0$ -397 Jun 13 j 21:42 15°**₹**58'38 -4°45'44 -392 May 06 j 08:39 0ಂಣ opposition -397 Jun 14 j 14:13 15°**∡**¹47'12 -2.8m -392 Jun 24 j 13:49 $0^{\circ}\Omega$ greatest brilliancy min. Earth dist. -397 Jun 18 j 10:51 14°**∡**′43'16 0.38977 AU -392 Aug 10 j 08:59 0° M -397 Jul 15 j 18:42 10°**∡**15'44 -392 Aug 19 j 23:12 6° m 20'35 direct evening set -397 Sep 14 j 03:12 0°₹ max. Earth dist. -392 Sep 07 j 00:21 18° m/28'20 2.55409 AU -397 Nov 01 j 14:54 0°≈ -392 Sep 23 j 19:43 0∘**⊽** -397 Dec 15 j 22:34 0°**₩** -396 Jan 26 j 14:58 -392 Oct 07 i 08:04 9°**£**26'23 0°25'14 asc. node 28°\ 20'37 conjunction -396 Jan 29 j 01:54 $0^{\circ}\Upsilon$ -392 Oct 07 i 09:07 minimum elong 9°**2**28'14 0°25'13 -396 Mar 14 j 04:01 0°8 -392 Nov 05 i 01:33 0°M -396 Apr 29 j 09:43 $0^{\circ}II$ desc. node -392 Nov 17 j 08:58 9°M00'29 -396 Jun 05 j 13:50 23°II44'04 -392 Nov 27 j 18:01 16°M41'32 evening set morning rise -396 Jun 15 j 10:22 0ಂತಾ -392 Dec 15 j 11:51 0°**∡**¹ -396 Jul 18 j 03:33 -391 Jan 23 j 16:19 0°궁 max. Earth dist. 20°5548'14 2.67374 AU -391 Mar 03 j 08:36 0°28 0°**∀** conjunction -396 Jul 22 j 05:28 23°524'15 1°09'13 -391 Apr 11 j 09:59 $0^{\circ}\Upsilon$ minimum elong -396 Jul 22 j 05:08 23°523'43 1°09'13 -391 May 21 j 22:25 -396 Aug 01 j 13:32 $0^{\circ}\Omega$ -391 Jul 04 j 12:06 0° 8 -396 Sep 04 j 21:55 22°Ω04'12 -391 Aug 24 j 05:52 $0^{\circ}\Pi$ morning rise -396 Sep 17 j 03:24 0° M -391 Sep 17 j 11:41 11°**Ⅲ**02'07 asc. node -396 Nov 01 j 18:38 0∘**⊽** -391 Oct 26 j 17:23 19°**Ⅲ**35'10 retrograde -396 Dec 16 j 09:45 0°M min. Earth dist. -391 Dec 02 j 00:32 11°**Ⅲ**07'16 0.63636 AU -395 Jan 29 j 05:47 0°⊀ opposition -391 Dec 05 j 18:14 9°**Ⅲ**37'33 2°57'46 desc. node -395 Feb 12 j 10:57 9°**х** 48′11 greatest brilliancy -391 Dec 05 j 07:38 9°**Ⅱ**48'10 -1.5m -395 Mar 13 j 18:35 0°궁 -390 Jan 13 j 11:50 0°**I**129′04

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 2 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -390 Apr 11 j 13:36 0ಂತಾ max. Earth dist. -385 May 18 j 13:11 11°**8**31'23 2.53729 AU -390 Jun 04 j 02:51 $0^{\circ}\Omega$ -385 Jun 07 j 11:52 24°857'55 morning rise -390 Jul 22 j 07:16 0°m -385 Jun 15 j 01:45 $\Pi^{\circ}0$ -390 Sep 05 j 00:37 0∘**⊽** -385 Jul 31 j 10:32 0ಂತಾ -390 Oct 03 j 18:29 20°**£**21'20 -385 Sep 17 j 23:39 $0^{\circ}\Omega$ evening set -390 Oct 05 j 07:33 -385 Nov 09 j 01:57 0° m desc. node 21°**2**28'21 -390 Oct 17 j 00:07 -384 Jan 14 j 17:45 0∘**⊽** 0°M -390 Oct 20 j 06:58 -384 Feb 15 j 10:39 max. Earth dist. 2°M25'09 2.43068 AU retrograde 5°**£**16'50 -390 Nov 25 j 22:03 0° **₹** -384 Mar 15 j 18:35 30°₽, Тр opposition -384 Mar 23 j 00:07 27° **m** 26'03 $2^{\circ}53'32$ conjunction -390 Nov 28 j 13:48 2°**₹**02'18 -0°34'13 greatest brilliancy -384 Mar 23 j 20:17 27° Mp 07'29 -1.8m -390 Nov 28 j 11:44 1°**∡**758'19 0°34'12 -384 Mar 30 j 13:04 minimum elong min. Earth dist. 24° Mp 39'51 0.55883 AU -389 Jan 03 j 12:52 0°る direct -384 May 02 j 02:28 17° **m** 58'46 22°る16'00 morning rise -389 Jan 31 j 20:43 desc. node -384 May 27 j 04:11 21° m/ 48'17 -389 Feb 10 j 16:59 0°**≈** -384 Jun 18 j 02:19 0∘**⊽** -389 Mar 21 j 07:44 0°**)**€ -384 Aug 09 j 20:29 0°M $0^{\circ}\Upsilon$ -389 Apr 30 j 06:01 -384 Sep 21 j 15:30 0°**⊼** -389 Jun 11 j 08:55 0°8 -384 Oct 31 j 10:18 0°정 -389 Jul 26 j 19:27 $\mathbb{I}^{\circ 0}$ -384 Dec 09 j 10:16 0°**≈** asc. node -389 Aug 05 j 11:34 6°**Ⅱ**00′24 -383 Jan 17 j 23:04 0°) -389 Sep 16 j 12:50 0ಂತಾ -383 Feb 27 j 21:21 $0^{\circ}\Upsilon$ retrograde -389 Nov 30 j 11:08 24°9509'19 asc. node -383 Mar 27 i 08:22 19°**Y**24'32 -388 Jan 09 i 12:06 14°528'44 4°24'47 evening set -383 Apr 07 j 06:48 26°Y58'54 opposition greatest brilliancy -388 Jan 09 j 11:08 14°9529'43 -1.3m -383 Apr 11 j 16:16 0°8 min. Earth dist. -388 Jan 09 i 14:45 14°9526'06 0.67546 AU -383 May 26 j 08:47 $\Pi^{\circ}0$ -388 Feb 19 j 06:08 4°939'50 direct -388 May 08 j 12:32 $0^{\circ}\Omega$ -383 May 30 j 01:31 2°II25'57 0°35'43 conjunction -388 Jun 30 j 06:03 0°m -383 May 30 j 00:11 2°II23'45 0°35'42 minimum elong -388 Aug 15 j 06:36 0∘**⊽** max. Earth dist. -383 Jun 15 j 23:53 13°**I**I29'12 2.63136 AU -383 Jul 11 j 14:48 -388 Aug 22 j 06:48 4°**₽**49'27 desc. node 000 -383 Jul 17 j 14:14 -388 Sep 26 j 12:52 0°M 3°9549'12 morning rise -388 Nov 05 j 08:18 -383 Aug 27 j 22:39 0°**∡** 0° Ω -388 Nov 30 j 20:04 19°**∡**¹50′16 -383 Oct 15 j 02:43 0° m evening set -388 Dec 13 j 18:02 0°궁 -383 Dec 03 j 16:06 0∘Ω 0° M -387 Jan 20 j 18:04 -382 Jan 26 j 10:23 0°≈ 25°ML08'43 -382 Apr 14 j 01:35 retrograde 12°≈14′01 -1°04′16 -387 Feb 05 j 08:31 -382 Apr 14 j 04:10 conjunction desc. node 25°M08'42 minimum elong -387 Feb 05 j 09:46 12°≈16'26 1°04'17 opposition -382 May 16 j 10:20 19°M13'10 -1°56'35 -387 Feb 28 j 07:00 0°**)**€ greatest brilliancy -382 May 16 j 23:01 19°ML03'18 -2.6m max. Earth dist. -387 Mar 26 j 23:24 20°**升**12'36 2.40556 AU min. Earth dist. -382 May 24 j 00:48 16°M52'13 0.42929 AU -387 Apr 09 j 04:29 $0^{\circ}\Upsilon$ direct -382 Jun 20 j 10:10 12°M07'58 -387 Apr 14 j 08:43 3°Y47'39 -382 Aug 15 j 21:58 0°**∡**7 morning rise -387 May 21 j 01:57 0° 8 -382 Oct 02 j 19:17 0°る -387 Jun 22 j 09:55 22°802'30 -382 Nov 14 j 07:28 0°**≈** asc. node -387 Jul 04 j 10:47 $\Pi^{\circ}0$ -382 Dec 26 j 03:25 0°**)**€ -387 Aug 20 j 21:13 0ಂತಾ -381 Feb 06 i 19:48 $0^{\circ}\Upsilon$ -387 Oct 12 j 13:29 -381 Feb 12 i 06:16 3°Y45'13 $0^{\circ}\Omega$ asc. node -386 Jan 04 i 04:50 -381 Mar 22 j 23:11 retrograde 27°**Ω**45'12 0°8 opposition -386 Feb 12 i 03:30 18°Ω45'17 4°30'41 -381 May 07 j 14:23 $\Pi^{\circ}0$ greatest brilliancy -386 Feb 12 i 17:47 $18^{\circ}\Omega 31'20 - 1.4m$ -381 May 22 j 03:04 9°**Ⅲ**23'18 evening set min. Earth dist. -386 Feb 16 i 03:26 17°Ω11'45 0.64910 AU -381 Jun 23 j 07:02 0ಂತಾ direct -386 Mar 25 j 12:54 8°Ω44'03 -386 Jun 02 j 13:03 0° m conjunction -381 Jul 08 j 19:48 9°954'17 1°04'57 -386 Jul 10 j 05:25 -381 Jul 08 i 18:58 desc. node 21° m 24'10 minimum elong 9°952'56 1°04'57 -386 Jul 23 j 19:40 0∘**⊽** -381 Jul 10 j 01:03 max. Earth dist. 10°5540'51 2.67252 AU -386 Sep 05 j 13:41 0°M -381 Aug 09 j 08:42 $0^{\circ}\Omega$ 8°**Ω**40′29 -386 Oct 15 j 21:12 0°**√** morning rise -381 Aug 22 j 22:50 -386 Nov 23 j 12:01 0°る -381 Sep 25 j 04:36 0° m -386 Dec 31 j 16:21 0°≈ -381 Nov 10 j 11:15 0∘**⊽** -385 Feb 08 j 11:07 0°**)**€ -381 Dec 26 j 06:39 0°M -385 Feb 09 j 05:59 0°**)**35′57 -380 Feb 10 j 01:59 0°**∡**7 evening set $0^{\circ}\Upsilon$ -385 Mar 20 j 15:46 desc. node -380 Mar 01 j 03:30 12°**₹**58'23 -380 Mar 28 j 04:46 0°궁 conjunction -385 Apr 12 j 06:12 16°**Y**16'35 -0°17'11 -380 May 22 j 15:02 0°≈ minimum elong -385 Apr 12 j 07:18 16°**Y**18'31 0°17'10 retrograde -380 Jul 01 j 21:25 9°≈31'09 -385 May 01 j 19:05 0°8 -380 Jul 29 j 10:18 5°≈02'13 0.37993 AU min. Earth dist.

-385 May 10 j 09:02

asc. node

5°**8**55'43

greatest brilliancy

-380 Aug 01 j 08:28

4°**≈**14'08

-2.9m

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 3 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. 4°≈01'54 -6°49'11 28°**₽**22'58 -380 Aug 02 i 02:19 desc. node -375 Oct 22 j 00:03 opposition -380 Aug 19 j 12:47 30°Rる -375 Oct 24 j 05:06 $0^{\circ}M$ -380 Aug 31 j 15:36 29°る01'55 direct -380 Sep 12 j 22:24 9°M237'34 -0°09'53 -375 Nov 06 j 06:13 0°≈≈ conjunction -380 Nov 22 j 23:54 0°**∀** -375 Nov 06 j 05:38 9°**™**36′30 0°09'53 minimum elong -380 Dec 30 j 04:58 22°¥17'32 -375 Nov 05 j 10:52 asc. node behind sun begin 9°M01'40 $0^{\circ}\Upsilon$ -379 Jan 11 j 14:55 -375 Nov 07 j 00:24 behind sun end 10°M11'22 -379 Feb 28 j 07:33 0° 8 -375 Dec 03 j 07:05 0°**∡**7 -379 Apr 16 j 23:42 $0^{\circ}II$ -374 Jan 03 j 18:09 24°**∡**16'36 morning rise -379 Jun 03 j 18:38 0ಂತಾ -374 Jan 11 j 02:18 0°ಕ evening set -379 Jun 28 j 20:56 15°5549'29 -374 Feb 18 j 09:56 0°≈ -379 Jul 21 j 04:23 -374 Mar 29 j 03:04 0°**)**€ $0^{\circ}\Omega$ -379 Aug 01 j 16:44 $0^{\circ}\Upsilon$ max. Earth dist. 7°**Ω**22'07 2.65919 AU -374 May 08 j 04:04 -374 Jun 19 j 14:03 0°8 conjunction -379 Aug 13 j 18:04 15° **Ω**08'01 1°07'43 -374 Aug 05 j 01:44 $0^{\circ}\Pi$ minimum elong -379 Aug 13 j 18:36 15°**Ω**08'53 1°07'43 asc. node -374 Aug 22 j 02:38 9°**I**I58'42 -379 Sep 05 j 14:17 -374 Oct 01 j 03:54 0ಂತಾ morning rise -379 Sep 27 j 16:12 14° m 35'32 retrograde -374 Nov 17 j 02:42 11°9516'14 -379 Oct 20 j 14:22 0∘**ত** min. Earth dist. -374 Dec 25 j 21:33 1°959'15 0.66790 AU -379 Dec 03 j 02:26 0°M opposition -374 Dec 27 j 07:00 1°9525'44 4°01'03 -378 Jan 14 j 06:17 0°×7 greatest brilliancy -374 Dec 27 j 00:58 1°931'47 -1.3m desc. node -378 Jan 17 j 02:23 2°**х** 02′52 -374 Dec 30 i 21:01 30°RⅡ -378 Feb 24 i 10:41 0°정 direct -373 Feb 05 i 09:44 21°**Ⅱ**49'15 -378 Apr 06 j 08:24 0°≈ -373 Mar 18 i 00:06 0ಂತಾ -378 May 18 j 11:54 0°**₩** -373 May 20 j 06:56 $0^{\circ}\Omega$ -378 Jul 05 j 08:39 $0^{\circ}\Upsilon$ -373 Jul 09 j 12:56 0° m -378 Aug 31 j 20:10 18°**Y**30'41 -373 Aug 23 j 21:21 0∘**⊽** retrograde -378 Sep 30 j 00:45 12°**Y**39'49 0.48670 AU -373 Sep 08 j 22:33 11°**≏**12'29 min. Earth dist. desc node -378 Oct 07 j 11:48 -373 Oct 04 j 23:34 greatest brilliancy 9° **Y**57'21 -2.3m oom. -378 Oct 08 j 01:17 9°Y45'06 -2°03'25 -373 Nov 06 j 14:56 24°M29'46 opposition evening set -378 Nov 10 j 15:49 2°Y37'53 -373 Nov 13 j 19:11 0°×7 direct -378 Nov 17 j 04:55 2°Y54'17 -373 Dec 22 j 06:17 0°궁 asc. node -377 Jan 30 j 21:49 0° 8 -377 Mar 25 j 21:23 13°る41'40 -1°02'33 $0^{\circ}\Pi$ -372 Jan 08 j 14:53 conjunction -377 May 15 j 06:06 000 -372 Jan 08 j 13:08 13°る38'13 1°02'33 minimum elong -372 Jan 08 j 10:22 -377 Jul 02 j 17:20 0° Ω 13°る32'45 2.37258 AU max. Earth dist. -377 Aug 05 j 14:19 -372 Jan 29 j 07:10 evening set 21°**Ω**41'11 0°≈ -372 Mar 07 j 19:48 -377 Aug 18 j 07:15 0° m 0°**)**€ max. Earth dist. -377 Aug 27 j 06:50 5° My 56'322.59309 AU morning rise -372 Mar 18 j 09:55 8°\mathcal{H}05'31 -372 Apr 16 j 16:13 $0^{\circ}\Upsilon$ conjunction -377 Sep 21 j 13:21 22° m 57'36 0°42'41 -372 May 28 j 13:24 0°8 -377 Sep 21 j 14:40 22° m 59'51 0°42'41 -372 Jul 09 j 02:12 28°**8**01'06 minimum elong asc. node -377 Oct 01 j 19:34 0∘**⊽** -372 Jul 12 j 03:14 $\Pi^{\circ}0$ -377 Nov 09 j 00:32 26°**♀**55'02 -372 Aug 29 j 12:14 0ಂತಾ morning rise -377 Nov 13 j 07:14 0° M -372 Oct 25 j 14:53 $0^{\circ}\Omega$ -377 Dec 05 i 01:25 -372 Dec 20 j 21:04 desc. node 15°M52'31 retrograde 14°**Ω**41'46 -377 Dec 24 i 01:29 -371 Jan 29 i 09:24 0°×7 opposition 5°Ω23'10 4°38'12 -376 Feb 01 i 14:37 0°る -371 Jan 29 i 17:49 greatest brilliancy 5°Ω14'52 -1.3m -371 Jan 31 j 21:09 -376 Mar 11 j 15:07 0°≈ min. Earth dist. 4°Ω24'14 0.66741 AU -376 Apr 20 j 01:14 0°**₩** -371 Feb 12 i 18:42 30°Rூ $0^{\circ}\Upsilon$ -376 May 31 j 03:47 direct -371 Mar 11 j 17:19 25°\$22'49 -376 Jul 15 j 07:34 0°8 -371 Apr 09 j 22:36 $0^{\circ}\Omega$ -376 Sep 13 j 23:19 $\mathbb{I}^{\circ 0}$ -371 Jun 14 j 14:44 0° m -376 Oct 04 j 03:59 -371 Jul 26 j 22:18 asc. node 4°**I**127'54 desc. node 26° m 04'57 4°**Ⅱ**55'24 -376 Oct 12 j 10:41 -371 Aug 01 j 20:28 0∘ଫ retrograde -376 Nov 08 j 03:02 30°R8 -371 Sep 13 j 19:07 0°M min. Earth dist. -376 Nov 15 j 22:25 27°804'40 0.60400 AU -371 Oct 23 j 19:35 0°×7 -376 Nov 21 j 02:47 25°**8**01'20 1°58'48 -371 Dec 01 j 06:57 0°정 opposition -376 Nov 20 j 16:55 25°**8**11'07 -1.7m -370 Jan 08 j 08:18 0°≈≈ greatest brilliancy -376 Dec 28 j 16:53 16°**8**17'25 -370 Jan 13 j 04:42 3°≈48'21 direct evening set -375 Feb 21 j 01:35 $0^{\circ}\Pi$ -370 Feb 15 j 23:29 0°**)**€ -375 Apr 21 j 20:32 0 \circ \odot -375 Jun 12 j 02:27 0° Ω conjunction -370 Mar 19 j 20:45 24°\(\dagger)00'24\) -0°40'06 -375 Jul 29 j 14:20 0° m minimum elong -370 Mar 19 j 23:20 24°**H**05'09 0°40'04 $0^{\circ}\Upsilon$ -375 Sep 12 j 03:49 0∘**⊽** -370 Mar 28 j 00:06 -375 Sep 15 j 03:10 2°**£**04'01 max. Earth dist. -370 May 03 j 11:15 26°**Y**08'45 2.48811 AU evening set max. Earth dist. -375 Sep 29 j 19:10 12°**2**23'13 2.48151 AU -370 May 08 j 23:36 0°8

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 4 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -370 May 19 j 15:05 7°**8**21'53 -365 Jul 14 j 14:20 30°R*x*7 morning rise -370 May 27 j 00:23 12°**8**25'18 -365 Aug 01 j 05:49 28°**₹**02'24 asc. node direct -370 Jun 22 j 04:59 $\mathbb{I}^{\circ 0}$ -365 Aug 18 j 11:26 0°궁 -370 Aug 07 j 19:15 0ಂತಾ -365 Oct 22 j 13:34 0°**≈** -370 Sep 26 j 08:03 $0^{\circ}\Omega$ -365 Dec 08 j 16:23 0°**∀** -364 Jan 16 j 21:25 -370 Nov 21 j 05:36 0° m 25° ¥ 54'36 asc. node $0^{\circ}\Upsilon$ -369 Jan 28 j 17:44 retrograde 20° Mp 00'00-364 Jan 23 j 02:00 0° 8 3°47'10 opposition -369 Mar 07 j 10:25 11° Mp 37'30 -364 Mar 08 j 20:48 $0^{\circ}\Pi$ greatest brilliancy -369 Mar 08 j 06:58 11° **m** 18'00 -1.6m -364 Apr 24 j 12:22 min. Earth dist. -369 Mar 13 j 16:59 9° Mp 14'54 0.60144 AU -364 Jun 10 j 18:15 0ಂತಾ direct -369 Apr 17 j 08:31 1° m 48'24 evening set -364 Jun 14 j 04:19 2°509'59 -369 Jun 13 j 21:21 desc. node 18° Mp 15'08 max. Earth dist. -364 Jul 23 j 11:39 27°508'17 2.67080 AU -369 Jul 05 j 20:48 -364 Jul 27 j 23:12 0∘**⊽** 0° Ω -369 Aug 21 j 17:16 0°M -369 Oct 02 j 01:41 0°**√** conjunction -364 Jul 30 j 10:34 1°**Ω**34'51 1°09'50 -369 Nov 10 j 04:43 0°ರ minimum elong -364 Jul 30 j 10:34 1°**£**34'51 1°09'50 -369 Dec 18 j 17:48 0°**≈** -364 Sep 12 j 11:26 -368 Jan 26 j 20:51 0°**)**€ morning rise -364 Sep 13 j 01:52 0° m 23'33 -368 Mar 07 j 10:00 $0^{\circ}\Upsilon$ -364 Oct 27 j 20:48 0∘**ত** evening set -368 Mar 17 j 17:06 7°**Υ**24'33 -364 Dec 11 j 01:18 0°M asc. node -368 Apr 12 j 23:02 25°Y54'30 -363 Jan 23 j 04:24 0°×7 -368 Apr 18 j 20:51 0°8 desc. node -363 Feb 02 i 18:46 7°**∡**'27'29 -363 Mar 06 i 15:38 0°궁 conjunction -368 May 12 j 15:29 16°**8**12'22 0°17'36 -363 Apr 18 j 09:56 0°≈ minimum elong -368 May 12 j 14:38 16°**8**10'56 0°17'36 -363 Jun 03 j 12:57 0°**∀** -368 Jun 02 j 07:48 $0^{\circ}II$ -363 Aug 11 j 06:43 25° ¥ 08'53 retrograde -368 Jun 05 j 14:21 2°П09'38 2.60062 AU -363 Sep 07 j 14:26 20°¥07'42 0.43602 AU max Earth dist min. Earth dist. -368 Jul 02 j 13:29 19°**Ⅱ**44'40 -363 Sep 14 j 09:50 17°¥51'46 -2.5m greatest brilliancy morning rise -368 Jul 18 j 12:43 0ಂತಾ opposition -363 Sep 15 j 11:35 17°**)** 30'14 -4°12'58 -368 Sep 04 j 03:54 $0^{\circ}\Omega$ -363 Oct 17 j 05:36 11° ¥ 16'27 direct 0° My 23°**)**€03'31 -368 Oct 23 j 08:02 -363 Dec 03 j 19:55 asc. node -368 Dec 14 j 17:36 0∘∙თ -363 Dec 19 j 01:03 $0^{\circ}\Upsilon$ -362 Feb 12 j 06:01 -367 Feb 21 j 20:22 0°8 0°M -367 Mar 19 j 09:56 -362 Apr 03 j 16:37 Π °0 retrograde 3°M34'10 -367 Apr 12 j 10:11 -362 May 22 j 18:12 0°9 -367 Apr 22 j 13:42 -362 Jul 09 j 16:52 opposition 26°**2**47'47 0°26'59 0 \circ Ω -367 Apr 22 j 17:54 -362 Jul 21 j 18:28 greatest brilliancy 26°**₽**44'14 -2.3m evening set 7°**Ω**41'21 desc. node -367 Apr 30 j 19:35 24°**♀**00'05 max. Earth dist. -362 Aug 16 j 20:53 24°**Ω**33'52 2.62488 AU min. Earth dist. -367 May 01 j 00:58 23°**♀**55'39 0.48064 AU -362 Aug 25 j 03:51 0° m direct -367 May 30 j 05:01 18°**♀**28'53 -367 Jul 13 j 15:11 0° M conjunction -362 Sep 05 j 22:19 7° mp 47'15 0°55'47 -367 Sep 02 j 23:44 0°×7 -362 Sep 05 j 23:31 7° m/49'15 0°55'47 minimum elong -367 Oct 15 j 08:06 0°る -362 Oct 08 j 19:28 0∘**ত** -367 Nov 24 j 17:45 -362 Oct 22 j 10:43 9°**£**25′08 0°≈ morning rise -366 Jan 04 j 06:59 0°**)**€ -362 Nov 20 j 15:02 0°M $0^{\circ}\Upsilon$ -366 Feb 15 i 01:16 desc. node -362 Dec 21 i 17:11 22°M32'26 -366 Feb 28 i 22:49 9°**Υ**43'52 asc. node -362 Dec 31 i 19:55 0°×7 -361 Feb 09 i 20:49 -366 Mar 30 j 12:12 0°8 0°정 24°809'19 -366 May 05 j 18:04 -361 Mar 21 i 09:27 0°**≈** evening set -366 May 14 j 16:06 $0^{\circ}II$ -361 Apr 30 j 09:52 0°**₩** $0^{\circ}\Upsilon$ -361 Jun 11 j 14:51 -366 Jun 24 j 00:20 26°II05'33 0°56'44 -361 Jul 30 j 11:40 0°8 conjunction -366 Jun 23 j 23:06 26°II03'34 0°56'44 -361 Sep 28 j 04:04 18°**8**48'55 minimum elong retrograde -366 Jun 30 j 02:45 -361 Oct 21 j 19:42 0000 asc. node 14°850'21 -366 Jul 01 j 00:51 min. Earth dist. max. Earth dist. 0°935'21 2.66280 AU -361 Oct 30 j 15:38 11°**8**41'08 0.56298 AU -366 Aug 09 j 01:49 25°9528'05 opposition -361 Nov 06 j 04:36 9°**8**08'32 0°41'51 morning rise -366 Aug 16 j 04:55 $0^{\circ}\Omega$ greatest brilliancy -361 Nov 06 j 00:07 9°**8**12'54 -1.9m -366 Oct 02 j 09:47 0° m -361 Dec 12 j 10:09 0°855'48 direct -366 Nov 18 j 13:51 0∘**⊽** -360 Mar 07 j 14:47 $0^{\circ}\Pi$ -365 Jan 05 j 03:52 0°M -360 Apr 30 j 20:10 0ಂತಾ -365 Feb 23 j 15:46 0°**∡**¹ -360 Jun 19 j 16:17 0° Ω desc. node -365 Mar 18 j 18:59 12°**х** 57′46 -360 Aug 05 j 17:13 0° m -365 Apr 24 j 00:33 0°궁 evening set -360 Aug 29 j 02:54 15° m 34'19 retrograde -365 Jun 01 j 11:48 8°**る**11'24 max. Earth dist. -360 Sep 14 j 10:51 26° Mp 42'41 2.52949 AU opposition -365 Jul 01 j 16:51 3°**ප**12'22 -6°05'30 -360 Sep 19 j 05:05 0∘**⊽** greatest brilliancy -365 Jul 02 j 00:46 3°る07'05 -2.9m min. Earth dist. -365 Jul 03 j 11:32 2°る43'51 0.37754 AU -360 Oct 17 j 14:30 20°**♀**01'32 0°13'20 conjunction

•			•		18-Feb-2025 14:22,		
Attention, astronom		-		nting style is the year	401 BCE in historical cou		
minimum elong	-360 Oct 17 j 15:07	20° ჲ 02'39	0°13'20		-355 Oct 05 j 15:20	0 $^{\circ}$ Ω	
behind sun begin	-360 Oct 17 j 02:34	19° ≙ 40'09			-355 Dec 10 j 01:13	0° m ∕	
behind sun end	-360 Oct 18 j 03:41	20° ≏ 25'11		retrograde	-354 Jan 12 j 18:42	5° Mp 55'26	
	-360 Oct 31 j 09:31	0°M			-354 Feb 12 j 16:28	30°R Ω	
desc. node	-360 Nov 07 j 16:29	5°M20'13		opposition	-354 Feb 20 j 08:20	27° Ω 07'33	
morning rise	-360 Dec 10 j 04:52	29°M37'36		greatest brilliancy	-354 Feb 21 j 01:28	26° Ω 50'58	-1.5m
	-360 Dec 10 j 16:41	0° ∡		min. Earth dist.	-354 Feb 25 j 04:32	25° Ω 15'11	0.63481 AU
	-359 Jan 18 j 17:35	ව°0		direct	-354 Apr 02 j 16:00	17° Ω 08'14	
	-359 Feb 26 j 06:16	0° ≈ 0° ∀			-354 May 23 j 11:18	0° Mp	
	-359 Apr 06 j 03:42	0°π 0°Υ		desc. node	-354 Jun 30 j 13:07	19° ₯ 44'05 0° 乒	
	-359 May 16 j 10:20	0° ∀			-354 Jul 17 j 11:15	0° M	
	-359 Jun 28 j 09:51 -359 Aug 15 j 21:28	0°II			-354 Aug 31 j 01:17 -354 Oct 10 j 16:03	0° ⊼ 1	
asc. node	-359 Aug 13 j 21.28 -359 Sep 07 j 18:37	11° Ⅱ 55'25			-354 Nov 18 j 10:29	0°ろ	
retrograde	-359 Nov 03 j 15:27	27° I I 57'23			-354 Dec 26 j 17:15	0°≈	
min. Earth dist.	-359 Dec 10 j 21:01	19° Ⅱ 10'42	0.65041 AU		-353 Feb 03 j 14:04	0° ∺	
opposition	-359 Dec 13 j 18:31	18° Ⅲ 01'02	3°24'59	evening set	-353 Feb 23 j 12:33	15° ∺ 00'35	
greatest brilliancy	-359 Dec 13 j 08:53	18° Ⅱ 10'41	-1.4m	evening sec	-353 Mar 15 j 20:46	0°Υ	
direct	-358 Jan 22 j 01:03	8° Ⅱ 41'18	1.1111		333 Mar 13 J 20.10	• •	
4	-358 Apr 03 j 16:42	0°9		conjunction	-353 Apr 24 j 06:39	28° Y 03'39	-0°03'56
	-358 May 29 j 12:27	$0^{\circ}\Omega$		minimum elong	-353 Apr 24 j 06:51	28° Υ 03'59	
	-358 Jul 17 j 08:24	0° mp		behind sun begin	-353 Apr 23 j 07:47	27° Y 23'51	
	-358 Aug 31 j 07:06	0∘ <u>⊽</u>		behind sun end	-353 Apr 25 j 05:55	28° Ƴ 44'05	
desc. node	-358 Sep 25 j 15:55	17° ≏ 53'18			-353 Apr 27 j 01:38	0° ႘	
	-358 Oct 12 j 08:01	0°M		asc. node	-353 Apr 30 j 16:01	2° 8 29'34	
evening set	-358 Oct 15 j 05:16	2°M07'26		max. Earth dist.	-353 May 25 j 21:43	19° 8 41'28	2.56182 AU
max. Earth dist.	-358 Nov 05 j 21:30	18° ™ 19'10	2.40396 AU		-353 Jun 10 j 08:31	$\Pi^{\circ}0$	
	-358 Nov 21 j 05:15	0° ∡ 7		morning rise	-353 Jun 17 j 09:08	4° Ⅲ 38'14	
					-353 Jul 26 j 14:19	0 \circ \odot	
conjunction	-358 Dec 12 j 11:57	16° ∡ 28'17	-0°46'52		-353 Sep 12 j 17:00	$0^{\circ}\Omega$	
minimum elong	-358 Dec 12 j 09:20	16° ≯ 23'11	0°46'50		-353 Nov 02 j 10:09	0°Щ	
	-358 Dec 29 j 18:36	0° ප			-353 Dec 30 j 15:07	0∘ ত	
	-357 Feb 05 j 21:03	0°≈		retrograde	-352 Feb 26 j 12:22	15° ≏ 10'11	
morning rise	-357 Feb 17 j 17:13	9° ≈ 17'09		opposition	-352 Apr 02 j 07:23	7° £ 39'57	
	-357 Mar 16 j 10:04	0° ∀		greatest brilliancy	-352 Apr 03 j 00:23	7° ≏ 24'38	-2.0m
	-357 Apr 25 j 06:26	0° Υ		min. Earth dist.	-352 Apr 10 j 08:57	4° ≏ 46'01	0.53239 AU
	-357 Jun 06 j 05:27	0° 8			-352 Apr 26 j 23:13	30°R Mp	
_	-357 Jul 21 j 05:04	0° I		direct	-352 May 11 j 17:35	28° m 30'56	
asc. node	-357 Jul 26 j 16:42	3° Ⅱ 29'02		desc. node	-352 May 17 j 12:17	28° Mp 44'26	
	-357 Sep 09 j 05:27	0° ©			-352 May 26 j 20:00	0° ™	
	-357 Nov 19 j 23:31	0° Ω			-352 Aug 01 j 19:23	0°M	
retrograde	-357 Dec 08 j 04:42	1° £ 56′15			-352 Sep 15 j 05:00	0° ₹	
:	-357 Dec 25 j 10:19	30°R©	4°33'08		-352 Oct 25 j 14:37	ව°00	
opposition	-356 Jan 17 j 02:28	22° © 22'41 22° © 20'24	4°33'08 -1.3m		-352 Dec 03 j 23:14	0° ≈ 0° ∀	
greatest brilliancy min. Earth dist.	-356 Jan 17 j 04:47	22 \$20 24 21°\$59'35	0.67550 AU		-351 Jan 12 j 18:16	0 Υ 0° Υ	
direct	-356 Jan 18 j 01:43 -356 Feb 27 j 02:54	12°S28'30	0.07330 AU	asc. node	-351 Feb 22 j 21:45 -351 Mar 17 j 14:20	16° Υ 00'43	
direct	-356 Apr 30 j 01:30	0°Ω		asc. Houe	-351 Apr 06 j 20:51	0° 8	
	-356 Jun 24 j 10:45	0° m		evening set	-351 Apr 18 j 01:53	7° 8 36'58	
	-356 Aug 10 j 03:17	0∘ ʊ ○ '₩		evening set	-351 May 21 j 16:15	0°II	
desc. node	-356 Aug 12 j 14:37	° - 1° - 40'47			551 Way 21 J 10.15	V д	
dese. Hode	-356 Sep 21 j 15:18	0°M		conjunction	-351 Jun 08 j 10:12	11° Ⅱ 35'59	0°44'33
	-356 Oct 31 j 12:38	0° ∡ 7		minimum elong	-351 Jun 08 j 08:48	11° Ⅲ 33'42	
	-356 Dec 08 j 22:59	0°ප		max. Earth dist.	-351 Jun 21 j 16:41		2.64489 AU
evening set	-356 Dec 16 j 02:19	。 5° る 37'57		man. Darvir diov.	-351 Jul 06 j 22:56	0°ಅ	2.01.09110
Ü	-355 Jan 15 j 23:12	0° ≈		morning rise	-351 Jul 25 j 22:04	12° © 06'14	
	,			S	-351 Aug 23 j 03:46	$0^{\circ}\Omega$	
conjunction	-355 Feb 21 j 06:50	28° ≈ 17'35	-0°58'32		-351 Oct 09 j 21:31	0° m	
minimum elong	-355 Feb 21 j 09:20				-351 Nov 27 j 09:05	0∘ ⊽	
Č	-355 Feb 23 j 12:09	0°) €			-350 Jan 17 j 00:44	0°M	
	-355 Apr 04 j 09:40	$0^{\circ}\mathbf{\Upsilon}$			-350 Mar 18 j 04:09	0°⊀	
max. Earth dist.	-355 Apr 13 j 03:36	6° Y 23′54	2.43432 AU	desc. node	-350 Apr 04 j 10:57	5° ∡ ¹49'04	
morning rise	-355 Apr 28 j 00:27	17° Y 07'06		retrograde	-350 Apr 30 j 12:18	9° ∡ 39'11	
	-355 May 16 j 06:25	0°8		opposition	-350 May 31 j 21:10	4° √ 11'11	-3°32'28
asc. node	-355 Jun 12 j 16:30	18° 8 47'49		greatest brilliancy	-350 Jun 01 j 14:55	3° ≯ 758'16	-2.7m
	-355 Jun 29 j 12:06	$\Pi^{\circ}0$		min. Earth dist.	-350 Jun 07 j 03:35	2° ≯ 22'19	0.40527 AU
	-355 Aug 15 j 12:07	0ං ව			-350 Jun 16 j 07:25	30°RM	

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 6 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. 27°M52'47 direct -350 Jul 04 i 03:09 conjunction -345 Sep 30 i 22:26 2°**2**34'52 0°33'08 -350 Jul 21 j 24:00 0°×7 -345 Sep 30 j 23:39 2°**£**36'58 0°33'07 minimum elong -350 Sep 22 j 23:56 0°궁 -345 Nov 08 j 14:29 0°M -350 Nov 06 j 23:04 0°**≈** -345 Nov 19 j 21:09 morning rise 8°M12'57 -350 Dec 19 j 22:29 0°**₩** -345 Nov 25 j 09:10 12°M15'26 desc. node $0^{\circ}\Upsilon$ -349 Feb 01 j 07:16 -345 Dec 19 j 05:01 0°×7 0°Υ51'15 0°ರ asc. node -349 Feb 02 j 13:17 -344 Jan 27 j 13:38 0° 8 0°≈ -349 Mar 17 j 21:17 -344 Mar 06 j 09:23 $0^{\circ}II$ 0°**)**€ -349 May 02 j 19:18 -344 Apr 14 j 13:31 $0^{\circ}\Upsilon$ evening set -349 May 31 j 01:24 18°**Ⅲ**08'15 -344 May 25 j 05:50 0° 8 -349 Jun 18 j 15:39 0ಂತಾ -344 Jul 08 j 06:13 -349 Jul 15 j 07:51 $\Pi^{\circ}0$ max. Earth dist. 16°**9**58'49 2.67423 AU -344 Aug 30 j 07:24 -344 Sep 24 j 10:05 9°**Ⅱ**43'19 asc. node conjunction -349 Jul 17 j 02:46 18°907'07 1°07'54 retrograde -344 Oct 20 j 18:27 13°**Ⅲ**54'47 minimum elong -349 Jul 17 j 02:13 18°906'15 1°07'54 min. Earth dist. -344 Nov 25 j 06:37 5°**Ⅱ**42'38 0.62301 AU -349 Aug 04 j 18:05 $0^{\circ}\Omega$ opposition -344 Nov 29 j 15:41 3°**Ⅱ**57'48 2°35'16 morning rise -349 Aug 30 j 22:33 16°**Ω**46'17 greatest brilliancy -344 Nov 29 j 04:50 4°**Ⅲ**08'38 -1.6m -349 Sep 20 j 10:42 0° m -344 Dec 10 j 02:22 30°R\ -349 Nov 05 j 08:39 0∘**ত** direct -343 Jan 06 j 21:12 24°859'30 -349 Dec 20 j 11:33 0°M -343 Feb 06 j 13:32 $0^{\circ}\Pi$ -348 Feb 03 j 01:38 0°×7 -343 Apr 15 j 07:53 0ಂತಾ desc. node -348 Feb 20 i 10:51 11°**х** 42′31 -343 Jun 06 j 20:30 $0^{\circ}\Omega$ -348 Mar 18 j 19:50 0°정 -343 Jul 24 i 18:50 0° m -348 May 05 i 03:39 0°≈ -343 Sep 07 i 11:42 0∘**⊽** retrograde -348 Jul 17 j 21:28 27°≈20'49 -343 Sep 25 j 11:34 12°**♀**37'35 evening set -348 Aug 13 j 12:51 22°≈52'08 0.39451 AU max. Earth dist. -343 Oct 10 j 12:08 min. Earth dist. 23°**£**24'32 2.45341 AU -348 Aug 18 j 07:31 21°≈28'17 -2.8m desc. node -343 Oct 12 j 07:39 greatest brilliancy 24°<u>₽</u>43'27 opposition -348 Aug 19 j 09:55 21°≈08'50 -6°12'53 -343 Oct 19 j 13:13 o°m. -348 Sep 18 j 13:50 15°≈48'38 direct -348 Nov 09 j 15:50 0°**)**€ -343 Nov 18 j 12:12 22°M20'24 -0°23'51 conjunction -348 Dec 20 j 12:14 21°¥33'01 -343 Nov 18 j 10:46 22°M17'40 0°23'51 minimum elong asc. node $0^{\circ}\Upsilon$ -347 Jan 03 j 23:48 -343 Nov 28 j 13:42 0°×7 -347 Feb 22 j 09:24 0° 8 -342 Jan 06 j 06:51 0°궁 10°**ප**07'11 -347 Apr 11 j 19:56 $0^{\circ}\Pi$ -342 Jan 19 j 04:41 morning rise -347 May 29 j 23:58 000 -342 Feb 13 j 12:31 0°≈ -347 Jul 07 j 04:28 24°901'46 -342 Mar 24 j 03:38 0°\ evening set -347 Jul 16 j 13:55 -342 May 03 j 01:50 $0^{\circ}\Upsilon$ 0° Ω max. Earth dist. -347 Aug 07 j 04:35 13°**Ω**51'04 2.64936 AU -342 Jun 14 j 05:46 0°8 -342 Jul 29 j 22:54 $\Pi^{\circ}0$ conjunction -347 Aug 22 j 00:43 23°**Ω**28'25 1°04'34 asc. node -342 Aug 12 j 09:51 8°**Ⅱ**11'59 -347 Aug 22 j 01:33 23°**Ω**29'46 1°04'33 -342 Sep 21 j 03:28 0ಂತಾ minimum elong -347 Sep 01 j 00:14 0° M -342 Nov 24 j 19:20 19°9509'22 retrograde -347 Oct 06 j 08:13 23°m/31'21 -341 Jan 03 j 22:05 9°524'03 4°16'21 morning rise opposition -347 Oct 15 j 21:24 0∘**⊽** min. Earth dist. -341 Jan 03 j 08:54 9°937'15 0.67332 AU -347 Nov 28 j 03:23 0° M greatest brilliancy -341 Jan 03 j 18:44 9°527'25 -1.3m -346 Jan 07 j 10:50 28°M55'40 -341 Feb 06 i 04:05 desc. node 30°RⅡ -346 Jan 08 j 22:08 -341 Feb 13 i 09:35 29°**Ⅱ**40′07 0°×7 direct -346 Feb 18 i 14:53 0°る -341 Feb 20 i 19:48 0ಂತಾ -346 Mar 30 j 21:26 0°≈ -341 May 13 i 13:04 $0^{\circ}\Omega$ -346 May 10 i 22:53 0°**₩** -341 Jul 04 j 04:22 0° m $0^{\circ}\Upsilon$ -346 Jun 24 j 13:33 -341 Aug 18 j 23:10 0∘**⊽** -346 Sep 02 j 01:01 0°8 -341 Aug 30 j 06:51 7°**£**49'59 desc node -346 Sep 11 j 09:11 0°**8**36'55 -341 Sep 30 j 05:01 0°M retrograde -346 Sep 20 j 13:12 -341 Nov 09 j 01:17 0°×7 30°R℃ -346 Oct 11 j 17:29 min. Earth dist. 24°Υ17'40 0.51517 AU evening set -341 Nov 20 j 11:54 8°**х** 50′58 -346 Oct 19 j 09:18 21°Y25'33 -0°56'26 -341 Dec 17 j 11:54 0°궁 opposition greatest brilliancy -346 Oct 19 j 03:18 21° Y 31'10 -2.1m -346 Nov 07 j 10:38 15°Y30'08 -340 Jan 24 j 18:12 0°≈11'54 -1°05'26 asc. node conjunction 13°Y52'09 -346 Nov 23 j 00:39 -340 Jan 24 j 18:06 0°≈11'43 1°05'27 direct minimum elong -345 Jan 20 j 17:54 0°8 -340 Jan 24 j 12:09 0°≈ -345 Mar 19 j 14:20 $0^{\circ}\Pi$ -340 Mar 03 j 00:12 0°**)**€ -345 May 10 j 01:00 0 \circ \odot max. Earth dist. -340 Mar 05 j 20:39 2°**₭**11'22 2.38504 AU $0^{\circ}\Omega$ -345 Jun 27 j 22:42 morning rise -340 Apr 03 j 01:45 23°**)** 30'44 $0^{\circ}\Upsilon$ -345 Aug 13 j 16:30 0° m -340 Apr 11 j 20:02 0°8 evening set -345 Aug 14 j 07:04 0° My 23'57 -340 May 23 j 15:53 max. Earth dist. -345 Sep 02 j 21:27 13° m/25'55 2.57243 AU -340 Jun 29 j 08:15 24°**8**56'25 asc. node

-340 Jul 07 j 00:43

 $0^{\circ}\Pi$

-345 Sep 27 j 04:58

0∘**⊽**

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 7 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -340 Aug 23 j 17:24 0ಂತಾ -334 Mar 25 i 13:28 0°8 -340 Oct 16 j 16:56 $0^{\circ}\Omega$ -334 May 09 j 22:26 $\Pi^{\circ}0$ -340 Dec 29 j 00:06 22°**Ω**35'54 -334 May 15 j 06:15 3°**Ⅱ**27'46 retrograde evening set -339 Feb 06 j 05:36 13°**Ω**27'20 4°35'13 -334 Jun 25 j 11:42 0ംഉ opposition -339 Feb 06 j 17:23 greatest brilliancy $13^{\circ}\Omega 15'47 - 1.4m$ -339 Feb 09 j 13:42 0.65853 AU -334 Jul 02 j 13:56 1°01'59 min. Earth dist. 12°**Ω**08'47 conjunction 4°**©**31'54 -339 Mar 19 j 15:08 3°**Ω**25'44 -334 Jul 02 j 12:54 1°01'59 direct minimum elong 4°**©**30'15 -339 Jun 07 j 06:45 -334 Jul 06 j 08:52 0° m max. Earth dist. 6°956'57 2.66928 AU -339 Jul 17 j 05:34 23° m 35'23 desc. node -334 Aug 11 j 13:20 $0^{\circ}\Omega$ 3°**Ω**30′14 -339 Jul 27 j 03:53 0∘**⊽** morning rise -334 Aug 17 j 01:21 0°M -339 Sep 08 j 14:34 -334 Sep 27 j 12:57 0° M -339 Oct 18 j 19:46 0°**∡** -334 Nov 13 j 04:35 0∘**ত** -339 Nov 26 j 09:18 0°る -334 Dec 29 j 16:42 0°M -338 Jan 03 j 12:03 0°**≈** -333 Feb 14 j 18:58 0°**⊼** evening set -338 Jan 28 j 16:23 19°≈37'30 desc. node -333 Mar 09 j 03:25 13°**∡**47'17 -338 Feb 11 j 04:18 0°**)**€ -333 Apr 05 j 22:47 0°정 $0^{\circ}\Upsilon$ -338 Mar 23 j 05:51 retrograde -333 Jun 19 j 11:06 26°る07'05 opposition -333 Jul 19 j 23:31 21°る00'01 -6°48'25 conjunction -338 Apr 02 j 11:23 7°Y26'41 -0°27'10 min. Earth dist. -333 Jul 18 j 15:23 21°る21'25 0.37477 AU minimum elong -338 Apr 02 j 13:10 7°**Υ**29'55 0°27'08 greatest brilliancy -333 Jul 19 j 17:00 21°**る**04'21 -2.9m -338 May 04 j 06:03 0°8 direct -333 Aug 18 j 14:50 16°る04'07 max. Earth dist. -338 May 12 j 10:47 5°840'54 2.51593 AU -333 Oct 08 i 02:25 0°≈ asc. node -338 May 17 j 07:15 9°801'09 -333 Nov 30 i 07:44 0°) morning rise -338 May 30 j 15:26 18°**8**05'49 asc. node -332 Jan 07 i 02:59 23°¥53'32 -338 Jun 17 j 10:31 $\mathbb{I}^{\circ 0}$ -332 Jan 16 j 15:20 $0^{\circ}\Upsilon$ -338 Aug 02 j 20:01 0ಂತಾ -332 Mar 03 j 08:32 0°8 -338 Sep 20 j 16:43 $0^{\circ}\Omega$ -332 Apr 19 j 12:17 $\Pi^{\circ}0$ -338 Nov 12 j 23:56 0°m -332 Jun 06 j 00:53 0ಂತಾ -337 Feb 07 j 14:35 29° m 00'41 -332 Jun 22 j 15:46 10°929'53 retrograde evening set -337 Mar 16 j 16:43 20° m 55'05 3°18'49 -332 Jul 23 j 08:42 $0^{\circ}\Omega$ opposition -337 Mar 17 j 13:35 -332 Jul 28 j 19:49 greatest brilliancy 20° m 35'34 -1.7m max. Earth dist. 3°**Ω**29'32 2.66548 AU -337 Mar 23 j 16:45 min. Earth dist. 18° Mp 18'16 0.57878 AU 9°**Ω**47'06 1°09'05 -337 Apr 26 j 05:16 -332 Aug 07 j 15:19 direct 11°Mp 16'19 conjunction -337 Jun 04 j 03:49 -332 Aug 07 j 15:39 9°**Ω**47'37 1°09'05 19° Mp 44'00 desc. node minimum elong -332 Sep 07 j 20:00 -337 Jun 26 j 13:52 0∘**⊽** 0° m -337 Aug 15 j 03:57 $0^{\circ}M$ -332 Sep 21 j 08:39 morning rise 8° m 52'57 -337 Sep 26 j 06:56 0°⊀ -332 Oct 23 j 00:47 0∘ଫ -332 Dec 05 j 20:23 -337 Nov 04 j 18:23 0°ರ 0°M -337 Dec 13 j 13:01 0°**≈** -331 Jan 17 j 10:21 0°**⊼** -336 Jan 21 j 20:27 0°**)**€ desc. node -331 Jan 24 j 02:16 4°**∡**¹45'44 -336 Mar 02 j 13:18 $0^{\circ}\Upsilon$ -331 Feb 28 j 03:03 0°₹ -336 Mar 29 j 16:08 19°**Y**16′06 -331 Apr 10 j 16:49 0°**≈** evening set -336 Apr 03 j 06:44 22°**Y**29'05 -331 May 24 j 00:21 0°**)**€ asc. node -336 Apr 14 j 03:14 0° 8 -331 Jul 15 j 19:55 $0^{\circ}\Upsilon$ -331 Aug 23 j 07:58 9°Y17'55 retrograde 26°805'52 0°28'30 -331 Sep 20 j 14:17 3°Υ50'29 0.46354 AU conjunction -336 May 22 j 18:23 min. Earth dist. -336 May 22 j 17:10 26°803'52 0°28'29 -331 Sep 28 i 17:47 0°Υ59'08 -2°57'39 minimum elong opposition -336 May 28 j 15:52 -331 Sep 27 i 22:30 $\mathbb{I}^{\circ 0}$ greatest brilliancy 1°Υ16'03 -2.4m -331 Oct 01 i 14:07 max. Earth dist. -336 Jun 11 i 17:51 9°**I**14'54 2.61860 AU 30°R₩ -336 Jul 11 j 06:30 28°**Ⅲ**21′00 -331 Oct 31 j 12:27 24°¥15'03 morning rise direct -336 Jul 13 j 20:18 0ಂತಾ asc. node -331 Nov 24 j 03:03 27° ¥ 32'48 $0^{\circ}\Upsilon$ -336 Aug 30 j 06:25 $0^{\circ}\Omega$ -331 Dec 02 j 10:51 -336 Oct 17 j 19:15 0°m -330 Feb 04 j 18:42 0°8 -336 Dec 07 j 08:33 0∘**⊽** $\Pi^{\circ}0$ -330 Mar 28 j 23:33 0ಂತಾ -335 Feb 02 j 18:06 0°M -330 May 17 j 17:49 15°ML45'19 retrograde -335 Apr 02 j 08:17 -330 Jul 04 j 23:58 $0^{\circ}\Omega$ -335 Apr 21 j 03:52 13°M33'05 -330 Jul 30 j 05:17 16°**Ω**06′06 desc. node evening set -335 May 05 j 12:48 9°M26'27 -0°49'52 -330 Aug 20 j 13:25 0° m opposition -335 May 05 j 18:58 max. Earth dist. -330 Aug 22 j 20:48 1° Mp 31'08 2.60831 AU greatest brilliancy 9°M21'28 -2.4m -335 May 13 j 17:42 0.45154 AU min. Earth dist. 6°**M**47′20 -335 Jun 10 j 18:46 $1^{\circ}\text{ML}45^{\prime}42$ -330 Sep 14 j 17:51 16° TQ 46'05 0°48'44 direct conjunction -335 Aug 24 j 09:00 0°⊀ minimum elong -330 Sep 14 j 19:09 16° Mp 48'17 0°48'43 0°ರ -335 Oct 08 j 01:20 -330 Oct 04 j 04:15 0∘**⊽** -335 Nov 18 j 10:32 0°≈ morning rise -330 Nov 01 j 05:18 19°**£**34'13 -335 Dec 29 j 14:21 0°**)** -330 Nov 15 j 20:16 0°M -334 Feb 09 j 18:52 $0^{\circ}\Upsilon$ desc. node -330 Dec 12 j 01:12 19°ML03'37 -334 Feb 19 j 04:33 6°**Y**32′30 -330 Dec 26 j 19:50 0°**∡**7 asc. node

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 8 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -329 Feb 04 i 14:12 0°정 min. Earth dist. -324 Jan 26 j 12:56 29°932'28 0.67227 AU -329 Mar 15 j 19:41 0°**≈** -324 Mar 05 j 22:10 20°917'32 direct $0^{\circ}\Omega$ -329 Apr 24 j 10:41 0°**)**€ -324 Apr 19 j 06:17 $0^{\circ}\Upsilon$ 0° m -329 Jun 04 j 21:08 -324 Jun 18 j 06:24 0°8 -329 Jul 21 j 01:43 -324 Aug 02 j 22:19 28° m/42'41 desc. node -329 Oct 07 j 02:10 28°**8**40'13 0∘**⊽** retrograde -324 Aug 04 j 20:31 -324 Sep 16 j 15:34 0°M asc. node -329 Oct 12 j 02:28 28°**8**29'37 0°**∡**7 min. Earth dist. -324 Oct 26 j 15:26 -329 Nov 09 j 16:56 21°**8**07'31 0.58667 AU 18°**8**50'46 1°28'55 -324 Dec 04 j 02:31 0°궁 opposition -329 Nov 15 j 11:46 greatest brilliancy -329 Nov 15 j 03:26 18°**8**58'59 -1.7m evening set -324 Dec 31 j 22:37 21°る58'25 direct -329 Dec 22 j 11:36 10°**8**19'45 -323 Jan 11 j 03:09 0°≈ -328 Feb 28 j 00:11 $0^{\circ}\Pi$ -323 Feb 18 j 16:41 0°**)**€ -328 Apr 25 j 00:07 0ಂತಾ -328 Jun 14 j 15:29 $0^{\circ}\Omega$ conjunction -323 Mar 08 j 16:24 13°¥40'35 -0°48'56 -328 Jul 31 j 23:36 0° m minimum elong -323 Mar 08 j 19:16 13°**)** 46′00 0°48'55 evening set -328 Sep 07 j 15:38 25° m 13'37 -323 Mar 30 j 14:47 $0^{\circ}\Upsilon$ -328 Sep 14 j 13:44 0∘**⊽** max. Earth dist. -323 Apr 25 j 12:16 18°**Y**44'07 2.46446 AU max. Earth dist. -328 Sep 22 j 19:32 5°**2**44'24 2.50362 AU morning rise -323 May 10 j 16:02 29°Y25'31 -328 Oct 26 j 17:37 $0^{\circ}M$ -323 May 11 j 11:47 0°8 asc. node -323 Jun 02 j 23:03 15°**8**28'05 conjunction -328 Oct 28 j 11:25 1°M16'20 0°00'21 -323 Jun 24 j 15:37 $\Pi^{\circ}0$ minimum elong -328 Oct 28 j 11:25 1°M16'20 0°00'21 -323 Aug 10 j 08:11 0ಂತಾ behind sun begin -328 Oct 27 j 13:06 0°M35'36 -323 Sep 29 i 09:12 $0^{\circ}\Omega$ behind sun end -328 Oct 29 i 09:43 1°M57'07 -323 Nov 26 i 19:41 0° m desc. node -328 Oct 28 j 23:58 1°M39'16 retrograde -322 Jan 21 j 17:12 14° m 17'37 -328 Dec 05 j 22:49 0°×7 opposition -322 Feb 28 j 19:49 5° mp 43'11 4°02'40 -328 Dec 23 j 14:45 13°**∡**31'37 -322 Mar 01 j 15:09 5° Mp 24'40 -1.5m morning rise greatest brilliancy -327 Jan 13 j 20:52 0°る min. Earth dist. -322 Mar 06 j 11:27 3° Mg 33'20 0.61763 AU -327 Feb 21 j 06:36 0°**≈** -322 Mar 16 j 12:36 30°R€ 0°**₩** -322 Apr 10 j 23:20 -327 Apr 01 j 00:54 25°**Ω**48'08 direct $0^{\circ}\Upsilon$ -327 May 11 j 02:45 -322 May 08 j 00:11 0° m -327 Jun 22 j 15:58 0° 8 -322 Jun 20 j 21:26 desc. node 18° m 49'08 -327 Aug 08 j 17:04 $0^{\circ}II$ -322 Jul 10 j 12:32 0∘ಹ -322 Aug 25 j 07:20 -327 Aug 29 j 00:48 11°**Ⅲ**28'29 0°M asc. node -322 Oct 05 j 08:15 -327 Oct 09 j 07:43 0°**∡**7 0ಂತಾ -327 Nov 11 j 10:38 6°907'06 -322 Nov 13 j 07:15 0°ರ retrograde -327 Dec 11 j 23:10 -322 Dec 21 j 16:57 30°Ŗ**Ⅱ** 0°≈ min. Earth dist. -327 Dec 19 j 13:23 27°**Ц**02'49 0.66130 AU -321 Jan 29 j 16:14 0°**)**€ -327 Dec 21 j 14:35 26°II13'27 3°47'41 -321 Mar 09 j 00:29 28°\#31'31 opposition evening set greatest brilliancy -327 Dec 21 j 06:42 26°**Ⅲ**21'22 -1.4m -321 Mar 11 j 01:07 $0^{\circ}\Upsilon$ -326 Jan 30 j 08:28 16°**Ⅲ**43'48 -321 Apr 20 j 21:21 29°**Y**00′01 direct asc. node -326 Mar 25 j 03:00 0ಂತಾ -321 Apr 22 j 07:59 0° 8 -326 May 23 j 13:59 $0^{\circ}\Omega$ -326 Jul 12 j 05:48 0° M -321 May 05 j 14:14 9°807'09 0°08'54 conjunction -326 Aug 26 j 11:21 -321 May 05 j 13:45 9°**8**06'21 0°08'53 0∘**⊽** minimum elong -326 Sep 15 i 22:37 -321 May 04 j 18:40 desc. node 14°**£**20'28 behind sun begin 8°**8**33'45 -326 Oct 07 i 14:15 -321 May 06 j 08:50 0°M behind sun end 9°838'54 -326 Oct 27 j 13:37 -321 Jun 01 j 19:16 evening set 14°M51'13 max. Earth dist. 27°**8**26'37 2.58433 AU -321 Jun 05 i 15:44 -326 Nov 16 i 11:31 0°×7 $0^{\circ}II$ max. Earth dist. -326 Nov 30 j 12:48 10° ₹ 51'35 2.38167 AU -321 Jun 26 i 19:31 13°**I**I52'59 morning rise -326 Dec 24 j 24:00 0°궁 -321 Jul 21 j 19:55 0ಂತಾ -321 Sep 07 j 14:40 $0^{\circ}\Omega$ -326 Dec 27 j 11:13 1°る56'29 -0°57'10 -321 Oct 27 j 07:46 0° m conjunction -326 Dec 27 j 08:44 -321 Dec 20 j 12:54 minimum elong 1°る51'36 0°57'08 0∘**⊽** -325 Feb 01 j 01:33 0°≈ retrograde -320 Mar 09 j 11:54 25°**£**43'33 morning rise -325 Mar 06 j 15:22 26°≈11'51 opposition -320 Apr 13 j 09:55 18°**£**36′23 1°15'25 -325 Mar 11 j 13:49 0°**₩** greatest brilliancy -320 Apr 13 j 20:50 18°**£**26'51 -2.1m $0^{\circ}\Upsilon$ -325 Apr 20 j 09:00 min. Earth dist. -320 Apr 21 j 18:52 15°**≏**40'54 0.50425 AU -325 Jun 01 j 05:22 0° 8 -320 May 07 j 19:43 11° 2 14'38 desc. node -325 Jul 15 j 20:50 $0^{\circ}\Pi$ -320 May 21 j 22:06 9°**£**52'05 direct -325 Jul 17 j 00:20 $0^{\circ} \Pi 44'26$ -320 Jul 22 j 18:58 0°M asc. node -325 Sep 02 j 17:27 0 \circ \odot -320 Sep 08 j 02:38 0°**∡**7 0°ರ -325 Nov 01 j 23:49 0° Ω -320 Oct 19 j 10:53 retrograde -325 Dec 16 j 00:09 9°**Ω**41'26 -320 Nov 28 j 07:30 0°≈ 0°**)**€ opposition -324 Jan 24 j 17:11 0°**Ω**15'50 4°37'25 -319 Jan 07 j 11:01 greatest brilliancy -324 Jan 24 j 22:54 0°Ω10'09 -1.3m -319 Feb 17 j 20:51 $0^{\circ}\Upsilon$

-319 Mar 07 j 20:56

asc. node

12°Y40'01

-324 Jan 25 j 09:09

30°Rூ

					18-Feb-2025 14:22, 401 BCE in historical cou	page 9	
Attention, astronom	-319 Apr 02 j 00:58	0° 8	astronomical cou	itting style is the year -	-314 May 04 j 05:30	0°) €	
evening set	-319 Apr 28 j 08:32	17° 8 41'47			-314 Jun 16 j 03:28	0° Υ	
evening set	-319 May 16 j 23:40	0° I			-314 Aug 07 j 06:43	%8 0°8	
	317 Way 10 j 23.40	ν д		retrograde	-314 Sep 21 j 04:52	11° 8 42'44	
conjunction	-319 Jun 17 j 11:17	20° Ⅲ 27'31	0°52'07	min. Earth dist.	-314 Oct 22 j 17:29	4° 8 55'47	0.54223 AU
minimum elong	-319 Jun 17 j 09:55	20° I 25'20		asc. node	-314 Oct 28 j 18:04	2° 8 37'14	0.3 1223 110
max. Earth dist.	-319 Jun 27 j 07:15		2.65585 AU	opposition	-314 Oct 29 j 19:08	2° 8 13'08	0°02'57
	-319 Jul 02 j 07:45	0ංම 		greatest brilliancy	-314 May 24 j 20:22	14°) 46'26	0.1m
morning rise	-319 Aug 03 j 02:18	20°©15'45		· ·	-314 Nov 04 j 17:38	30° ₹ Υ	
Ü	-319 Aug 18 j 10:31	$0^{\circ}\Omega$		direct	-314 Dec 04 j 08:19	24° Υ 16'46	
	-319 Oct 04 j 20:29	0° m/y			-313 Jan 05 j 18:01	0°8	
	-319 Nov 21 j 12:58	0∘ ⊽			-313 Mar 12 j 17:33	$\Pi^{\circ}0$	
	-318 Jan 09 j 05:23	0° M .			-313 May 04 j 15:21	0 \circ \mathfrak{S}	
	-318 Mar 02 j 14:38	0° ∡ ¹			-313 Jun 23 j 01:57	$0^{\circ}\Omega$	
desc. node	-318 Mar 25 j 19:04	11° ₹ 25'43			-313 Aug 09 j 00:37	O° Mp	
retrograde	-318 May 18 j 07:02	25° х 36′28		evening set	-313 Aug 23 j 05:18	9° m 23'09	
opposition	-318 Jun 17 j 18:14	20° 尽 30′02	-5°06'14	max. Earth dist.	-313 Sep 09 j 21:18	21° mp 17'32	2.54936 AU
greatest brilliancy	-318 Jun 18 j 10:06	20° ₹ 19'09	-2.8m		-313 Sep 22 j 13:55	0∘ ರ	
min. Earth dist.	-318 Jun 21 j 20:07	19° ∡ ¹22'52	0.38665 AU		1 3		
direct	-318 Jul 19 j 09:41	14° ₹ 54'39		conjunction	-313 Oct 10 j 18:57	12° ≏ 43'45	0°22'13
	-318 Sep 08 j 22:57	0°る		minimum elong	-313 Oct 10 j 19:54	12° ≏ 45'25	0°22'11
	-318 Oct 29 j 09:25	0° ≈		C	-313 Nov 03 j 21:28	0°M	
	-318 Dec 13 j 04:47	0°)		desc. node	-313 Nov 15 j 16:22	8°M36'49	
asc. node	-317 Jan 23 j 19:58	28° ℋ 11'20		morning rise	-313 Dec 01 j 14:31	20°M25'07	
	-317 Jan 26 j 12:35	$0^{\circ}\mathbf{\Upsilon}$		C	-313 Dec 14 j 08:39	0° ≯	
	-317 Mar 12 j 16:25	0°8			-312 Jan 22 j 13:14	5°0	
	-317 Apr 27 j 22:43	0° I I			-312 Mar 01 j 04:50	0° ≈	
evening set	-317 Jun 08 j 19:09	26° Ⅱ 42'05			-312 Apr 09 j 04:34	0°) €	
S	-317 Jun 13 j 23:44	0ಂಣ			-312 May 19 j 13:39	0° Ƴ	
max. Earth dist.	-317 Jul 20 j 15:20	23°518'02	2.67336 AU		-312 Jul 01 j 20:07	0°8	
	,				-312 Aug 20 j 13:33	0°Ⅱ	
conjunction	-317 Jul 25 j 08:34	26°©18'28	1°09'30	asc. node	-312 Sep 14 j 17:23	12° Ⅱ 03′26	
minimum elong	-317 Jul 25 j 08:20	26°918'05	1°09'30	retrograde	-312 Oct 28 j 19:57	22° Ⅲ 31'12	
Č	-317 Jul 31 j 03:26	$0^{\circ}\Omega$		min. Earth dist.	-312 Dec 04 j 07:23	13° Ⅱ 59'07	0.63935 AU
morning rise	-317 Sep 08 j 00:19	24° Ω 59'03		opposition	-312 Dec 07 j 20:30	12° ∏ 33'49	3°06'04
C	-317 Sep 15 j 17:49	0° m y		greatest brilliancy	-312 Dec 07 j 09:54	12° ∏ 44'27	-1.5m
	-317 Oct 31 j 09:07	0∘ ⊽		direct	-311 Jan 15 j 15:58	3° Ⅲ 23′02	
	-317 Dec 14 j 23:16	0° M			-311 Apr 08 j 02:29	$0 \circ \mathfrak{S}$	
	-316 Jan 27 j 16:43	0° ∡ ¹			-311 Jun 01 j 09:39	$0^{\circ}\Omega$	
desc. node	-316 Feb 10 j 18:57	9° ∡ ¹45'25			-311 Jul 19 j 21:11	0° m y	
	-316 Mar 11 j 00:04	0°ರ			-311 Sep 02 j 18:49	0∘ ⊽	
	-316 Apr 24 j 04:15	0°≈		desc. node	-311 Oct 02 j 16:04	21° ≏ 07'01	
	-316 Jun 13 j 13:47	0°)		evening set	-311 Oct 06 j 08:59	23° ≏ 47'50	
retrograde	-316 Aug 01 j 04:29	13° ¥ 59'31			-311 Oct 14 j 21:08	0° M	
min. Earth dist.	-316 Aug 27 j 23:38	9°) 16'43	0.41546 AU	max. Earth dist.	-311 Oct 23 j 16:37	6°M29'42	2.42544 AU
greatest brilliancy	-316 Sep 03 j 01:58	7° ℋ 21'16	-2.7m		-311 Nov 23 j 20:41	0° ∡ ¹	
opposition	-316 Sep 04 j 06:13	6° 升 58'50	-5°09'36				
direct	-316 Oct 05 j 05:08	1°) 10′16		conjunction	-311 Dec 01 j 15:37	5° √ 59'06	-0°37'25
asc. node	-316 Dec 10 j 18:29	22°) €01'50		minimum elong	-311 Dec 01 j 13:23	5° ₹ 54'48	0°37'24
	-316 Dec 25 j 23:33	$0^{\circ}\mathbf{\Upsilon}$			-310 Jan 01 j 11:58	0°る	
	-315 Feb 16 j 00:50	8° 0		morning rise	-310 Feb 04 j 14:17	26° る 48'57	
	-315 Apr 06 j 11:38	$\Pi^{\circ}0$			-310 Feb 08 j 15:33	0° ≈	
	-315 May 25 j 03:10	0 \circ \odot			-310 Mar 19 j 04:49	0°) €	
	-315 Jul 11 j 22:10	$0^{\circ}\Omega$			-310 Apr 28 j 00:41	0 ° Υ	
evening set	-315 Jul 15 j 12:55	2° Ω 17'55			-310 Jun 08 j 23:56	0°8	
max. Earth dist.	-315 Aug 12 j 19:48	20° Ω 29'02	2.63680 AU		-310 Jul 24 j 03:51	$\Pi^{\circ}0$	
	-315 Aug 27 j 09:27	O° My		asc. node	-310 Aug 02 j 15:04	5° Ⅱ 56′04	
					-310 Sep 13 j 02:25	0 \circ \odot	
conjunction	-315 Aug 30 j 12:00	2°Mp02'36	0°59'58	retrograde	-310 Dec 02 j 12:02	26° © 58'06	
minimum elong	-315 Aug 30 j 13:05	2°Mp04'22	0°59'58	opposition	-309 Jan 11 j 12:20	17° © 18'56	4°27'29
	-315 Oct 11 j 04:26	0∘ ত		greatest brilliancy	-309 Jan 11 j 12:03	17° © 19'12	-1.3m
morning rise	-315 Oct 15 j 09:29	2° ♀ 52'59		min. Earth dist.	-309 Jan 11 j 19:37	17° © 11'39	0.67586 AU
	-315 Nov 23 j 05:16	0°M₊		direct	-309 Feb 21 j 07:13	7° 5 28'44	
desc. node	-315 Dec 28 j 17:19	25°M36'54			-309 May 05 j 22:13	$0^{\circ}\Omega$	
	-314 Jan 03 j 16:51	0° ∡ ¹			-309 Jun 28 j 13:45	0° m	
	-314 Feb 13 j 00:41	0° ප			-309 Aug 13 j 22:13	0∘ ⊽	
	-314 Mar 24 j 20:27	0° ≈		desc. node	-309 Aug 20 j 14:50	4° ≙ 34'56	

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 10 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -309 Sep 25 i 08:45 0°M conjunction -304 Jun 01 j 10:46 5°**I**33'23 0°38'16 -309 Nov 04 j 06:38 0°×7 minimum elong -304 Jun 01 j 09:23 5°II31'07 0°38'15 -309 Dec 05 j 04:22 24°**х** 03′34 max. Earth dist. -304 Jun 17 j 14:36 16°**I**105'17 2.63418 AU evening set -309 Dec 12 j 17:29 0°궁 -304 Jul 09 j 04:38 0ಂತಾ 6°545'20 -308 Jan 19 j 17:28 -304 Jul 19 j 18:12 0°≈ morning rise -304 Aug 25 j 10:50 0° Ω -308 Feb 09 j 22:58 -304 Oct 12 j 11:47 conjunction 16°≈38'11 -1°03'17 0° m -308 Feb 10 j 00:37 -304 Nov 30 j 17:35 0∘**⊽** minimum elong 16°≈41'23 1°03'16 0° M -308 Feb 27 j 05:20 0°**)**€ -303 Jan 22 j 11:24 max. Earth dist. -308 Mar 31 j 13:17 25°**₭**12'16 2.41066 AU desc. node -303 Apr 11 j 11:02 28°M54'15 $0^{\circ}\Upsilon$ -308 Apr 07 j 00:49 retrograde -303 Apr 17 j 14:35 29° M 08'03-308 Apr 17 j 15:15 7°**Y**45'49 -303 May 19 j 19:26 morning rise opposition 23°M17'49 -2°18'58 -308 May 18 j 19:33 0°8 greatest brilliancy -303 May 20 j 09:55 23°M06'43 -2.6m asc. node -308 Jun 19 j 14:28 21°844'59 min. Earth dist. -303 May 27 j 06:07 21°M01'45 0.42462 AU -308 Jul 02 j 00:39 $0^{\circ}II$ direct -303 Jun 23 j 11:11 16°ML21'27 -308 Aug 18 j 05:03 0ಂತಾ -303 Aug 10 j 20:04 0°**⊼** -308 Oct 09 j 05:12 $0^{\circ}\Omega$ -303 Sep 29 j 16:52 0°ರ -308 Dec 27 j 03:13 0° m -303 Nov 11 j 16:09 0°≈ retrograde -307 Jan 06 j 08:40 0° m 37'07 -303 Dec 23 j 16:11 0°) -307 Jan 16 j 06:23 30°R€ -302 Feb 04 j 09:55 $0^{\circ}\Upsilon$ opposition -307 Feb 14 j 05:52 21° **Ω**39'32 4°27'34 asc. node -302 Feb 09 j 11:17 3°Y29'27 greatest brilliancy -307 Feb 14 i 20:48 21°**Ω**25'00 -1.4m -302 Mar 20 j 13:24 0°8 min. Earth dist. -307 Feb 18 i 10:17 20°Ω01'43 0.64668 AU -302 May 05 i 04:20 $\Pi^{\circ}0$ direct -307 Mar 27 j 15:00 11°**Ω**38'12 -302 May 24 j 09:51 12°**I**24'57 evening set -307 May 29 j 16:55 0° m -302 Jun 20 j 20:53 0ಂತಾ desc. node -307 Jul 07 j 13:01 21° m 30'31 -307 Jul 21 j 03:28 0∘**⊽** -302 Jul 10 j 23:23 12°949'00 1°05'54 conjunction -307 Sep 03 j 05:54 0°M -302 Jul 10 j 22:37 1°05'55 minimum elong 12°9547'46 -307 Oct 13 j 17:14 0°×7 max. Earth dist. -302 Jul 11 j 15:33 13°5514'44 2.67304 AU -307 Nov 21 j 09:41 0°る -302 Aug 06 j 22:38 0 $^{\circ}\Omega$ -307 Dec 29 j 14:18 -302 Aug 25 j 00:42 11°**£**33′06 0°22 morning rise -306 Feb 06 j 08:21 0°**)**€ -302 Sep 22 j 18:20 0° m 4°**)** 44'13 -302 Nov 07 j 23:46 0∘**⊽** -306 Feb 12 j 13:49 evening set $0^{\circ}\Upsilon$ -302 Dec 23 j 15:54 -306 Mar 18 j 11:33 0°M -301 Feb 07 j 04:24 0°**∡**7 19°**Y**55'09 -0°13'45 -306 Apr 15 j 04:07 -301 Feb 27 j 10:26 13°**₹**14'00 conjunction desc. node -306 Apr 15 j 04:59 19°**Y**56'41 0°13'43 -301 Mar 25 j 15:07 minimum elong 0°궁 behind sun begin -306 Apr 14 j 16:35 19°**Ƴ**34'45 -301 May 16 j 22:01 0°≈ behind sun end -306 Apr 15 j 17:23 20°Y18'36 retrograde -301 Jul 06 j 16:54 14°≈22'19 -306 Apr 29 j 12:54 0° 8 min. Earth dist. -301 Aug 02 j 23:12 9°≈54'11 0.38226 AU asc. node -306 May 07 j 14:30 5°**8**35'11 greatest brilliancy -301 Aug 06 j 06:32 8°≈59'17 -2.9m max. Earth dist. -306 May 20 j 10:18 14°822'01 2.54205 AU -301 Aug 07 j 02:14 8°≈45'35 -6°44'13 opposition -306 Jun 09 j 23:44 28°**8**11'14 direct -301 Sep 05 j 18:38 3°≈42'32 morning rise -306 Jun 12 j 17:13 $\Pi^{\circ}0$ -301 Nov 19 j 23:31 0°**)**€ -306 Jul 28 j 23:06 0ಂತಾ -301 Dec 28 j 10:39 22°**)** 31'10 asc. node -306 Sep 15 i 07:23 -300 Jan 09 j 15:16 $0^{\circ}\Upsilon$ $0^{\circ}\Omega$ -306 Nov 05 j 21:14 -300 Feb 26 i 15:26 0°8 0° m -305 Jan 07 i 19:55 -300 Apr 14 j 10:35 0∘**⊽** $0^{\circ}II$ -305 Feb 18 i 01:46 -300 Jun 01 i 07:12 retrograde 8°**£**26'26 0ಂತಾ -305 Mar 26 j 11:09 0°**2**39'24 2°42'21 -300 Jun 30 i 23:55 18°942'49 opposition evening set -305 Mar 27 j 06:35 0°**£**21'34 -1.9m -300 Jul 18 j 18:26 $0^{\circ}\Omega$ greatest brilliancy -305 Mar 28 j 06:01 30°R ₩ max. Earth dist. -300 Aug 03 j 05:50 9°**Ω**54'03 2.65763 AU min. Earth dist. -305 Apr 03 j 02:05 27° m 51'42 0.55405 AU 21° m 14'46 direct -305 May 05 j 10:23 conjunction -300 Aug 15 j 20:12 18°Ω01'28 1°06'56 desc. node -305 May 25 j 12:00 23° m 45'52 minimum elong -300 Aug 15 j 20:50 18°**Ω**02'29 1°06'57 -305 Jun 13 j 16:26 0∘**⊽** -300 Sep 03 j 05:45 0° m 0°M -305 Aug 07 j 22:39 morning rise -300 Sep 29 j 19:41 17° m 34'33 -305 Sep 20 j 05:01 0°×7 -300 Oct 18 j 06:59 0∘**⊽** -300 Nov 30 j 19:24 0°M -305 Oct 30 j 03:55 0°る -305 Dec 08 j 05:14 0°≈ -299 Jan 11 j 22:38 0°**∡**7 -304 Jan 16 j 17:55 0°**)**€ -299 Jan 14 j 10:31 1°**х** 48′10 desc. node $0^{\circ}\Upsilon$ -304 Feb 26 j 15:13 -299 Feb 22 j 01:09 0°ಕ 19°**Y**02′26 asc. node -304 Mar 24 j 12:43 -299 Apr 03 j 19:03 0°≈ evening set -304 Apr 09 j 23:05 0°**8**24'29 -299 May 15 j 13:46 0°**)**€ -304 Apr 09 j 08:48 0° 8 -299 Jul 01 j 03:31 $0^{\circ}\Upsilon$ -304 May 23 j 23:56 $\Pi^{\circ}0$ -299 Sep 03 j 13:06 22°**℃**17'43 retrograde

min. Earth dist.

-299 Oct 02 j 21:39

16°**Y**21'38 0.49234 AU

•			•		8-Feb-2025 14:22, 401 BCE in historical cou	page 11	l
		13° Y 26'33					
opposition	-299 Oct 10 j 21:31			desc. node	-294 Sep 06 j 06:49	10° £ 54'37	
greatest brilliancy	-299 Oct 10 j 10:01	13° Y 37'04	-2.2m		-294 Oct 02 j 19:59	0°M	
direct	-299 Nov 13 j 18:13	6°Υ13'49		evening set	-294 Nov 09 j 17:07	28°M27'03	
asc. node	-299 Nov 14 j 09:07	6° Y 13'58			-294 Nov 11 j 17:33	0° ⊼	
	-298 Jan 27 j 00:49	0° B			-294 Dec 20 j 05:21	0° ප	
	-298 Mar 22 j 22:56	0° I I			202 1 12:04 47	100=07152	1002120
	-298 May 12 j 14:51	0° ©		conjunction	-293 Jan 12 j 04:47	18° ろ 07'52	
	-298 Jun 30 j 05:57	0° Ω 24° Ω 38'51		minimum elong	-293 Jan 12 j 03:22	18° る 05'03	
evening set	-298 Aug 07 j 18:25			max. Earth dist.	-293 Jan 23 j 21:48	27°る22'11 0°≈	2.37271 AU
may Earth dist	-298 Aug 15 j 22:44	0° Т р 8° Т р 44'42	2 50046 ATT		-293 Jan 27 j 05:55	0° ∺	
max. Earth dist.	-298 Aug 29 j 04:06	o 11/4442	2.58946 AU	morning rise	-293 Mar 06 j 17:23 -293 Mar 23 j 01:07	0 X 12° X 27'52	
conjunction	-298 Sep 23 j 19:46	26° Mp 03'49	0°40'14	morning rise		12 π 2/32 0° Υ	
minimum elong	-298 Sep 23 j 21:04	26° Mp 06'03	0°40'13		-293 Apr 15 j 11:51 -293 May 27 j 06:16	0°8	
minimum ciong	-298 Sep 29 j 13:23	ე∘ <u>ი</u>	0 40 13	asc. node	-293 Jul 07 j 06:42	27° 8 47'09	
morning rise	-298 Nov 11 j 12:47	0°M.18'06		asc. node	-293 Jul 10 j 15:53	0°Ⅱ	
morning rise	-298 Nov 11 j 12:47	0°M				0°©	
desc. node	·	15°M29'40			-293 Aug 27 j 16:24 -293 Oct 22 j 09:48	0°€ 0 €	
desc. node	-298 Dec 02 j 09:09	13 IIC2940 0° √		ratragrada	-293 Dec 23 j 23:44	0 δ 2 17° Ω 31'49	
	-298 Dec 21 j 22:00	0°る		retrograde		8° Ω 15'18	4°37'27
	-297 Jan 30 j 11:15 -297 Mar 10 j 10:53	0°≈		opposition greatest brilliancy	-292 Feb 01 j 10:41 -292 Feb 01 j 19:49		
	-297 Mai 10 j 10.33 -297 Apr 18 j 18:39	0 ≈ 0° ∀		min. Earth dist.	-292 Feb 01 j 19.49 -292 Feb 04 j 02:36	7°Ω12'15	0.66593 AU
		0 Υ 0° Υ		IIIII. Eartii tist.	,		0.00393 AU
	-297 May 29 j 16:08	0° 8		direct	-292 Feb 26 j 06:28	30°RS 28°S14'29	
	-297 Jul 13 j 07:13	0°II		direct	-292 Mar 13 j 18:29	28 3 14 29 0°Ω	
1-	-297 Sep 08 j 07:02				-292 Mar 31 j 05:04 -292 Jun 11 j 11:23		
asc. node	-297 Oct 02 j 08:05	6° ∏ 52'36		daga mada	-	0°∭0 26°™00'02	
retrograde min. Earth dist.	-297 Oct 15 j 15:56	8° П 01'49 0° П 06'23	0.60786 AU	desc. node	-292 Jul 24 j 05:50	26°№00'03 0° <u>മ</u>	
IIIII. Eartii dist.	-297 Nov 19 j 08:02	0 Д0623 30°R 8	0.00780 AU		-292 Jul 30 j 08:15	0° M ₊	
	-297 Nov 19 j 14:30		2°09'47		-292 Sep 11 j 13:15		
opposition	-297 Nov 24 j 08:10	28° 8 06'56			-292 Oct 21 j 17:00	್ತಾ 0°⋜	
greatest brilliancy direct	-297 Nov 23 j 21:44	28° 8 17'18 19° 8 20'00	-1.6m		-292 Nov 29 j 05:49	0°≈	
direct	-296 Jan 01 j 00:33	0° Ⅱ		avanina aat	-291 Jan 06 j 07:15	0 ≈ 8°≈09'00	
	-296 Feb 16 j 23:23	0°©		evening set	-291 Jan 16 j 16:41 -291 Feb 13 j 21:28	8 ≈0900 0° H	
	-296 Apr 18 j 18:42	0°Ω 0 €			-291 Feb 13 J 21.28	0 K	
	-296 Jun 09 j 11:23 -296 Jul 27 j 04:39			conjunction	-291 Mar 23 j 01:47	27° ¥ 57'39	0026150
	-296 Sep 09 j 21:41	0 ்⊽ 0° ™		minimum elong	-291 Mar 23 j 04:12	27 X 3739 28° X 02'07	
avaning sat				minimum clong	•	28 γ (02 07 0° γ	0 30 30
evening set max. Earth dist.	-296 Sep 17 j 14:04 -296 Oct 02 j 06:45	5° £ 20'39 15° £ 43'18	2.47620 AU	max. Earth dist.	-291 Mar 25 j 20:18 -291 May 05 j 17:40	29° Υ 18'20	2.49338 AU
desc. node	-296 Oct 02 j 06:43	13 22 43 18 28° 2 00'01	2.47020 AU	max. Earm dist.	-291 May 05 j 17:40	0°8	2.49338 AU
desc. node	-296 Oct 19 j 07:37 -296 Oct 22 j 01:22	0°M		morning rise	, ,	10° 8 47'34	
	-290 Oct 22 j 01.22	O IIG		asc. node	-291 May 22 j 08:08 -291 May 24 j 05:28	10 84734 12°805'08	
conjunction	-296 Nov 09 j 01:15	13°M17'24	0013123	asc. node	-291 Jun 19 j 20:15	0° Ⅱ	
minimum elong	-296 Nov 09 j 01:13	13°M15'58			-291 Aug 05 j 06:56	0°©	
behind sun begin	-296 Nov 08 j 10:52	12°M50'36	0 13 22		-291 Aug 03 j 00:30 -291 Sep 23 j 12:38	0°€ 0°€	
behind sun end	-296 Nov 09 j 14:06	13°M41'22			-291 Nov 17 j 09:19	0° m)	
bennia sun ena	-296 Dec 01 j 04:49	0° √		retrograde	-290 Jan 31 j 03:57	23° Mp 00'40	
morning rise	-295 Jan 07 j 03:42	28° ∡ ³32'20		opposition	-290 Mar 09 j 17:21	14° m) 41'31	3°39'35
morning risc	-295 Jan 09 j 00:37	0°る		greatest brilliancy	-290 Mar 10 j 13:56	14° m) 22'01	-1.6m
	-295 Feb 16 j 07:57	0°≈		min. Earth dist.	-290 Mar 16 j 03:07	12° m) 16'02	0.59719 AU
greatest brilliancy	-295 Feb 23 j 18:04	5° ≈ 48'07	1.2m	direct	-290 Apr 19 j 13:19	4° My 53'56	0.57/17 AO
greatest orimaney	-295 Mar 26 j 23:50	0° ∺	1.2111	desc. node	-290 Jun 11 j 03:45	19° m 02'53	
	-295 May 05 j 22:20	0°Υ		desc. node	-290 Jul 02 j 10:28	0° ت	
	-295 Jun 17 j 03:49	0°8			-290 Aug 19 j 03:04	0° ™	
	-295 Aug 02 j 05:43	0°II			-290 Sep 29 j 18:19	0° ⊼ ¹	
asc. node	-295 Aug 19 j 07:52	10° Ⅱ 09'56			-290 Nov 08 j 00:20	0°ਤ	
	-295 Sep 26 j 12:50	0°95			-290 Dec 16 j 14:28	0°≈	
retrograde	-295 Nov 19 j 04:04	14° © 07'11			-289 Jan 24 j 17:21	0° ₩	
min. Earth dist.	-295 Dec 28 j 02:06	4°5946'59	0.66919 AU		-289 Mar 06 j 05:27	0° Υ	
opposition	-295 Dec 29 j 07:19	4°9517'41	4°05'55	evening set	-289 Mar 21 j 14:25	11° Υ 02'50	
greatest brilliancy	-295 Dec 29 j 01:45	4°523'15		asc. node	-289 Apr 11 j 05:05	25° Y 33'33	
<u> </u>	-294 Jan 09 j 11:42	30°R∏			-289 Apr 17 j 14:44	0°8	
direct	-294 Feb 07 j 11:00	24° ∏ 39'35			r . j	-	
	-294 Mar 11 j 11:31	0ಂಣ		conjunction	-289 May 16 j 03:55	19° 8 26'44	0°20'36
	-294 May 17 j 04:33	$0^{\circ}\Omega$		minimum elong	-289 May 16 j 02:57	19° 8 25'06	0°20'36
	-294 Jul 06 j 23:42	0° m/y		Č	-289 May 31 j 23:55	0° I I	
	-294 Aug 21 j 14:14	0∘ ⊽		max. Earth dist.	-289 Jun 08 j 05:16		2.60422 AU
	-				•		

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 12 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -289 Jul 05 i 18:43 22°II42'45 direct -284 Oct 20 i 12:55 15° **** 08'17 morning rise -289 Jul 17 j 03:01 0ಂತಾ -284 Dec 01 i 01:26 24° # 24'29 asc node -289 Sep 02 j 15:46 $0^{\circ}\Omega$ -284 Dec 14 j 05:52 $0^{\circ}\Upsilon$ -289 Oct 21 j 14:54 0°m -283 Feb 09 j 02:56 0°8 -289 Dec 12 j 09:54 0∘**⊽** $\Pi^{\circ}0$ -283 Mar 31 j 22:57 -288 Feb 14 j 07:38 0°M 0ಂತಾ -283 May 20 j 04:40 -283 Jul 07 j 06:08 retrograde -288 Mar 22 j 11:27 7°M06'22 0° Ω opposition -288 Apr 25 j 11:19 0° M24'54 0°08'52 evening set -283 Jul 23 j 22:06 10°**Ω**36'47 greatest brilliancy -285 May 28 j 08:24 22°**Ⅲ**25'43 1.8m max. Earth dist. -283 Aug 18 j 15:09 27°**Ω**15'31 2.62211 AU -288 Apr 26 j 16:47 30°**₽**Ω -283 Aug 22 j 19:30 0° M desc. node -288 Apr 28 j 03:41 29°**₽**30'24 -288 May 03 j 21:57 -283 Sep 08 j 02:58 0°53'58 min. Earth dist. 27°**₽**34'43 0.47491 AU conjunction 10° Mp 47'37 -288 Jun 01 j 19:31 direct 22°**₽**12'48 minimum elong -283 Sep 08 j 04:13 10° **m** 49'41 0°53'58 -288 Jul 07 j 13:01 0°M -283 Oct 06 j 13:02 0∘**⊽** -288 Aug 30 j 20:46 0°**√** morning rise -283 Oct 24 j 18:52 12°**2**36'51 -288 Oct 12 j 17:33 0°ರ -283 Nov 18 j 09:47 0°M -288 Nov 22 j 07:40 0°**≈** desc. node -283 Dec 19 j 01:09 22°M11'59 -287 Jan 01 j 22:36 0°**)**€ -283 Dec 29 j 15:03 0°**∡**7 -287 Feb 12 j 17:12 $0^{\circ}\Upsilon$ -282 Feb 07 j 15:30 0°る asc. node -287 Feb 26 j 03:07 9°Y23'45 -282 Mar 19 j 02:38 0°**≈** -287 Mar 28 j 03:45 0°8 -282 Apr 27 j 23:48 0°**)**€ -287 May 08 i 03:53 27°**8**17'40 -282 Jun 08 i 21:08 $0^{\circ}\Upsilon$ evening set -287 May 12 j 07:03 Π °0 -282 Jul 26 i 14:48 0°8 -282 Sep 30 j 11:36 22°**8**04'18 retrograde -287 Jun 26 i 04:55 29°**I**01'57 0°58'19 asc. node -282 Oct 19 j 01:02 19°**8**34'52 conjunction -287 Jun 26 j 03:43 29°II00'02 0°58'19 -282 Nov 02 j 04:23 14°850'55 0.56767 AU minimum elong min. Earth dist. -287 Jun 27 i 17:11 0ಂತಾ opposition -282 Nov 08 j 13:06 12°**8**21'50 0°55'18 -287 Jul 02 j 17:06 3°5511'46 2.66438 AU greatest brilliancy -282 Nov 08 j 07:19 max. Earth dist. 12°**8**27'29 -1 8m 4°**8**05'15 -287 Aug 11 j 02:54 -282 Dec 14 j 21:31 28°9318'17 direct morning rise -287 Aug 13 j 18:53 $0^{\circ}\Omega$ -281 Mar 04 j 23:48 $\Pi^{\circ}0$ -287 Sep 29 j 22:50 0° My -281 Apr 28 j 23:50 000 -287 Nov 16 j 00:29 0∘**⊽** -281 Jun 18 j 02:46 $0^{\circ}\Omega$ -281 Aug 04 j 07:52 -286 Jan 02 j 08:31 0°M 0° m -286 Feb 20 j 04:34 0° **₹** -281 Sep 01 j 10:49 18° Mp 42'34 evening set -286 Mar 16 j 03:42 13°**∡**¹48'15 -281 Sep 17 j 22:51 desc. node 0∘ଫ 29° Mp 46'11 2.52483 AU -286 Apr 17 j 01:06 -281 Sep 17 j 14:51 0°궁 max. Earth dist. -286 Jun 05 j 09:31 12°**る**48'46 retrograde -286 Jul 05 j 15:42 7°る50'05 -6°19'02 conjunction -281 Oct 21 j 03:33 23°**2**25'30 0°10'05 opposition greatest brilliancy -286 Jul 05 j 21:11 7°る46'27 -2.9m minimum elong -281 Oct 21 j 04:02 23°**£**26'22 0°10'04 min. Earth dist. -286 Jul 06 j 19:52 7°る31'21 0.37607 AU behind sun begin -281 Oct 20 j 10:39 22°**£**55'07 direct -286 Aug 04 j 22:17 2°る44'37 behind sun end -281 Oct 21 j 21:25 23°**£**57'39 -286 Oct 18 j 13:49 -281 Oct 30 j 05:34 0°≈ 0°M -286 Dec 05 j 16:30 0°**)**€ -281 Nov 06 j 00:11 4°M57'01 desc. node -285 Jan 14 j 01:24 25°**)** 49'31 -281 Dec 09 j 14:09 asc. node 0°×7 3°**∡**¹28'45 -285 Jan 20 j 09:45 $0^{\circ}\Upsilon$ -281 Dec 14 j 04:10 morning rise -285 Mar 07 i 07:35 0°8 -280 Jan 17 j 15:31 0°궁 -285 Apr 23 i 00:34 -280 Feb 25 i 03:38 $\mathbb{I}^{\circ 0}$ 0°≈ -285 Jun 09 i 07:27 0ಂತಾ -280 Apr 03 i 23:27 0°) $0^{\circ}\Upsilon$ evening set -285 Jun 17 j 08:56 5°906'15 -280 May 14 i 02:57 max. Earth dist. -285 Jul 25 j 22:32 29°536'16 2.67011 AU -280 Jun 25 j 20:22 0°8 -285 Jul 26 j 13:24 $0^{\circ}\Omega$ -280 Aug 12 j 15:43 $0^{\circ}\Pi$ -280 Sep 04 j 23:17 12°**Ⅲ**31'34 asc. node -285 Aug 02 j 13:08 4°Ω28'00 1°09'44 -280 Oct 24 j 22:35 0ಂತಾ conjunction minimum elong -285 Aug 02 j 13:13 4°Ω28'08 1°09'44 retrograde -280 Nov 05 j 17:41 0°952'20 -280 Nov 17 j 01:11 -285 Sep 11 j 02:30 0° m 30°RⅡ -285 Sep 16 j 04:00 3° m 18'21 min. Earth dist. -280 Dec 13 j 02:56 22°П01'48 0.65269 AU morning rise -280 Dec 15 j 20:07 -285 Oct 26 j 12:14 0∘**⊽** 20°**Ⅲ**56′19 3°32'04 opposition -285 Dec 09 j 16:15 0°M -280 Dec 15 j 10:42 21°**Ⅱ**05'47 -1.4m greatest brilliancy -284 Jan 21 j 17:45 0° **₹** -279 Jan 24 j 03:59 11°**Ⅲ**34'33 direct -284 Feb 01 j 02:22 7°**∡**18'27 -279 Mar 30 j 16:44 0ಂತಾ desc. node -284 Mar 04 j 01:36 0°る 0° Ω -279 May 26 j 15:42 -279 Jul 14 j 20:15 -284 Apr 15 j 12:32 0°≈ 0° m -284 May 30 j 16:45 0°**)**€ -279 Aug 28 j 23:42 0∘**⊽** retrograde -284 Aug 14 j 04:02 29°**)** 13'57 desc. node -279 Sep 22 j 22:49 17°**△**32'23 min. Earth dist. 24°**₭**08'58 0.44093 AU -284 Sep 10 j 14:38 -279 Oct 10 j 03:42 0°M -284 Sep 18 j 14:47 21°\(\cdot\)27'39 -3°55'04 -279 Oct 18 j 01:36 opposition evening set 5°M49'47 -284 Sep 17 j 14:25 21°\dagger48'10 -2.5m max. Earth dist. -279 Nov 10 j 05:10 greatest brilliancy 23°M12'06 2.39937 AU Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 13

3	ical year style is used: T		. ,,		401 BCE in historical cou	inting style.	,
rittention, detronom	-279 Nov 19 j 02:53	0° ∡ 7	astronomical cour	morning rise	-274 Jun 19 j 19:12	7° ∏ 47'33	
	277 1107 17 j 02.03	· ,		morning rise	-274 Jul 24 j 03:21	0°9	
conjunction	-279 Dec 15 j 19:51	20° ∡ ′41′13	-0°49'37		-274 Sep 10 j 02:27	$0^{\circ}\Omega$	
minimum elong	-279 Dec 15 j 17:12	20°×36'02			-274 Oct 30 j 11:01	0° mp	
minimum clong	-279 Dec 27 j 17:09	0°පි	0 47 50		-274 Dec 26 j 03:36	0° ت الله	
	-278 Feb 03 j 19:34	0° ≈		retrograde	-273 Mar 01 j 07:30	0 – 18° ≏ 26'49	
morning rise	-278 Feb 21 j 11:53	0 ≈ 13° ≈ 51'23		opposition	-273 Apr 05 j 21:56		1°56'18
morning risc	-278 Mar 14 j 07:35	0° \		greatest brilliancy	-273 Apr 06 j 13:30	11° ⊆ 00'36	-2.0m
	-278 Apr 23 j 01:57	0° Υ		min. Earth dist.	-273 Apr 14 j 00:10	8° 2 06'41	0.52723 AU
	-278 Jun 03 j 21:42	0.8 0.1		direct	-273 May 15 j 03:14	1° £ 55'42	0.32723 AC
	-278 Jul 03 j 21:42	0°I		desc. node	-273 May 15 j 19:42	1° ⊆ 55'54	
asc. node	-278 Jul 23 j 22:30	3° Ⅱ 22'40		desc. Hode	-273 Jul 30 j 11:21	0°M	
asc. node	-278 Sep 06 j 02:51	ე H 2240			·	0° ⊼	
	-278 Nov 10 j 19:13	0° U			-273 Sep 13 j 15:07	0° ठ	
rotro ara do	,	0 δι 4° Ω 44'06			-273 Oct 24 j 06:45	0° ≈	
retrograde	-278 Dec 10 j 06:00				-273 Dec 02 j 17:32	0° ∺	
annagition	-277 Jan 06 j 07:37	30°R© 25°©12'05	1021125		-272 Jan 11 j 12:52	0 X 0°Υ	
opposition	-277 Jan 19 j 02:13			4-	-272 Feb 21 j 15:35		
greatest brilliancy	-277 Jan 19 j 05:14	25°509'04	-1.3m	asc. node	-272 Mar 14 j 18:59	15° Ƴ 38'52	
min. Earth dist.	-277 Jan 20 j 05:43	24°5944'42	0.67510 AU	. ,	-272 Apr 04 j 13:23	0°8	
direct	-277 Mar 01 j 02:43	15° © 16'49		evening set	-272 Apr 20 j 16:05	10° 8 56'08	
	-277 Apr 26 j 19:46	0° N			-272 May 19 j 07:28	Π °0	
	-277 Jun 22 j 15:22	0° m/y			272 1 10:10.10	1.40 11.40.00	0046140
	-277 Aug 08 j 17:23	0° ⊽		conjunction	-272 Jun 10 j 18:19	14° Ⅱ 40'03	
desc. node	-277 Aug 10 j 22:01	1° ≏ 28'51		minimum elong	-272 Jun 10 j 16:54	14° Ⅱ 37'46	0°46'47
	-277 Sep 20 j 09:58	0° M ₊		max. Earth dist.	-272 Jun 23 j 08:46		2.64723 AU
	-277 Oct 30 j 09:45	0° ∡			-272 Jul 04 j 13:03	0°50	
	-277 Dec 07 j 21:09	0° ਰ		morning rise	-272 Jul 28 j 01:22	15° © 00'39	
evening set	-277 Dec 20 j 17:00	10°る07'26			-272 Aug 20 j 16:48	0 \circ Ω	
	-276 Jan 14 j 21:21	0° ≈			-272 Oct 07 j 08:35	0° m	
	-276 Feb 22 j 09:27	0° ∀			-272 Nov 24 j 15:12	0∘ ⊽	
					-271 Jan 13 j 17:05	0°M₊	
conjunction	-276 Feb 25 j 22:04	2° ¥ 42'17			-271 Mar 11 j 22:55	0°⊀	
minimum elong	-276 Feb 26 j 00:47	2° ∺ 47'29	0°56'26	desc. node	-271 Apr 01 j 18:52	8° ≯ 05'23	
	-276 Apr 02 j 05:24	$0^{\circ}\Upsilon$		retrograde	-271 May 04 j 10:57	13° ≯ 54'05	
max. Earth dist.	-276 Apr 16 j 01:16		2.44031 AU	opposition	-271 Jun 04 j 13:12	8° ≯ 31'08	
morning rise	-276 May 01 j 02:40	20° Ƴ 54'42		greatest brilliancy	-271 Jun 05 j 07:40	8° ∡ 17'52	
	-276 May 13 j 23:56	9° 8		min. Earth dist.	-271 Jun 10 j 11:21		0.40115 AU
asc. node	-276 Jun 09 j 21:38	18° 8 29'52		direct	-271 Jul 07 j 13:02	2° ∡ ¹21'31	
	-276 Jun 27 j 02:38	Π $^{\circ}$ 0			-271 Sep 19 j 03:32	0°₹	
	-276 Aug 12 j 21:52	0 \circ			-271 Nov 04 j 01:17	0° ≈	
	-276 Oct 02 j 13:44	$0^{\circ}\Omega$			-271 Dec 17 j 08:08	0° ∀	
	-276 Dec 03 j 19:47	0° m y			-270 Jan 29 j 19:52	0 ° Υ	
retrograde	-275 Jan 15 j 00:13	8° Mp 48'28		asc. node	-270 Jan 30 j 18:14	0° Ƴ 38′08	
opposition	-275 Feb 22 j 11:23	0° ™ 03'06	4°14'47		-270 Mar 15 j 10:50	0°8	
	-275 Feb 22 j 14:36	30° ₹ €			-270 Apr 30 j 09:02	Π $^{\circ}0$	
greatest brilliancy	-275 Feb 23 j 04:57	29° Ω 46′07	-1.5m	evening set	-270 Jun 02 j 07:43	21° Ⅲ 07'57	
min. Earth dist.	-275 Feb 27 j 11:16	28° Ω 07'14	0.63188 AU		-270 Jun 16 j 05:30	0∘ ௐ	
direct	-275 Apr 04 j 17:58	20° Ω 04'04		max. Earth dist.	-270 Jul 16 j 22:41	19° © 32'56	2.67425 AU
	-275 May 18 j 12:26	0° m y					
desc. node	-275 Jun 27 j 21:19	20° Mp 00'56		conjunction	-270 Jul 19 j 06:37	21° © 01'57	1°08'28
	-275 Jul 14 j 15:26	0∘ 亚		minimum elong	-270 Jul 19 j 06:08	21° © 01'12	1°08'28
	-275 Aug 28 j 16:23	0° M			-270 Aug 02 j 08:14	$0^{\circ}\Omega$	
	-275 Oct 08 j 11:37	0° ∡ ¹		morning rise	-270 Sep 02 j 01:02	19° Ω 40′13	
	-275 Nov 16 j 07:50	0°ರ			-270 Sep 18 j 01:08	0° m ⁄	
	-275 Dec 24 j 14:47	0° ≈			-270 Nov 02 j 22:43	0∘ ত	
	-274 Feb 01 j 10:43	0° ∀			-270 Dec 17 j 23:57	0° M.	
evening set	-274 Feb 26 j 18:32	19° ₩ 02'37			-269 Jan 31 j 10:10	0° ∡ ¹	
	-274 Mar 13 j 15:52	0° Y		desc. node	-269 Feb 17 j 18:43	11° ∡ ¹45'35	
	-274 Apr 24 j 18:51	9° 8			-269 Mar 16 j 20:02	ರ°0	
					-269 May 02 j 04:10	0° ≈	
conjunction	-274 Apr 27 j 02:29	1° 8 36'32	-0°00'27		-269 Jul 05 j 09:51	0°) €	
minimum elong	-274 Apr 27 j 02:27	1° 8 36'30	0°00'26	retrograde	-269 Jul 22 j 05:26	1° ¥ 56′29	
behind sun begin	-274 Apr 26 j 03:11	0° 8 56'08			-269 Aug 08 j 01:14	30° ₹ ≈	
behind sun end	-274 Apr 28 j 01:44	2° 8 16'48		min. Earth dist.	-269 Aug 17 j 21:46	27° ≈ 25'57	0.39785 AU
asc. node	-274 Apr 27 j 19:56	2° 8 06'45		greatest brilliancy	-269 Aug 22 j 23:02	25° ≈ 55'41	-2.8m
max. Earth dist.	-274 May 27 j 18:28	22° 8 30'52	2.56642 AU	opposition	-269 Aug 24 j 02:11	25° ≈ 35'20	-6°00'12
	-274 Jun 07 j 23:48	$\Pi^{\circ}0$		direct	-269 Sep 23 j 09:07	20° ≈ 10′16	

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 14

•	ical year style is used: T		· /		401 BCE in historical cou	inting style.	•
rittention, detronom	-269 Nov 04 j 13:23	0° ∀	ustronomicar coc	conjunction	-264 Nov 21 j 10:56	26°M09'50	-0°27'16
asc. node	-269 Dec 18 j 17:03	22° ₩ 01'30		minimum elong	-264 Nov 21 j 09:18	26°M06'44	
ase. Hode	-268 Jan 01 j 15:57	0° Υ		minimum ciong	-264 Nov 26 j 11:43	0° √	0 27 14
	-268 Feb 20 j 14:14	0°8			-263 Jan 04 j 05:16	∞ੰਤ	
	-268 Apr 09 j 05:26	0°II		morning rise	-263 Jan 22 j 19:57	0 ੱ 14° ਰ 36'15	
	-268 May 27 j 11:52	0ංම 0 ප		morning risc	-263 Feb 11 j 10:20	0°≈	
evening set	-268 Jul 09 j 08:12	26°956'43			-263 Mar 21 j 23:56	0 ∞ 0° ∀	
evening set	-268 Jul 14 j 03:34	0° Ω			-263 Apr 30 j 19:39	0° Υ	
max. Earth dist.	-268 Aug 08 j 18:41		2.64712 AU		-263 Jun 11 j 19:38	%8 0°8	
max. Earth dist.	-200 Aug 00 j 10.41	10 6623 20	2.04/12 AU		-263 Jul 27 j 05:13	0°U	
conjunction	-268 Aug 24 j 04:43	26° Ω 26'11	1902122	asc. node	-263 Aug 09 j 13:26	0 П 8°П13'19	
minimum elong	-268 Aug 24 j 05:36	$26^{\circ}\Omega 27'39$		asc. node	-263 Sep 17 j 09:06	0°99	
minimum clong	-268 Aug 29 j 15:28	0° m)	1 03 23	retrograde	-263 Nov 26 j 20:35	0 3 21° 9 59'19	
marning rigg	• •	رانا 0 26° m) 37'17		•	-262 Jan 05 j 22:09		4910152
morning rise	-268 Oct 08 j 14:27	0° ت 0° ت		opposition	-262 Jan 05 j 22.09	12°©15'07	
	-268 Oct 13 j 13:53			greatest brilliancy	,	12°517'52	
4 4-	-268 Nov 25 j 20:35 -267 Jan 04 j 17:13	0°ጤ 28°ጤ35'54		min. Earth dist.	-262 Jan 05 j 13:11	2°\$29'50	0.67422 AU
desc. node	3			direct	-262 Feb 15 j 10:21		
	-267 Jan 06 j 15:22	0° ⊀			-262 May 10 j 04:11	0° N	
	-267 Feb 16 j 07:20	5°0			-262 Jul 01 j 13:04	0° m	
	-267 Mar 28 j 11:43	0° ≈		1 1	-262 Aug 16 j 14:59	0° Ω	
	-267 May 08 j 07:55	0° ∀		desc. node	-262 Aug 27 j 14:53	7° Ω 34'14	
	-267 Jun 21 j 07:03	0° Υ			-262 Sep 28 j 00:51	0°M 0°. ₹	
	-267 Aug 19 j 19:06	0° 8			-262 Nov 06 j 23:27	0° 🗖	
retrograde	-267 Sep 13 j 21:36	4° 8 07'08		evening set	-262 Nov 23 j 16:58	12° ∡ 756'45	
	-267 Oct 07 j 20:24	30° ₹ Υ	0.50005.437		-262 Dec 15 j 11:05	% ප	
min. Earth dist.	-267 Oct 14 j 10:43	27° Y 42'09	0.52035 AU		-261 Jan 22 j 11:10	0° ≈	
opposition	-267 Oct 21 j 23:28	24° Y 51'59					
greatest brilliancy	-267 Oct 21 j 19:16	24° Y 55'57	-2.1m	conjunction	-261 Jan 28 j 08:40	4°≈38'27	
asc. node	-267 Nov 04 j 16:10	20° Y 13′25		minimum elong	-261 Jan 28 j 08:58	4°≈39'04	1°05'21
direct	-267 Nov 25 j 19:04	17° Y 13'51			-261 Mar 01 j 22:00	0° ∀	
	-266 Jan 15 j 20:58	0°8		max. Earth dist.	-261 Mar 13 j 16:34		2.38906 AU
	-266 Mar 16 j 12:03	0°П		morning rise	-261 Apr 07 j 12:15	27°) (40'22	
	-266 May 07 j 08:25	0°€			-261 Apr 10 j 15:45	0° Υ	
	-266 Jun 25 j 10:46	$0^{\circ}\Omega$			-261 May 22 j 08:43	0°8	
	-266 Aug 11 j 07:46	0° m)		asc. node	-261 Jun 27 j 12:33	24° 8 40'49	
evening set	-266 Aug 16 j 12:14	3° m/24'38			-261 Jul 05 j 13:38	0°П	
max. Earth dist.	-266 Sep 04 j 19:26	16° Mp 16'32	2.56804 AU		-261 Aug 21 j 23:27	0°©	
	-266 Sep 24 j 22:36	0∘ ⊽			-261 Oct 14 j 02:21	0 $^{\circ}\Omega$	
				retrograde	-260 Jan 01 j 03:58	25° Ω 27'10	
conjunction	-266 Oct 03 j 07:48	5° ≙ 48'29	0°30'20	opposition	-260 Feb 09 j 07:21	16° Ω 20'40	4°33'05
minimum elong	-266 Oct 03 j 08:58	5° ≙ 50'30	0°30'19	greatest brilliancy	-260 Feb 09 j 19:48	16° Ω 08'28	-1.4m
	-266 Nov 06 j 09:43	0° M		min. Earth dist.	-260 Feb 12 j 19:26	14° Ω 58'12	0.65660 AU
morning rise	-266 Nov 22 j 14:42	11°M49'27		direct	-260 Mar 21 j 16:03	6° Ω 18'48	
desc. node	-266 Nov 22 j 16:06	11°ML52'01			-260 Jun 03 j 19:00	0° m	
	-266 Dec 17 j 01:04	0° ∡ ¹		desc. node	-260 Jul 14 j 13:07	23°M 36'38	
	-265 Jan 25 j 09:47	0°ಕ			-260 Jul 24 j 13:13	0∘ ⊽	
	-265 Mar 05 j 04:52	0° ≈			-260 Sep 06 j 07:17	0° ™	
	-265 Apr 13 j 07:14	0° ∀			-260 Oct 16 j 16:00	0° ∡	
	-265 May 23 j 19:53	0° Υ			-260 Nov 24 j 07:09	0°る	
	-265 Jul 06 j 11:35	0°₽			-259 Jan 01 j 10:10	0° ≈	
_	-265 Aug 27 j 01:18	0°II		evening set	-259 Feb 01 j 02:16	23°≈52'30	
asc. node	-265 Sep 22 j 15:34	11° I I1'40			-259 Feb 09 j 01:41	0° ∀	
retrograde	-265 Oct 23 j 21:42	16° Ⅱ 54'12			-259 Mar 21 j 01:44	0° Y	
min. Earth dist.	-265 Nov 28 j 13:56	8° Ⅱ 37'46	0.62642 AU				
opposition	-265 Dec 02 j 18:38	6° Ⅱ 57'00	2°44'33	conjunction	-259 Apr 05 j 12:15	11° Y 13'23	
greatest brilliancy	-265 Dec 02 j 07:34	7° Ⅱ 08'04	-1.5m	minimum elong	-259 Apr 05 j 13:49	11° Y 16'12	0°23'45
	-265 Dec 23 j 09:50	30° ₹ 8			-259 May 01 j 23:49	0°8	
direct	-264 Jan 10 j 02:10	27° 8 56'16		asc. node	-259 May 14 j 12:48	8° 8 41'23	
	-264 Jan 29 j 03:23	$\Pi^{\circ}0$		max. Earth dist.	-259 May 14 j 13:49		2.52091 AU
	-264 Apr 12 j 01:05	0°©		morning rise	-259 Jun 02 j 05:22	21° 8 24'25	
	-264 Jun 04 j 04:01	0 $^{\circ}$ Ω			-259 Jun 15 j 01:46	0° ∏	
	-264 Jul 22 j 08:42	0° m)			-259 Jul 31 j 08:03	0°©	
_	-264 Sep 05 j 05:34	0∘ ⊽			-259 Sep 17 j 23:10	$0^{\circ}\Omega$	
evening set	-264 Sep 27 j 23:54	15° ≙ 58'47			-259 Nov 09 j 14:31	0° m p	
desc. node	-264 Oct 09 j 15:57	24° ≙ 22'00			-258 Jan 21 j 19:17	0∘ ⊽	
max. Earth dist.	-264 Oct 13 j 08:24	27° ♀ 02'29	2.44803 AU	retrograde	-258 Feb 10 j 02:40	2° ≏ 04'56	
	-264 Oct 17 j 09:44	0° M ₊			-258 Feb 28 j 05:16	30°R Mp	

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 15 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -258 Mar 19 i 00:57 24° m 02'35 3°09'19 -253 Jun 04 i 14:24 0ಂತಾ opposition -258 Mar 19 j 21:25 23° m 43'29 -253 Jun 25 j 18:34 13°921'56 greatest brilliancy -1 7m evening set min. Earth dist. -258 Mar 26 j 03:17 21° m 23'48 -253 Jul 21 j 23:25 0.57441 AU $0^{\circ}\Omega$ -258 Apr 28 j 10:18 -253 Jul 31 j 06:40 direct 14° Mp 25'45 max. Earth dist. 5°**Ω**56'38 2.66426 AU 21°Mp04'41 -258 Jun 01 j 11:53 desc. node -258 Jun 22 j 10:04 -253 Aug 10 j 17:05 12°**Ω**38'22 1°08'36 0∘**⊽** conjunction 0° M minimum elong -258 Aug 12 j 10:28 -253 Aug 10 j 17:29 12°**Ω**39'01 1°08'36 -258 Sep 23 j 22:14 0°⊀ -253 Sep 06 j 11:56 0° m 0°ರ -258 Nov 02 j 13:04 morning rise -253 Sep 24 j 11:05 11°M/48'12 -258 Dec 11 j 08:45 0°≈ -253 Oct 21 j 17:31 0°Ω -257 Jan 19 j 15:56 0°**)**€ -253 Dec 04 j 13:07 0°M -257 Mar 01 j 07:47 $0^{\circ}\Upsilon$ 0°**∡**7 -252 Jan 16 j 01:56 22°\bar{Y}06'37 asc. node -257 Apr 01 j 11:18 desc. node -252 Jan 22 j 10:17 4°**∡**³32'42 evening set -257 Apr 02 j 10:47 22°**Y**47'33 -252 Feb 26 j 16:05 0°ರ -257 Apr 12 j 20:19 0° 8 -252 Apr 08 j 00:44 0°≈ -252 May 20 j 19:54 0°**)**€ conjunction -257 May 26 j 05:21 29°816'48 0°31'17 -252 Jul 10 j 00:58 $0^{\circ}\Upsilon$ minimum elong -257 May 26 j 04:04 29°814'42 0°31'16 retrograde -252 Aug 26 j 03:53 13°**Y**13'54 min. Earth dist. -257 May 27 j 07:28 $0^{\circ}\Pi$ -252 Sep 23 j 13:26 7°**Υ**41'21 0.46917 AU max. Earth dist. -257 Jun 14 j 06:54 11°**Ц**48'21 2.62178 AU opposition -252 Oct 01 j 17:30 4°Υ48'15 -2°39'06 -257 Jul 12 j 10:21 0ಂತಾ greatest brilliancy -252 Oct 01 j 00:12 5°**Y**03′36 -2.3m morning rise -257 Jul 14 j 11:13 1°9518'17 -252 Oct 17 i 09:35 30°R**)**€ -257 Aug 28 j 18:28 $0^{\circ}\Omega$ direct -252 Nov 03 i 18:31 27° ¥ 58'10 -257 Oct 16 i 03:27 0° m asc. node -252 Nov 21 i 07:55 29° **X** 51'40 -257 Dec 05 j 06:57 0∘**⊽** -252 Nov 21 j 23:53 $0^{\circ}\Upsilon$ -256 Jan 30 j 00:58 0°M -251 Feb 01 j 07:41 0°8 -256 Apr 05 j 14:36 19°M30'47 -251 Mar 26 j 04:01 $\Pi^{\circ}0$ retrograde -256 Apr 18 j 11:15 -251 May 15 j 03:58 0ಂತಾ 18°M-29'07 desc. node -256 May 08 j 16:02 13°M17'04 -1°10'37 -251 Jul 02 j 13:26 $0^{\circ}\Omega$ opposition -256 May 09 j 00:28 -251 Aug 01 j 08:30 19°**Ω**00'43 greatest brilliancy 13°M10'18 -2.5m evening set -251 Aug 18 j 05:29 -256 May 16 j 19:37 min. Earth dist. 10°M41'02 0.44647 AU 0° m -256 Jun 13 j 15:03 -251 Aug 24 j 16:27 direct 5°M44'21 max. Earth dist. 4° Mp 14'59 2.60512 AU -256 Aug 20 j 14:06 0°⊀ 0°₹ -256 Oct 05 j 06:19 -251 Sep 16 j 22:58 19° Mp 47'46 0°46'33 conjunction -256 Nov 15 j 22:47 -251 Sep 17 j 00:16 19°**m** 49'59 0°≈ minimum elong 0°46'32 -256 Dec 27 j 05:14 0°**)**€ -251 Oct 01 j 22:28 0∘**⊽** -255 Feb 07 j 10:24 $0^{\circ}\Upsilon$ -251 Nov 03 j 15:09 22°**♀**50'05 morning rise -255 Feb 16 j 09:37 6° Y 14'24 -251 Nov 13 j 16:03 0°M asc. node -255 Mar 23 j 04:41 0° 8 desc. node -251 Dec 09 j 09:15 18°ML40'57 -255 May 07 j 13:07 $0^{\circ}II$ -251 Dec 24 j 16:24 0°**⊼** -255 May 17 j 13:43 6°**Ⅲ**30′48 -250 Feb 02 j 10:41 0°₹ evening set -255 Jun 23 j 02:02 0ಂತಾ -250 Mar 13 j 15:00 0°**≈** -250 Apr 22 j 03:13 0°**)**€ -255 Jul 04 j 17:40 7°526'26 1°03'13 -250 Jun 02 j 07:41 $0^{\circ}\Upsilon$ conjunction -255 Jul 04 j 16:42 7°524'53 1°03'12 -250 Jul 17 j 19:43 0° 8 minimum elong -255 Jul 08 i 00:37 -250 Sep 22 j 11:17 max. Earth dist. 9°532'18 2.67020 AU $\Pi^{\circ}0$ -255 Aug 09 i 03:31 -250 Oct 09 i 08:24 $0^{\circ}\Omega$ retrograde 1°**I**50'39 morning rise -255 Aug 19 j 02:40 6°**Ω**21'03 asc. node -250 Oct 09 i 06:19 1°**I**50'39 -255 Sep 25 j 02:36 0° m -250 Oct 25 i 08:33 30°R8 -255 Nov 10 j 16:27 0∘**⊽** min. Earth dist. -250 Nov 12 j 03:36 24°813'02 0.59091 AU -255 Dec 27 j 00:15 0°M -250 Nov 17 j 18:30 21°859'37 1°41'02 opposition -254 Feb 11 j 16:53 0°×7 -250 Nov 17 j 09:18 22°808'44 -1.7m greatest brilliancy desc. node -254 Mar 06 j 10:25 14°**∡**°14′28 -250 Dec 24 j 20:49 13°**8**25'22 direct 0°る -254 Apr 01 j 17:10 -249 Feb 23 j 17:51 $\Pi^{\circ}0$ -254 Jun 11 j 05:58 0°≈ -249 Apr 23 j 01:10 0ಂತಾ -254 Jun 23 j 12:12 0°≈57'48 -249 Jun 13 j 01:27 $0^{\circ}\Omega$ retrograde -254 Jul 05 j 16:11 30°Rる -249 Jul 30 j 14:20 0° m -254 Jul 22 j 04:05 26°る16'50 0.37564 AU -249 Sep 11 j 00:35 min. Earth dist. evening set 28° m 24'57 -254 Jul 24 j 01:36 25°る46'29 -6°51'37 -249 Sep 13 j 07:41 opposition 0∘ଫ -254 Jul 23 j 16:26 25°る52'36 -2.9m 8°**♀**57'36 2.49852 AU greatest brilliancy max. Earth dist. -249 Sep 26 j 04:21 -254 Aug 22 j 15:37 20°**る**50'37 -249 Oct 25 j 13:51 direct 0°M -254 Oct 01 j 12:31 0°≈ desc. node -249 Oct 27 j 07:52 1°M16'35 -254 Nov 26 j 22:16 0°**)**€ asc. node -253 Jan 04 j 09:16 23°**)** 58'24 conjunction -249 Nov 01 j 03:00 4°M47'20 -0°03'07 $0^{\circ}\Upsilon$ -253 Jan 13 j 20:21 minimum elong -249 Nov 01 j 02:48 4°M46'59 0°03'08 -253 Mar 01 j 18:40 0°8 behind sun begin -249 Oct 31 j 04:30 4°M06'05 -253 Apr 18 j 00:32 $\Pi^{\circ}0$ behind sun end -249 Nov 02 j 01:06 5°M27'55

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 16

Attention, astronom	ical year style is used: Tl	-	astronomical cou				2056120
	-249 Dec 04 j 20:28	0° ∡ 7		opposition	-243 Mar 03 j 01:27	8° m 45'24	
morning rise	-249 Dec 27 j 19:11	17° ∡ 35'18		greatest brilliancy	-243 Mar 03 j 20:58	8° TD 26'43	-1.6m
	-248 Jan 12 j 19:06	0° ට		min. Earth dist.	-243 Mar 08 j 19:58	6° Tp 32'50	0.61380 AU
	-248 Feb 20 j 04:33	0° ≈			-243 Mar 31 j 00:13	30°RΩ	
	-248 Mar 29 j 21:32	0°) €		direct	-243 Apr 13 j 02:30	28° Ω 51'30	
	-248 May 08 j 20:43	0° Υ		1 1	-243 Apr 26 j 17:29	0° m/y	
	-248 Jun 20 j 04:52	8°0		desc. node	-243 Jun 18 j 03:44	19° m 21'41	
	-248 Aug 05 j 18:10	0°II			-243 Jul 07 j 08:18	0∘ m	
asc. node	-248 Aug 26 j 06:08	11° Ⅱ 48′32 0° ©			-243 Aug 22 j 18:42	0°M 0°. 7	
	-248 Oct 03 j 08:22				-243 Oct 03 j 01:35	0°⋜	
retrograde	-248 Nov 13 j 12:32	8°©59'51			-243 Nov 11 j 03:18		
i. David dias	-248 Dec 21 j 10:21	30°RⅡ 20°Ⅱ-52122	0.66202 ATT		-243 Dec 19 j 13:54	0° ≈	
min. Earth dist.	-248 Dec 21 j 17:48	29° П 32'32 29° П 06'47	0.66302 AU		-242 Jan 27 j 12:48	0° Υ 0° Υ	
opposition	-248 Dec 23 j 15:20				-242 Mar 08 j 20:26	0° γ 2° Υ 18'02	
greatest brilliancy	-248 Dec 23 j 07:46	29° Ⅱ 14'22	-1.4m	evening set	-242 Mar 12 j 00:25		
direct	-247 Feb 01 j 10:18	19° Ⅱ 35'32		asc. node	-242 Apr 18 j 03:25	28° Ƴ 39'57	
	-247 Mar 20 j 02:55	0.ಲ			-242 Apr 20 j 01:31	0°8	
	-247 May 20 j 14:09	0° N			242.34 00:04.24	120 427125	0012102
	-247 Jul 09 j 17:04	0° m		conjunction	-242 May 08 j 04:34	12° 8 27'25	
	-247 Aug 24 j 04:09	0° ™		minimum elong	-242 May 08 j 03:56	12° 8 26'20	0°12'04
desc. node	-247 Sep 13 j 06:44	14° £ 01'53		behind sun begin	-242 May 07 j 13:08	12° 8 01'09	
	-247 Oct 05 j 10:24	0°M		behind sun end	-242 May 08 j 18:44	12° 8 51'29	
evening set	-247 Oct 30 j 12:14	18°M39'52		m at the	-242 Jun 03 j 07:18	0°II	2.50020 111
F 4 F 4	-247 Nov 14 j 09:32	0°×7	2 27020 411	max. Earth dist.	-242 Jun 03 j 12:56	0° Ⅱ 09'21	2.58820 AU
max. Earth dist.	-247 Dec 08 j 16:27	18° ∡ 749'02	2.37829 AU	morning rise	-242 Jun 29 j 01:53	16° Ⅱ 54'44	
	-247 Dec 22 j 22:42	0° ප			-242 Jul 19 j 09:25	0° ©	
	245 20:22 14	60 7 16155	00.5010.4		-242 Sep 05 j 01:16	0° Ω	
conjunction	-247 Dec 30 j 22:14	6° る 16'57			-242 Oct 24 j 12:07	0° mp	
minimum elong	-247 Dec 30 j 19:56	6°る12'24	0°59'04		-242 Dec 16 j 20:47	0∘ ⊽	
	-246 Jan 29 j 24:00	0° ≈		retrograde	-241 Mar 13 j 10:42	29° Ω 10'01	
	-246 Mar 09 j 11:06	0°) (opposition	-241 Apr 17 j 04:43	22° Ω 07'29	0°59'19
morning rise	-246 Mar 10 j 09:02	0°) 42′14		greatest brilliancy	-241 Apr 17 j 13:26		-2.2m
	-246 Apr 18 j 04:20	0° Υ		min. Earth dist.	-241 Apr 25 j 14:22	19° Ω 12'40	0.49847 AU
	-246 May 29 j 21:49	0° B		desc. node	-241 May 06 j 03:14	16° Ω 02'34	
	-246 Jul 13 j 08:37	0°II		direct	-241 May 25 j 10:47	13° Ω 29'06	
asc. node	-246 Jul 14 j 05:22	0° Ⅱ 33'44			-241 Jul 19 j 11:04	0°M	
	-246 Aug 30 j 19:07	0°©			-241 Sep 06 j 05:24	0° ⊼	
	-246 Oct 27 j 23:49	0° Ω			-241 Oct 17 j 22:35	5°0	
retrograde	-246 Dec 18 j 02:45	12° Ω 31'25	4027124		-241 Nov 26 j 22:41	0° ≈	
opposition	-245 Jan 26 j 17:44	3° Ω 07'38			-240 Jan 06 j 03:26	0°) €	
greatest brilliancy	-245 Jan 27 j 00:09	3° Ω 01'16			-240 Feb 16 j 13:18	0° Υ	
min. Earth dist.	-245 Jan 28 j 17:12	2° £ 20'34	0.67128 AU	asc. node	-240 Mar 05 j 01:42	12° Y 20′00	
1.	-245 Feb 03 j 17:46	30°R≌			-240 Mar 30 j 16:48	0°8	
direct	-245 Mar 08 j 22:23	23°508'46		evening set	-240 Apr 30 j 19:49	20° 8 54'17	
	-245 Apr 14 j 09:12	0° N			-240 May 14 j 14:40	Π °0	
1 1	-245 Jun 16 j 06:13	0°M)			240 1 10:16.52	220 T 26120	0052157
desc. node	-245 Aug 01 j 05:41	28° m 34'47		conjunction	-240 Jun 19 j 16:53	23° Ⅱ 26'30	
	-245 Aug 03 j 09:00	0∘ w		minimum elong	-240 Jun 19 j 15:34	23° ∏ 24'23	0°53'57
	-245 Sep 15 j 09:50	0°M₊		max. Earth dist.	-240 Jun 28 j 21:14		2.65779 AU
	-245 Oct 25 j 12:46	0°⊀ 0° ≥			-240 Jun 29 j 21:58	0°©	
ovanina a-t	-245 Dec 03 j 01:12	0°る 26° そ 2220		morning rise	-240 Aug 05 j 03:48	23°©07'02	
evening set	-244 Jan 05 j 11:22	26° る 22'28			-240 Aug 16 j 00:00	0° N	
	-244 Jan 10 j 01:52	0° ≈			-240 Oct 02 j 08:39	0° my	
	-244 Feb 17 j 14:22	0° ℋ			-240 Nov 18 j 21:53	0∘ ⊽	
	24434 12:01:17	1501/10145	004640		-239 Jan 06 j 05:58	0°M	
conjunction	-244 Mar 12 j 01:17	17°) 48'47		1 1	-239 Feb 26 j 13:00	0°×7	
minimum elong	-244 Mar 12 j 04:07	17° ¥ 54'06	0~46'07	desc. node	-239 Mar 23 j 03:30	12° ∡ ′44′03	
E d V	-244 Mar 28 j 10:38	0° Υ	2.46007 133		-239 May 18 j 12:16	0°る	
max. Earth dist.	-244 Apr 28 j 03:00		2.46987 AU	retrograde	-239 May 22 j 04:18	0°る05'09	
	-244 May 09 j 05:15	0°8		•,•	-239 May 25 j 20:08	30°₹ ⋌ 7	5025120
morning rise	-244 May 13 j 12:34	3° 8 00'15		opposition	-239 Jun 21 j 14:40	25° ₹ 01'33	
asc. node	-244 May 31 j 03:48	15° 8 08'50		greatest brilliancy	-239 Jun 22 j 05:17	24° 🗷 51'34	
	-244 Jun 22 j 06:11	0° I I		min. Earth dist.	-239 Jun 25 j 03:28	24° 🗷 03'41	0.38377 AU
	-244 Aug 07 j 18:37	0 \circ \odot		direct	-239 Jul 22 j 22:59	19° ∡ ³33′05	
		00.0			220 0 02 110	00-	
	-244 Sep 26 j 11:02	0° N			-239 Sep 02 j 19:50	5°0	
	-244 Sep 26 j 11:02 -244 Nov 22 j 09:39	0° m			-239 Oct 26 j 00:18	0° ≈	
retrograde	-244 Sep 26 j 11:02						

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 17 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. 28°**)** 01'43 asc. node -238 Jan 20 j 23:40 morning rise -234 Dec 04 j 10:16 24°M06'41 $0^{\circ}\Upsilon$ -238 Jan 23 j 22:13 -234 Dec 12 j 06:11 0°×7 -238 Mar 10 j 04:11 0°8 -233 Jan 20 j 11:05 0°궁 -238 Apr 25 j 11:28 $\mathbb{I}^{\circ 0}$ -233 Feb 28 j 02:03 0°**≈** 0°**∀** -238 Jun 11 j 00:41 29°**Ⅱ**40'03 evening set -233 Apr 08 j 00:01 $0^{\circ}\Upsilon$ -238 Jun 11 j 13:14 0ಂತಾ -233 May 18 j 05:41 0°8 max. Earth dist. -238 Jul 22 j 04:51 25°5649'57 2.67305 AU -233 Jun 30 j 05:11 $\Pi^{\circ}0$ -233 Aug 18 j 01:27 12°**I**55'59 conjunction -238 Jul 27 j 11:43 29°9512'08 1°09'41 asc. node -233 Sep 12 j 21:26 -238 Jul 27 j 11:34 minimum elong 29°9511'54 1°09'41 retrograde -233 Oct 31 j 22:33 25°**Ⅲ**28'21 -238 Jul 28 j 17:43 $0^{\circ}\Omega$ min. Earth dist. -233 Dec 07 j 13:30 16°**Ⅲ**52'31 0.64214 AU -238 Sep 10 j 02:23 27°**Ω**52'51 -233 Dec 10 j 22:49 morning rise opposition 15°**Ⅲ**30′52 3°14'10 -238 Sep 13 j 08:43 0° M greatest brilliancy -233 Dec 10 j 12:13 15°**Ⅱ**41'30 -1.5m -238 Oct 29 j 00:04 0∘**⊽** direct -232 Jan 18 j 19:57 6° II 17'58 -238 Dec 12 j 13:17 0°M -232 Apr 04 j 11:05 0ಂತಾ -237 Jan 25 j 04:20 0°**√** -232 May 29 j 14:44 $0^{\circ}\Omega$ desc. node -237 Feb 08 j 02:11 9°×39'56 -232 Jul 17 j 09:47 0° m -237 Mar 09 j 06:49 0°る -232 Aug 31 j 11:51 0∘**ত** -237 Apr 21 j 23:40 0°**≈** desc. node -232 Sep 29 j 22:50 20°**-**44'30 -237 Jun 09 j 10:51 0°**)**€ evening set -232 Oct 09 j 02:26 27°**£**21'47 retrograde -237 Aug 05 j 06:32 18°**)** 18′06 -232 Oct 12 j 17:11 0°M min. Earth dist. -237 Sep 01 i 03:04 13°**)**€32'31 0.41984 AU max. Earth dist. -232 Oct 27 i 06:12 10°M43'55 2.42046 AU greatest brilliancy -237 Sep 07 j 11:31 11°**)**(30'57 -2.6m -232 Nov 21 j 18:39 0°×7 opposition -237 Sep 08 i 15:09 11°\(\)\(\)08'49 -4°52'44 -237 Oct 09 j 17:24 direct 5° **)** 14'44 -232 Dec 04 i 19:47 10°**≯**02'02 -0°40'35 conjunction -237 Dec 08 j 23:38 22°\ 55'06 -232 Dec 04 j 17:25 9°**x**⁷57'28 0°40'33 asc. node minimum elong -237 Dec 23 j 01:15 $0^{\circ}\Upsilon$ -232 Dec 30 j 10:50 0°궁 -236 Feb 14 j 01:45 0°8 -231 Feb 06 j 14:19 0°≈ -236 Apr 03 j 19:33 $0^{\circ}II$ -231 Feb 08 j 07:50 1°≈21'32 morning rise -236 May 22 j 14:26 0000 -231 Mar 17 j 02:28 0°**∀** $0^{\circ}\Upsilon$ -236 Jul 09 j 11:52 $0^{\circ}\Omega$ -231 Apr 25 j 20:08 -236 Jul 17 j 16:29 -231 Jun 06 j 15:50 0°8 evening set 5°**Ω**12'30 -231 Jul 21 j 13:29 max. Earth dist. -236 Aug 14 j 10:35 23°**Ω**04'14 2.63436 AU $0^{\circ}\Pi$ -231 Jul 30 j 20:35 -236 Aug 25 j 01:15 5°**Ⅲ**52'39 0° m asc. node -231 Sep 09 j 19:28 0°9 -236 Sep 01 j 16:02 5° Mp 00'35 0°58'26 -231 Dec 04 j 13:32 conjunction retrograde 29°5546'26 -236 Sep 01 j 17:09 5° Mp 02'25 0°58'25 -230 Jan 13 j 12:00 minimum elong opposition 20°908'27 4°29'52 -236 Oct 08 j 21:54 0∘**⊽** greatest brilliancy -230 Jan 13 j 12:22 20°908'06 -1.3m morning rise -236 Oct 17 j 16:06 6°**£**00'12 min. Earth dist. -230 Jan 13 j 22:57 19°**©**57'31 0.67594 AU -236 Nov 20 j 23:42 0°M direct -230 Feb 23 j 07:07 10°9517'10 desc. node -236 Dec 26 j 00:53 25°M16'38 -230 May 02 j 03:20 $0^{\circ}\Omega$ -235 Jan 01 j 11:27 0°×7 -230 Jun 25 j 20:09 0° m -235 Feb 10 j 18:38 0°る -230 Aug 11 j 12:52 0∘**ত** -235 Mar 22 j 12:39 0°≈ -230 Aug 17 j 21:37 4°**£**20'03 desc. node -235 May 01 j 17:47 0°**)**€ -230 Sep 23 j 03:38 0°M -235 Jun 13 i 05:55 $0^{\circ}\Upsilon$ -230 Nov 02 i 03:49 0°×7 -235 Aug 02 j 12:06 0°8 -230 Dec 08 j 16:38 28°**≮**27'23 evening set -235 Sep 23 j 14:27 retrograde 15°**8**04'46 -230 Dec 10 j 15:40 0°정 -235 Oct 25 i 08:35 min. Earth dist. 8°811'54 0.54725 AU -229 Jan 17 j 15:41 0°≈ -235 Oct 25 j 23:12 7°**8**58'02 asc node -235 Nov 01 j 06:19 5°832'05 0°17'42 -229 Feb 13 i 15:37 21°≈08'15 -1°02'00 opposition conjunction -235 Nov 01 j 04:19 5°**8**34'01 -2.0m -229 Feb 13 i 17:35 21°≈12'05 1°01'59 greatest brilliancy minimum elong -235 Nov 17 j 18:33 30°R℃ -229 Feb 25 j 02:43 0°\ -235 Dec 06 j 22:17 27°**Ƴ**31'35 direct max. Earth dist. -229 Apr 05 j 06:53 29° **X** 34'41 2.41644 AU $0^{\circ}\Upsilon$ -235 Dec 27 j 12:36 0°8 -229 Apr 05 j 20:36 11°**Y**42'55 -234 Mar 09 j 08:56 $0^{\circ}II$ morning rise -229 Apr 21 j 21:04 -234 May 01 j 20:50 0ಂತಾ -229 May 17 j 13:01 0°8 -234 Jun 20 j 13:18 $0^{\circ}\Omega$ -229 Jun 17 j 20:14 21°**8**29'06 asc. node -234 Aug 06 j 15:48 0° m -229 Jun 30 j 14:52 $0^{\circ}\Pi$ -234 Aug 25 j 11:51 12°**m** 27'09 -229 Aug 16 j 13:48 0ಂತಾ evening set -234 Sep 12 j 00:12 24° Mp 17'10 2.54504 AU -229 Oct 06 j 23:54 0° Ω max. Earth dist. -234 Sep 20 j 08:02 0∘**⊽** -229 Dec 15 j 07:22 0° m retrograde -228 Jan 09 j 13:30 3°m/28'37 conjunction -234 Oct 13 j 05:53 16° 201'16 0° 19'07 -228 Feb 01 j 21:19 30°R€ minimum elong -234 Oct 13 j 06:43 16° **2**02'45 0°19'07 opposition -228 Feb 17 j 08:00 24°**Ω**33'13 4°23'59 -234 Nov 01 j 17:45 0°M greatest brilliancy -228 Feb 17 j 23:25 24°**Ω**18'12 -1.4m desc. node -234 Nov 13 j 00:09 8° ML13'03 min. Earth dist. -228 Feb 21 j 15:33 22°Ω52'18 0.64420 AU

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 18 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. 0°8 direct -228 Mar 29 i 15:51 14°**Ω**32'00 -223 Mar 18 j 03:30 -228 May 25 j 14:19 0° m -223 May 02 j 18:10 $\Pi^{\circ}0$ -228 Jul 04 j 21:16 21°Mp40'02 -223 May 26 j 16:34 15°**Ⅲ**26′26 desc. node evening set -228 Jul 18 j 10:11 0∘**⊽** -223 Jun 18 j 10:34 0.00 -228 Aug 31 j 21:43 0°M -228 Oct 11 j 12:59 0°**√** -223 Jul 13 j 03:04 conjunction 15°9544'02 1°06'45 -228 Nov 19 j 07:00 0°ರ -223 Jul 13 j 02:23 1°06'45 minimum elong 15°9542'57 -223 Jul 13 j 08:35 -228 Dec 27 j 11:45 0°≈ max. Earth dist. 15°952'50 2.67350 AU 0°**)**€ -227 Feb 04 j 04:54 -223 Aug 04 j 12:26 $0^{\circ}\Omega$ evening set -227 Feb 15 j 22:58 8°**¥**55'47 morning rise -223 Aug 27 j 02:21 14°**£**25'37 $0^{\circ}\Upsilon$ -227 Mar 16 j 06:32 -223 Sep 20 j 08:10 0° M -223 Nov 05 j 12:53 0∘**ত** -227 Apr 18 j 02:55 23°Y36'08 -0°10'13 0°M conjunction -223 Dec 21 j 02:37 -227 Apr 18 j 03:33 minimum elong 23°Y37'15 0°10'13 -222 Feb 04 j 09:36 0°**⊼** behind sun begin -227 Apr 17 j 08:43 23°**Y**04'05 desc. node -222 Feb 24 j 18:42 13°**∡** 25'59 behind sun end -227 Apr 18 j 22:23 24° Y 10'24 -222 Mar 22 j 07:20 0°ರ -227 Apr 27 j 06:00 0°8 -222 May 11 j 11:40 0°≈ asc. node -227 May 04 j 18:17 5°**8**12'52 retrograde -222 Jul 10 j 07:07 19°**≈**07'13 max. Earth dist. -227 May 22 j 12:12 17°**8**21'40 2.54705 AU min. Earth dist. -222 Aug 06 j 10:29 14°**≈**39'32 0.38444 AU -227 Jun 10 j 08:14 $0^{\circ}\Pi$ opposition -222 Aug 10 j 23:31 13°≈22'45 -6°37'27 morning rise -227 Jun 12 j 11:35 1°**I**I25'15 greatest brilliancy -222 Aug 10 j 01:59 13°≈37'59 -227 Jul 26 j 11:37 0ಂತಾ direct -222 Sep 09 i 18:52 8°≈16'27 -227 Sep 12 j 15:42 $0^{\circ}\Omega$ -222 Nov 15 j 15:14 0°) -227 Nov 02 j 18:45 0° m asc. node -222 Dec 25 i 15:49 22° **)** 47'33 -226 Jan 02 j 03:37 0∘**⊽** -221 Jan 06 j 13:35 $0^{\circ}\Upsilon$ -226 Feb 20 j 16:49 11°**≏**36'43 -221 Feb 23 j 22:24 0°8 retrograde -226 Mar 28 j 22:15 3°**2**53'14 2°30'38 -221 Apr 12 j 21:00 $\Pi^{\circ}0$ opposition -226 Mar 29 j 16:39 -221 May 30 j 19:31 0ಂತಾ greatest brilliancy 3°<u>₽</u>36'23 -1.9m -226 Apr 05 j 14:38 1°**2**04'39 0.54927 AU -221 Jul 04 j 03:27 21°537'12 min. Earth dist. evening set -226 Apr 08 j 16:27 -221 Jul 17 j 08:15 30°R, Mp 0° Ω -226 May 07 j 17:25 24° m 31'50 -221 Aug 05 j 17:38 direct max. Earth dist. 12°**Ω**24'15 2.65580 AU -226 May 22 j 19:53 25° m 59'11 desc. node -226 Jun 07 j 01:20 0∘**⊽** conjunction -221 Aug 18 j 23:35 20°Ω57'20 1°06'03 -226 Aug 04 j 22:19 -221 Aug 19 j 00:17 $0^{\circ}M$ 20°**Q**58'28 1°06'03 minimum elong -221 Sep 01 j 20:57 -226 Sep 17 j 17:43 0°⊀ 0° m -221 Oct 03 j 00:27 -226 Oct 27 j 21:16 0°궁 20° m 36'30 morning rise -226 Dec 06 j 00:11 -221 Oct 16 j 23:17 0°≈ 0∘ଫ -225 Jan 14 j 12:52 0°**)**€ -221 Nov 29 j 12:16 0°M -225 Feb 24 j 09:09 $0^{\circ}\Upsilon$ -220 Jan 10 j 15:19 0°**⊼** 18°**Y**40'31 -225 Mar 22 j 17:13 desc. node -220 Jan 12 j 17:16 1°×30'16 asc. node -225 Apr 08 j 01:18 0° 8 -220 Feb 20 j 16:39 0°₹ -225 Apr 13 j 15:38 3°**8**50'08 -220 Apr 01 j 07:42 0°**≈** evening set -225 May 22 j 14:57 $\Pi^{\circ}0$ -220 May 12 j 19:21 0°**)**€ -220 Jun 27 j 09:10 $0^{\circ}\Upsilon$ -225 Jun 04 j 20:30 8°**II**41'35 0°40'45 -220 Sep 06 j 03:30 25°Y55'57 conjunction retrograde -225 Jun 04 j 19:06 8°**Д**39'17 0°40'45 -220 Oct 05 j 17:03 19°**Y**53'54 0.49757 AU minimum elong min. Earth dist. -225 Jun 20 j 05:08 16°**Y**′59'45 -1°28'20 max. Earth dist. 18°**Д**41'16 2.63691 AU opposition -220 Oct 13 j 14:30 -225 Jul 07 j 18:24 17°**Y**′08'36 -2.2m 0ಂತಾ greatest brilliancy -220 Oct 13 i 04:55 -225 Jul 22 j 22:09 9°9541'33 9°Y52'07 morning rise asc. node -220 Nov 11 j 14:31 9°**Υ**41'51 -225 Aug 23 j 23:13 $0^{\circ}\Omega$ direct -220 Nov 16 j 15:37 -225 Oct 10 j 21:33 0°m -219 Jan 22 j 23:32 0°8 -225 Nov 28 j 20:52 0∘**⊽** -219 Mar 19 j 23:56 $\Pi^{\circ}0$ -224 Jan 19 j 18:32 0°M -219 May 09 j 23:31 0ಂತಾ -224 Mar 28 j 15:51 -219 Jun 27 j 18:40 0°×7 $0^{\circ}\Omega$ desc. node -224 Apr 08 j 18:51 2°×13'39 evening set -219 Aug 09 j 22:57 27°**Ω**37'04 retrograde -224 Apr 21 j 07:04 3°**х¹**09′03 -219 Aug 13 j 14:20 0° m -224 May 14 j 03:19 30°RM max. Earth dist. -219 Aug 31 j 00:32 11° Mp 31'22 2.58546 AU -224 May 23 j 05:34 27°M24'30 -2°41'30 opposition -224 May 23 j 21:48 -219 Sep 26 j 03:50 29° m 13'01 0°37'41 greatest brilliancy 27°M12'15 -2.6m conjunction -224 May 30 j 11:28 0.41978 AU -219 Sep 26 j 05:06 29° m 15'12 0°37'40 min. Earth dist. 25°**™**13'39 minimum elong -224 Jun 26 j 15:08 20° M $_{3}7'07$ -219 Sep 27 j 07:11 0∘**⊽** direct -224 Aug 04 j 18:28 0°⊀ -219 Nov 08 j 22:01 0°M 0°ರ -224 Sep 26 j 10:44 morning rise -219 Nov 14 j 03:35 3°M46'41 -224 Nov 08 j 23:13 0°≈ desc. node -219 Nov 29 j 15:59 15°M05'54 -224 Dec 21 j 04:11 0°**)** -219 Dec 19 j 18:04 0°**∡**7 -223 Feb 01 j 23:40 $0^{\circ}\Upsilon$ -218 Jan 28 j 07:23 0°る -223 Feb 06 j 16:45 3°Y15'02 -218 Mar 08 j 06:17 0°**≈** asc. node

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 19 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -218 Apr 16 j 12:11 0°**)**€ desc. node -213 Jul 22 j 13:00 25° m 56'00 $0^{\circ}\Upsilon$ -218 May 27 j 05:28 -213 Jul 28 j 19:16 0∘**⊽** -218 Jul 10 j 09:57 0°8 -213 Sep 10 j 06:46 0°M -218 Sep 02 j 22:43 $\mathbb{I}^{\circ 0}$ -213 Oct 20 j 13:51 0°×7 -218 Sep 29 j 13:56 8°**I**57'19 -213 Nov 28 j 04:13 0°궁 asc. node -218 Oct 17 j 19:09 11°**Ⅲ**03′25 -213 Dec 13 j 23:01 retrograde greatest brilliancy 12°**る**26'09 1.2m -218 Nov 21 j 15:40 3°**Ⅲ**03'42 min. Earth dist. 0.61159 AU -212 Jan 05 j 05:56 0°≈ -218 Nov 26 j 11:57 opposition 1°**Ⅱ**07'45 2°20'07 evening set -212 Jan 21 j 04:36 12°≈29'24 1°**Ⅱ**18'39 greatest brilliancy -218 Nov 26 j 01:02 -1.6m -212 Feb 12 j 19:25 0°**∀** -218 Nov 29 j 08:26 30°₽₩ -212 Mar 23 j 16:37 $0^{\circ}\Upsilon$ direct -217 Jan 03 j 06:40 22°**8**18'15 -217 Feb 11 j 06:12 $\Pi^{\circ}0$ -212 Mar 26 j 06:14 1°Y53'12 -0°33'45 conjunction -217 Apr 16 j 16:17 0ಂತಾ 1°Y57'18 0°33'43 minimum elong -212 Mar 26 j 08:28 -217 Jun 07 j 20:30 $0^{\circ}\Omega$ -212 May 04 j 11:36 0°8 -217 Jul 25 j 19:18 0° m max. Earth dist. -212 May 08 j 03:49 2°**8**33'59 2.49853 AU -217 Sep 08 j 15:59 0∘**⊽** asc. node -212 May 21 j 11:01 11°845'30 evening set -217 Sep 21 j 00:24 8°**£**35'45 morning rise -212 May 25 j 00:45 14°**8**12'13 19°**≏**06'36 max. Earth dist. -217 Oct 05 j 20:28 2.47081 AU -212 Jun 17 j 11:31 $\Pi^{\circ}0$ desc. node -217 Oct 17 j 15:56 27°**₽**37'43 -212 Aug 02 j 18:34 0ಂತಾ -217 Oct 20 j 22:05 0°M -212 Sep 20 j 17:37 $0^{\circ}\Omega$ -212 Nov 13 j 17:13 0° m conjunction -217 Nov 12 j 20:32 16°ML57'26 -0°16'50 retrograde -211 Feb 02 i 14:08 26° m 01'41 minimum elong -217 Nov 12 j 19:33 16°M55'36 0°16'50 opposition -211 Mar 11 j 23:56 17° m 45'24 3°31'30 -217 Nov 30 i 02:55 0°×7 greatest brilliancy -211 Mar 12 j 20:20 17° m 26'05 -1.7m -216 Jan 07 j 23:04 0°る min. Earth dist. -211 Mar 18 j 12:11 15° m 17'43 0.59315 AU -216 Jan 11 j 14:45 2°**る**51'19 direct -211 Apr 21 j 17:04 7° m 59'23 morning rise -216 Feb 15 j 05:49 0°**≈** desc. node -211 Jun 08 j 11:47 19° m 58'34 -216 Mar 24 j 20:17 0°**₩** -211 Jun 28 j 20:25 0∘**⊽** -216 May 03 j 16:19 $0^{\circ}\Upsilon$ -211 Aug 16 j 12:18 0°M -216 Jun 14 j 17:38 0°8 -211 Sep 27 j 10:45 0°×7 -216 Jul 30 j 10:52 $\mathbb{I}^{\circ 0}$ -211 Nov 05 j 19:38 0°ಕ -216 Aug 16 j 12:17 10°**Ⅲ**17'16 -211 Dec 14 j 10:36 0°≈ asc. node -216 Sep 22 j 07:58 -210 Jan 22 j 13:08 0°**∀** 0°9 $0^{\circ}\Upsilon$ -216 Nov 21 j 05:10 16°957'05 -210 Mar 04 j 00:06 retrograde 14°**Y**41'24 -216 Dec 30 j 05:55 -210 Mar 24 j 11:29 min. Earth dist. 7°934'00 0.67053 AU evening set 25°**Y**11'39 -216 Dec 31 j 07:30 -210 Apr 08 j 09:54 opposition 7°508'19 4°10'22 asc. node -216 Dec 31 j 02:25 -210 Apr 15 j 07:51 0° 8 greatest brilliancy 7°513'26 -1.3m -215 Jan 20 j 19:23 30°RⅡ direct -215 Feb 09 j 12:15 27°**Ⅲ**28'56 conjunction -210 May 18 j 16:30 22°**8**42'12 0°23'35 -215 Mar 02 j 21:02 0ಂತಾ minimum elong -210 May 18 j 15:25 22°840'24 0°23'35 -215 May 14 j 00:31 $0^{\circ}\Omega$ -210 May 29 j 15:21 $\Pi^{\circ}0$ -215 Jul 04 j 09:56 0° m max. Earth dist. -210 Jun 09 j 20:40 7°**Ⅲ**24'25 2.60772 AU -215 Aug 19 j 06:51 0∘**ত** -210 Jul 08 j 00:20 $25^{\circ}\Pi42'34$ morning rise -215 Sep 03 j 14:51 10°**≏**36'47 -210 Jul 14 j 16:39 0ಂತಾ desc. node -215 Sep 30 j 16:22 0°M -210 Aug 31 j 02:57 $0^{\circ}\Omega$ -215 Nov 09 j 16:10 -210 Oct 18 j 21:20 0°×7 0° m -210 Dec 09 i 03:19 -215 Nov 12 j 18:40 2°×23'06 0∘**⊽** evening set -209 Feb 07 i 17:44 -215 Dec 18 j 04:53 0°정 0°M retrograde -209 Mar 26 i 13:31 10°M43'05 -214 Jan 15 j 18:03 22°る31'54 -1°04'28 desc. node -209 Apr 26 j 11:09 5°ML05'27 conjunction -214 Jan 15 j 17:01 22°る29'52 1°04'29 -209 Apr 29 j 10:35 4°ML06'32 -0°09'56 minimum elong opposition -214 Jan 25 j 05:13 0°**≈** -210 Aug 28 j 15:53 28°527'42 1.8m greatest brilliancy 1°M17'58 0.46960 AU max. Earth dist. -214 Feb 06 j 21:47 9°≈58'35 2.37384 AU min. Earth dist. -209 May 07 j 21:31 -214 Mar 04 j 15:27 0°**)**€ -209 May 12 j 01:57 30°R<u>Ω</u> -214 Mar 26 j 15:21 16°**)** 47′03 direct morning rise -209 Jun 05 j 12:42 26°**₽**01'33 $0^{\circ}\Upsilon$ -214 Apr 13 j 07:49 -209 Jun 30 j 10:20 0°M -214 May 24 j 23:18 0° 8 -209 Aug 28 j 14:50 0°×7 -214 Jul 04 j 10:59 27°**8**32'25 -209 Oct 11 j 02:25 0°정 asc. node -214 Jul 08 j 04:43 $0^{\circ}\Pi$ -209 Nov 20 j 21:34 0°≈ -214 Aug 24 j 21:24 0ಂತಾ -209 Dec 31 j 14:14 0°) -214 Oct 18 j 11:22 $0^{\circ}\Omega$ $0^{\circ}\Upsilon$ -208 Feb 11 j 08:59 9°Y04'59 retrograde -214 Dec 26 j 03:05 20°**£**21'32 -208 Feb 24 j 07:59 asc. node opposition -213 Feb 03 j 11:38 11°**Ω**06'47 4°36'19 -208 Mar 25 j 18:56 0°8 greatest brilliancy -213 Feb 03 j 21:25 10°**Ω**57'08 -1.3m -208 May 09 j 21:27 Π °0 min. Earth dist. -213 Feb 06 j 07:03 10°**Ω**00′15 0.66446 AU evening set -208 May 10 j 12:57 0°**I**I25′20 -213 Mar 16 j 18:39 1°**Ω**05'40 -208 Jun 25 j 07:01 0ಂತಾ direct

-213 Jun 09 j 05:47

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 20 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -208 Jun 28 i 09:43 1°559'32 0°59'49 retrograde -203 Oct 02 j 19:19 25°821'59 conjunction -208 Jun 28 j 08:35 1°957'43 0°59'49 -203 Oct 16 j 04:20 24°803'43 minimum elong asc. node max. Earth dist. -208 Jul 04 j 06:52 5°9345'09 2.66571 AU -203 Nov 04 j 17:09 18°**8**03'29 0.57237 AU min. Earth dist. -208 Aug 11 j 08:16 $0^{\circ}\Omega$ -203 Nov 10 j 22:26 1°08'43 15°**8**37'03 opposition -208 Aug 13 j 04:43 1° € 10'43 -203 Nov 10 j 15:24 morning rise greatest brilliancy 15°**8**43'57 -1.8m -208 Sep 27 j 11:18 0° m -203 Dec 17 j 09:46 direct 7°**8**16'56 -208 Nov 13 j 10:30 0∘**⊽** -202 Mar 01 j 04:10 Π $^{\circ}0$ -208 Dec 30 j 12:41 0°M 0ಂತಾ -202 Apr 26 j 02:37 -207 Feb 16 j 18:28 -202 Jun 15 j 13:08 $0^{\circ}\Omega$ 0°**∡** desc. node -207 Mar 13 j 10:03 14°**х** 32′53 -202 Aug 01 j 22:36 0° M -207 Apr 11 j 04:08 0°ಕ evening set -202 Sep 03 j 18:23 21° m 50'11 -207 Jun 09 j 11:56 17°る35'32 -202 Sep 15 j 16:41 retrograde 0°Ω -207 Jul 09 j 17:32 -202 Sep 19 j 20:34 opposition 12°る36'01 -6°30'33 max. Earth dist. 2°**♀**52'35 2.52006 AU greatest brilliancy -207 Jul 09 j 20:22 12°**る**34'08 -2.9m min. Earth dist. -207 Jul 10 j 07:26 12°る26'50 0.37542 AU conjunction -202 Oct 23 j 16:42 26°**£**49'56 0°06'47 direct -207 Aug 08 j 17:50 7°る34'02 minimum elong -202 Oct 23 j 17:02 26°**♀**50'33 0°06'47 -207 Oct 14 j 04:43 0°**≈** behind sun begin -202 Oct 22 j 20:51 26° **△**14'07 -207 Dec 02 j 14:41 0°**)**€ behind sun end -202 Oct 24 j 13:13 27°**♀**27'01 asc. node -206 Jan 11 j 07:24 25°**)** 48′38 -202 Oct 28 j 01:38 0°M -206 Jan 17 j 17:05 $0^{\circ}\Upsilon$ desc. node -202 Nov 03 j 07:52 4°M33'48 -206 Mar 04 j 18:23 0°8 -202 Dec 07 j 11:40 0°×7 -206 Apr 20 j 12:49 $\mathbb{I}^{\circ 0}$ morning rise -202 Dec 17 i 04:38 7°**х¹**22'32 -206 Jun 06 i 20:38 0ಂತಾ -201 Jan 15 i 13:38 0°궁 evening set -206 Jun 19 j 12:39 8°900'55 -201 Feb 23 j 01:26 0°≈ -206 Jul 24 j 03:34 $0^{\circ}\Omega$ -201 Apr 02 j 19:52 0°**∀** -206 Jul 27 j 11:17 2°**Ω**07'11 2.66921 AU -201 May 12 j 20:26 $0^{\circ}\Upsilon$ max. Earth dist. -201 Jun 24 j 08:06 0°8 -206 Aug 04 j 15:30 7°Ω20'48 1°09'31 -201 Aug 10 j 12:54 $0^{\circ}II$ conjunction -206 Aug 04 j 15:41 1°09'31 -201 Sep 03 j 03:57 13°**Ⅱ**02'19 minimum elong 7°**Ω**21′06 asc node -206 Sep 08 j 17:36 -201 Oct 14 j 08:33 0° m 0ಂತಾ -206 Sep 18 j 06:23 -201 Nov 08 j 19:18 6° Tp 13'40 3°9547'14 morning rise retrograde -206 Oct 24 j 03:50 0∘**⊽** -201 Dec 02 j 09:31 30°R II -206 Dec 07 j 07:21 0°M -201 Dec 16 j 07:30 min. Earth dist. 24°**I**53'44 0.65489 AU -201 Dec 18 j 21:29 -205 Jan 19 j 07:05 0° **₹** 23°II51'24 3°38'52 opposition -201 Dec 18 j 12:12 -205 Jan 29 j 09:46 7°**х**¹09′08 24°**Ⅱ**00'44 desc. node greatest brilliancy -1.4m -205 Mar 02 j 11:23 0°궁 -200 Jan 27 j 07:14 14°**Ⅲ**27'54 direct -205 Apr 13 j 15:12 -200 Mar 26 j 10:23 0°≈ 0ಂತಾ -205 May 27 j 23:54 0°**)**€ -200 May 23 j 18:17 $0^{\circ}\Omega$ -205 Jul 26 j 19:34 $0^{\circ}\Upsilon$ -200 Jul 12 j 08:22 0° m retrograde -205 Aug 18 j 04:19 3°Y24'15 -200 Aug 26 j 16:55 0∘**⊽** -205 Sep 09 j 01:56 30°**₹** desc. node -200 Sep 20 j 06:28 17°**2**11'43 min. Earth dist. -205 Sep 14 j 17:24 28°\ 14'18 0.44640 AU -200 Oct 08 j 00:03 0°M -205 Sep 22 j 19:47 25°**升**29'38 -3°36'08 -200 Oct 20 j 21:34 9°M30'32 opposition evening set -205 Sep 21 j 21:06 25°¥48'56 -2.5m max. Earth dist. -200 Nov 14 j 11:46 28°M02'53 2.39467 AU greatest brilliancy -205 Oct 25 j 00:38 19°**)**€03'53 -200 Nov 17 j 01:03 direct 0°×7 -205 Nov 29 i 06:25 26°**₩**00'05 asc. node -205 Dec 09 i 16:50 $0^{\circ}\Upsilon$ -200 Dec 19 i 04:01 24°**\$\sqrt{54**'10} -0°52'11 conjunction 0°8 -200 Dec 19 i 01:23 -204 Feb 06 i 21:32 minimum elong 24°**х** 49'00 0°52'09 -204 Mar 29 i 04:44 $0^{\circ}II$ -200 Dec 25 j 16:02 0°궁 -204 May 17 i 15:01 0ಂತಾ -199 Feb 01 i 18:12 0°**≈** -204 Jul 04 j 19:21 $0^{\circ}\Omega$ -199 Feb 25 j 07:12 18°≈26'33 morning rise -204 Jul 26 j 00:59 13°Ω31'04 -199 Mar 12 j 05:07 0°\ evening set -204 Aug 20 j 07:02 29°**Ω**53'21 2.61928 AU -199 Apr 20 j 21:30 $0^{\circ}\Upsilon$ max. Earth dist. -199 Jun 01 j 14:11 0°8 -204 Aug 20 j 11:05 0° m -199 Jul 16 j 03:06 $\Pi^{\circ}0$ -199 Jul 21 j 03:52 conjunction -204 Sep 10 j 07:08 13° m/47'16 0°52'04 3°**Ⅱ**14'31 asc. node -204 Sep 10 j 08:24 13° Mp 49'22 0°52'02 -199 Sep 03 j 02:03 0ಂತಾ minimum elong -204 Oct 04 j 06:39 0∘**⊽** -199 Nov 04 j 03:25 0° Ω -204 Oct 27 j 02:52 15°**£**48'24 -199 Dec 12 j 07:54 morning rise retrograde 7°**£**33′21 -204 Nov 16 j 04:49 0°M -198 Jan 16 j 03:20 30°Rூ -204 Dec 16 j 09:10 21°M50'45 -198 Jan 21 j 02:23 desc. node opposition 28°902'43 4°35'42 -204 Dec 27 j 10:44 0°**∡** greatest brilliancy -198 Jan 21 j 06:02 27°**9**59'05 -1.3m -203 Feb 05 j 10:53 0°궁 min. Earth dist. -198 Jan 22 j 09:11 27°**©**32'03 0.67464 AU -203 Mar 16 j 20:34 0°≈ direct -198 Mar 03 j 03:08 18°906'48 -203 Apr 25 j 14:27 0°**)** -198 Apr 22 j 04:07 0 $^{\circ}$ Ω -203 Jun 06 j 04:25 $0^{\circ}\Upsilon$ -198 Jun 19 j 18:36 0° m -203 Jul 22 j 22:52 0°8 -198 Aug 06 j 07:23 0∘**ত**

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:22, page 21

•		he year -400 in	• • •	inting style is the year	401 BCE in historical cou		
desc. node	-198 Aug 08 j 05:24	1° ≏ 17'09		minimum elong	-193 Jun 13 j 23:39	17° Ⅱ 38'48	
	-198 Sep 18 j 05:09	0°M		max. Earth dist.	-193 Jun 25 j 20:35	25° ∏ 18'46	2.64949 AU
	-198 Oct 28 j 07:42	0° ∡			-193 Jul 03 j 03:34	0ಂ ತಾ	
	-198 Dec 05 j 20:17	0° ろ		morning rise	-193 Jul 31 j 03:14	17°952'10	
evening set	-198 Dec 24 j 04:53	14° ට 29'28			-193 Aug 19 j 06:15	$\Omega^{\circ}\Omega$	
	-197 Jan 12 j 20:23	0° ≈			-193 Oct 05 j 20:14	0° m	
	-197 Feb 20 j 07:26	0° ℋ			-193 Nov 22 j 22:30	0∘ 亚	
agnismation	107 Mar. 01 i 00:57	6°) 58'38	0054112		-192 Jan 11 j 12:42 -192 Mar 06 j 17:02	0° M 0° ∡ 7	
conjunction minimum elong	-197 Mar 01 j 09:57 -197 Mar 01 j 12:47	7° ∺ 04'02		desc. node	-192 Mar 30 j 03:18	0 x . 10° x 03'25	
minimum ciong	-197 Apr 01 j 01:35	7 γ(04 02 0° γ	0 3411	retrograde	-192 May 08 j 06:12	10 x 03 23 18° x 09'30	
max. Earth dist.	-197 Apr 01 j 01:53		2.44582 AU	opposition	-192 Jun 08 j 04:57	18 ₹ 0930	-4°17'07
morning rise	-197 May 05 j 03:00	24° Y 38'03	2.44302 AU	greatest brilliancy	-192 Jun 08 j 23:43	12° 🗷 37'43	
morning rise	-197 May 12 j 17:43	0° 8		min. Earth dist.	-192 Jun 13 j 17:09	11° 🖈 17'02	
asc. node	-197 Jun 08 j 02:16	18° 8 10'33		direct	-192 Jul 10 j 21:24	6° ₹ 49'50	0.57700110
use. noue	-197 Jun 25 j 17:25	0° I I			-192 Sep 14 j 23:07	0°ප	
	-197 Aug 11 j 08:04	0°9			-192 Nov 01 j 00:41	0° ≈	
	-197 Sep 30 j 13:35	$0^{\circ}\Omega$			-192 Dec 14 j 16:01	0°) €	
	-197 Nov 29 j 11:47	0° m		asc. node	-191 Jan 27 j 22:17	0° Y 25'43	
retrograde	-196 Jan 18 j 07:48	11° m 44'43			-191 Jan 27 j 07:09	$0^{\circ}\Upsilon$	
opposition	-196 Feb 25 j 15:52	3°Mp01'52	4°09'41		-191 Mar 12 j 23:27	9° 8	
greatest brilliancy	-196 Feb 26 j 09:43	2° Mp 44'36	-1.5m		-191 Apr 27 j 22:12	$\Pi^{\circ}0$	
min. Earth dist.	-196 Mar 01 j 18:28	1°Mp03'24	0.62859 AU	evening set	-191 Jun 04 j 13:26	24° Ⅱ 06'59	
	-196 Mar 04 j 13:24	30° R Ω			-191 Jun 13 j 19:05	0 \circ \odot	
direct	-196 Apr 06 j 20:15	23° Ω 03'46		max. Earth dist.	-191 Jul 18 j 14:20	22° © 08'28	2.67437 AU
	-196 May 12 j 15:39	0° ™					
desc. node	-196 Jun 25 j 03:57	20°Mp21'10		conjunction	-191 Jul 21 j 09:24	23° © 55'12	
	-196 Jul 11 j 16:26	0∘ ত		minimum elong	-191 Jul 21 j 09:02	23° © 54'37	1°08'56
	-196 Aug 26 j 05:53	0°M₊			-191 Jul 30 j 22:18	0 ° Ω	
	-196 Oct 06 j 06:21	0° ∡		morning rise	-191 Sep 04 j 02:12	22° Ω 32'12	
	-196 Nov 14 j 04:59	5°0			-191 Sep 15 j 15:34	0° т у	
	-196 Dec 22 j 12:38	0° ≈			-191 Oct 31 j 12:54	0° ™	
. ,	-195 Jan 30 j 08:03	0°) (5€142			-191 Dec 15 j 12:42	0°M 0°. ₹	
evening set	-195 Mar 01 j 21:25	22° 升 56'43 0° ⋎		J J.	-190 Jan 28 j 19:33	0°×7	
	-195 Mar 11 j 11:50 -195 Apr 22 j 12:54	0° ∀		desc. node	-190 Feb 15 j 02:18 -190 Mar 13 j 22:17	11°矛46'12 0°る	
asc. node	-195 Apr 25 j 01:30	1° 8 45'23			-190 Mar 13 j 22.17 -190 Apr 28 j 11:30	0°≈	
ase. node	193 Apr 23 j 01.30	1 043 23			-190 Jun 23 j 20:02	0° ∀	
conjunction	-195 Apr 29 j 19:19	5° 8 02'25	0°02'56	retrograde	-190 Jul 25 j 12:16	6° ∺ 27'11	
minimum elong	-195 Apr 29 j 19:11	5° 8 02'10	0°02'56	min. Earth dist.	-190 Aug 21 j 03:48		0.40138 AU
behind sun begin	-195 Apr 28 j 20:11	4° 8 22'28		opposition	-190 Aug 27 j 16:22	29° ≈ 57'16	
behind sun end	-195 Apr 30 j 18:11	5° 8 41'50		greatest brilliancy	-190 Aug 26 j 12:40	0°) 18'14	
max. Earth dist.	-195 May 29 j 17:41	25° 8 23'08	2.57065 AU	· ·	-190 Aug 27 j 12:45	30°R ≈	
	-195 Jun 05 j 15:45	$\Pi^{\circ}0$		direct	-190 Sep 27 j 00:33	24°≈27'23	
morning rise	-195 Jun 22 j 03:18	10° Ⅱ 52'29			-190 Oct 27 j 19:21	0°) €	
	-195 Jul 21 j 17:01	0 \circ \odot		asc. node	-190 Dec 15 j 21:55	22°) ₹35′21	
	-195 Sep 07 j 12:44	$0^{\circ}\Omega$			-190 Dec 29 j 04:42	$0^{\circ}\Upsilon$	
	-195 Oct 27 j 13:33	0° ™			-189 Feb 17 j 17:42	9° 8	
	-195 Dec 22 j 00:30	0∘ ⊽			-189 Apr 07 j 14:08	Π °0	
retrograde	-194 Mar 04 j 02:00	21° ≏ 45'17			-189 May 25 j 23:19	0 \circ \odot	
opposition	-194 Apr 08 j 13:05	14° £ 23′19	1°42'12	evening set	-189 Jul 12 j 11:34	29° © 51'13	
greatest brilliancy	-194 Apr 09 j 03:00	14° ≙ 10'53	-2.0m		-189 Jul 12 j 17:06	0 \circ Ω	
min. Earth dist.	-194 Apr 16 j 17:01	11° ≏ 28'58	0.52167 AU	max. Earth dist.	-189 Aug 11 j 06:41	18° &2 56'14	2.64503 AU
desc. node	-194 May 13 j 02:59	5° £ 31'28				0	
direct	-194 May 17 j 13:24	5° Ω 23'19		conjunction	-189 Aug 27 j 08:05	29° £ 22'44	
	-194 Jul 26 j 21:23	0°M		minimum elong	-189 Aug 27 j 09:03	29° Ω 24'19	1°02'07
	-194 Sep 10 j 22:32	0°る		marnina ris-	-189 Aug 28 j 06:52	0°Mp 20°m⊳41!12	
	-194 Oct 21 j 20:54			morning rise	-189 Oct 11 j 19:39	29° Mp 41'12	
	-194 Nov 30 j 10:23	0° ≫			-189 Oct 12 j 06:43	0° ™ 0° 亚	
	-193 Jan 09 j 06:34 -193 Feb 19 j 09:05	0°π 0°Υ		desc. node	-189 Nov 24 j 14:12 -188 Jan 03 j 00:49	28°M17'38	
asc. node	-193 Feb 19 J 09:05 -193 Mar 13 j 00:24	15° Υ 18'25		uese. Hout	-188 Jan 05 j 00:49 -188 Jan 05 j 08:59	28°11617′38 0° √ 7	
asc. Houc	-193 Mar 13 j 00:24 -193 Apr 03 j 06:02	0° 8			-188 Feb 15 j 00:05	0°₹'	
evening set	-193 Apr 03 j 00:02 -193 Apr 24 j 05:07	14° 8 12'36			-188 Mar 26 j 02:20	0°≈	
5. timing 50t	-193 May 17 j 23:02	0°II			-188 May 05 j 17:44	0° ℋ	
		. —			-188 Jun 18 j 03:29	0° Υ	
		_					
conjunction	-193 Jun 14 j 01:03	17° Ⅱ 41'04	0°48'53		-188 Aug 12 j 07:05	9° 8	

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 22 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -188 Sep 16 i 08:21 7°**8**35'56 -183 Dec 13 j 09:27 0°정 retrograde 0.52550 AU 0°**≈** -188 Oct 17 j 03:23 1°**8**04'51 -182 Jan 20 j 09:38 min. Earth dist. -188 Oct 20 j 00:21 30°RY -188 Oct 24 j 12:38 28°Y16'44 -0°24'28 -182 Feb 01 j 01:29 9°≈10'22 -1°04'59 conjunction opposition -188 Oct 24 j 10:07 28°**Y**19′08 -182 Feb 01 j 02:16 9°≈11'53 1°04'59 greatest brilliancy -2.1m minimum elong -188 Nov 01 j 21:34 25°**Y**15′18 -182 Feb 27 j 19:43 0°**)**€ asc. node -182 Mar 20 j 00:41 20° Y 34'12 15°**升**25'58 2.39415 AU direct -188 Nov 28 j 11:14 max. Earth dist. $0^{\circ}\Upsilon$ -187 Jan 10 j 08:07 0°8 -182 Apr 08 j 11:55 $\mathfrak{I}^{\circ 0}$ 1°Y46'51 -187 Mar 13 j 07:34 morning rise -182 Apr 10 j 21:46 -187 May 04 j 14:50 0ಂತಾ -182 May 20 j 02:30 0°8 -187 Jun 22 j 22:16 0° Ω asc. node -182 Jun 24 j 18:55 24°**8**26'22 -182 Jul 03 j 03:55 -187 Aug 08 j 22:50 0° M Π °0 -182 Aug 19 j 07:31 0ಂತಾ evening set -187 Aug 18 j 17:48 6° Mp 26'12max. Earth dist. -187 Sep 06 j 18:52 19°**№**09'37 2.56406 AU -182 Oct 10 j 16:43 $0^{\circ}\Omega$ -187 Sep 22 j 16:27 0∘**⊽** retrograde -181 Jan 03 j 07:16 28°**Ω**16'35 opposition -181 Feb 11 j 08:23 19°**Ω**11'55 4°30'37 conjunction -187 Oct 05 j 16:58 9°**2**01'31 0°27'28 greatest brilliancy -181 Feb 11 j 21:20 18°**Q**59'12 -1.4m minimum elong -187 Oct 05 j 18:02 9°**2**03'24 0°27'27 min. Earth dist. -181 Feb 14 j 23:23 17°**Ω**46'33 0.65452 AU -187 Nov 04 j 05:34 direct -181 Mar 24 j 16:22 9°**Ω**10′02 desc. node -187 Nov 20 j 00:07 11°M29'18 -181 Jun 01 j 03:59 0° m morning rise -187 Nov 25 j 07:15 15°M23'13 desc. node -181 Jul 12 j 21:02 23° m 39'17 -187 Dec 14 j 22:02 0°×7 -181 Jul 22 j 22:13 0∘**⊽** -186 Jan 23 i 06:58 0°る -181 Sep 05 i 00:02 0°M -186 Mar 03 j 01:16 0°≈ -181 Oct 15 j 12:17 0°×7 -186 Apr 11 j 01:45 0°**)**€ -181 Nov 23 j 04:55 0°궁 -186 May 21 j 10:39 $0^{\circ}\Upsilon$ -181 Dec 31 j 08:04 0°≈ -186 Jul 03 j 18:08 0°8 -180 Feb 05 j 14:50 28°≈12'46 evening set -186 Aug 23 j 02:33 $0^{\circ}II$ -180 Feb 07 j 22:46 0°**₩** -186 Sep 19 j 20:06 12°**Ⅲ**29'04 -180 Mar 18 j 21:20 $0^{\circ}\Upsilon$ asc. node -186 Oct 25 j 23:53 19°**Ⅲ**54'13 retrograde -186 Nov 30 j 20:11 min. Earth dist. 11°**Д**34'10 0.62962 AU -180 Apr 08 j 14:33 15°Υ02'33 -0°20'16 conjunction -186 Dec 04 j 21:40 -180 Apr 08 j 15:53 15°Υ04'56 0°20'15 9°**I**56'30 2°53'36 minimum elong opposition -186 Dec 04 j 10:23 10°**I**107'48 -1.5m -180 Apr 29 j 17:30 greatest brilliancy 0° 8 -185 Jan 12 j 07:28 0°II53'30 -180 May 11 j 16:50 8°**8**18'53 direct asc. node -185 Apr 09 j 15:17 0ಂತಾ -180 May 16 j 20:58 11°**8**52'11 2.52624 AU max. Earth dist. -185 Jun 02 j 10:14 $0^{\circ}\Omega$ -180 Jun 04 j 19:19 24°**8**42'38 morning rise -185 Jul 20 j 21:34 -180 Jun 12 j 17:16 0° M Π $^{\circ}0$ -185 Sep 03 j 22:34 0∘**⊽** -180 Jul 28 j 20:43 0ಂತಾ evening set -185 Oct 01 j 14:28 19°**£**25'31 -180 Sep 15 j 06:53 $0^{\circ}\Omega$ desc. node -185 Oct 07 j 22:59 23°**♀**59'34 -180 Nov 06 j 08:28 0° m -185 Oct 16 j 05:39 0° M -179 Jan 12 j 05:02 0∘**⊽** max. Earth dist. -185 Oct 17 j 10:44 0°M53'05 2.44293 AU -179 Feb 12 j 14:37 5°**£**09'47 retrograde -179 Mar 13 j 11:42 30°₽, M) -185 Nov 25 j 10:47 0°**∡**02'23 -0°30'38 -179 Mar 21 j 09:43 27° m 10'32 2°59'15 conjunction opposition -185 Nov 25 j 08:57 29°M58'54 0°30'37 greatest brilliancy -179 Mar 22 j 05:33 26° Mp 52'04 -1.8m minimum elong -185 Nov 25 i 09:31 0°**∡**¹ -179 Mar 28 i 14:05 min. Earth dist. 24° m 30'17 0.56997 AU -184 Jan 03 i 03:59 0°る -179 Apr 30 j 16:02 direct 17° m 36'17 -184 Jan 27 j 10:02 19°**ට**02'10 -179 May 29 j 20:05 morning rise desc. node 22° m 36'18 -184 Feb 10 i 08:55 0°≈ -179 Jun 17 j 20:01 0∘**⊽** -184 Mar 19 j 21:22 0°**₩** -179 Aug 09 j 15:39 0°M $0^{\circ}\Upsilon$ -184 Apr 28 j 14:50 -179 Sep 21 j 13:19 0°×7 -184 Jun 09 j 10:59 0°8 -179 Oct 31 j 07:54 0°궁 -184 Jul 24 j 13:29 $\mathbb{I}^{\circ 0}$ -179 Dec 09 j 04:45 0°≈ -184 Aug 06 j 19:06 0°**∀** asc. node 8°**Ⅱ**14′28 -178 Jan 17 j 11:38 -184 Sep 13 j 20:08 $0^{\circ}\Upsilon$ 0ಂತಾ -178 Feb 27 j 02:21 21°Y43'31 retrograde -184 Nov 28 j 21:27 24°9548'33 -178 Mar 29 j 15:31 asc. node 26°**Y**19′02 -183 Jan 07 j 21:59 15°905'10 4°23'11 -178 Apr 05 j 05:41 opposition evening set greatest brilliancy -183 Jan 07 j 19:45 -178 Apr 10 j 13:19 0°8 15°907'24 -1.3m -183 Jan 07 j 16:08 0.67476 AU -178 May 24 j 22:55 $0^{\circ}\Pi$ min. Earth dist. 15°**©**11'02 -183 Feb 17 j 11:10 5°9518'47 direct -183 May 06 j 16:15 $0^{\circ}\Omega$ -178 May 28 j 16:35 $2^{\circ}\Pi 28'12 \quad 0^{\circ}34'01$ conjunction -183 Jun 28 j 20:44 0° m minimum elong -178 May 28 j 15:15 2°**Ⅲ**25'59 0°34'00 -183 Aug 14 j 05:58 0∘**⊽** max. Earth dist. -178 Jun 15 j 23:31 14°**Д**27'45 2.62492 AU desc. node -183 Aug 24 j 21:21 7°**£**17'22 -178 Jul 10 j 00:23 0 \circ \odot -183 Sep 25 j 19:50 0°M morning rise -178 Jul 16 j 16:01 4°9515'43 -183 Nov 04 j 20:43 0°×7 -178 Aug 26 j 06:50 $0^{\circ}\Omega$ -183 Nov 27 j 02:06 17°**∡**12'32 -178 Oct 13 j 12:32 0° M evening set

Planetary Pheno	omena of Mars from	m -400 thro	ugh 102 (UT).	Astrodienst AG	18-Feb-2025 14:23.	page 23	3
•	nical year style is used: The		. ,				•
,	-178 Dec 02 j 07:30	_0∘ ⊽		,	-172 Mar 23 j 06:52	0°II	
	-177 Jan 25 j 17:54	0°M			-172 May 12 j 12:57	0° ©	
retrograde	-177 Apr 10 j 02:02	23°M20'01			-172 Jun 30 j 01:52	$0^{\circ}\Omega$	
desc. node	-177 Apr 16 j 18:38	23°ML03'26		evening set	-172 Aug 03 j 12:49	21° Ω 58'43	
opposition	-177 May 12 j 21:38	17°ML12'05	-1°31'52		-172 Aug 15 j 20:30	0° ™	
greatest brilliancy	-177 May 13 j 08:20	17°ML03'36	-2.5m	max. Earth dist.	-172 Aug 26 j 09:26	6° Mp 56'11	2.60147 AU
min. Earth dist.	-177 May 20 j 22:46	14°MJ39'42	0.44118 AU				
direct	-177 Jun 17 j 14:49	9°M47'46		conjunction	-172 Sep 19 j 05:58	22° m 54'42	0°44'14
	-177 Aug 17 j 10:04	0° ∡ ¹		minimum elong	-172 Sep 19 j 07:16	22° M 56'55	0°44'12
	-177 Oct 03 j 08:34	0°₹			-172 Sep 29 j 15:30	0∘ ⊽	
	-177 Nov 14 j 09:38	0° ≈		morning rise	-172 Nov 06 j 03:44	26° ≙ 13'32	
	-177 Dec 25 j 19:21	0° ∀			-172 Nov 11 j 10:30	0°M₊	
	-176 Feb 06 j 01:31	0° Y		desc. node	-172 Dec 06 j 15:49	18° ™ 18'07	
asc. node	-176 Feb 14 j 15:07	5° Y 57'40			-172 Dec 22 j 11:35	0° ∡	
	-176 Mar 20 j 19:38	0°B			-171 Jan 31 j 05:57	0°ರ	
	-176 May 05 j 03:33	$\Pi^{\circ 0}$			-171 Mar 11 j 09:29	0° ≈	
evening set	-176 May 19 j 21:48	9° ∏ 35′02			-171 Apr 19 j 19:32	0° ∀	
	-176 Jun 20 j 16:03	0ංම			-171 May 30 j 19:01	0° Υ	
					-171 Jul 14 j 17:10	0°8	
conjunction	-176 Jul 06 j 22:06	10°522'33	1°04'19		-171 Sep 12 j 23:18	0°Ⅱ 4°Ⅲ 4515 0	
minimum elong	-176 Jul 06 j 21:12	10°521'08	1°04'20	asc. node	-171 Oct 06 j 11:57	4° ∏ 47'50	
max. Earth dist.	-176 Jul 09 j 16:26		2.67109 AU	retrograde	-171 Oct 11 j 12:19	4° ∏ 58'14	
	-176 Aug 06 j 17:24	0°N			-171 Nov 07 j 05:36	30°R ∀	0.50504.477
morning rise	-176 Aug 21 j 04:34	9° Ω 13'20		min. Earth dist.	-171 Nov 14 j 12:29		0.59504 AU
	-176 Sep 22 j 16:14	0° m)		opposition	-171 Nov 20 j 00:17	25° 8 05'53	1°52'31
	-176 Nov 08 j 04:50	0∘ 亚		greatest brilliancy	-171 Nov 19 j 14:17	25° 8 15'48	-1.7m
	-176 Dec 24 j 09:11	0°M₊		direct	-171 Dec 27 j 05:23	16° 8 28'51	
1 1-	-175 Feb 08 j 17:45	0° ₹ 149. ₹ 36/50			-170 Feb 19 j 03:15	0°© 0°∏	
desc. node	-175 Mar 03 j 18:13	14° ₹ 36'50			-170 Apr 20 j 00:45	0°Ω	
	-175 Mar 28 j 20:07	0°る 0°≈			-170 Jun 10 j 10:39	0° m y	
retrograde	-175 May 27 j 11:18 -175 Jun 27 j 09:05	0 ≈ 5°≈47'00			-170 Jul 28 j 04:35 -170 Sep 11 j 01:20	0∘ ت اللا	
min. Earth dist.	-175 Jul 27 j 09:05	3 ≈47 00 1°≈09'44	0.37644 AU	evening set	-170 Sep 11 j 01:20 -170 Sep 13 j 09:45	0 == 1° £ 37'21	
opposition	-175 Jul 28 j 02:29	0°≈30'52		max. Earth dist.	-170 Sep 13 j 09:43 -170 Sep 28 j 12:38		2.49323 AU
greatest brilliancy	-175 Jul 28 j 02.29 -175 Jul 27 j 14:52	0 ≈30 32 0°≈38'42		max. Earm dist.	-170 Oct 23 j 09:49	0°M	2.49323 AU
greatest offinancy	-175 Jul 27 j 14.32	0 ≈36 42 30°Rる	-2.9111	desc. node	-170 Oct 23 j 09:49 -170 Oct 24 j 15:33	0°M54'07	
direct	-175 Aug 26 j 17:35	25° පි 34'33		desc. node	-170 Oct 24 j 15.55	0 1103407	
uncet	-175 Sep 22 j 12:37	0°≈		conjunction	-170 Nov 03 j 19:55	8°M21'49	-0°06'35
	-175 Nov 23 j 07:30	0° ₩		minimum elong	-170 Nov 03 j 19:34	8°M21'11	0°06'34
asc. node	-174 Jan 01 j 14:08	24°) €05'08		behind sun begin	-170 Nov 02 j 22:27	7°M42'17	0 005.
	-174 Jan 10 j 23:01	0°Υ		behind sun end	-170 Nov 04 j 16:42	9°M00'08	
	-174 Feb 27 j 03:19	0°8			-170 Dec 02 j 17:41	0° ∡ 7	
	-174 Apr 15 j 11:44	0°II		morning rise	-170 Dec 31 j 02:47	21° ₹ 46'51	
	-174 Jun 02 j 03:01	0°©		Č	-169 Jan 10 j 16:42	0° ට	
evening set	-174 Jun 27 j 22:55	16°917'44			-169 Feb 18 j 01:39	0° ≈	
-	-174 Jul 19 j 13:15	$0^{\circ}\Omega$			-169 Mar 28 j 17:13	0° ∀	
max. Earth dist.	-174 Aug 01 j 20:30	8° Ω 29'54	2.66279 AU		-169 May 07 j 13:52	$0^{\circ}\mathbf{Y}$	
					-169 Jun 18 j 17:27	0°8	
conjunction	-174 Aug 12 j 20:45	15° Ω 34'13	1°07'59		-169 Aug 03 j 20:26	$\Pi^{\circ}0$	
minimum elong	-174 Aug 12 j 21:15	15° Ω 35′01	1°07'59	asc. node	-169 Aug 24 j 10:47	12° Ⅱ 04'37	
	-174 Sep 04 j 02:54	O° m y			-169 Sep 29 j 06:08	0 \circ \odot	
morning rise	-174 Sep 26 j 15:20	14° m 48'18		retrograde	-169 Nov 16 j 12:51	11° © 51'58	
	-174 Oct 19 j 09:20	0∘ ত		min. Earth dist.	-169 Dec 24 j 21:31	2° 5 341'57	0.66483 AU
	-174 Dec 02 j 05:12	0°M,		opposition	-169 Dec 26 j 15:50	1° © 59'25	3°58'48
	-173 Jan 13 j 17:25	0° ∡ ¹		greatest brilliancy	-169 Dec 26 j 08:36	2° 5 06'41	-1.3m
desc. node	-173 Jan 19 j 17:11	4° ҂ 17'36			-169 Dec 31 j 16:05	30°RⅡ	
	-173 Feb 24 j 05:47	0°₹		direct	-168 Feb 04 j 12:47	22° Ⅱ 26'47	
	-173 Apr 06 j 10:25	0° ≈			-168 Mar 14 j 10:22	$0 {\circ} {f \widehat{e}}$	
	-173 May 18 j 19:25	0° ∀			-168 May 17 j 12:45	0 ° Ω	
	-173 Jul 06 j 04:20	0° Υ			-168 Jul 07 j 03:44	0° m/y	
retrograde	-173 Aug 29 j 21:54	17° Y 04'32			-168 Aug 21 j 20:41	0∘ ⊽	
min. Earth dist.	-173 Sep 27 j 12:35	11° Y 25'45	0.47440 AU	desc. node	-168 Sep 10 j 14:34	13° Ω 43'10	
opposition	-173 Oct 05 j 15:01	8°Υ32'26			-168 Oct 03 j 06:33	0°M 220m 20152	
greatest brilliancy	-173 Oct 04 j 23:38	8° Y 46'12	-2.3m	evening set	-168 Nov 02 j 11:02	22°M28'52	
direct	-173 Nov 07 j 20:56	1° Y 36'47			-168 Nov 12 j 07:47	0° x̄¹ 26° x̄¹04!22	0.07540 ***
asc. node	-173 Nov 19 j 12:40	2° Y 28'39		max. Earth dist.	-168 Dec 15 j 21:50		2.37542 AU
	-172 Jan 29 j 16:39	0°8			-168 Dec 20 j 21:49	0°ಕ	

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 24 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -167 Jan 03 j 10:02 10°る38'26 -1°00'44 -162 Feb 22 j 19:08 $0^{\circ}M$ conjunction -167 Jan 03 j 07:57 10°る34'21 1°00'43 -162 Mar 16 j 07:29 2°M36'02 minimum elong retrograde -167 Jan 27 j 22:48 0°**≈** -162 Apr 05 j 18:19 30°R<u> </u>Ω -167 Mar 07 j 08:35 0°**)**€ -162 Apr 19 j 23:15 0°42'40 25°**♀**37'59 opposition -167 Mar 14 j 03:00 5°**¥**12′26 -162 Apr 20 j 05:38 morning rise greatest brilliancy 25°**₽**32'28 -2.2m-167 Apr 15 j 23:39 $0^{\circ}\Upsilon$ -162 Apr 28 j 10:42 min. Earth dist. 22°**₽**43'14 0.49320 AU -162 May 03 j 11:00 -167 May 27 j 14:03 0° 8 desc. node 21°**2**07'08 -167 Jul 10 j 20:17 $0^{\circ}II$ -162 May 28 j 00:50 direct 17°**2**05′24 -167 Jul 11 j 09:19 $0^{\circ} \mathbf{I} 21'18$ -162 Jul 14 j 17:04 asc. node $0^{\circ}M$ -167 Aug 27 j 21:38 0ಂತಾ -162 Sep 03 j 07:52 0°**∡**7 -167 Oct 23 j 11:32 0°る $0^{\circ}\Omega$ -162 Oct 15 j 11:01 -167 Dec 20 j 04:57 15°**Ω**21'19 -162 Nov 24 j 14:43 0°≈ retrograde -166 Jan 28 j 18:17 -161 Jan 03 j 20:32 0°**)**€ opposition 5°**Ω**58'56 4°37'23 $0^{\circ}\Upsilon$ greatest brilliancy -166 Jan 29 j 01:17 5°**Ω**51′59 -1.3m -161 Feb 14 j 06:13 11°Y 59'22 min. Earth dist. -166 Jan 30 j 20:57 5°**Ω**08'42 0.67034 AU asc. node -161 Mar 03 j 06:32 -166 Feb 14 j 00:03 30°Rூ -161 Mar 29 j 08:55 0°8 direct -166 Mar 10 j 23:05 25°959'40 evening set -161 May 04 j 06:46 24°**8**05'32 -166 Apr 07 j 03:27 $0^{\circ}\Omega$ -161 May 13 j 05:52 $\Pi^{\circ}0$ 0° M -166 Jun 13 j 04:35 desc. node -166 Jul 29 j 12:52 28° m) 27'26 conjunction -161 Jun 22 j 22:49 26°**Ⅲ**25'33 0°55'43 -166 Jul 31 j 21:03 0∘**⊽** minimum elong -161 Jun 22 j 21:32 26°**Ⅲ**23'29 0°55'43 -166 Sep 13 i 03:48 0°M -161 Jun 28 j 12:24 0ಂತಾ -166 Oct 23 i 09:49 0°×7 max. Earth dist. -161 Jul 01 i 08:42 1°9549'31 2.65949 AU -166 Nov 30 i 23:45 0°る morning rise -161 Aug 08 i 05:59 25°959'08 -165 Jan 08 i 23:45 0°≈45'28 -161 Aug 14 j 13:42 $0^{\circ}\Omega$ evening set -165 Jan 08 j 00:38 0°**≈** -161 Sep 30 j 20:59 0° m -165 Feb 15 j 12:18 0°**)**€ -161 Nov 17 j 06:58 0∘**⊽** -160 Jan 04 j 07:18 0°M -165 Mar 16 j 09:08 21°\\$53'55 -0°43'14 -160 Feb 23 j 16:16 0°×7 conjunction -165 Mar 16 j 11:53 -160 Mar 20 j 09:47 21°\ 59'03 0°43'13 13°**₹**51'56 minimum elong desc. node -165 Mar 27 j 06:53 $0^{\circ}\Upsilon$ -160 Apr 27 j 18:19 0°궁 25°**Y**44'16 2.47522 AU -165 May 01 j 21:52 -160 May 26 j 03:50 4°る39'10 max. Earth dist. retrograde -165 May 07 j 23:09 0° 8 -160 Jun 24 j 03:44 30°R.✓ -165 May 17 j 08:31 -160 Jun 25 j 12:59 6°**8**33'03 29°**х** 37'34 -5°43'14 morning rise opposition -165 May 29 j 09:05 14°**8**49'40 -160 Jun 26 j 01:55 asc. node greatest brilliancy 29°**₹**28'49 -2.9m 28°**₹**48'56 0.38166 AU -165 Jun 20 j 21:10 Π °0 min. Earth dist. -160 Jun 28 j 13:04 -165 Aug 06 j 05:35 0ಂತಾ -160 Jul 26 j 12:46 direct 24°**∡**15′28 -165 Sep 24 j 14:11 $0^{\circ}\Omega$ -160 Aug 25 j 20:12 0°₹ -165 Nov 19 j 07:48 0° m -160 Oct 22 j 12:02 0°≈ retrograde -164 Jan 27 j 10:16 20° Mp 15'05 -160 Dec 07 j 13:42 0°**)**€ opposition -164 Mar 05 j 06:43 11° Mp 46'02 3°49'37 -159 Jan 18 j 05:43 27° ¥ 55'07 asc. node greatest brilliancy -164 Mar 06 j 02:14 11° Mp 27'20 -1.6m -159 Jan 21 j 08:26 $0^{\circ}\Upsilon$ min. Earth dist. -164 Mar 11 j 03:57 9° Mp 31'02 0.61021 AU -159 Mar 07 j 16:37 0° 8 direct -164 Apr 15 j 05:53 1° m 53'23 -159 Apr 23 j 00:45 $\Pi^{\circ}0$ desc. node -164 Jun 15 j 11:44 19° m 59'26 -159 Jun 09 j 03:05 0ಂತಾ -164 Jul 04 i 02:32 0∘**⊽** -159 Jun 13 i 04:35 evening set 2°534'42 -164 Aug 20 j 06:12 0°M -159 Jul 23 i 19:57 max. Earth dist. 28°523'50 2.67254 AU -164 Sep 30 i 19:07 0°**∡**¹ -159 Jul 26 j 08:18 $0^{\circ}\Omega$ -164 Nov 08 i 23:21 0°る -164 Dec 17 i 10:41 0°**≈** -159 Jul 29 i 13:47 2°Ω03'35 1°09'45 conjunction -163 Jan 25 j 09:10 0°**₩** -159 Jul 29 i 13:44 2°Ω03'30 1°09'46 minimum elong -163 Mar 06 j 15:39 $0^{\circ}\Upsilon$ -159 Sep 10 j 23:58 0° m -163 Mar 15 j 00:21 6°**Y**04′02 -159 Sep 12 j 04:03 0° m 45'36 evening set morning rise 28° **Y**17'34 -159 Oct 26 j 15:26 0∘**⊽** asc. node -163 Apr 15 j 08:15 0°M -159 Dec 10 j 03:42 -163 Apr 17 j 19:07 0° 8 0°×7 -158 Jan 22 j 16:13 conjunction -163 May 10 j 19:23 15°**8**47'51 0°15'14 desc. node -158 Feb 05 j 09:28 9°**х** 34′00 -163 May 10 j 18:36 15°**8**46'32 0°15'13 -158 Mar 06 j 13:52 0°정 minimum elong -163 May 10 j 12:39 15°**8**36'27 -158 Apr 18 j 20:22 0°≈ behind sun begin -163 May 11 j 00:33 15°**8**56'37 -158 Jun 04 j 19:59 0°**)**€ behind sun end -163 May 31 j 23:06 -158 Aug 08 j 11:18 22°**)** 39'47 Π °0 retrograde -163 Jun 05 j 09:10 max. Earth dist. 2°**П**55'52 2.59209 AU min. Earth dist. -158 Sep 04 j 08:28 17° **€** 50'02 0.42489 AU -163 Jul 01 j 09:00 morning rise 19°**Ⅲ**57'13 greatest brilliancy -158 Sep 10 j 22:30 15°**)** 42'43 -2.6m -163 Jul 16 j 23:12 0 \circ \odot opposition -158 Sep 12 j 01:05 15°**∺**21'10 -4°34'44 -163 Sep 02 j 12:16 0° Ω direct -158 Oct 13 j 09:19 9°**∺**20'43 -163 Oct 21 j 17:22 0° m -158 Dec 06 j 05:01 23°**)** 57'59

asc. node

-158 Dec 18 j 19:36

 $0^{\circ}\Upsilon$

-163 Dec 13 j 08:37

0∘**ত**

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 25 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -157 Feb 11 i 01:30 0°8 -152 Feb 05 j 12:36 0°≈ -157 Apr 02 j 03:23 $\mathbb{I}^{\circ 0}$ -152 Feb 13 j 02:05 5°≈56'20 morning rise -157 May 21 j 01:52 0ಂತಾ -152 Mar 14 j 23:43 0°**₩** -157 Jul 08 j 01:44 $0^{\circ}\Omega$ $0^{\circ}\Upsilon$ -152 Apr 23 j 15:23 0°8 -157 Jul 20 j 18:58 8°**Ω**04'59 -152 Jun 04 j 07:49 evening set max. Earth dist. -157 Aug 16 j 23:06 -152 Jul 18 j 23:35 $\Pi^{\circ}0$ 25°**Ω**35'26 2.63186 AU -152 Jul 28 j 02:35 5°**Ⅱ**48'57 -157 Aug 23 j 17:12 0° m asc. node -152 Sep 06 j 14:44 0°9 conjunction -157 Sep 04 j 19:16 7° **m** 57'01 0°56'47 -152 Nov 15 j 06:18 0° Ω 0°56'47 minimum elong -157 Sep 04 j 20:26 7° **m** 58'56 retrograde -152 Dec 06 j 14:11 2°**Ω**36'12 -157 Oct 07 j 15:39 0∘**⊽** -152 Dec 26 j 10:29 30°Rூ -157 Oct 20 j 22:28 9°**≏**06'43 -151 Jan 15 j 11:56 morning rise opposition 22°559'19 4°31'49 -157 Nov 19 j 18:39 -151 Jan 15 j 12:50 0° M greatest brilliancy 22°**9**58'25 -1.3m desc. node -157 Dec 24 j 09:08 24°M56'21 min. Earth dist. -151 Jan 16 j 01:52 22°5645'23 0.67598 AU -157 Dec 31 j 06:48 0°**√** direct -151 Feb 25 j 08:20 13°907'18 -156 Feb 09 j 13:24 0°ರ -151 Apr 28 j 01:51 $0^{\circ}\Omega$ -156 Mar 20 j 05:37 0°**≈** -151 Jun 23 j 01:06 0° m -156 Apr 29 j 06:49 0°**)**€ -151 Aug 09 j 03:08 0∘**ত** -156 Jun 10 j 09:47 $0^{\circ}\Upsilon$ desc. node -151 Aug 15 j 05:14 4°**£**07'14 -156 Jul 29 j 04:18 0°8 -151 Sep 20 j 22:40 0°M retrograde -156 Sep 25 j 22:44 18°**8**27'39 -151 Oct 31 j 01:27 0°×7 asc. node -156 Oct 23 i 02:52 13°**8**16'10 -151 Dec 08 j 14:22 0°궁 min. Earth dist. -156 Oct 27 i 22:35 11°**8**29'39 0.55227 AU -151 Dec 12 i 02:41 2°る46'05 evening set opposition -156 Nov 03 j 17:28 8°**8**51'48 0°32'16 -150 Jan 15 j 14:17 0°≈ greatest brilliancy -156 Nov 03 i 13:49 8°**8**55'19 -1.9m -156 Dec 09 j 12:47 0°847'28 -150 Feb 17 j 05:48 25°≈32'33 -1°00'27 direct conjunction -155 Mar 05 j 21:09 $0^{\circ}II$ -150 Feb 17 j 08:06 25°≈37'00 1°00'27 minimum elong -155 Apr 29 j 01:32 0ಂತಾ -150 Feb 23 j 00:16 0°) -155 Jun 18 j 00:24 $0^{\circ}\Omega$ -150 Apr 03 j 16:23 $0^{\circ}\Upsilon$ 3°**Υ**52'41 2.42189 AU -155 Aug 04 j 06:48 0° m -150 Apr 08 j 22:31 max. Earth dist. 15°M 31'12 -155 Aug 27 j 18:15 -150 Apr 25 j 01:32 15°**Y**37'10 evening set morning rise -155 Sep 14 j 01:25 -150 May 15 j 06:25 max. Earth dist. 27° Mp 14'20 2.54058 AU 0° 8 21°**8**11'23 -155 Sep 18 j 01:57 -150 Jun 15 j 00:58 0∘ଫ asc. node -150 Jun 28 j 05:04 Π °0 -155 Oct 15 j 16:51 19° **2**19'38 0°16'00 -150 Aug 13 j 22:52 0ಂಣ conjunction -155 Oct 15 j 17:35 -150 Oct 03 j 20:15 0° Ω minimum elong 19°**2**20′54 0°15′59 -155 Oct 15 j 13:52 -150 Dec 07 j 13:54 behind sun begin 19°**₽**14'19 0° m behind sun end -155 Oct 15 j 21:17 19°**♀**27'29 retrograde -149 Jan 11 j 18:53 6° m 23'07 -155 Oct 30 j 13:47 0° M -149 Feb 12 j 20:56 30°RΩ desc. node -155 Nov 10 j 07:51 7°M49'39 -149 Feb 19 j 11:00 27° **Ω**29'52 4°20'01 opposition -155 Dec 07 j 06:49 27°M50'34 greatest brilliancy -149 Feb 20 j 02:46 27°Ω14'31 -1.4m morning rise -155 Dec 10 j 03:34 0°×7 min. Earth dist. -149 Feb 23 j 21:28 25°**Ω**46'13 0.64141 AU -154 Jan 18 j 08:58 0°る direct -149 Apr 01 j 17:42 17°**Ω**29'22 -154 Feb 25 j 23:33 0°≈ -149 May 22 j 00:33 0° M -154 Apr 05 j 19:57 0°**)**€ desc. node -149 Jul 03 j 04:05 21° m 52'07 -154 May 15 j 22:21 $0^{\circ}\Upsilon$ -149 Jul 16 j 14:15 0∘**⊽** -154 Jun 27 i 15:14 0°8 -149 Aug 30 j 12:14 0°M -154 Aug 14 j 17:00 $0^{\circ}II$ -149 Oct 10 j 08:12 0°×7 -154 Sep 10 j 02:20 13°**Ⅱ**42'42 0°궁 asc. node -149 Nov 18 i 04:24 -154 Nov 02 i 23:33 28°**Ⅲ**25'29 -149 Dec 26 i 09:45 0°≈ retrograde min. Earth dist. -154 Dec 09 j 18:21 19°**Ⅱ**46'46 0.64478 AU -148 Feb 03 j 02:17 0°**₩** -154 Dec 13 j 00:49 18°**Ⅲ**27'58 3°21'52 -148 Feb 20 j 05:16 12° ¥ 59'40 opposition evening set -154 Dec 12 j 14:12 18°**耳**38'37 -1.4m -148 Mar 14 j 02:25 $0^{\circ}\Upsilon$ greatest brilliancy -153 Jan 21 j 00:55 9°**Ⅱ**13'10 direct 0ಂತಾ -153 Apr 01 j 15:09 conjunction -148 Apr 20 j 22:54 27° Y 10'16 -0°06'49 $0^{\circ}\Omega$ -153 May 27 j 18:57 minimum elong -148 Apr 20 j 23:19 27°**Υ**11'01 0°06'48 0° My 26°Y32'19 -153 Jul 15 j 22:12 behind sun begin -148 Apr 20 j 01:16 27°**Y**49'40 -153 Aug 30 j 04:52 0∘**⊽** -148 Apr 21 j 21:22 behind sun end -153 Sep 28 j 06:24 20°**£**23'43 -148 Apr 24 j 23:52 0°B desc. node -153 Oct 11 j 13:08 0°M -148 May 01 j 23:40 4°**8**51'55 asc. node -153 Oct 12 j 19:24 -148 May 24 j 15:57 20°**8**23'11 2.55160 AU evening set 0°M55'16 max. Earth dist. max. Earth dist. -153 Oct 31 j 13:26 14°M47'16 2.41528 AU -148 Jun 07 j 23:49 $0^{\circ}\Pi$ -153 Nov 20 j 16:21 0°**∡** morning rise -148 Jun 14 j 21:33 4°**Ⅲ**35′02 -148 Jul 24 j 00:39 0 \circ \odot conjunction -153 Dec 08 j 23:53 14°**х** 05'53 -0°43'34 -148 Sep 10 j 00:43 0° Ω -153 Dec 08 j 21:24 14°**₹**01'04 0°43'34 -148 Oct 30 j 18:00 0° M minimum elong

-148 Dec 28 j 03:50

0∘**ত**

-153 Dec 29 j 09:15

0°る

					18-Feb-2025 14:23,		6
		-	astronomical cou	inting style is the year	401 BCE in historical cou		
retrograde	-147 Feb 23 j 08:08	14° ≙ 50'14			-142 Feb 21 j 04:28	0° 8	
opposition	-147 Mar 31 j 10:47	7° ≙ 10'32			-142 Apr 10 j 07:02	0°II	
greatest brilliancy	-147 Apr 01 j 04:04			_	-142 May 28 j 07:48	0°€	
min. Earth dist.	-147 Apr 08 j 05:49	4° ≙ 20'34	0.54397 AU	evening set	-142 Jul 06 j 07:34	24°932'05	
	-147 Apr 22 j 12:03	30°R, Mp			-142 Jul 14 j 22:19	0°N	
direct	-147 May 10 j 02:13	27° m 53'09		max. Earth dist.	-142 Aug 07 j 06:46	14° &2 55'57	2.65401 AU
desc. node	-147 May 20 j 02:49	28° m/32'15					
	-147 May 28 j 10:33	0∘ ⊽		conjunction	-142 Aug 21 j 03:03	23° Ω 52'44	1°05'04
	-147 Aug 01 j 17:36	0° M ₊		minimum elong	-142 Aug 21 j 03:50	23° Ω 54'01	1°05'04
	-147 Sep 15 j 04:06	0° ∡ ¹			-142 Aug 30 j 12:35	0° m	
	-147 Oct 25 j 13:02	6°0		morning rise	-142 Oct 05 j 04:58	23° m 37'30	
	-147 Dec 03 j 18:09	0° ≈			-142 Oct 14 j 16:05	0° ™	
	-146 Jan 12 j 07:22	0° ∀			-142 Nov 27 j 05:31	0°M	
	-146 Feb 22 j 03:10	0° Υ			-141 Jan 08 j 08:19	0° ∡ 7	
asc. node	-146 Mar 19 j 23:06	18° Y 20′22		desc. node	-141 Jan 10 j 00:42	1° ≯ 13'03	
	-146 Apr 05 j 18:16	0°8			-141 Feb 18 j 08:26	ව°0	
evening set	-146 Apr 16 j 06:15	7° 8 11'16			-141 Mar 30 j 20:48	0° ≈	
	-146 May 20 j 06:36	Π °0			-141 May 11 j 02:10	0° ∀	
					-141 Jun 24 j 20:16	0° Υ	
conjunction	-146 Jun 07 j 04:14	11° II 45'17	0°43'06	retrograde	-141 Sep 09 j 16:39	29° Y 33'14	0.50001.477
minimum elong	-146 Jun 07 j 02:48	11° Ⅱ 42'58	0°43'05	min. Earth dist.	-141 Oct 09 j 12:32	23° Y 24'58	
max. Earth dist.	-146 Jun 21 j 18:31	21° Ⅱ 14'18	2.63951 AU	opposition	-141 Oct 17 j 07:06	20° Y 31′56	
	-146 Jul 05 j 08:50	0°9		greatest brilliancy	-141 Oct 16 j 23:22	20° Y 39'07	-2.2m
morning rise	-146 Jul 25 j 00:39	12° © 34'24		asc. node	-141 Nov 09 j 19:44	13° Y 55'43	
	-146 Aug 21 j 12:20	$0^{\circ}\Omega$		direct	-141 Nov 20 j 11:18	13° Y 09'18	
	-146 Oct 08 j 08:21	0° m)			-140 Jan 19 j 14:24	0° 8	
	-146 Nov 26 j 01:57	0∘ ⊽			-140 Mar 16 j 23:12	0°II	
	-145 Jan 16 j 06:39	0° M ₊			-140 May 07 j 07:21	0°©	
	-145 Mar 20 j 00:15	0° ∡ ¹			-140 Jun 25 j 06:52	0 ° Ω	
desc. node	-145 Apr 07 j 02:50	5° ∡ 109'16			-140 Aug 11 j 05:43	0° т р	
retrograde	-145 Apr 26 j 00:42	7° ∡ 12'47		evening set	-140 Aug 12 j 03:51	0°m/36'12	
opposition	-145 May 27 j 17:06	1° ∡ ³33'42		max. Earth dist.	-140 Sep 01 j 19:27		2.58177 AU
greatest brilliancy	-145 May 28 j 10:47	1° ∡ 120′27	-2.7m		-140 Sep 25 j 01:08	0∘ ত	
	-145 Jun 01 j 22:00	30°RM₁					
min. Earth dist.	-145 Jun 03 j 15:42	29°M29'14	0.41483 AU	conjunction	-140 Sep 28 j 11:29	2° £ 21'32	
direct	-145 Jun 30 j 19:30	24°M54'59		minimum elong	-140 Sep 28 j 12:43	2° £ 23'39	0°35'02
	-145 Jul 28 j 19:36	0° ∡ ¹			-140 Nov 06 j 17:46	0°M	
	-145 Sep 23 j 23:59	0°⋜		morning rise	-140 Nov 16 j 17:35	7°M13'21	
	-145 Nov 07 j 04:04	0° ≈		desc. node	-140 Nov 26 j 23:54	14°M43'06	
	-145 Dec 19 j 14:42	0° ∀			-140 Dec 17 j 14:47	0° ∡ ¹	
	-144 Jan 31 j 12:30	0° Υ			-139 Jan 26 j 04:10	6°0	
asc. node	-144 Feb 04 j 20:57	2° Y 59'57			-139 Mar 06 j 02:14	0° ≈	
	-144 Mar 15 j 17:09	0°8			-139 Apr 14 j 06:05	0° ∀	
	-144 Apr 30 j 08:02	0°II			-139 May 24 j 19:08	0° Υ	
evening set	-144 May 28 j 23:18	18° Ⅱ 27'25			-139 Jul 07 j 13:43	0° B	
	-144 Jun 16 j 00:35	0ං ව			-139 Aug 29 j 05:16	0°II	
. ,.	144 7 1 17 06 16	100627120	1007120	asc. node	-139 Sep 26 j 18:39	10° Ⅱ 48'38	
conjunction	-144 Jul 15 j 06:16	18°937'39	1°07'28	retrograde	-139 Oct 19 j 21:57	14° Ⅱ 07'11	0.61520.444
minimum elong	-144 Jul 15 j 05:40	18°936'41	1°07'29	min. Earth dist.	-139 Nov 23 j 23:03	6° Ⅱ 04'00	
max. Earth dist.	-144 Jul 14 j 22:57	18° © 26'00	2.67404 AU	opposition	-139 Nov 28 j 16:36	4° Ⅱ 10'43	2°30'13
	-144 Aug 02 j 02:41	0°Ω		greatest brilliancy	-139 Nov 28 j 05:15	4° Ⅱ 22'02	-1.6m
morning rise	-144 Aug 29 j 03:36	17° Ω 16'52		T	-139 Dec 09 j 20:12	30°R 8	
	-144 Sep 17 j 22:31	0° m/y		direct	-138 Jan 05 j 14:34	25° 8 18'39	
	-144 Nov 03 j 02:39	0∘ ⊽			-138 Feb 04 j 04:49	0° Ⅱ	
	-144 Dec 18 j 14:16	0° M ○° 7			-138 Apr 13 j 10:45	0°9	
1 1	-143 Feb 01 j 16:28	0° ⋌ ¹			-138 Jun 05 j 03:54	$\Omega^{\circ}\Omega$	
desc. node	-143 Feb 22 j 02:06	13° ∡ ′33′00			-138 Jul 23 j 08:38	0° Mp	
	-143 Mar 19 j 03:20	5°0			-138 Sep 06 j 09:14	0° ⊽	
. 1	-143 May 06 j 18:52	0° ≈		evening set	-138 Sep 23 j 13:00	11° £ 56'38	2.46574.444
retrograde	-143 Jul 13 j 18:51	23°≈47'06	0.20/00 ***	max. Earth dist.	-138 Oct 08 j 12:28	22° £ 35'49	2.46574 AU
min. Earth dist.	-143 Aug 09 j 18:37	19°≈20'35	0.38680 AU	desc. node	-138 Oct 14 j 22:44	27° £ 14'05	
opposition	-143 Aug 14 j 18:36	17°≈55'00			-138 Oct 18 j 18:07	0° M	
greatest brilliancy	-143 Aug 13 j 19:21	18°≈11'37	-2.8m		120 N 15:15 00	200m 41110	0020110
direct	-143 Sep 13 j 14:09	12° ≈ 45'18		conjunction	-138 Nov 15 j 17:09	20°M41'18	
aga nada	-143 Nov 10 j 20:22	0° ∺ 23° ∺ 05'59		minimum elong	-138 Nov 15 j 15:58	20°M39'05	0°20'18
asc. node	-143 Dec 22 j 19:53 -142 Jan 03 j 09:46	23°π05'59 0° Υ			-138 Nov 28 j 00:46 -137 Jan 05 j 21:44	0°る 2°0	
	-142 Jan 03 J 09.40	v i			-13/ Jan 03 J 21.44	v O	

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 27 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -137 Jan 15 j 01:37 7°る09'53 -132 Aug 13 i 20:30 0°M morning rise -137 Feb 13 j 04:18 0°**≈** -132 Sep 25 j 02:56 0°×7 -137 Mar 23 j 17:32 0°**)**€ -132 Nov 03 j 14:54 0°궁 $0^{\circ}\Upsilon$ -132 Dec 12 j 06:43 0°**≈** -137 May 02 j 11:07 0°8 0°**∀** -137 Jun 13 j 08:18 -131 Jan 20 j 08:46 $0^{\circ}\Upsilon$ -137 Jul 28 j 17:16 $0^{\circ}II$ -131 Mar 01 j 18:26 18°**Y**′21′29 -137 Aug 14 j 17:19 $10^{\circ} \Pi 23'08$ asc. node evening set -131 Mar 27 j 09:20 24°**Y**48'35 -137 Sep 19 j 09:45 0ಂತಾ asc. node -131 Apr 05 j 13:39 -137 Nov 24 j 05:19 retrograde 19°**©**47'56 -131 Apr 13 j 00:33 0° 8 min. Earth dist. -136 Jan 02 j 09:07 10°9522'35 0.67157 AU opposition -136 Jan 03 j 07:44 9°**9**59'53 4°14'31 conjunction -131 May 21 j 05:53 25°**8**59'27 0°26'34 -136 Jan 03 j 03:05 -131 May 21 j 04:43 25°**8**57'30 greatest brilliancy 10°904'33 -1.3m minimum elong 0°26'33 -136 Feb 12 j 14:45 -131 May 27 j 06:24 direct 0°ഇ19'15 $0^{\circ}\Pi$ -136 May 10 j 17:11 $0^{\circ}\Omega$ max. Earth dist. -131 Jun 11 j 17:49 10°**Ⅱ**12'38 2.61134 AU -136 Jul 01 j 18:27 0° m morning rise -131 Jul 10 j 06:33 28°**Ⅱ**43'33 -136 Aug 16 j 22:00 0∘**⊽** -131 Jul 12 j 06:09 0ಂತಾ desc. node -136 Aug 31 j 20:58 10°**£**18'18 -131 Aug 28 j 14:27 $0^{\circ}\Omega$ 0° m -136 Sep 28 j 11:20 0°M -131 Oct 16 j 04:46 -136 Nov 07 j 13:24 0°×7 -131 Dec 05 j 23:32 0∘**ত** evening set -136 Nov 16 j 00:47 6°**х¹**30'57 -130 Feb 02 j 05:49 0°M -136 Dec 16 j 03:14 0°る retrograde -130 Mar 29 j 18:29 14°ML21'01 desc. node -130 Apr 23 j 18:19 10°M32'58 -135 Jan 19 j 10:23 27°る03'56 -1°05'03 opposition -130 May 02 j 10:44 7°ML49'55 -0°29'16 conjunction minimum elong -135 Jan 19 i 09:45 27°る02'41 1°05'03 greatest brilliancy -130 May 02 j 14:29 7°ML46'49 -2.4m -135 Jan 23 j 03:40 0°**≈** min. Earth dist. -130 May 10 j 21:27 5°ML03'10 0.46418 AU -135 Feb 17 j 22:07 20°≈12'36 2.37667 AU -130 Jun 03 j 23:53 30°R**≏** max. Earth dist. -135 Mar 02 j 13:06 0°₩ -130 Jun 08 j 08:30 29°**£**52'07 direct -135 Mar 30 j 04:47 21°**)**€04'30 -130 Jun 12 j 17:30 0°M morning rise -135 Apr 11 j 03:45 $0^{\circ}\Upsilon$ -130 Aug 25 j 04:36 0°×7 -135 May 22 j 16:38 0°8 -130 Oct 08 j 09:52 0°ಕ -135 Jul 01 j 17:12 27°**8**19'50 -130 Nov 18 j 10:53 0°≈ asc. node -135 Jul 05 j 18:09 Π $^{\circ}0$ -130 Dec 29 j 05:44 0°**∀** -135 Aug 22 j 03:36 0ಂತಾ -129 Feb 09 j 00:50 0° 8°Y47'08 -135 Oct 14 j 18:24 0° Ω -129 Feb 21 j 13:30 asc. node -135 Dec 28 j 04:55 23°**Ω**10′53 -129 Mar 24 j 10:16 0° 8 retrograde -134 Feb 05 j 12:07 13°**Ω**57'43 4°34'48 -129 May 08 j 11:59 $0^{\circ}\Pi$ opposition -134 Feb 05 j 22:27 3°**Ⅲ**33'39 greatest brilliancy $13^{\circ} \Omega 47'32 -1.3 \text{m}$ evening set -129 May 13 j 22:41 min. Earth dist. -134 Feb 08 j 10:35 12°**Ω**48'14 0.66285 AU -129 Jun 23 j 20:56 0ಂಣ direct -134 Mar 18 j 19:41 $3^{\circ}\Omega 56'28$ -134 Jun 05 j 21:19 0° m conjunction -129 Jul 01 j 14:58 4°957'38 1°01'13 desc. node -134 Jul 19 j 20:37 25° m 54'16 minimum elong -129 Jul 01 j 13:53 4°955'55 1°01'12 -134 Jul 26 j 05:24 0∘**ত** max. Earth dist. -129 Jul 06 j 20:04 8°517'32 2.66697 AU -134 Sep 07 j 23:39 $0^{\circ}M$ -129 Aug 09 j 21:48 0° Ω -134 Oct 18 j 09:57 0°×7 -129 Aug 16 j 06:45 4°**Ω**03'16 morning rise -134 Nov 26 j 01:39 0°る -129 Sep 26 j 00:14 0° M -133 Jan 03 i 03:28 0∘**⊽** 0°≈ -129 Nov 11 j 21:36 -133 Jan 24 j 19:20 16°≈57'17 -129 Dec 28 i 18:59 0°M evening set 0°**₩** -128 Feb 14 i 12:56 -133 Feb 10 j 16:09 0°×7 $0^{\circ}\Upsilon$ 15°**х** 10′36 -133 Mar 22 j 11:54 desc. node -128 Mar 10 i 17:41 -128 Apr 06 j 04:11 0°궁 -133 Mar 30 i 12:06 5°Υ52'39 -0°30'21 retrograde -128 Jun 13 j 14:31 22°る21'10 conjunction -133 Mar 30 j 14:08 5°Υ56'22 0°30'20 -128 Jul 13 j 18:56 17°る20'27 -6°39'49 minimum elong opposition -133 May 03 j 04:57 0°8 greatest brilliancy -128 Jul 13 j 19:24 17°る20'09 -2.9m -128 Jul 13 j 20:22 max. Earth dist. -133 May 11 j 15:30 5°**8**53'14 2.50423 AU min. Earth dist. 17°る19'31 0.37473 AU -133 May 19 j 15:20 12°**る**21'25 11°**8**24'36 direct -128 Aug 12 j 16:54 asc. node morning rise -133 May 28 j 17:27 17°**8**37'38 -128 Oct 09 j 07:16 0°22 0°**)**€ -133 Jun 16 j 02:32 $0^{\circ}II$ -128 Nov 29 j 10:04 -133 Aug 01 j 06:25 0ಂತಾ -127 Jan 08 j 12:35 25°**)**(48'33 asc. node $0^{\circ}\Upsilon$ -133 Sep 18 j 23:32 $0^{\circ}\Omega$ -127 Jan 14 j 23:16 -133 Nov 11 j 05:08 0° m -127 Mar 02 j 04:39 0°8 -132 Feb 05 j 23:18 29° Mp 03'23 -127 Apr 18 j 00:47 $0^{\circ}\Pi$ retrograde -132 Mar 14 j 06:50 20° Mp 49'46 3°22'56 -127 Jun 04 j 09:36 0ಂತಾ opposition greatest brilliancy -132 Mar 15 j 02:54 20° Mp 30'49 -1.7m evening set -127 Jun 21 j 16:57 10°956'39 min. Earth dist. -132 Mar 20 j 21:45 18° Mp 20'01 0.58916 AU -127 Jul 21 j 17:29 0° Ω direct -132 Apr 23 j 22:06 11° **m** 05'47 max. Earth dist. -127 Jul 29 j 03:55 4°**Ω**44'35 2.66818 AU -132 Jun 05 j 20:05 21°Mp02'16 desc. node -132 Jun 25 j 00:51 0∘**⊽** -127 Aug 06 j 18:30 10°Ω15'03 1°09'11 conjunction

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 28 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. 13°**Ⅱ**28'34 -127 Aug 06 j 18:46 10°**Ω**15'29 1°09'12 asc. node -122 Aug 31 j 09:41 minimum elong -127 Sep 06 j 08:30 0° m -122 Oct 07 j 04:55 0ಂತಾ -127 Sep 20 j 09:32 9° m 10'44 -122 Nov 10 j 18:58 6°939'13 morning rise retrograde -127 Oct 21 j 19:25 0∘**⊽** -122 Dec 12 j 15:54 30°Ŗ**Ⅱ** -127 Dec 04 j 22:54 0°M -122 Dec 18 j 11:17 27°**Д**43'02 0.65713 AU min. Earth dist. -126 Jan 16 j 21:35 0°**√** -122 Dec 20 j 22:12 opposition 26°**Ⅱ**43'52 3°45'02 -126 Jan 26 j 17:11 6°**х** 57′22 -122 Dec 20 j 13:10 desc. node greatest brilliancy 26°**I**52'56 -1.4m -126 Feb 27 j 23:16 0°궁 direct -121 Jan 29 j 11:00 17°**Ⅲ**18'45 -126 Apr 10 j 21:25 0°≈ -121 Mar 22 j 20:42 0°9 -126 May 24 j 14:32 0°**)**€ -121 May 21 j 20:10 0° Ω 0° m $0^{\circ}\Upsilon$ -121 Jul 10 j 20:21 -126 Jul 18 j 00:45 $7^{\circ}\mathbf{\Upsilon}26'02$ -126 Aug 21 j 01:53 -121 Aug 25 j 10:10 0∘Φ retrograde -126 Sep 17 j 19:30 2°Υ10'02 0.45149 AU min. Earth dist. desc. node -121 Sep 18 j 14:29 16°**≏**51'39 -126 Sep 24 j 03:28 30°R₩ -121 Oct 06 j 20:35 0°M opposition -126 Sep 25 j 21:41 29°\ 23'31 -3°17'36 evening set -121 Oct 24 j 16:55 13°M10'02 greatest brilliancy -126 Sep 25 j 00:45 29°**)** 41′35 -2.4m -121 Nov 15 j 23:32 0°**⊼** direct -126 Oct 28 j 07:39 22°¥51'47 max. Earth dist. -121 Nov 20 j 16:31 3°**х** 36′21 2.39016 AU asc. node -126 Nov 26 j 11:07 27°**)** 46′52 -126 Dec 03 j 03:32 $0^{\circ}\Upsilon$ conjunction -121 Dec 23 j 12:31 29°**₹**07'32 -0°54'31 -125 Feb 03 j 14:11 0°8 minimum elong -121 Dec 23 j 09:56 29°**∡**°02'29 0°54'31 -125 Mar 27 j 09:58 $\mathbb{I}^{\circ 0}$ -121 Dec 24 j 15:15 0°궁 -125 May 16 j 01:12 0ಂತಾ -120 Jan 31 j 17:02 0°≈ -125 Jul 03 i 08:28 $0^{\circ}\Omega$ -120 Mar 01 i 02:56 23°≈02'10 morning rise evening set -125 Jul 29 i 04:52 16°**Ω**26′59 -120 Mar 10 i 02:41 0°**∀** -125 Aug 19 j 02:29 0° m -120 Apr 18 j 16:55 $0^{\circ}\Upsilon$ -125 Aug 22 j 21:06 2° Mp 28'28 2.61599 AU -120 May 30 j 06:27 0°8 max. Earth dist. -120 Jul 13 j 14:28 $\Pi^{\circ}0$ -125 Sep 13 j 12:57 16° m 50'16 0° 50'01 -120 Jul 18 j 07:56 3°**Ⅲ**03'57 conjunction asc. node -125 Sep 13 j 14:14 16° m 52'24 0°50'00 -120 Aug 31 j 02:42 0ಂತಾ minimum elong -125 Oct 02 j 23:54 -120 Oct 29 j 15:21 0∘**⊽** $0^{\circ}\Omega$ -125 Oct 30 j 13:23 19°**♀**05'27 -120 Dec 14 j 08:39 10°**Ω**22'03 morning rise retrograde -125 Nov 14 j 23:22 -119 Jan 23 j 02:28 0°M 0°**Ω**52'39 4°36'20 opposition -119 Jan 23 j 06:42 -125 Dec 14 j 15:43 21°M27'44 desc. node greatest brilliancy 0°Ω48'26 -1.3m -125 Dec 26 j 05:58 -119 Jan 24 j 12:24 0°⊀ min. Earth dist. 0°**Ω**18'54 0.67424 AU -119 Jan 25 j 07:26 0°₹ -124 Feb 04 j 06:08 30°Rூ -124 Mar 14 j 14:53 -119 Mar 05 j 04:37 20°956'12 0°≈ direct -124 Apr 23 j 06:19 0°**)**€ -119 Apr 16 j 23:43 0 \circ Ω -124 Jun 03 j 14:16 $0^{\circ}\Upsilon$ -119 Jun 16 j 20:21 0° m -124 Jul 19 j 14:00 0° 8 -119 Aug 03 j 20:37 0∘**⊽** retrograde -124 Oct 04 j 23:30 28°**8**32'37 desc. node -119 Aug 05 j 12:57 1°**2**07'10 asc. node -124 Oct 13 j 10:21 28°801'36 -119 Sep 15 j 23:43 $0^{\circ}M$ min. Earth dist. -124 Nov 07 j 02:38 21°810'14 0.57679 AU -119 Oct 26 j 05:12 0°**∡**7 -124 Nov 13 j 05:28 18°**8**45'57 1°21'20 -119 Dec 03 j 19:10 0°정 opposition -124 Nov 12 j 21:21 18°**8**53'56 -1.8m -119 Dec 27 j 16:31 18°**る**51'13 greatest brilliancy evening set -124 Dec 19 j 20:11 10°**8**22'43 -118 Jan 10 j 19:25 direct 0°≈ -123 Feb 25 i 05:00 $0^{\circ}II$ -118 Feb 18 j 05:35 0°) -123 Apr 23 j 05:11 0ಂತಾ -123 Jun 12 i 23:41 $0^{\circ}\Omega$ conjunction -118 Mar 04 j 20:58 11°\(\)12'32 -0°51'46 -123 Jul 30 j 13:37 0° m minimum elong -118 Mar 04 i 23:52 11° ¥ 18'03 0°51'44 -123 Sep 06 j 02:26 24° m 58'11 -118 Mar 29 i 21:57 $0^{\circ}\Upsilon$ evening set -123 Sep 13 j 10:49 0∘**⊽** max. Earth dist. -118 Apr 23 j 09:20 17°**Y**′50′54 2.45128 AU -123 Sep 21 j 23:06 5°**2**53'11 2.51492 AU -118 May 08 j 02:40 28°Y19'39 max Earth dist morning rise -123 Oct 25 j 21:48 -118 May 10 j 11:39 0°8 oom. asc. node -118 Jun 05 j 07:17 17°851'35 conjunction -123 Oct 26 j 07:26 0°M17'27 0°03'26 -118 Jun 23 j 08:16 $\Pi^{\circ}0$ minimum elong -123 Oct 26 j 07:34 0°M17'42 0°03'25 -118 Aug 08 j 18:29 0ಂತಾ behind sun begin -123 Oct 25 j 09:53 29°**♀**38'23 -118 Sep 27 j 14:39 $0^{\circ}\Omega$ -123 Oct 27 j 05:16 -118 Nov 24 j 18:11 0° M behind sun end 0°**IL**57'04 -123 Oct 31 j 15:05 -117 Jan 20 j 13:20 14° Mp 40'02 desc. node 4°**IL**09'43 retrograde -123 Dec 05 j 09:00 -117 Feb 27 j 19:31 4°04'10 0°**∡** opposition 5° **m** 59'24 -123 Dec 20 j 08:06 morning rise 11°**∡**′23′13 greatest brilliancy -117 Feb 28 j 13:32 5° m/42'00 -1.5m -122 Jan 13 j 11:15 0°궁 min. Earth dist. -117 Mar 05 j 01:16 3° m 58'09 0.62542 AU -122 Feb 20 j 22:34 0°≈ -117 Mar 16 j 08:00 30°**Ŗ**€ -122 Mar 31 j 15:39 0°**)** direct -117 Apr 09 j 23:22 26°**Ω**02'18 $0^{\circ}\Upsilon$ 0°Щ -122 May 10 j 13:37 -117 May 06 j 08:34 -122 Jun 21 j 20:19 0° 8 desc. node -117 Jun 23 j 11:40 20° m 45'50 -122 Aug 07 j 12:47 $\Pi^{\circ}0$ -117 Jul 09 j 15:51 0∘**ত**

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 29 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -117 Aug 24 j 18:49 0°M -112 Jul 28 j 12:14 $0^{\circ}\Omega$ -117 Oct 05 j 00:34 0°×7 -112 Sep 06 j 04:03 25°**Ω**25'33 morning rise -117 Nov 13 j 01:28 0°궁 -112 Sep 13 j 05:57 0° m 0°**≈** -112 Oct 29 j 03:01 0∘**⊽** -117 Dec 21 j 09:45 -116 Jan 29 j 04:43 0°**)**€ -112 Dec 13 j 01:18 0°M -116 Mar 05 j 00:32 26°\£51'33 -111 Jan 26 j 04:41 0°×7 evening set $0^{\circ}\Upsilon$ -111 Feb 12 j 08:59 11°**∡**°45'40 -116 Mar 09 j 07:15 desc. node 0° 8 -116 Apr 20 j 06:32 -111 Mar 11 j 00:37 0°ಕ asc. node -116 Apr 22 j 06:42 1°**8**23'55 -111 Apr 24 j 21:32 0°≈ -111 Jun 16 j 06:50 0°**)**€ conjunction -116 May 02 j 12:33 8°**8**29'15 0°06'15 retrograde -111 Jul 28 j 21:50 11°**X**01'17 -116 May 02 j 12:12 -111 Aug 24 j 11:07 minimum elong 8°**8**28'38 0°06'15 min. Earth dist. 6°**¥**27'11 0.40567 AU -116 May 01 j 14:41 7°**8**51'37 behind sun begin greatest brilliancy -111 Aug 30 j 03:50 4°**)** 43′06 -2.7m behind sun end -116 May 03 j 09:43 9°**8**05'37 opposition -111 Aug 31 j 07:27 4°\;\;21'56 -5°30'43 max. Earth dist. -116 May 31 j 17:12 28°**8**16'24 2.57485 AU -111 Sep 17 j 06:14 30°R≈ -116 Jun 03 j 07:21 $0^{\circ}II$ direct -111 Sep 30 j 20:27 28°≈46'16 morning rise -116 Jun 24 j 11:44 13°**Ⅲ**58'29 -111 Oct 14 j 19:14 0°**)**€ -116 Jul 19 j 06:17 0ಂತಾ asc. node -111 Dec 13 j 03:20 23°**¥**16′06 -116 Sep 04 j 22:40 $0^{\circ}\Omega$ -111 Dec 25 j 13:34 $0^{\circ}\Upsilon$ -116 Oct 24 j 16:24 0° M -110 Feb 14 j 20:34 0°8 -116 Dec 18 j 02:48 0∘**⊽** -110 Apr 04 j 22:59 $\Pi^{\circ}0$ retrograde -115 Mar 06 j 19:12 25°**♀**04'16 -110 May 23 j 11:02 0ಂತಾ opposition -115 Apr 11 j 04:05 17°**≏**46'26 1°27'40 -110 Jul 10 i 06:53 $0^{\circ}\Omega$ greatest brilliancy -115 Apr 11 j 16:17 17°**2**35'38 -2.1m -110 Jul 14 i 14:31 2°Ω44'26 evening set min. Earth dist. -115 Apr 19 j 11:05 14°**£**50'47 0.51650 AU max. Earth dist. -110 Aug 12 j 19:43 21°Ω28'13 2.64278 AU desc. node -115 May 10 j 10:53 9°**₽**29'13 -110 Aug 25 j 22:31 O° m -115 May 20 j 01:24 8°**£**51'07 direct -115 Jul 23 j 02:49 0°M -110 Aug 29 j 11:04 2° m 18'21 1°00'45 conjunction -115 Sep 08 j 05:33 0°×7 -110 Aug 29 j 12:05 1°00'45 minimum elong 2° My 20'010°る -110 Oct 09 j 23:55 -115 Oct 19 j 11:12 0∘Ω -115 Nov 28 j 03:17 -110 Oct 14 j 00:59 0°22 2°**£**45'00 morning rise -114 Jan 07 j 00:03 0°**)**€ -110 Nov 22 j 08:19 0°M $0^{\circ}\Upsilon$ -110 Dec 31 j 08:59 27°M59'22 -114 Feb 17 j 02:04 desc. node 14°**Y**58'01 -114 Mar 10 j 05:15 -109 Jan 03 j 03:10 0°**∡**7 asc. node -114 Mar 31 j 21:59 0°8 -109 Feb 12 j 17:23 0°ಕ -114 Apr 26 j 17:36 17°**8**28'56 -109 Mar 24 j 17:23 evening set 0°≈ -114 May 15 j 13:54 -109 May 04 j 04:01 0°**)**€ Π °0 -109 Jun 16 j 01:39 $0^{\circ}\Upsilon$ conjunction -114 Jun 16 j 07:53 20°II43'14 0°50'55 -109 Aug 07 j 08:58 0°8 minimum elong -114 Jun 16 j 06:31 20°II41'00 0°50'54 retrograde -109 Sep 19 j 18:18 11°**8**07'00 max. Earth dist. -114 Jun 27 j 09:02 27°**Ц**50'46 2.65158 AU min. Earth dist. -109 Oct 20 j 19:35 4°830'51 0.53083 AU -114 Jun 30 j 17:28 0ಂತಾ -109 Oct 28 j 02:52 1°843'46 -0°08'32 opposition 20°5946'07 -114 Aug 02 j 05:59 -106 Jul 14 j 11:00 27°**Ω**27'19 1.6m morning rise greatest brilliancy -114 Aug 16 j 19:07 $0^{\circ}\Omega$ -109 Oct 31 j 01:30 0°**8**37'16 asc. node -114 Oct 03 j 07:17 0° M -109 Nov 01 j 18:10 30°₹**Ƴ** -114 Nov 20 i 05:21 -109 Dec 02 i 05:07 23°Y56'56 0∘**⊽** direct -113 Jan 08 i 08:54 0°M -108 Jan 04 i 15:23 0°8 -113 Mar 02 j 22:37 0°×7 -108 Mar 10 i 01:04 $0^{\circ}II$ desc. node -113 Mar 28 j 09:30 11°**∡**¹47'53 -108 May 01 i 20:56 0ಂತಾ retrograde -113 May 13 i 01:49 22°**₹**31'43 -108 Jun 20 j 09:49 $0^{\circ}\Omega$ -113 Jun 12 j 22:58 17°**∡**16'58 -4°38'25 -108 Aug 06 j 13:56 opposition O° m -113 Jun 13 j 17:20 17°**₹**'03'59 -2.8m -108 Aug 20 j 23:09 9° m 27'21 greatest brilliancy evening set min. Earth dist. -113 Jun 18 j 00:18 15°**₹**'51'36 0.39380 AU max. Earth dist. -108 Sep 08 j 14:58 21° m 57'05 2.55994 AU -113 Jul 15 j 06:13 direct 11°×23'40 -108 Sep 20 j 10:18 0∘**⊽** 0°る -113 Sep 11 j 08:11 -113 Oct 29 j 22:28 0°≈ conjunction -108 Oct 08 j 01:55 12°**£**14'28 0°24'33 -113 Dec 12 j 23:47 0°**)**€ minimum elong -108 Oct 08 j 02:55 12°**△**16'13 0°24'32 $0^{\circ}\Upsilon$ -112 Jan 25 j 18:42 -108 Nov 02 j 01:28 0°M -112 Jan 26 j 04:01 0° **Y**15'50 -108 Nov 17 j 07:41 asc. node desc. node 11°M05'36 -112 Mar 10 j 12:17 0°8 -108 Nov 28 j 00:30 18°M58'33 morning rise -112 Apr 25 j 11:24 $0^{\circ}\Pi$ -108 Dec 12 j 19:13 0°**∡**7 -112 Jun 06 j 18:22 27°**Ⅲ**04'40 -107 Jan 21 j 04:37 0°궁 evening set -112 Jun 11 j 08:33 0ಂತಾ -107 Feb 28 j 22:24 0°≈ max. Earth dist. -112 Jul 20 j 04:54 24°9542'24 2.67426 AU -107 Apr 08 j 21:07 0°**)**€ $0^{\circ}\Upsilon$ -107 May 19 j 02:23 -112 Jul 23 j 11:56 26°5548'16 1°09'16 -107 Jul 01 j 02:09 0°8 conjunction

-112 Jul 23 j 11:39

minimum elong

26°9547'49

1°09'16

-107 Aug 19 j 09:43

 $\Pi^{\circ}0$

•			•		18-Feb-2025 14:23, 101 BCE in historical cou	page 30)
asc. node	-107 Sep 17 j 00:36	13° ∏ 37'03	ustronomicar cour	ting style is the year	-101 Feb 05 j 20:25	0° \	
retrograde	-107 Oct 28 j 01:29	22° ∏ 54'40		evening set	-101 Feb 08 j 23:48	2° ∺ 24'22	
min. Earth dist.	-107 Dec 03 j 02:27	14° ∏ 31'30	0.63281 AU	evening set	-101 Mar 17 j 17:25	0°Υ	
opposition	-107 Dec 07 j 01:08	12° Д 56'40	3°02'22		101 Mai 17 j 17.23	0 1	
greatest brilliancy	-107 Dec 06 j 13:42	13° Ⅱ 08'07		conjunction	-101 Apr 12 j 13:57	18° Ƴ 45'12	-0°16'48
direct	-106 Jan 14 j 14:57	3° ∏ 51′20	1.0111	minimum elong	-101 Apr 12 j 15:03	18° Y 47'10	
	-106 Apr 06 j 02:33	0 ಹ			-101 Apr 28 j 11:29	0°8	
	-106 May 30 j 16:07	$0^{\circ}\Omega$		asc. node	-101 May 09 j 21:48	7° 8 57'26	
	-106 Jul 18 j 10:40	0° m/		max. Earth dist.	-101 May 20 j 03:14		2.53118 AU
	-106 Sep 01 j 15:56	0∘ ⊽		morning rise	-101 Jun 08 j 07:57	27° 8 58'12	
evening set	-106 Oct 04 j 05:14	22° Ω 52'15		Č	-101 Jun 11 j 08:54	$\Pi^{\circ}0$	
desc. node	-106 Oct 05 j 06:04	23° ჲ 36'52			-101 Jul 27 j 09:29	0ංම	
	-106 Oct 14 j 01:48	0° M			-101 Sep 13 j 14:55	$0^{\circ}\Omega$	
max. Earth dist.	-106 Oct 20 j 05:39	4°M30'11	2.43759 AU		-101 Nov 04 j 04:07	0° ™	
	-106 Nov 23 j 07:23	0° ∡			-100 Jan 06 j 06:24	0∘ ⊽	
				retrograde	-100 Feb 16 j 03:26	8° ≙ 18'45	
conjunction	-106 Nov 28 j 11:31	3° х 56′56	-0°33'56	opposition	-100 Mar 23 j 20:11	0° £ 22'55	2°48'37
minimum elong	-106 Nov 28 j 09:31	3° х 53′06	0°33'54		-100 Mar 24 j 20:53	30° ₽,™)	
	-105 Jan 01 j 02:38	0° ප		greatest brilliancy	-100 Mar 24 j 15:16	0° ჲ 05'13	-1.8m
morning rise	-105 Jan 31 j 02:25	23° る 32'50		min. Earth dist.	-100 Mar 31 j 04:02	27° Mp $40'23$	0.56508 AU
	-105 Feb 08 j 07:28	0° ≈		direct	-100 May 03 j 00:11	20° m 51'53	
	-105 Mar 18 j 18:55	0°) €		desc. node	-100 May 27 j 02:29	24° My $22^\prime 28$	
	-105 Apr 27 j 10:20	0° Y			-100 Jun 12 j 11:19	0∘ ⊽	
	-105 Jun 08 j 02:55	0°8			-100 Aug 06 j 16:58	0°M₊	
	-105 Jul 22 j 22:45	Π °0			-100 Sep 19 j 02:05	0° ∡ ⊓	
asc. node	-105 Aug 05 j 00:42	8° Ⅱ 13'32			-100 Oct 29 j 01:10	0°ಕ	
	-105 Sep 11 j 10:45	0			-100 Dec 06 j 23:47	0° ≈	
retrograde	-105 Dec 01 j 21:16	27° © 38'25			-99 Jan 15 j 06:55	0° ∀	
opposition	-104 Jan 10 j 22:02	17° 9 56'01			-99 Feb 24 j 20:54	0° Υ	
greatest brilliancy	-104 Jan 10 j 20:19	17° © 57'43	-1.3m	asc. node	-99 Mar 26 j 21:28	21° Y '23'05	
min. Earth dist.	-104 Jan 10 j 19:21	17° © 58'42	0.67529 AU	evening set	-99 Apr 07 j 22:26	29° Y ′45′59	
direct	-104 Feb 20 j 13:41	8° © 08'39			-99 Apr 08 j 06:32	0∘ R	
	-104 May 03 j 00:18	0° N			-99 May 22 j 14:38	$\Pi^{\circ}0$	
	-104 Jun 26 j 03:49	0° m		. ,.	00.14 21:01.52	50 T 25145	0027125
1 1-	-104 Aug 11 j 21:15	0° ჲ 7° ჲ 01'52		conjunction	-99 May 31 j 01:53	5° Ⅱ 35'45 5° Ⅱ 33'29	
desc. node	-104 Aug 22 j 04:55	0°M		minimum elong max. Earth dist.	-99 May 31 j 00:30		2.62791 AU
	-104 Sep 23 j 15:29	0° 11℃ 0° 17⊓		max. Earm dist.	-99 Jun 17 j 17:12	17 ப 08 22	2.02/91 AU
evening set	-104 Nov 02 j 18:46 -104 Nov 30 j 10:01	0 x · 21° x · 24'58		morning rise	-99 Jul 07 j 14:40 -99 Jul 18 j 19:41	0 ৩ 7°©10'57	
evening set	-104 Nov 30 j 10.01 -104 Dec 11 j 08:29	21 メ ・24 38		morning rise	-99 Aug 23 j 19:30	0°Ω	
	-103 Jan 18 j 08:30	0° ≈			-99 Oct 10 j 22:14	0° m)	
	103 0411 10 1 00.50				-99 Nov 29 j 09:41	0∘ ⊽	
conjunction	-103 Feb 04 j 17:17	13° ≈ 39'18	-1°04'18		-98 Jan 21 j 18:20	0° M ₊	
minimum elong	-103 Feb 04 j 18:27	13° ≈ 41'36		retrograde	-98 Apr 13 j 14:45	27° M 11'29	
Z .	-103 Feb 25 j 17:31	0°) {		desc. node	-98 Apr 14 j 02:10	27° M 11'24	
max. Earth dist.	-103 Mar 24 j 22:24	20°) 44'30	2.39907 AU	opposition	-98 May 16 j 03:47	21°ML09'24	-1°53'27
	-103 Apr 06 j 07:56	0° Y		greatest brilliancy	-98 May 16 j 16:41	20°M59'17	-2.5m
morning rise	-103 Apr 14 j 06:43	5° Y 52'01		min. Earth dist.	-98 May 24 j 00:44	18° M 41'27	0.43568 AU
	-103 May 17 j 20:02	0°8		direct	-98 Jun 20 j 14:50	13°M53'20	
asc. node	-103 Jun 21 j 23:24	24° 8 08'58			-98 Aug 12 j 17:50	0° ∡ ¹	
	-103 Jun 30 j 18:03	Π $^{\circ}0$			-98 Sep 30 j 07:09	0°ಕ	
	-103 Aug 16 j 15:46	0 \circ \odot			-98 Nov 11 j 18:08	0° ≈	
	-103 Oct 07 j 09:11	$0^{\circ}\Omega$			-98 Dec 23 j 07:44	0° ∀	
	-103 Dec 22 j 08:42	0° ™			-97 Feb 03 j 15:26	0° Y	
retrograde	-102 Jan 05 j 10:57	1° m 09'08		asc. node	-97 Feb 11 j 19:44	5° Ƴ 41'20	
	-102 Jan 18 j 19:42	30°RΩ			-97 Mar 19 j 09:53	0° 8	
opposition	-102 Feb 13 j 10:33	22° Ω 06′25			-97 May 03 j 17:39	0°П	
greatest brilliancy	-102 Feb 13 j 23:57	21° Ω 53'17		evening set	-97 May 23 j 05:40	12° ∏ 39′00	
min. Earth dist.	-102 Feb 17 j 04:51	20° Ω 38'00	0.65225 AU		-97 Jun 19 j 05:58	0ං වෙ	
direct	-102 Mar 26 j 18:47	12° Ω 04'58			07.1.1.10:01.20	12001=12	1005120
1 1	-102 May 28 j 05:56	0°M)		conjunction	-97 Jul 10 j 01:38	13°517'19	1°05'20
desc. node	-102 Jul 10 j 03:59	23° Mp 44'04		minimum elong	-97 Jul 10 j 00:49	13°9516'02	1°05'19
	-102 Jul 20 j 05:15	0∘ m		max. Earth dist.	-97 Jul 12 j 03:49		2.67197 AU
	-102 Sep 02 j 15:58	0°M. 0°- ⊿		morning rise	-97 Aug 05 j 07:15	0° Ω 12° Ω 04'21	
	-102 Oct 13 j 08:23 -102 Nov 21 j 02:58	0°⋜		morning rise	-97 Aug 24 j 05:35 -97 Sep 21 j 05:51	12° Ω 04'21 0° m	
	-102 Nov 21 j 02.38 -102 Dec 29 j 06:30	0°≈			-97 Nov 06 j 17:22	0∘ ত المال	
		- · - ·			00 j 17.22		

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 31 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -97 Dec 22 j 18:44 0°M -91 Apr 16 j 22:33 0ಂತಾ -96 Feb 06 j 20:27 0°×7 -91 Jun 07 j 19:03 $0^{\circ}\Omega$ -96 Mar 01 j 01:52 14°**∡** 54'40 -91 Jul 25 j 18:23 0° m desc. node -96 Mar 25 j 05:10 0°る -91 Sep 08 j 18:48 0∘**⊽** -96 May 19 j 07:15 -91 Sep 15 j 20:19 0°≈ evening set 4°**£**52'30 -96 Jul 01 j 01:43 -91 Sep 30 j 19:17 15°**≏**20'59 2.48828 AU retrograde 10°≈32'19 max. Earth dist. -91 Oct 21 j 22:28 -96 Jul 29 j 02:41 min. Earth dist. 5°**≈**58'57 0.37741 AU desc. node 0°M30'00 -96 Jul 31 j 10:54 -91 Oct 21 j 05:57 greatest brilliancy 5°≈20'40 -2.9m 0°M opposition -96 Aug 01 j 01:07 5°≈10'58 -6°51'19 direct -96 Aug 30 j 15:55 0°≈13'39 conjunction -91 Nov 06 j 13:17 11°ML57'03 -0°10'02 -96 Nov 19 j 11:21 0°**∀** minimum elong -91 Nov 06 j 12:43 11°ML56'01 0°10'01 -96 Dec 29 j 18:05 24°**₭**13'50 -91 Nov 05 j 18:19 asc. node behind sun begin 11°M22'00 -95 Jan 07 j 23:43 $0^{\circ}\Upsilon$ -91 Nov 07 j 07:07 behind sun end 12°M30'03 -95 Feb 24 j 10:49 0° 8 -91 Nov 30 j 15:29 0°**⊼** -95 Apr 12 j 22:09 $0^{\circ}II$ morning rise -90 Jan 03 j 09:00 25°**₹**54'42 -95 May 30 j 15:10 0ಂತಾ -90 Jan 08 j 15:11 0°ರ evening set -95 Jun 30 j 02:47 19°9512'58 -90 Feb 15 j 23:50 0°≈ -95 Jul 17 j 02:53 $0^{\circ}\Omega$ -90 Mar 26 j 14:04 0°**)**€ max. Earth dist. -95 Aug 03 j 11:56 11°**Ω**05'49 2.66142 AU -90 May 05 j 08:12 $0^{\circ}\Upsilon$ -90 Jun 16 j 07:18 0°8 conjunction -95 Aug 14 j 23:22 18°**Ω**28'33 1°07'17 -90 Aug 01 j 00:46 $\Pi^{\circ}0$ minimum elong -95 Aug 14 j 23:56 18°**Ω**29'29 1°07'16 -90 Aug 21 i 15:56 12°**I**17'27 asc. node -95 Sep 01 i 17:54 0° m -90 Sep 24 i 17:34 0ಂತಾ -95 Sep 28 i 18:38 17° m 46'56 retrograde -90 Nov 18 j 12:27 14°9543'19 morning rise -90 Dec 27 j 01:15 -95 Oct 17 i 01:15 0∘**⊽** min. Earth dist. 5°530'41 0.66636 AU -95 Nov 29 j 21:24 0°M opposition -90 Dec 28 j 16:21 4°951'27 4°03'50 -94 Jan 11 j 09:00 0°×7 -90 Dec 28 j 09:31 4°958'18 -1.3m greatest brilliancy -94 Jan 17 j 00:41 4°**х** 03′22 -89 Jan 10 j 13:13 desc node 30°R TT -94 Feb 21 j 19:45 0°る -89 Feb 06 j 16:29 25°**Ⅱ**17'16 direct -94 Apr 03 j 20:48 0°≈ -89 Mar 08 j 13:49 0ಂತಾ 0°**₩** -94 May 15 j 21:10 -89 May 15 j 09:31 $0^{\circ}\Omega$ $0^{\circ}\Upsilon$ -94 Jul 01 j 20:49 -89 Jul 05 j 13:31 0° m 20°**Y**51′29 -94 Sep 01 j 13:02 -89 Aug 20 j 12:25 0∘ಹ retrograde -94 Sep 30 j 10:12 15°**Y**06'36 0.47966 AU -89 Sep 08 j 21:00 13°**£**23'33 min. Earth dist. desc. node -94 Oct 08 j 10:51 12°**Y**°13'03 -2°03'01 -89 Oct 02 j 01:54 opposition 0°M -94 Oct 07 j 21:20 12°**Y**25′15 -2.3m -89 Nov 06 j 12:50 26°M25'23 greatest brilliancy evening set -94 Nov 10 j 19:42 5°**Υ**12'12 -89 Nov 11 j 05:22 0°**∡**7 direct -94 Nov 16 j 18:00 5°Y25'54 -89 Dec 19 j 20:32 0°정 asc. node -93 Jan 25 j 21:17 0° 8 max. Earth dist. -89 Dec 28 j 06:36 6°る37'24 2.37354 AU -93 Mar 21 j 08:32 $0^{\circ}II$ -93 May 10 j 21:26 0ಂತಾ conjunction -88 Jan 07 j 23:30 15°る04'00 -1°02'11 -93 Jun 28 j 14:09 $0^{\circ}\Omega$ -88 Jan 07 j 21:43 15°る00'28 1°02'11 minimum elong -93 Aug 06 j 16:55 24°**Ω**56′05 -88 Jan 26 j 21:40 0°**≈** evening set -93 Aug 14 j 11:43 0° m -88 Mar 05 j 06:37 0°) max. Earth dist. -93 Aug 29 j 00:19 9° m/33'27 2.59808 AU -88 Mar 17 j 19:04 9°**)**37'18 morning rise -88 Apr 13 j 19:57 $0^{\circ}\Upsilon$ -93 Sep 22 j 12:05 25° m 59'40 0°41'52 0°8 conjunction -88 May 25 i 07:36 -93 Sep 22 j 13:23 minimum elong 26° m 01'51 0°41'52 asc. node -88 Jul 08 i 15:28 0°II09'38 -93 Sep 28 i 09:02 $\Pi^{\circ}0$ 0∘**⊽** -88 Jul 08 i 09:36 -93 Nov 09 i 15:21 29°**£**34'21 -88 Aug 25 j 02:39 0ಂತಾ morning rise -93 Nov 10 i 05:41 0°M -88 Oct 19 j 09:16 $0^{\circ}\Omega$ desc. node -93 Dec 04 j 23:39 17°ML56'13 -88 Dec 22 j 05:17 18°Ω09'02 retrograde 8°\$\Omega48'01 4°36'46 -93 Dec 21 j 07:34 0°×7 opposition -87 Jan 30 j 18:11 0°る -92 Jan 30 j 01:55 greatest brilliancy -87 Jan 31 j 01:48 8°**Ω**40'29 -1.3m -92 Mar 09 j 04:31 0°& min. Earth dist. -87 Feb 02 j 00:16 7°**Ω**54'29 0.66922 AU -92 Apr 17 j 12:18 0°**₩** -87 Feb 27 j 09:16 30°R∽ $0^{\circ}\Upsilon$ -92 May 28 j 07:01 direct -87 Mar 13 j 00:36 28°9548'20 -92 Jul 11 j 16:48 0° 8 -87 Mar 27 j 09:00 0° Ω -92 Sep 06 j 08:16 $0^{\circ}\Pi$ -87 Jun 10 j 01:27 0° M -92 Oct 03 j 17:26 7°**Ⅱ**25'15 -87 Jul 26 j 20:24 28° m 21'23 asc. node desc. node -87 Jul 29 j 08:44 0∘**⊽** retrograde -92 Oct 13 j 15:23 8°**Ⅲ**05′01 min. Earth dist. -92 Nov 16 j 20:36 0°**I**19'46 0.59914 AU -87 Sep 10 j 21:29 0°M -92 Nov 17 j 16:40 30°R₩ -87 Oct 21 j 06:28 0°**∡**7 0°₹ opposition -92 Nov 22 j 05:49 28°**8**11'39 2°03'43 -87 Nov 28 j 21:42 greatest brilliancy -92 Nov 21 j 19:08 28°**8**22'14 -1.7m -86 Jan 05 j 22:44 0°≈ -92 Dec 29 j 15:08 19°831'41 -86 Jan 12 j 15:21 5°≈15'53 direct evening set

-86 Feb 13 j 09:40

0°**)**€

-91 Feb 14 j 00:24

 $\Pi^{\circ}0$

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 32 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. -86 Mar 19 j 18:20 26°\dagger 01'40 -0°40'08 -81 Apr 19 j 19:56 0°궁 conjunction -86 Mar 19 j 20:58 26°\ 06'34 0°40'06 -81 May 31 j 07:15 9°る16'15 minimum elong retrograde -86 Mar 25 j 02:53 $0^{\circ}\Upsilon$ -81 Jun 30 j 12:31 4°る16'30 -5°59'27 opposition -86 May 04 j 13:45 29°**Υ**11'39 2.48118 AU greatest brilliancy -81 Jun 30 j 23:46 max. Earth dist. 4°る08'59 -2.9m -86 May 05 j 17:15 0° 8 -81 Jul 03 j 00:48 min. Earth dist. 3°る36'15 0.37962 AU -86 May 20 j 04:06 10°804'21 morning rise -81 Jul 18 j 23:31 30°R.✓ -81 Jul 31 j 05:27 14°**8**29'07 29°**х** 00′30 asc. node -86 May 26 j 14:03 direct -86 Jun 18 j 12:48 $0^{\circ}II$ -81 Aug 12 j 11:57 0°궁 0ಂತಾ -81 Oct 19 j 17:23 -86 Aug 03 j 17:41 0°≈ -86 Sep 21 j 19:18 0° Ω -81 Dec 05 j 15:34 0°**)**€ 0° My -86 Nov 15 j 12:53 asc. node -80 Jan 16 j 11:02 27° **X** 49'51 -85 Jan 29 j 16:39 -80 Jan 19 j 17:13 $0^{\circ}\Upsilon$ retrograde 23° Mp 11'47-85 Mar 08 j 11:30 -80 Mar 05 j 04:05 0° 8 opposition 14° m 45'11 3°42'24 greatest brilliancy -85 Mar 09 j 06:58 14° Mp 26'37 -1.6m -80 Apr 20 j 13:15 $0^{\circ}\Pi$ min. Earth dist. -85 Mar 14 j 12:12 12° Mp 27'24 0.60660 AU -80 Jun 06 j 16:08 0ಂತಾ direct -85 Apr 18 j 09:59 4° m 54'02 evening set -80 Jun 15 j 09:32 5°931'58 desc. node -85 Jun 13 j 19:59 20° m 41'54 -80 Jul 23 j 22:03 $0^{\circ}\Omega$ -85 Jul 01 j 18:03 0∘**ত** max. Earth dist. -80 Jul 25 j 12:38 1°Ω01'29 2.67197 AU -85 Aug 18 j 17:25 $0^{\circ}M$ -85 Sep 29 j 12:52 0°×7 conjunction -80 Jul 31 j 16:50 4°**Ω**57'57 1°09'42 -85 Nov 07 j 19:42 0°궁 minimum elong -80 Jul 31 j 16:53 4°**Ω**58'01 1°09'42 -85 Dec 16 j 07:40 0°≈ -80 Sep 08 j 14:29 0° m -84 Jan 24 i 05:33 0°**₩** -80 Sep 14 i 06:53 3° m 41'37 morning rise -84 Mar 04 j 10:41 $0^{\circ}\Upsilon$ -80 Oct 24 i 06:23 0∘**ত** -84 Mar 18 j 01:21 9°Υ51'42 -80 Dec 07 j 18:12 0°M evening set -84 Apr 12 j 12:07 27°Y53'53 -79 Jan 20 j 04:57 0°×7 asc. node -84 Apr 15 j 12:27 0° 8 -79 Feb 02 j 17:02 9°×26'34 desc node -79 Mar 03 j 22:47 0°궁 -84 May 13 j 10:47 19°809'27 0°18'25 -79 Apr 15 j 20:48 0°≈ conjunction -84 May 13 j 09:52 -79 May 31 j 17:18 19°807'55 0°18'24 0°**∀** minimum elong -84 May 29 j 14:40 $\mathbb{I}^{\circ 0}$ -79 Aug 11 j 13:00 retrograde 26° ¥ 55'04 -79 Sep 07 j 13:23 22°**₭**00'12 0.42959 AU -84 Jun 07 j 08:57 5°**II**48'32 2.59612 AU max. Earth dist. min. Earth dist. 22°**Ⅲ**59'47 -84 Jul 03 j 16:09 -79 Sep 14 j 06:48 greatest brilliancy 19°**)** 48′24 -2.6m morning rise -79 Sep 15 j 08:07 -84 Jul 14 j 13:00 19°**升**27'34 -4°16'32 0ಂತಾ opposition -79 Oct 16 j 22:13 13°**¥**21′03 -84 Aug 30 j 23:40 0° Ω direct -84 Oct 18 j 23:42 0° M -79 Dec 03 j 09:33 25°**米**09'50 asc. node $0^{\circ}\Upsilon$ -84 Dec 10 j 00:00 0∘**⊽** -79 Dec 14 j 03:58 -78 Feb 07 j 22:45 -83 Feb 13 j 06:26 0° M 0°8 -83 Mar 19 j 07:39 6° ML03'44-78 Mar 30 j 09:48 $\Pi^{\circ}0$ retrograde -83 Apr 20 j 08:47 30°**₽**Ω -78 May 18 j 12:13 0ಂಣ opposition -83 Apr 22 j 18:59 29° 210'45 0°25'31 -78 Jul 05 j 14:35 $0^{\circ}\Omega$ -83 Apr 22 j 22:55 29°**≙**07'24 -78 Jul 22 j 23:08 11°**Ω**01'36 greatest brilliancy -2.2m evening set desc. node -83 Apr 30 j 18:15 26°**♀**27'32 max. Earth dist. -78 Aug 18 j 13:43 28°**Ω**11'44 2.62887 AU min. Earth dist. -83 May 01 j 07:45 26°**△**16'18 0.48778 AU -78 Aug 21 j 08:04 0° M -83 May 30 j 17:14 20°**₽**44'08 direct -83 Jul 09 i 03:58 -78 Sep 07 i 00:26 10° m 58'42 0°55'01 0°M conjunction -78 Sep 07 i 01:38 -83 Aug 31 i 07:41 0°**∡**¹ minimum elong 11° m 00'41 0°55'00 0°る -78 Oct 05 i 08:09 -83 Oct 12 j 22:29 0∘**⊽** -83 Nov 22 j 06:20 0°≈ morning rise -78 Oct 23 i 07:14 12° 2 19'50 -82 Jan 01 j 13:27 0°**₩** -78 Nov 17 i 12:19 0°M $0^{\circ}\Upsilon$ -82 Feb 11 j 23:01 -78 Dec 21 j 15:38 24°MJ35'02 desc node 11°**Y**39'58 -82 Feb 28 j 11:56 -78 Dec 29 j 01:01 0°×7 asc. node -82 Mar 27 j 00:50 0°8 -77 Feb 07 j 07:28 0°궁 -82 May 06 j 17:46 27°817'03 -77 Mar 18 j 22:33 0°28 evening set 0°**∀** -82 May 10 j 20:46 $0^{\circ}II$ -77 Apr 27 j 20:43 $0^{\circ}\Upsilon$ -77 Jun 08 j 16:05 29°**II**25'07 0°57'23 conjunction -82 Jun 25 j 04:45 -77 Jul 26 j 06:41 0°8 -82 Jun 25 j 03:31 29°II23'09 0°57'23 -77 Sep 29 j 04:45 21°**8**45'37 minimum elong retrograde -82 Jun 26 j 02:29 000 -77 Oct 21 j 08:45 18°**8**14'55 asc. node -82 Jul 02 j 22:19 -77 Oct 31 j 09:57 14°**8**43'51 0.55698 AU max. Earth dist. 4°922'36 2.66115 AU min. Earth dist. -77 Nov 07 j 03:01 0°46'12 morning rise -82 Aug 10 j 08:22 28°951'57 opposition 12°**8**07'31 -82 Aug 12 j 03:13 0° Ω greatest brilliancy -77 Nov 06 j 21:54 12°**8**12'29 -1.9m -82 Sep 28 j 09:30 0° m direct -77 Dec 13 j 02:28 3°**8**59'39 -82 Nov 14 j 16:50 0∘**⊽** -76 Mar 02 j 06:03 Π $^{\circ}0$ -81 Jan 01 j 10:32 $0^{\circ}M$ -76 Apr 26 j 05:07 0 \circ ∞ -81 Feb 20 j 01:11 0°×7 -76 Jun 15 j 10:45 $0^{\circ}\Omega$

desc. node

-81 Mar 18 j 17:15

14°**∡**′51'31

-76 Aug 01 j 21:13

0° M

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 33 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. $0^{\circ}\Upsilon$ -76 Aug 30 j 01:18 18° m 37'22 -71 Apr 01 j 12:34 evening set 8°**Υ**23'21 2.42717 AU -76 Sep 15 j 19:13 0∘**⊽** -71 Apr 12 j 21:52 max. Earth dist. -76 Sep 15 j 22:48 0°**ჲ**06'09 morning rise -71 Apr 28 j 05:18 19°**Y**29'14 max. Earth dist. 2.53568 AU 0°8 -71 May 13 j 00:03 -76 Oct 18 j 05:27 -71 Jun 12 j 05:17 20°**8**52'35 conjunction 22°**₽**42'31 0°12'47 asc. node -76 Oct 18 j 06:02 -71 Jun 25 j 19:24 $\Pi^{\circ}0$ minimum elong 22°**₽**43'34 0°12'47 -76 Oct 17 j 16:36 behind sun begin 0ಂತಾ 22°**2**19'34 -71 Aug 11 j 08:16 -76 Oct 18 j 19:29 -71 Sep 30 j 18:24 $0^{\circ}\Omega$ behind sun end 23°**♀**07'34 -71 Dec 01 j 12:17 0° m -76 Oct 28 j 09:03 $0^{\circ}M$ desc. node -76 Nov 07 j 14:31 7°M25'57 retrograde -70 Jan 13 j 22:48 9° m 16'50 -76 Dec 07 j 23:57 0°⊀ opposition -70 Feb 21 j 13:56 0° m 25'39 4°15'37 -76 Dec 10 j 06:35 1°**х³**43′01 -70 Feb 22 j 06:03 morning rise greatest brilliancy 0° My 09'58 -1.4 m -75 Jan 16 j 05:41 0°₹ -70 Feb 22 j 16:19 30°R€ -75 Feb 23 j 19:50 0°**≈** min. Earth dist. -70 Feb 26 j 04:07 28°**Ω**38'43 0.63868 AU -75 Apr 03 j 14:51 0°**)**€ direct -70 Apr 03 j 21:14 20°**Ω**25'48 $0^{\circ}\Upsilon$ -75 May 13 j 14:30 -70 May 16 j 22:59 0° m 0°8 -75 Jun 25 j 01:45 desc. node -70 Jun 30 j 11:21 22° m 06'31 -75 Aug 11 j 11:54 $\Pi^{\circ}0$ -70 Jul 13 j 17:28 0∘**ত** asc. node -75 Sep 07 j 08:18 14°**Ⅲ**23'36 -70 Aug 28 j 02:34 0°M -75 Oct 21 j 09:15 0ಂತಾ -70 Oct 08 j 03:13 0°**∡**7 retrograde -75 Nov 04 j 23:43 1°9520'35 -70 Nov 16 j 01:32 0°궁 -75 Nov 18 j 23:18 30°RⅡ -70 Dec 24 i 07:28 0°≈ min. Earth dist. -75 Dec 11 j 23:13 22°**Д**38'52 0.64751 AU -69 Jan 31 j 23:30 0°**∀** opposition -75 Dec 15 i 02:25 21°**Ⅲ**23′28 3°29'02 -69 Feb 23 i 11:07 17° **\(**02'09 evening set greatest brilliancy -75 Dec 14 j 15:57 21°**Ⅱ**33'57 -1.4m -69 Mar 12 j 22:19 $0^{\circ}\Upsilon$ -74 Jan 23 j 06:06 12°**Ⅱ**06'36 -69 Apr 23 j 17:54 0°8 direct -74 Mar 28 j 14:18 0ಂತಾ -74 May 24 j 22:16 $0^{\circ}\Omega$ -69 Apr 24 j 18:56 0°843'47 -0°03'22 conjunction -74 Jul 13 j 10:19 0° m -69 Apr 24 j 19:10 0°844'10 0°03'23 minimum elong -74 Aug 27 j 21:52 0∘**⊽** -69 Apr 23 j 19:40 0°803'07 behind sun begin -74 Sep 25 j 14:05 20°**♀**02'59 -69 Apr 25 j 18:39 behind sun end 1°**8**25'11 desc. node -74 Oct 09 j 09:16 -69 Apr 30 j 05:04 0°M 4°**8**30'33 asc. node -69 May 27 j 16:06 evening set -74 Oct 15 j 12:20 4° M28'38 max. Earth dist. 23°**8**18'10 2.55615 AU max. Earth dist. -74 Nov 03 j 23:48 -69 Jun 06 j 15:39 18°M 56'38 2.41007 AU $0^{\circ}\Pi$ -74 Nov 18 j 14:19 -69 Jun 18 j 08:06 7°**Ⅱ**45'16 0° **₹** morning rise -69 Jul 22 j 13:54 0ಂತಾ -74 Dec 12 j 05:26 18° **₹**12'27 -0°46'27 -69 Sep 08 j 10:08 0° Ω conjunction minimum elong -74 Dec 12 j 02:53 18°**∡**07'30 0°46'25 -69 Oct 28 j 18:42 0° m -74 Dec 27 j 07:53 0°ರ -69 Dec 24 j 15:55 0∘**⊽** -73 Feb 03 j 10:54 0°**≈** retrograde -68 Feb 26 j 22:32 18°**≗**02'50 -73 Feb 16 j 22:47 10°≈36'07 -68 Apr 02 j 23:08 10° 226'56 2°05'36 morning rise opposition -73 Mar 13 j 20:43 0°**)**€ greatest brilliancy -68 Apr 03 j 15:13 10°**♀**12'22 -1.9m -73 Apr 22 j 10:12 $0^{\circ}\Upsilon$ min. Earth dist. -68 Apr 10 j 21:56 7°**2**34'41 0.53905 AU -73 Jun 02 j 23:23 0° 8 direct -68 May 12 j 12:51 1°**2**13′09 -73 Jul 17 j 09:42 $\mathbb{I}^{\circ 0}$ -68 May 17 j 10:24 1°**£**22'40 desc. node -73 Jul 26 i 06:09 5°**Ⅱ**41′02 -68 Jul 29 i 11:07 0°M asc. node -73 Sep 04 j 11:52 0ಂತಾ 0°**∡**7 -68 Sep 12 i 14:45 0°る -73 Nov 07 i 22:11 $0^{\circ}\Omega$ -68 Oct 23 i 05:15 -73 Dec 09 j 14:04 5°**Ω**25'33 -68 Dec 01 i 12:23 0°≈ retrograde -72 Jan 07 j 14:55 30°R95 -67 Jan 10 i 01:53 0°**₩** -72 Jan 18 j 12:01 25°9549'53 4°33'21 -67 Feb 19 j 21:00 $0^{\circ}\Upsilon$ opposition 17°**Y**58'30 -72 Jan 18 j 13:32 25°9548'22 -1.3m -67 Mar 17 j 03:48 greatest brilliancy asc. node min. Earth dist. -72 Jan 19 j 05:29 25°532'28 0.67608 AU -67 Apr 03 j 10:58 0°8 -67 Apr 18 j 20:46 direct -72 Feb 28 j 10:43 15°957'03 10°832'10 evening set $0^{\circ}\Omega$ -72 Apr 23 j 17:22 -67 May 17 j 22:05 $0^{\circ}\Pi$ -72 Jun 20 j 05:00 0° m -72 Aug 06 j 17:02 0∘**⊽** conjunction -67 Jun 09 j 12:28 14°**I**49'56 0°45'23 -72 Aug 12 j 12:52 3°**£**55'09 -67 Jun 09 j 11:03 14°**Ⅱ**47'37 0°45'22 desc. node minimum elong -72 Sep 18 j 17:36 0°M -67 Jun 23 j 10:47 23°**Ц**52'04 2.64202 AU max. Earth dist. -72 Oct 28 j 23:11 0° ×7 -67 Jul 02 j 23:11 0ಂತಾ 0°₹ -67 Jul 27 j 04:23 15°529'23 -72 Dec 06 j 13:24 morning rise evening set -72 Dec 15 j 13:01 7°**る**04'45 -67 Aug 19 j 01:23 0° Ω -71 Jan 13 j 13:24 0°≈ -67 Oct 05 j 19:04 0° m -67 Nov 23 j 07:17 0∘**⊽** conjunction -71 Feb 20 j 19:39 29°≈54'47 -0°58'40 -66 Jan 12 j 21:09 0°M -71 Feb 20 j 22:11 29°≈59'40 0°58'40 -66 Mar 13 j 00:10 0°**∡**7 minimum elong

-66 Apr 04 j 09:11

desc. node

7°**∡**¹43'46

-71 Feb 20 j 22:21

0°**)**€

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 34 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. $0^{\circ}\Omega$ -66 Apr 29 j 15:21 11°**∡**19'55 -61 Jun 23 j 18:50 retrograde opposition -66 May 31 j 05:25 5° ₹ 45'28 -3°26'25 -61 Aug 09 j 20:52 0° m -66 Jun 01 j 00:05 5°**₹**³1'36 -2.7m -61 Aug 15 j 08:00 3° m 34'20 greatest brilliancy evening set min. Earth dist. -66 Jun 06 j 20:10 3°**尽**48'07 0.41062 AU -61 Sep 04 j 11:23 max. Earth dist. 16° m 55'16 2.57799 AU -66 Jun 23 j 14:15 -61 Sep 23 j 18:51 30°RML 0∘ಹ -66 Jul 03 j 23:04 29°M15'14 direct 0°⊀ -66 Jul 14 j 07:56 conjunction -61 Oct 01 j 18:26 5°**£**29'26 0°32'22 -61 Oct 01 j 19:36 0°ರ minimum elong -66 Sep 20 j 09:41 5°**£**31'27 0°32'22 -66 Nov 04 j 08:42 0°≈ -61 Nov 05 j 13:26 0°M 0°**)**€ 10° ML40'51-66 Dec 17 j 01:43 morning rise -61 Nov 20 j 07:43 $0^{\circ}\Upsilon$ -65 Jan 29 j 01:54 desc. node -61 Nov 25 j 07:30 14°M19'46 2°**Y**46'05 -65 Feb 02 j 02:24 -61 Dec 16 j 11:37 0°**∡**7 asc. node -65 Mar 14 j 07:12 0° 8 -60 Jan 25 j 01:17 0°₹ -65 Apr 28 j 22:03 $0^{\circ}II$ -60 Mar 03 j 22:40 0°≈ evening set -65 Jun 01 j 05:23 21°**Ⅲ**26′55 -60 Apr 12 j 00:29 0°**)**€ $0^{\circ}\Upsilon$ -65 Jun 14 j 14:35 0ಂತಾ -60 May 22 j 09:22 0°8 max. Earth dist. -65 Jul 17 j 10:30 20°554'45 2.67428 AU -60 Jul 04 j 18:43 -60 Aug 24 j 22:12 $\Pi^{\circ}0$ conjunction -65 Jul 18 j 09:09 21°930'48 1°08'06 asc. node -60 Sep 23 j 23:05 12°**Ⅲ**26′52 minimum elong -65 Jul 18 j 08:38 21°930'00 1°08'06 retrograde -60 Oct 22 j 00:09 17°**Ⅱ**10'48 -65 Jul 31 j 16:52 $0^{\circ}\Omega$ min. Earth dist. -60 Nov 26 j 06:20 9°**Д**04'10 0.61897 AU -65 Sep 01 i 05:13 20°Ω08'55 opposition -60 Nov 30 i 20:57 7°**Ⅱ**13'53 2°40'04 morning rise -65 Sep 16 j 12:46 0° m greatest brilliancy -60 Nov 30 i 09:15 7°**Ⅲ**25'32 -1.6m -65 Nov 01 j 16:12 0∘**⊽** -60 Dec 22 i 22:27 30°R8 -65 Dec 17 j 01:35 0°M direct -59 Jan 07 j 23:22 28°819'03 -64 Jan 30 j 23:01 0°×7 -59 Jan 25 j 00:58 $\Pi^{\circ}0$ -64 Feb 20 j 08:35 13°**∡**38'43 -59 Apr 10 j 02:54 0ಂತಾ desc node -64 Mar 15 j 23:58 0°る -59 Jun 02 j 10:48 $0^{\circ}\Omega$ -64 May 02 j 10:21 0°**≈** -59 Jul 20 j 21:55 0° M) -64 Jul 17 j 09:11 28°≈30'25 -59 Sep 04 j 02:27 0∘∙თ retrograde -64 Aug 13 j 03:35 -59 Sep 26 j 01:22 min. Earth dist. 24°≈04'04 0.39003 AU evening set 15° £ 17'19 -64 Aug 18 j 14:34 -59 Oct 10 j 22:28 22°≈29'47 -6°17'46 max. Earth dist. 25° **2**54'48 2.46041 AU opposition -64 Aug 17 j 13:59 greatest brilliancy 22°≈47'31 -2.8m desc. node -59 Oct 12 j 05:51 26°**£**51'24 -64 Sep 17 j 11:39 -59 Oct 16 j 13:59 direct 17°≈15'46 0°M -64 Nov 05 j 08:48 0°**)**€ -64 Dec 20 j 01:43 23°**)**€30'36 -59 Nov 18 j 14:00 24°M26'29 -0°23'44 asc. node conjunction -64 Dec 31 j 03:56 $0^{\circ}\Upsilon$ -59 Nov 18 j 12:37 24°M23'52 0°23'44 minimum elong -63 Feb 18 j 10:16 0° 8 -59 Nov 25 j 22:18 0°**⊼** -63 Apr 07 j 17:07 $0^{\circ}II$ -58 Jan 03 j 19:59 0°ರ -63 May 25 j 20:05 0ಂತಾ morning rise -58 Jan 18 j 13:24 11°る31'17 -63 Jul 08 j 10:01 27°524'10 -58 Feb 11 j 02:27 0°≈ evening set -63 Jul 12 j 12:20 $0^{\circ}\Omega$ -58 Mar 21 j 14:38 0°) max. Earth dist. -63 Aug 08 j 21:51 17°**Ω**30'44 2.65214 AU -58 Apr 30 j 06:00 $0^{\circ}\Upsilon$ -58 Jun 10 j 23:18 0° 8 -63 Aug 23 j 05:05 26° **Ω**45'59 1°03'59 -58 Jul 26 j 00:37 $0^{\circ}\Pi$ conjunction -63 Aug 23 i 05:56 10°**Ⅲ**27'52 minimum elong 26° Ω47'22 1°03'58 asc. node -58 Aug 11 i 23:00 -63 Aug 28 j 04:13 0° m -58 Sep 15 i 16:53 0ಂತಾ -63 Oct 07 i 09:00 -58 Nov 26 i 04:40 morning rise 26° m 37'41 retrograde 22°538'38 -63 Oct 12 j 09:01 0∘**⊽** opposition -57 Jan 05 i 07:51 12°951'34 4°18'16 -63 Nov 24 j 23:04 0°M greatest brilliancy -57 Jan 05 i 03:42 12°955'43 -1.3m -62 Jan 06 j 01:33 0°×7 min. Earth dist. -57 Jan 04 j 12:49 13°9510'38 0.67258 AU desc. node -62 Jan 07 j 08:46 0°**х** 56′30 direct -57 Feb 14 j 17:42 3°909'37 -62 Feb 16 j 00:18 0°궁 -57 May 08 j 07:07 $0^{\circ}\Omega$ -62 Mar 28 j 09:50 0°≈ -57 Jun 30 j 02:35 0° m 0°**₩** -62 May 08 j 09:06 -57 Aug 15 j 13:24 0∘**⊽** $0^{\circ}\Upsilon$ -62 Jun 21 j 10:08 -57 Aug 30 j 04:56 10°**2**02'33 desc. node -62 Aug 21 j 08:40 0° 8 -57 Sep 27 j 06:45 0°M -62 Sep 12 j 04:17 3°**8**12'13 -57 Nov 06 j 11:06 0°**∡**7 retrograde -62 Oct 03 j 05:10 30°R℃ -57 Nov 20 j 04:52 10°**∡**°34'33 evening set -62 Oct 12 j 06:37 26°**Y**58'51 0.50843 AU -57 Dec 15 j 01:51 0°₹ min. Earth dist. 24°Υ05'49 -0°54'13 -56 Jan 22 j 02:11 opposition -62 Oct 20 j 00:05 0°≈ greatest brilliancy -62 Oct 19 j 18:12 24°**Y**11′19 -2.2m asc. node -62 Nov 07 j 00:16 18°**Y**27'32 conjunction -56 Jan 24 j 01:16 1°≈32'50 -1°05'18 direct -62 Nov 23 j 08:22 16°**Ƴ**38'19 minimum elong -56 Jan 24 j 01:04 1°≈32'27 1°05'19 -61 Jan 14 j 18:06 0° 8 -56 Feb 29 j 10:36 0°**)**€ -61 Mar 14 j 20:49 $\Pi^{\circ}0$ max. Earth dist. -56 Feb 29 j 15:00 0°¥08'30 2.37983 AU -61 May 05 j 14:42 0ಂತಾ -56 Apr 02 j 17:32 25°**¥**20′30 morning rise

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 35 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. $0^{\circ}\Upsilon$ -56 Apr 08 j 23:27 -51 Aug 21 j 12:15 0°×7 -56 May 20 j 09:48 0°8 -51 Oct 05 j 14:45 0°궁 -56 Jun 28 j 21:57 27°804'37 -51 Nov 15 j 22:34 0°≈ asc. node -56 Jul 03 j 07:36 $\Pi^{\circ}0$ 0°**₩** -51 Dec 26 j 20:11 -56 Aug 19 j 10:24 $0^{\circ}\Upsilon$ 0000 -50 Feb 06 j 16:13 -50 Feb 18 j 18:37 8°Y29'09 -56 Oct 11 j 05:05 $0^{\circ}\Omega$ asc. node -50 Mar 22 j 01:37 0°8 retrograde -56 Dec 30 j 06:46 26°**Ω**02'00 -55 Feb 07 j 13:15 $\Pi^{\circ}0$ opposition 16°**Ω**50'35 4°32'49 -50 May 06 j 02:54 6° II 39'03 greatest brilliancy -55 Feb 08 j 00:08 $16^{\circ}\Omega 39'53 - 1.3m$ evening set -50 May 16 j 07:17 min. Earth dist. -55 Feb 10 j 15:31 15°**Ω**37'35 0.66116 AU -50 Jun 21 j 11:26 0ಂತಾ direct -55 Mar 20 j 22:00 6°**Ω**49′20 -55 Jun 02 j 08:18 -50 Jul 03 j 18:46 0° M conjunction 7°552'26 1°02'28 -55 Jul 17 j 04:01 25° m 54'34 -50 Jul 03 j 17:46 desc. node minimum elong 7°**9**50'50 1°02'28 -55 Jul 23 j 14:17 0∘**⊽** max. Earth dist. -50 Jul 08 j 07:01 10°5945'17 2.66820 AU -55 Sep 05 j 16:19 0°M -50 Aug 07 j 12:00 $0^{\circ}\Omega$ -55 Oct 16 j 06:27 0°**√** morning rise -50 Aug 18 j 07:46 6° £ 53'17 -55 Nov 23 j 23:53 0°ರ -50 Sep 23 j 13:54 0° m -54 Jan 01 j 01:59 0°≈ -50 Nov 09 j 09:39 0∘**ত** evening set -54 Jan 28 j 06:06 21°≈15'05 -50 Dec 26 j 02:52 0°M -54 Feb 08 j 13:51 0°**)**€ -49 Feb 11 j 10:48 0°**∡**7 -54 Mar 20 j 07:58 $0^{\circ}\Upsilon$ desc. node -49 Mar 09 j 01:42 15°**∡**'41'55 -49 Apr 02 j 17:53 0°궁 -54 Apr 02 j 14:55 9°Y'44'29 -0°26'58 retrograde -49 Jun 18 j 11:30 27°る05'05 conjunction minimum elong -54 Apr 02 j 16:44 9°Y47'48 0°26'56 opposition -49 Jul 18 i 19:10 22°る02'15 -6°46'51 -54 Apr 30 j 22:55 0°8 min. Earth dist. -49 Jul 18 i 06:59 22°る10'20 0.37422 AU -54 May 13 j 22:53 9°**8**03'49 2.50947 AU greatest brilliancy -49 Jul 18 j 16:59 22°る03'41 -2.9m max Earth dist -54 May 16 j 20:19 11°**8**03'46 -49 Aug 17 j 15:22 17°る05'13 direct asc node -54 May 31 j 08:50 20°859'37 -49 Oct 04 j 16:10 0°**≈** morning rise -54 Jun 13 j 18:02 $0^{\circ}II$ -49 Nov 27 j 02:20 0°\ -54 Jul 29 j 18:46 0000 -48 Jan 06 j 16:28 25° ¥48'43 asc. node $0^{\circ}\Upsilon$ -54 Sep 16 j 06:19 $0^{\circ}\Omega$ -48 Jan 13 j 04:06 -54 Nov 07 j 20:03 0° m -48 Feb 28 j 14:12 0°8 0∘**⊽** -48 Apr 15 j 12:27 $\Pi^{\circ}0$ -53 Jan 19 j 22:21 -53 Feb 08 j 09:09 2°**2**07'36 -48 Jun 01 j 22:36 0.00 retrograde -53 Feb 26 j 16:58 -48 Jun 23 j 21:12 13°951'51 30°₽,₩) evening set -53 Mar 17 j 14:55 -48 Jul 19 j 07:40 opposition 23° m 57'12 3°13'49 0 \circ Ω -53 Mar 18 j 10:38 greatest brilliancy 23° Mp 38'41 -1.7m max. Earth dist. -48 Jul 30 j 19:33 7°**Ω**19'52 2.66725 AU min. Earth dist. -53 Mar 24 j 09:57 21° m/24'25 0.58467 AU direct -53 Apr 27 j 05:07 14° Mp 15'40 conjunction -48 Aug 08 j 20:59 13°Ω08'01 1°08'46 desc. node -53 Jun 04 j 02:14 22° m 14'59 minimum elong -48 Aug 08 j 21:21 13°Ω08'37 1°08'46 -53 Jun 21 j 20:06 0∘**⊽** -48 Sep 03 j 23:47 0° m -53 Aug 12 j 02:04 $0^{\circ}M$ -48 Sep 22 j 12:21 12° m 06'47 morning rise -53 Sep 23 j 17:45 0°×7 -48 Oct 19 j 11:23 0∘**ত** -53 Nov 02 j 09:33 0°る -48 Dec 02 j 14:49 0°M -53 Dec 11 j 02:52 0°≈ -47 Jan 14 j 12:29 0°**∡**7 -52 Jan 19 i 04:59 0°**₩** 6°**х** 44′39 desc. node -47 Jan 24 i 00:32 $0^{\circ}\Upsilon$ -52 Feb 28 i 13:41 -47 Feb 25 i 11:50 0°궁 21°Y54'14 evening set -52 Mar 30 j 04:18 -47 Apr 08 i 05:02 0°≈ 24°\bar{`}28'15 0°**∀** asc. node -52 Apr 02 j 20:03 -47 May 21 i 09:16 -52 Apr 10 j 18:16 0°8 -47 Jul 11 i 16:22 $0^{\circ}\Upsilon$ -47 Aug 23 j 19:50 11°**Y**23′22 retrograde -52 May 23 j 16:28 29°810'11 0°29'22 -47 Sep 20 j 19:47 6°Υ01'40 0.45654 AU conjunction min. Earth dist. -52 May 23 j 15:13 29°808'06 0°29'21 opposition -47 Sep 28 j 21:39 3°Y13'20 -2°59'04 minimum elong -47 Sep 28 j 02:24 3°**Y**30′07 -2.4m -52 May 24 j 22:25 $0^{\circ}II$ greatest brilliancy max. Earth dist. -52 Jun 13 j 13:49 12°**Д**57'24 2.61464 AU -47 Oct 08 j 20:55 30°**₹** 0°ಅ -52 Jul 09 j 20:31 direct -47 Oct 31 j 10:48 26° **)** 36'04 -52 Jul 12 j 10:48 29°**)** 48'58 1°9540'01 -47 Nov 23 j 16:15 morning rise asc. node $0^{\circ}\Upsilon$ -52 Aug 26 j 02:51 $0^{\circ}\Omega$ -47 Nov 24 j 09:09 -52 Oct 13 j 13:27 0° M -46 Jan 31 j 03:54 0°8 -52 Dec 02 j 22:24 0∘**⊽** -46 Mar 24 j 14:11 $0^{\circ}\Pi$ 0° M -46 May 13 j 10:52 0ಂತಾ -51 Jan 28 j 10:03 -51 Apr 02 j 02:38 18°M01'21 -46 Jun 30 j 21:24 0° Ω retrograde evening set desc. node -51 Apr 21 j 01:46 15°M46'32 -46 Jul 31 j 08:58 19°**Ω**23'12 opposition -51 May 05 j 12:14 11°MJ36'02 -0°49'00 -46 Aug 16 j 17:58 greatest brilliancy -51 May 05 j 18:24 11° M $_{3}0'59$ -2.4m max. Earth dist. -46 Aug 24 j 11:40 5°Mp04'12 2.61283 AU min. Earth dist. -51 May 13 j 20:50 0.45835 AU 8°M52'07 -51 Jun 11 j 04:18 -46 Sep 15 j 18:08 19° m 52'04 0°47'54 direct 3°M45'34 conjunction

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 36 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. $\Pi^{\circ}0$ -46 Sep 15 j 19:25 19° m 54'13 0°47'53 -41 Jul 12 j 02:34 minimum elong -46 Sep 30 j 17:26 0∘**⊽** -41 Jul 16 j 13:20 2°**I**I54'09 asc. node -46 Nov 01 j 22:53 22°**₽**20'31 -41 Aug 29 j 04:53 0ಂತಾ morning rise -46 Nov 12 j 18:16 -41 Oct 25 j 19:08 $0^{\circ}\Omega$ o°m. -46 Dec 11 j 23:18 21°ML06'06 -41 Dec 17 j 08:32 13°**Ω**10′58 desc. node retrograde -46 Dec 24 j 01:30 0°**√** -40 Jan 26 j 02:27 opposition 3°**Ω**43′00 4°36'41 -45 Feb 02 j 01:28 0°ರ -40 Jan 26 j 07:21 greatest brilliancy 3°**Ω**38′08 -1.3m -45 Mar 13 j 09:09 0°≈ min. Earth dist. -40 Jan 27 j 16:23 3°**Ω**05′22 0.67354 AU 0°**)**€ -40 Feb 04 j 16:52 -45 Apr 21 j 22:05 30°R∽ $0^{\circ}\Upsilon$ -40 Mar 07 j 06:37 -45 Jun 02 j 00:23 direct 23°5645'49 0° 8 -45 Jul 17 j 07:52 -40 Apr 10 j 22:00 0° Ω -45 Sep 21 j 23:58 $\Pi^{\circ}0$ -40 Jun 13 j 19:49 0° M -45 Oct 08 j 04:31 -40 Aug 01 j 08:34 0°**⊽** retrograde 1°**Ⅱ**44′08 asc. node -45 Oct 11 j 16:06 1°**Ⅱ**38'58 desc. node -40 Aug 02 j 19:54 0°**£**58'26 -45 Oct 23 j 18:17 30°R₩ -40 Sep 13 j 17:09 0°M min. Earth dist. -45 Nov 10 j 12:44 24°**8**17'54 0.58124 AU -40 Oct 24 j 01:32 0°**⊼** opposition -45 Nov 16 j 12:57 21°**8**56'09 1°33'42 -40 Dec 01 j 16:48 0°ರ greatest brilliancy -45 Nov 16 j 03:51 22°**8**05'06 -1.8m evening set -40 Dec 31 j 08:24 23°**る**23'44 direct -45 Dec 23 j 08:31 13°**8**29'36 -39 Jan 08 j 17:13 0°≈ -44 Feb 21 j 22:02 $\mathbb{I}^{\circ 0}$ -39 Feb 16 j 02:40 0°) -44 Apr 20 j 05:30 0ಂತಾ -44 Jun 10 j 08:48 $0^{\circ}\Omega$ conjunction -39 Mar 08 i 09:20 15°\(\)30'16 -0°49'05 -44 Jul 28 i 03:34 0° m minimum elong -39 Mar 08 j 12:15 15°\(\)35'47 0°49'04 evening set -44 Sep 08 j 11:13 28° m 08'43-39 Mar 27 i 17:36 $0^{\circ}\Upsilon$ -44 Sep 11 j 04:15 0∘**⊽** max. Earth dist. -39 Apr 26 j 08:33 21°**Υ**'34'37 2.45730 AU -44 Sep 23 j 23:20 8°**2**50'58 2.51018 AU -39 May 08 j 05:15 0°8 max. Earth dist. -44 Oct 23 j 17:45 -39 May 11 j 01:18 $0^{\circ}M$ 1°**8**59'42 morning rise -39 Jun 02 j 12:40 17°**8**33'21 asc. node -44 Oct 28 j 21:50 3°ML45'11 0°00'01 -39 Jun 20 j 23:08 $\Pi^{\circ}0$ conjunction 3°M45'14 0°00'01 -39 Aug 06 j 05:19 -44 Oct 28 j 21:52 0ಂತಾ minimum elong -44 Oct 28 j 04:04 -39 Sep 24 j 17:05 $0^{\circ}\Omega$ behind sun begin 3°M12'52 -44 Oct 29 j 15:40 -39 Nov 20 j 10:29 behind sun end 4°**I**ቤ17'38 0° m -44 Oct 28 j 22:04 -38 Jan 22 j 18:13 3° M45'35 retrograde 17° m 35'28 desc. node -38 Mar 01 j 23:17 -44 Dec 03 j 06:31 8° m 57'12 3°58'12 0° **₹** opposition -38 Mar 02 j 17:32 -44 Dec 23 j 10:07 15°**х** 21′09 8° M 39'39 -1.5m morning rise greatest brilliancy -43 Jan 11 j 09:21 0°₹ -38 Mar 07 j 09:18 6° Mp 52'21 0.62217 AU min. Earth dist. -43 Feb 18 j 20:15 -38 Mar 30 j 21:36 0°≈ 30°R€ -43 Mar 29 j 11:55 0°**)**€ direct -38 Apr 12 j 03:21 29°**Ω**01'04 -43 May 08 j 07:10 $0^{\circ}\Upsilon$ -38 Apr 24 j 20:14 0° m -43 Jun 19 j 08:53 0° 8 desc. node -38 Jun 20 j 19:27 21° m 14'30 -43 Aug 04 j 13:53 $0^{\circ}II$ -38 Jul 06 j 13:00 0∘**⊽** -43 Aug 28 j 14:23 13°**Ⅱ**50'35 -38 Aug 22 j 07:10 0°M asc. node -43 Oct 01 j 10:05 0ಂತಾ -38 Oct 02 j 18:31 0°**∡**7 -43 Nov 12 j 19:10 9°933'05 -38 Nov 10 j 21:43 0°**ਰ** retrograde -43 Dec 20 j 16:18 0°533'41 0.65919 AU -38 Dec 19 j 06:29 0°**≈** min. Earth dist. -43 Dec 22 j 23:29 -37 Jan 27 i 00:49 0°**∀** opposition 29°II38'22 3°51'02 -37 Mar 08 i 01:59 $0^{\circ}\Upsilon$ -43 Dec 22 i 01:55 30°RⅡ 0°Υ49'04 greatest brilliancy -43 Dec 22 j 14:47 29°**I**47′06 -1.4m evening set -37 Mar 09 i 04:45 direct -42 Jan 31 j 15:30 20°**Ⅱ**11'18 -37 Apr 18 j 23:32 0°8 -42 Mar 17 j 17:12 0ಂತಾ -37 Apr 20 j 10:42 1°801'24 asc. node -42 May 18 j 19:14 $0^{\circ}\Omega$ -42 Jul 08 j 06:28 0°m -37 May 06 j 06:35 11°858'08 0°09'37 conjunction -42 Aug 23 j 01:49 0∘**⊽** -37 May 06 j 06:03 11°**8**57'14 0°09'36 minimum elong 11°**8**25'31 desc. node -42 Sep 15 j 20:44 16°**♀**31'13 behind sun begin -37 May 05 j 11:33 -42 Oct 04 j 15:44 0°M behind sun end -37 May 07 j 00:33 12°828'55 -42 Oct 27 j 15:26 16°M58'13 -37 Jun 01 j 22:31 $\Pi^{\circ}0$ evening set -42 Nov 13 j 20:55 0°⊀ max. Earth dist. -37 Jun 03 j 16:03 1°**I**09'14 2.57933 AU -42 Nov 26 j 15:03 9°**҂**47′26 2.38633 AU -37 Jun 27 j 20:32 17°**I**05'29 max. Earth dist. morning rise -42 Dec 22 j 13:48 0°궁 -37 Jul 17 j 19:28 0ಂತಾ -37 Sep 03 j 08:58 0° Ω -42 Dec 26 j 23:03 3°る26'38 -0°56'43 -37 Oct 22 j 20:27 0° M conjunction minimum elong -42 Dec 26 j 20:36 3°る21'49 0°56'42 -37 Dec 15 j 10:10 0∘**⊽** -41 Jan 29 j 15:42 0°≈ retrograde -36 Mar 09 j 15:22 28°**£**25′08 morning rise -41 Mar 05 j 21:21 27°≈34'38 opposition -36 Apr 13 j 20:21 21°**♀**11'53 1°12'24 -41 Mar 09 j 00:28 0°**₩** greatest brilliancy -36 Apr 14 j 06:41 21°**≏**02'48 -2.1m -41 Apr 17 j 12:48 $0^{\circ}\Upsilon$ min. Earth dist. -36 Apr 22 j 05:21 18°**≏**15'32 0.51126 AU

-36 May 07 j 17:53

desc. node

13°**≏**51'55

-41 May 28 j 23:20

0°8

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 37 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. direct -36 May 22 j 15:01 12°**♀**21'12 minimum elong -31 Aug 31 j 16:08 5° mp 18'10 0°59'15 -36 Jul 19 j 00:22 0°M -31 Oct 07 j 16:40 0∘**⊽** 5°**≏**52'31 -36 Sep 05 j 10:55 0°×7 -31 Oct 16 j 07:54 morning rise -36 Oct 17 j 01:00 0°궁 -31 Nov 20 j 02:05 0°M -36 Nov 25 j 20:08 0°≈ -31 Dec 28 j 15:30 27°M38'13 desc. node 0°**₩** -35 Jan 04 j 17:39 0°×7 -31 Dec 31 j 21:18 $0^{\circ}\Upsilon$ 0°궁 -35 Feb 14 j 19:10 -30 Feb 10 j 11:07 14° **Y**37'18 -35 Mar 07 j 10:03 0°≈ asc. node -30 Mar 22 j 09:34 0°**)**€ -35 Mar 29 j 14:00 0°8 -30 May 01 j 16:26 $0^{\circ}\Upsilon$ evening set -35 Apr 29 j 06:35 20°**8**45'39 -30 Jun 13 j 04:02 0° 8 -35 May 13 j 04:45 Π °0 -30 Aug 02 j 11:37 -30 Sep 22 j 02:32 14°**8**30'46 retrograde -30 Oct 23 j 08:57 conjunction -35 Jun 18 j 15:08 23°II45'57 0°52'51 min. Earth dist. 7°**8**50'31 0.53586 AU -35 Jun 18 j 13:47 minimum elong 23°**Ⅱ**43'45 0°52'51 asc. node -30 Oct 28 j 07:11 5°**8**57'45 -35 Jun 28 j 07:26 0ಂತಾ opposition -30 Oct 30 j 14:42 5°**8**04'32 0°06'38 max. Earth dist. -35 Jun 29 j 02:17 0°930'18 2.65368 AU greatest brilliancy -29 Oct 10 j 19:17 15°**♀**00'49 1.4m morning rise -35 Aug 04 j 09:10 23°9540'30 -30 Nov 14 j 14:53 30°RY -35 Aug 14 j 08:17 $0^{\circ}\Omega$ direct -30 Dec 04 j 21:51 27°Y13'38 -35 Sep 30 j 19:04 0° M -30 Dec 26 j 18:34 0°8 -35 Nov 17 j 13:34 0∘**ত** -29 Mar 07 j 16:50 $0^{\circ}\Pi$ -34 Jan 05 j 07:57 0°M -29 Apr 30 j 02:39 0ಂತಾ -34 Feb 26 i 15:14 0°×7 -29 Jun 18 j 21:14 $0^{\circ}\Omega$ desc. node -34 Mar 25 i 16:45 13°**х** 19′01 -29 Aug 05 i 04:56 0° m retrograde -34 May 17 j 01:28 26°**х** 56′23 evening set -29 Aug 24 i 05:04 12° m 29'32 opposition -34 Jun 16 j 18:21 21°**x**⁷45'42 -4°59'00 max. Earth dist. -29 Sep 11 i 08:55 24° m 41'12 2.55535 AU -34 Jun 17 j 12:15 -29 Sep 19 j 03:56 0∘**⊽** greatest brilliancy 21°**₹**33'15 -2.8m -34 Jun 21 j 10:19 20° ₹28'10 0.39051 AU min. Earth dist. -34 Jul 18 j 16:31 16°**х** 00′51 -29 Oct 11 j 12:27 15°**♀**30'58 0°21'32 direct conjunction -34 Sep 06 j 00:25 0°₹ -29 Oct 11 j 13:21 15°**△**32'33 0°21'30 minimum elong -34 Oct 26 j 16:50 0°≈ -29 Oct 31 j 20:57 0°M 10°M40'42 -34 Dec 10 j 06:16 0°**)**€ -29 Nov 15 j 14:02 desc. node -33 Jan 23 j 09:26 0°Υ06'12 -29 Dec 01 j 20:38 22°M40'52 asc. node morning rise $0^{\circ}\Upsilon$ -33 Jan 23 j 05:46 -29 Dec 11 j 15:46 0°**⊼** 0° 8 0°정 -33 Mar 09 j 01:02 -28 Jan 20 j 01:30 -28 Feb 27 j 18:49 -33 Apr 24 j 00:39 $0^{\circ}\Pi$ 0°≈ -33 Jun 09 j 22:03 -28 Apr 06 j 16:07 0°**)**€ 000 $0^{\circ}\Upsilon$ -28 May 16 j 18:22 evening set -33 Jun 10 j 00:05 0°903'13 max. Earth dist. -33 Jul 22 j 18:36 27°514'59 2.67408 AU -28 Jun 28 j 11:34 0° 8 -28 Aug 15 j 22:49 $\Pi^{\circ}0$ conjunction -33 Jul 26 j 14:55 29°542'04 1°09'30 asc. node -28 Sep 14 j 06:51 14°**Ⅲ**35'47 -33 Jul 26 j 14:44 29°9541'46 1°09'30 retrograde -28 Oct 30 j 02:20 25°**Ⅲ**50'43 minimum elong -33 Jul 27 j 02:11 $0^{\circ}\Omega$ -28 Dec 05 j 08:03 17°**Д**24'10 0.63595 AU min. Earth dist. -33 Sep 09 j 06:12 28°**Ω**19'25 -28 Dec 09 j 03:13 15°II53'01 3°10'30 morning rise opposition -33 Sep 11 j 20:26 0° M -28 Dec 08 j 15:46 16°**Ⅱ**04'27 -1.5m greatest brilliancy -33 Oct 27 j 17:38 0∘**ত** -27 Jan 16 j 20:31 6°**Ⅱ**45'15 direct -33 Dec 11 j 14:57 0°M -27 Apr 02 j 11:09 0ಂತ -32 Jan 24 j 15:43 0°**∡**¹ -27 May 27 j 21:39 $0^{\circ}\Omega$ 11°**х**⁴43′04 -27 Jul 15 j 23:50 desc. node -32 Feb 10 i 16:47 0° m 0°る -32 Mar 08 j 06:02 -27 Aug 30 i 09:32 0∘**⊽** -32 Apr 21 i 13:39 0°**≈** desc. node -27 Oct 02 j 13:47 23°**£**14'56 -32 Jun 10 j 10:37 0°**₩** -27 Oct 06 j 19:36 26°**₽**18'01 evening set -32 Aug 01 j 05:07 15°**¥**29'45 -27 Oct 11 j 22:14 0°M retrograde -32 Aug 27 j 19:06 10°**)** 51'55 0.40973 AU max. Earth dist. -27 Oct 22 j 23:53 8°ML05'56 2.43207 AU min. Earth dist. opposition -32 Sep 03 j 20:25 8°\(\)41'01 -5°14'24 -27 Nov 21 j 05:27 0°×7 greatest brilliancy -32 Sep 02 j 17:11 9°**)** €02'14 -2.7m 2°**)** 59′42 -27 Dec 01 j 13:10 direct -32 Oct 04 j 15:06 conjunction 7°**х** 53′21 -0°37′07 -27 Dec 01 j 11:00 -32 Dec 10 j 08:09 24°**)** 02'43 minimum elong 7°**∡**¹49'11 0°37'06 asc. node $0^{\circ}\Upsilon$ -32 Dec 21 j 17:27 -27 Dec 30 j 01:15 0°정 -31 Feb 11 j 22:01 0°8 -26 Feb 03 j 20:37 28°る07'50 morning rise -31 Apr 02 j 07:10 $0^{\circ}\Pi$ -26 Feb 06 j 05:40 0°≈ 0ಂತಾ 0°**)**€ -31 May 20 j 22:21 -26 Mar 16 j 15:50 $0^{\circ}\Upsilon$ -31 Jul 07 j 20:19 0° Ω -26 Apr 25 j 05:05 0°8 evening set -31 Jul 16 j 18:06 5°**£**39′03 -26 Jun 05 j 18:17 max. Earth dist. -31 Aug 14 j 12:32 24°**Ω**06'53 2.64026 AU -26 Jul 20 j 08:09 Π $^{\circ}0$ -31 Aug 23 j 13:45 0° m asc. node -26 Aug 02 j 04:48 8°**Ⅲ**09'26 -26 Sep 08 j 04:16 0ಂತಾ

-31 Aug 31 j 15:03

conjunction

5° Mp 16'24 0°59'16

-26 Nov 25 j 07:53

 $0^{\circ}\Omega$

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 38 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. 0°**∡**7 retrograde -26 Dec 03 i 20:41 0°**Ω**27'05 -21 Sep 17 j 14:47 -26 Dec 12 j 03:55 30°R95 -21 Oct 27 j 18:25 0°궁 -25 Jan 12 j 21:59 20°5945'58 4°28'24 -21 Dec 05 j 18:37 0°**≈** opposition -25 Jan 12 j 20:54 -20 Jan 14 j 01:49 0°**₩** greatest brilliancy 20°9547'03 -1.3m $0^{\circ}\Upsilon$ -25 Jan 12 j 23:16 -20 Feb 23 j 14:58 min. Earth dist. 20°9544'42 0.67587 AU 21°**Y**'02'05 -25 Feb 22 j 15:59 -20 Mar 24 j 02:40 direct 10°957'29 asc. node -25 Apr 30 j 03:55 -20 Apr 05 j 23:17 0° 8 0° Ω -20 Apr 10 j 14:49 -25 Jun 24 j 09:52 0° m 3°**8**12'39 evening set 0∘**⊽** -20 May 20 j 05:57 -25 Aug 10 j 11:58 Π $^{\circ}0$ 6°**₽**48'18 desc. node -25 Aug 20 j 13:01 8°**II**43'37 0°39'07 -25 Sep 22 j 10:49 $0^{\circ}M$ conjunction -20 Jun 02 j 11:03 -25 Nov 01 j 16:44 0°**∡** -20 Jun 02 j 09:38 8°II41'17 0°39'06 minimum elong -25 Dec 04 j 16:55 25°**∡**³35′26 -20 Jun 19 j 11:49 evening set max. Earth dist. 19°**耳**51'07 2.63077 AU -20 Jul 05 j 04:33 -25 Dec 10 j 07:41 0°ರ 0ಂತಾ -24 Jan 17 j 07:40 0°**≈** morning rise -20 Jul 20 j 23:38 10°9507'20 -20 Aug 21 j 07:45 $0^{\circ}\Omega$ conjunction -24 Feb 09 j 08:08 18°≈05'33 -1°03'21 -20 Oct 08 j 07:36 0° m minimum elong -24 Feb 09 j 09:44 18°≈08'39 1°03'20 -20 Nov 26 j 12:11 0∘**ত** -24 Feb 24 j 15:35 0°**)**€ -19 Jan 17 j 23:18 0°M max. Earth dist. -24 Mar 29 j 17:27 25°**)** 56'35 2.40383 AU -19 Apr 03 j 10:52 0°**∡**7 -24 Apr 04 j 04:03 $0^{\circ}\Upsilon$ desc. node -19 Apr 11 j 09:15 0°**х** 53′45 morning rise -24 Apr 17 j 14:28 9°**Υ**'54'27 retrograde -19 Apr 17 j 01:25 1°**х** 05'35 -24 May 15 j 13:27 0°8 -19 Apr 30 i 05:27 30°RML asc. node -24 Jun 19 i 03:34 23°**8**51'15 opposition -19 May 19 j 10:29 25°ML08'30 -2°15'01 -24 Jun 28 j 07:59 Π °0 greatest brilliancy -19 May 20 j 01:15 24°M56'59 -2.6m -24 Aug 14 j 00:11 0ಂತಾ min. Earth dist. -19 May 27 j 02:00 22°MJ46'03 0.43081 AU -24 Oct 04 j 03:50 $0^{\circ}\Omega$ -19 Jun 23 j 13:14 18°ML00'31 direct -24 Dec 11 j 07:43 0°m -19 Aug 07 j 10:22 0°**∡**¹ -23 Jan 07 j 13:10 4° m 00'50 -19 Sep 27 j 04:21 0°궁 retrograde -23 Feb 01 j 16:13 -19 Nov 09 j 02:47 0°≈ 30°RΩ -23 Feb 15 j 12:20 25° **Q**00'06 4°24'17 -19 Dec 20 j 20:32 0°**∀** opposition $0^{\circ}\Upsilon$ -23 Feb 16 j 02:16 -18 Feb 01 j 05:39 greatest brilliancy 24°**Ω**46'30 -1.4m 5°Y25'39 -23 Feb 19 j 10:56 -18 Feb 09 j 01:00 min. Earth dist. 23°**Ω**27'48 0.65005 AU asc. node -18 Mar 17 j 00:12 -23 Mar 28 j 21:45 14°**Ω**58'49 0° 8 direct -23 May 24 j 01:20 0° m -18 May 01 j 07:40 $0^{\circ}\Pi$ -23 Jul 07 j 11:14 23° My 51'28-18 May 25 j 12:34 15°**Ⅱ**41'12 desc. node evening set -23 Jul 17 j 11:03 0∘**⊽** -18 Jun 16 j 19:46 0ಂತಾ -23 Aug 31 j 07:10 0° M -23 Oct 11 j 03:51 0°⊀ conjunction -18 Jul 12 j 04:54 16°5511'50 1°06'13 -23 Nov 19 j 00:25 0°ರ minimum elong -18 Jul 12 j 04:10 16°5510'40 1°06'13 -23 Dec 27 j 04:29 0°**≈** max. Earth dist. -18 Jul 13 j 14:19 17°505'04 2.67258 AU -22 Feb 03 j 17:52 0°**)**€ -18 Aug 02 j 21:01 $0^{\circ}\Omega$ -22 Feb 12 j 07:53 6°**)**€34'02 morning rise -18 Aug 26 j 07:12 14°**£**56'34 evening set -22 Mar 15 j 13:29 $0^{\circ}\Upsilon$ -18 Sep 18 j 19:24 0° M -18 Nov 04 j 05:44 0∘**ত** 22°Y26'32 -0°13'20 -18 Dec 20 i 04:05 0°M conjunction -22 Apr 15 j 12:56 -22 Apr 15 j 13:47 -17 Feb 03 i 23:16 0°**∡**7 minimum elong 22° Y 28'04 0° 13' 19 -22 Apr 15 j 00:09 22° Y 03'50 15°**₹**09'51 behind sun begin desc. node -17 Feb 27 i 08:20 22°Y52'18 0°궁 behind sun end -22 Apr 16 j 03:26 -17 Mar 22 i 16:39 -22 Apr 26 j 05:32 0°8 -17 May 13 i 21:54 0°**≈** asc. node -22 May 07 j 03:45 7°**8**37'32 retrograde -17 Jul 05 j 19:45 15°≈20'36 max. Earth dist. -22 May 22 j 02:32 17°**8**54'11 2.53599 AU min. Earth dist. -17 Aug 02 j 11:58 10°≈50'37 0.37933 AU -22 Jun 09 j 00:33 $\mathbb{I}^{\circ 0}$ greatest brilliancy -17 Aug 05 j 07:39 10°≈604'13 -2.9m -22 Jun 10 j 20:36 opposition morning rise 1°**I**I13'34 -17 Aug 06 j 00:19 9°≈52'47 -6°47'12 -22 Jul 24 j 22:14 0000 direct -17 Sep 04 j 13:37 4°≈53'17 $0^{\circ}\Omega$ -22 Sep 10 j 23:09 -17 Nov 16 j 09:24 0°**)**€ -22 Nov 01 j 01:27 0° M asc. node -17 Dec 28 j 00:12 24° # 27'11 $0^{\circ}\Upsilon$ -22 Dec 31 j 13:49 0∘**⊽** -16 Jan 05 j 23:50 -21 Feb 18 j 14:43 11°**≏**26′02 -16 Feb 22 j 18:41 0° 8 retrograde -21 Mar 27 j 05:45 -16 Apr 10 j 09:06 $0^{\circ}\Pi$ opposition ვ°**ჲ**33'49 2°37'36 -16 May 28 j 03:46 0ಂತಾ greatest brilliancy -21 Mar 28 j 00:08 3°**£**16'53 -1.8m evening set min. Earth dist. -21 Apr 03 j 17:38 0°**£**48'25 0.56042 AU -16 Jul 02 j 05:31 22°905'32 -21 Apr 06 j 00:03 30°R, Mp -16 Jul 14 j 16:56 0° Ω direct -21 May 06 j 08:43 24° m 05'31 max. Earth dist. -16 Aug 05 j 03:34 13°**Ω**41'17 2.65993 AU desc. node -21 May 25 j 10:02 26° Mp 21'24 -21 Jun 07 j 02:12 0∘**⊽** -16 Aug 17 j 01:18 21°Ω21'08 1°06'27 conjunction -21 Aug 04 j 17:06 0° M -16 Aug 17 j 01:57 21°Ω22'12 1°06'28 minimum elong

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 39 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.							
	-16 Aug 30 j 09:23	0° mp			-11 Sep 20 j 14:00	0 _ං න	
morning rise	-16 Sep 30 j 22:07	20° Mp 45'10		retrograde	-11 Nov 20 j 12:26	17° © 34'56	
	-16 Oct 14 j 17:47	0∘ ⊽		min. Earth dist.	-11 Dec 29 j 05:58	8° © 19'05	0.66786 AU
	-16 Nov 27 j 14:14	0°M		opposition	-11 Dec 30 j 16:58	7° 5 944'02	4°08'29
	-15 Jan 09 j 01:06	0° ⊀		greatest brilliancy	-11 Dec 30 j 10:37	7° 9 50'23	-1.3m
desc. node	-15 Jan 14 j 08:15	3° ∡ ¹48'17			-10 Jan 22 j 18:27	30°RⅡ	
	-15 Feb 19 j 09:59	0°ප		direct	-10 Feb 08 j 19:40	28° Ⅱ 08'05	
	-15 Apr 01 j 07:21	0° ≈			-10 Feb 26 j 23:19	0ංම	
	-15 May 12 j 23:38	0° ∺			-10 May 12 j 04:14	0 $^{\circ}$ Ω	
	-15 Jun 27 j 20:17	0° Υ			-10 Jul 02 j 23:02	0° m	
retrograde	-15 Sep 04 j 03:22	24° Y 39'48			-10 Aug 18 j 04:24	0∘ ⊽	
min. Earth dist.	-15 Oct 03 j 06:49		0.48535 AU	desc. node	-10 Sep 06 j 04:32	13° ≙ 05'25	
opposition	-15 Oct 11 j 07:20	15° Y 55′06			-10 Sep 29 j 21:38	0° M ₊	
greatest brilliancy	-15 Oct 10 j 19:44	16° Y 05'37	-2.3m	evening set	-10 Nov 09 j 14:06	0° ∡ 120'44	
direct	-15 Nov 13 j 20:42	8° Υ 48'52			-10 Nov 09 j 03:14	0° ∡	
asc. node	-15 Nov 13 j 23:05	8° Y 48'52		E d E c	-10 Dec 17 j 19:23	0°る	2 27222 444
	-14 Jan 21 j 20:29	8°0		max. Earth dist.	-9 Jan 08 j 15:50	1/°613′08	2.37233 AU
	-14 Mar 18 j 09:37	$\Pi^{\circ 0}$			0.1 11:12.06	100=20154	1902121
	-14 May 08 j 06:08	ი∘ ⊙		conjunction	-9 Jan 11 j 13:06	19° る 29'54	
evening set	-14 Jun 26 j 02:46	0° Ω 27° Ω 52'16		minimum elong	-9 Jan 11 j 11:39	19°る27'00 0°≈	1-03/20
evening set	-14 Aug 08 j 20:40				-9 Jan 24 j 20:27	0 ≈ 0° ∀	
may Earth dist	-14 Aug 12 j 03:12 -14 Aug 30 j 16:00	0° Тф	2.59455 AU	morning rise	-9 Mar 04 j 04:27 -9 Mar 22 j 11:54	0° X 14° ¥ 03'28	
max. Earth dist.	-14 Aug 30 J 10.00	12 11111 30	2.39433 AU	morning rise	-9 Mai 22 j 11.34 -9 Apr 12 j 16:00	14 π03 28 0° Υ	
conjunction	-14 Sep 24 j 17:40	29° m 03'22	0°20'26		-9 May 24 j 01:00	0° 8	
minimum elong	-14 Sep 24 j 17:40 -14 Sep 24 j 18:56	29° m 05'31		asc. node	-9 Jul 06 j 20:17	29° 8 55'40	
minimum eiong	-14 Sep 24 j 18.36 -14 Sep 26 j 02:52	0° ت 19 ا ار ن 31	0 39 23	asc. node	-9 Jul 06 j 22:55	0° Ⅱ	
	-14 Sep 20 j 02.32 -14 Nov 08 j 01:18	0° m.			-9 Aug 23 j 08:08	0°9	
morning rise	-14 Nov 08 j 01:18 -14 Nov 12 j 02:44	2°M54'30			-9 Oct 16 j 12:06	0° U	
desc. node	-14 Nov 12 j 02:44 -14 Dec 02 j 07:14	17°M32'53		retrograde	-9 Dec 25 j 06:25	20° Ω 59'19	
desc. node	-14 Dec 02 j 07:14 -14 Dec 19 j 04:12	0° ₹		opposition	-8 Feb 02 j 19:03	11° Ω 40'06	1°35'11
	-13 Jan 27 j 22:41	°ਤ ਹ°ਤ		greatest brilliancy	-8 Feb 03 j 03:18	11° Ω 31'57	
	-13 Mar 08 j 00:24	0° ≈		min. Earth dist.	-8 Feb 05 j 05:20		0.66799 AU
	-13 Apr 16 j 05:54	0° ∀		direct	-8 Mar 15 j 02:56	1° Ω 40'01	0.00755110
	-13 May 26 j 19:54	ο° Υ		uncet	-8 Jun 06 j 18:36	0° m)	
	-13 Jul 09 j 18:20	0°8		desc. node	-8 Jul 24 j 03:39	28° m 16'59	
	-13 Sep 01 j 21:14	0°Щ			-8 Jul 26 j 19:16	$0 \circ \overline{\mathbf{v}}$	
asc. node	-13 Oct 01 j 21:35	9° Ⅱ 45′20			-8 Sep 08 j 14:57	0° M	
retrograde	-13 Oct 16 j 19:42	11° Ⅱ 12'43			-8 Oct 19 j 03:24	0° ∡ ¹	
min. Earth dist.	-13 Nov 20 j 06:00	3° Ⅱ 23′29	0.60326 AU		-8 Nov 26 j 20:13	0°ರ	
opposition	-13 Nov 25 j 12:01	1° Ⅱ 18'34	2°14'42		-7 Jan 03 j 21:25	0° ≈	
greatest brilliancy	-13 Nov 25 j 00:47	1° Ⅱ 29'42	-1.7m	evening set	-7 Jan 16 j 03:55	9° ≈ 39'01	
	-13 Nov 28 j 20:04	30° ₹ 8			-7 Feb 11 j 07:26	0° ∀	
direct	-12 Jan 02 j 01:41	22° 8 35'22			-7 Mar 22 j 22:57	0° Y	
	-12 Feb 09 j 02:27	$\Pi^{\circ}0$					
	-12 Apr 13 j 18:50	0ං ව		conjunction	-7 Mar 23 j 00:44	0° Ƴ 03'19	-0°36'57
	-12 Jun 05 j 03:15	$0^{\circ}\Omega$		minimum elong	-7 Mar 23 j 03:13	0° Ƴ 07'55	0°36'55
	-12 Jul 23 j 08:14	0° m			-7 May 03 j 11:06	0° 8	
	-12 Sep 06 j 12:18	0° ™		max. Earth dist.	-7 May 06 j 23:31	2° 8 28'24	2.48664 AU
evening set	-12 Sep 18 j 06:37	8° ≙ 07'14		morning rise	-7 May 22 j 22:27	13° 8 33'40	
max. Earth dist.	-12 Oct 03 j 00:12	18° ≏ 28′28	2.48313 AU	asc. node	-7 May 23 j 18:54	14° 8 08'49	
desc. node	-12 Oct 19 j 05:33	0°ML06'23			-7 Jun 16 j 04:02	Π $^{\circ}0$	
	-12 Oct 19 j 02:01	0° M			-7 Aug 01 j 05:24	0 \circ	
					-7 Sep 19 j 00:27	0 $^{\circ}$ Ω	
conjunction	-12 Nov 09 j 06:50	15°M33'06			-7 Nov 11 j 21:02	0° m)	
minimum elong	-12 Nov 09 j 06:05	15°M31'42	0°13'27	retrograde	-6 Feb 01 j 00:57	26° Mp 13'26	
behind sun begin	-12 Nov 08 j 16:47	15°M07'02		opposition	-6 Mar 10 j 18:23	17° m) 49'57	3°34'39
behind sun end	-12 Nov 09 j 19:23	15°M56'23		greatest brilliancy	-6 Mar 11 j 13:48	17° Mp 31'30	-1.6m
	-12 Nov 28 j 13:13	0°⊀ 0°₹05!06		min. Earth dist.	-6 Mar 16 j 23:33	15° Mp 28'34	0.60251 AU
morning rise	-11 Jan 06 j 16:20	0° る 05'06		direct	-6 Apr 20 j 16:34	8° Mp 00'35	
	-11 Jan 06 j 13:42	8°0		desc. node	-6 Jun 11 j 01:45	21° m/31'43	
	-11 Feb 13 j 22:14	0° ≈			-6 Jun 28 j 02:31	0∘ ™	
	-11 Mar 24 j 11:20	0° ℋ 0° Ƴ			-6 Aug 16 j 01:43	0°M 0°. 7	
	-11 May 03 j 03:07				-6 Sep 27 j 04:50	0° ∡ 0° ≍	
	-11 Jun 13 j 21:56	0° Η			-6 Nov 05 j 15:04	5°0	
asc. node	-11 Jul 29 j 06:32 -11 Aug 18 j 21:08	0° П 12° П 27'23			-6 Dec 14 j 04:17 -5 Jan 22 j 02:00	0° ₩	
use. Houe	11 Aug 10 J 21.08	12 112/23			5 Jan 22 J 02.00	υ Λ	

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 40 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. $0^{\circ}\Upsilon$ -5 Mar 03 i 06:01 00 Jan 18 j 18:06 0°×7 -5 Mar 21 j 23:05 13°Y32'27 00 Feb 01 j 00:19 9°**х** 17′39 desc. node evening set -5 Apr 10 j 18:24 27° Y 33'48 00 Mar 01 j 08:38 0°궁 asc. node -5 Apr 14 j 06:05 0°**≈** 0°8 00 Apr 12 j 23:27 0°**∀** 00 May 27 j 22:30 -5 May 16 j 23:34 $0^{\circ}\Upsilon$ conjunction 22°**8**26'00 0°21'26 00 Aug 02 j 01:02 1° Y 06' 19 minimum elong -5 May 16 j 22:33 22°**8**24'17 0°21'25 retrograde 00 Aug 14 j 11:28 -5 May 28 j 06:25 $0^{\circ}II$ 00 Aug 26 j 17:17 30°₽**Ж** 2.59981 AU max. Earth dist. -5 Jun 10 j 03:54 8°**Ⅲ**32'55 min. Earth dist. 00 Sep 10 j 17:12 26°**₭**06'17 0.43426 AU morning rise -5 Jul 06 j 21:51 25°**Ⅲ**59'55 opposition 00 Sep 18 j 13:24 23°\dagger30'06 -3°58'09 -5 Jul 13 j 02:51 0ಂತಾ greatest brilliancy 00 Sep 17 j 13:17 23°**)** € 50'14 -2.5m -5 Aug 29 j 11:10 $0^{\circ}\Omega$ direct 00 Oct 20 j 06:39 17°**H** 17'53 -5 Oct 17 j 06:32 0° M asc. node 00 Nov 30 j 14:32 26°\ 33'01 -5 Dec 07 j 17:38 0∘**⊽** 00 Dec 08 j 22:49 $0^{\circ}\Upsilon$ -4 Feb 07 j 07:49 0° M 01 Feb 04 j 17:49 0°8 retrograde -4 Mar 22 j 11:19 9° M36'26 01 Mar 27 j 15:20 $0^{\circ}\Pi$ opposition -4 Apr 25 j 16:40 2°M48'53 0°07'36 01 May 15 j 22:11 0ಂತಾ greatest brilliancy -3 Sep 07 j 23:37 18°**Ω**36′04 1.8m 01 Jul 03 j 03:26 $0^{\circ}\Omega$ desc. node -4 Apr 28 j 01:00 2°M00'54 evening set 01 Jul 25 j 02:37 13°**Ω**56'45 -4 May 03 j 23:49 01 Aug 18 j 23:16 0° m 0.48189 AU min. Earth dist. -4 May 04 j 04:42 29°**♀**55'58 max. Earth dist. 01 Aug 20 j 06:04 0° Mp 50'15 2.62612 AU direct -4 Jun 02 i 09:43 24°**£**28'26 -4 Jul 02 i 01:38 0°M conjunction 01 Sep 09 i 04:27 13° m 57'54 0°53'11 -4 Aug 28 i 02:16 0°×7 minimum elong 01 Sep 09 i 05:40 13° m 59'56 0°53'10 -4 Oct 10 i 06:53 0°る 01 Oct 03 i 01:13 0∘**⊽** -4 Nov 19 j 19:47 0°**≈** 01 Oct 25 j 14:47 15°**£**30′13 morning rise -4 Dec 30 j 04:52 0°**₩** 01 Nov 15 j 06:37 o°m. -3 Feb 09 j 14:53 $0^{\circ}\Upsilon$ 01 Dec 18 j 22:55 24°ML14'07 desc node -3 Feb 25 j 17:05 11°Y21'20 01 Dec 26 j 19:46 0°**∡**¹ asc node -3 Mar 24 j 16:21 0° 8 02 Feb 05 j 01:56 0°궁 $\mathbb{I}^{\circ 0}$ 02 Mar 16 j 15:47 -3 May 08 j 11:35 0°22 0°**I**I26'43 02 Apr 25 j 11:03 0°**∀** -3 May 09 j 03:50 evening set $0^{\circ}\Upsilon$ -3 Jun 23 j 16:38 0°9 02 Jun 05 j 23:33 02 Jul 22 j 15:08 0°8 -3 Jun 27 j 09:31 02 Oct 01 j 11:44 25°**8**02'10 conjunction 2°922'37 0°58'55 retrograde -3 Jun 27 j 08:20 02 Oct 18 j 14:29 22°**8**55'37 minimum elong 2°920'43 0°58'55 asc. node -3 Jul 04 j 12:17 max. Earth dist. 6°956'04 2.66276 AU min. Earth dist. 02 Nov 02 j 21:51 17°**8**56'01 0.56178 AU -3 Aug 09 j 16:51 $0^{\circ}\Omega$ opposition 02 Nov 09 j 12:08 15°**8**22'12 0°59'48 morning rise -3 Aug 12 j 09:54 1°**Ω**43'22 greatest brilliancy 02 Nov 09 j 05:41 15°**8**28'28 -1.9m -3 Sep 25 j 22:15 0° M 02 Dec 15 j 16:38 7°**8**10'30 direct -3 Nov 12 j 03:17 0∘**⊽** 03 Feb 27 j 10:44 $\Pi^{\circ}0$ -3 Dec 29 j 15:13 0°M 03 Apr 24 j 07:39 0ಂತಾ -2 Feb 16 j 14:34 0°×7 03 Jun 13 j 20:43 $0^{\circ}\Omega$ -2 Mar 16 j 01:19 15°**∡**⁴43'16 03 Jul 31 j 11:35 0° M desc. node -2 Apr 13 j 04:47 0°₹ 03 Sep 02 j 08:23 21°Mp43'10 evening set -2 Jun 04 i 08:57 retrograde 13°る55'02 03 Sep 14 j 12:52 0∘**⊽** opposition -2 Jul 04 i 12:10 8° ප් 56'36 -6°13'59 max. Earth dist. 03 Sep 18 j 18:54 2°**2**55'07 2.53120 AU greatest brilliancy -2 Jul 04 i 21:36 8°る50'19 -2.9m min. Earth dist. -2 Jul 06 i 12:04 8°る24'41 0.37756 AU conjunction 03 Oct 21 j 17:20 26°**2**03'11 0°09'35 03 Oct 21 j 17:47 direct -2 Aug 04 j 01:20 3°₹46'00 26°**₽**04'00 0°09'34 minimum elong -2 Oct 15 j 14:50 0°**≈** behind sun begin 03 Oct 21 j 00:03 25°**£**32'16 -2 Dec 02 j 14:28 0°**₩** behind sun end 03 Oct 22 j 11:30 26°**£**35'45 -1 Jan 13 j 14:52 27°**)**(45'06 03 Oct 27 j 05:07 0°M asc node $0^{\circ}\Upsilon$ -1 Jan 17 j 00:17 desc. node 03 Nov 05 j 21:50 7°**IL**01'53 -1 Mar 03 j 14:29 0°8 03 Dec 06 j 21:28 0°**∡**¹ -1 Apr 19 j 01:09 $0^{\circ}II$ morning rise 03 Dec 14 j 04:34 5° **₹** 30'36 -1 Jun 05 j 04:58 0ಂತಾ 04 Jan 15 j 03:40 0°궁 -1 Jun 18 j 14:17 8°9528'58 04 Feb 22 j 17:20 0°≈ evening set -1 Jul 22 j 11:47 $0^{\circ}\Omega$ 04 Apr 01 j 10:49 0°**)** 0°Υ -1 Jul 28 j 01:08 3°**Ω**32'29 2.67143 AU max. Earth dist. 04 May 11 j 07:33 0°8 04 Jun 22 j 13:15 conjunction -1 Aug 03 j 19:03 7°**Ω**50'59 1°09'33 04 Aug 08 j 09:24 $0^{\circ}\Pi$ minimum elong -1 Aug 03 j 19:11 7°**Ω**51'11 1°09'33 asc. node 04 Sep 04 j 12:56 14°**I**57′26 -1 Sep 07 j 05:04 0° m 04 Oct 11 j 02:06 0 \circ \odot morning rise -1 Sep 17 j 08:49 6° TQ 36'13retrograde 04 Nov 07 j 00:35 4°915'27 -1 Oct 22 j 21:24 0∘**⊽** 04 Dec 02 j 02:57 30°R II

min. Earth dist.

04 Dec 14 j 05:09

25°**Ⅲ**29'54 0.65005 AU

-1 Dec 06 j 08:53

0°M

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 41 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. 04 Dec 17 i 04:05 24°**I**18'50 3°35'56 evening set 10 Feb 26 j 18:27 21°\(\)07'32 opposition $0^{\circ}\Upsilon$ 04 Dec 16 j 17:53 24°**I**129'04 -1.4m 10 Mar 10 j 17:48 greatest brilliancy 05 Jan 25 j 10:38 14°**Ⅲ**59'39 10 Apr 21 j 11:41 0° 8 direct 05 Mar 24 j 06:28 0ಂತಾ 05 May 22 j 00:11 4°**8**18'32 0°00'09 $0^{\circ}\Omega$ conjunction 10 Apr 27 j 15:40 05 Jul 10 j 21:42 0° m minimum elong 10 Apr 27 j 15:40 4°**8**18'32 0°00'10 10 Apr 26 j 16:16 0∘**⊽** 05 Aug 25 j 14:19 behind sun begin 3°**8**37'47 4°859'15 desc. node 05 Sep 22 j 20:42 19°**£**41'16 behind sun end 10 Apr 28 j 15:04 05 Oct 07 j 05:04 $0^{\circ}M$ asc. node 10 Apr 27 j 09:41 4°808'09 evening set 05 Oct 18 j 07:17 8°ML06'38max. Earth dist. 10 May 29 j 12:50 26°**8**07'27 2.56099 AU max. Earth dist. 05 Nov 08 j 10:24 23°M52'32 2.40534 AU 10 Jun 04 j 07:30 $0^{\circ}\Pi$ 05 Nov 16 j 12:15 10 Jun 20 j 18:27 10°**I**54'56 0°×7 morning rise 10 Jul 20 j 03:32 0ಂತಾ conjunction 05 Dec 15 j 11:28 22°**₹**20'03 -0°49'11 10 Sep 05 j 20:20 $0^{\circ}\Omega$ minimum elong 05 Dec 15 j 08:53 22° - 15'01 0°49'09 10 Oct 25 j 21:09 0° m 05 Dec 25 j 06:54 0°ರ 10 Dec 20 j 12:45 0∘**⊽** 06 Feb 01 j 09:58 0°**≈** retrograde 11 Mar 01 j 14:47 21°**2**15'36 morning rise 06 Feb 20 j 16:20 15°≈07'51 opposition 11 Apr 06 j 11:51 13°**₽**43'53 1°52'21 06 Mar 11 j 18:50 0°**)**€ greatest brilliancy 11 Apr 07 j 02:39 13°**♀**30'34 -2.0m 06 Apr 20 j 06:20 $0^{\circ}\Upsilon$ min. Earth dist. 11 Apr 14 j 13:04 10°**♀**50'13 0.53404 AU 06 May 31 j 16:23 0°8 direct 11 May 15 j 23:20 4°**£**33'40 06 Jul 14 i 21:30 Π °0 desc. node 11 May 15 i 17:48 4°**£**33'41 11 Jul 27 j 00:39 06 Jul 23 i 11:39 5°**Ⅱ**33'14 0°M asc. node 06 Sep 01 i 11:57 0000 11 Sep 11 i 00:29 0°×7 06 Nov 01 j 16:04 $0^{\circ}\Omega$ 11 Oct 21 j 21:18 0°궁 06 Dec 11 j 13:46 8° **Ω**13'27 11 Nov 30 j 06:42 0°≈ retrograde 07 Jan 17 j 02:24 12 Jan 08 j 20:30 0°\ 30°R95 07 Jan 20 j 11:58 28°939'14 4°34'34 12 Feb 18 j 14:50 $0^{\circ}\Upsilon$ opposition 07 Jan 20 j 14:12 12 Mar 14 j 08:29 17°**Y**36'45 greatest brilliancy 28°937'01 -1.3m asc node min. Earth dist. 07 Jan 21 j 09:54 12 Apr 01 j 03:29 0° 8 28°917'26 0.67584 AU 13°**8**53'24 07 Mar 02 j 12:28 direct 18°9545'20 12 Apr 21 j 11:31 evening set 07 Apr 19 j 23:41 12 May 15 j 13:15 0° Ω Π $^{\circ}0$ 07 Jun 18 j 07:42 0° M 07 Aug 05 j 06:14 0∘**⊽** 12 Jun 11 j 20:32 17°**I**54'41 0°47'35 conjunction 07 Aug 10 j 19:41 3°**₽**43'00 12 Jun 11 j 19:07 17° II 52'22 0°47'34 desc. node minimum elong 12 Jun 25 j 06:13 07 Sep 17 j 11:48 $0^{\circ}M$ 26°**II**35'25 2.64454 AU max. Earth dist. 07 Oct 27 j 20:08 0°**∡**¹ 12 Jun 30 j 13:14 0ಂತಾ 07 Dec 05 j 11:41 0°ರ morning rise 12 Jul 29 j 07:36 18°9523'55 07 Dec 20 j 02:40 11°る31'31 12 Aug 16 j 14:23 $0^{\circ}\Omega$ evening set 08 Jan 12 j 11:56 0°**≈** 12 Oct 03 j 06:09 0° m 08 Feb 19 j 20:15 0°**)**€ 12 Nov 20 j 13:44 0∘**⊽** 13 Jan 09 j 14:54 0°M 08 Feb 25 j 10:03 4°**)** 18'02 -0°56'39 13 Mar 07 j 06:12 0°**∡**7 conjunction 08 Feb 25 j 12:47 4°¥23'16 0°56'37 13 Apr 01 j 16:45 10°**х** °00′07 minimum elong desc. node 08 Mar 30 j 09:01 $0^{\circ}\Upsilon$ 13 May 03 j 09:03 15°**∡**³30′18 retrograde 12°**Y**31'31 2.43306 AU 13 Jun 03 j 19:19 max. Earth dist. 08 Apr 16 i 09:39 opposition 10°**х** 00′59 -3°48′31 08 May 01 i 06:59 23°Y16'10 13 Jun 04 j 14:40 morning rise greatest brilliancy 9°**∡**146'49 -2.7m 13 Jun 10 j 03:06 08 May 10 j 18:22 0°8 min. Earth dist. 8° **₹**10'33 0.40637 AU 20°835'14 13 Jul 07 i 03:09 asc. node 08 Jun 09 j 11:27 direct 3°**х** 40′06 08 Jun 23 j 10:46 $0^{\circ}II$ 13 Sep 16 j 12:07 0°ਰ 08 Aug 08 j 19:09 0ಂತಾ 13 Nov 01 j 10:50 0°≈ 08 Sep 27 j 19:18 $0^{\circ}\Omega$ 13 Dec 14 j 11:28 0°**₩** 08 Nov 26 j 09:02 0° m 14 Jan 26 j 14:32 $0^{\circ}\Upsilon$ 2°Y33'43 retrograde 09 Jan 16 j 01:52 12° m 08'19 14 Jan 30 j 07:59 asc. node 3° m 19'25 4°10'47 09 Feb 23 j 16:11 14 Mar 11 j 20:43 0°8 opposition 09 Feb 24 j 08:43 14 Apr 26 j 11:35 greatest brilliancy 3° Mp 03'25 -1.5m $0^{\circ}\Pi$ min. Earth dist. 09 Feb 28 j 11:05 1°M)28'17 0.63589 AU evening set 14 Jun 03 j 11:41 24°**Ⅲ**27'17 09 Mar 04 j 08:35 30°R€ 14 Jun 12 j 04:06 0ಂತಾ 09 Apr 06 j 00:06 23°**Ω**19'55 max. Earth dist. 14 Jul 18 j 22:37 direct 23°525'07 2.67448 AU 09 May 11 j 03:00 0° M 09 Jun 27 j 19:07 22° Mp 23'3814 Jul 20 j 12:20 24°\$25'10 1°08'36 desc. node conjunction 09 Jul 10 j 19:37 0∘**⊽** minimum elong 14 Jul 20 j 11:54 24°9524'29 1°08'36 09 Aug 25 j 16:46 0°M 14 Jul 29 j 06:37 0° Ω 09 Oct 05 j 22:13 0°⊀ morning rise 14 Sep 03 j 07:03 23°**Ω**02'01 09 Nov 13 j 22:31 0°궁 14 Sep 14 j 02:48 0° m 09 Dec 22 j 04:53 0°**≈** 14 Oct 30 j 05:58 0∘**ত**

14 Dec 14 j 13:47

0°M

10 Jan 29 j 20:17

0°**)**€

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 42 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. 15 Jan 28 i 07:23 0°**∡**¹ direct 20 Jan 11 j 05:48 1°**I**16′20 15 Feb 17 j 16:33 13°**х** 43′03 20 Apr 06 j 16:55 0ಂತಾ desc node 15 Mar 14 j 00:01 0°る 20 May 30 j 17:10 $0^{\circ}\Omega$ 0°**≈** 20 Jul 18 j 10:59 0° m 15 Apr 29 j 11:24 15 Jun 30 j 00:41 0°**)**€ 20 Sep 01 j 19:37 0∘**⊽** 15 Jul 21 j 22:41 20 Sep 28 j 13:45 retrograde 3°**¥**10′06 evening set 18°**△**38'18 26°**≏**29'34 30°R**≈** 20 Oct 09 j 13:23 15 Aug 12 j 20:26 desc. node min. Earth dist. 15 Aug 17 j 13:07 28°**≈**42'28 0.39316 AU max. Earth dist. 20 Oct 13 j 09:04 29°**£**15'05 2.45483 AU 20 Oct 14 j 09:53 greatest brilliancy 15 Aug 22 j 07:26 27°≈19'21 -2.8m 0°M opposition 15 Aug 23 j 08:40 27°≈00'53 -6°05'17 direct 15 Sep 22 j 10:31 21°≈42'20 conjunction 20 Nov 21 j 12:32 28°M15'23 -0°27'08 0°**)**€ 20 Nov 21 j 10:57 15 Oct 30 j 17:08 minimum elong 28°M12'23 0°27'07 24°**₭**00'15 20 Nov 23 j 19:46 0°**∡**7 asc. node 15 Dec 18 j 06:57 $0^{\circ}\Upsilon$ 15 Dec 28 j 18:16 21 Jan 01 j 18:00 0°정 16 Feb 16 j 14:20 0° 8 morning rise 21 Jan 22 j 04:32 16°**පි**00'17 16 Apr 05 j 02:05 $0^{\circ}II$ 21 Feb 09 j 00:07 0°≈ 16 May 23 j 07:28 0ಂತಾ 21 Mar 19 j 11:06 0°**)**€ evening set 16 Jul 10 j 13:44 $0^{\circ}\Omega 19'24$ 21 Apr 28 j 00:20 $0^{\circ}\Upsilon$ 16 Jul 10 j 01:29 $0^{\circ}\Omega$ 21 Jun 08 j 14:08 0°8 max. Earth dist. 16 Aug 10 j 16:03 20°**Ω**11'52 2.65009 AU 21 Jul 23 j 08:43 $0^{\circ}\Pi$ asc. node 21 Aug 09 j 03:31 10°**Ⅲ**28'50 conjunction 16 Aug 25 i 08:43 29°Ω43'18 1°02'45 21 Sep 12 i 04:41 0ಂತಾ minimum elong 16 Aug 25 i 09:38 29°**Ω**44'48 1°02'45 retrograde 21 Nov 28 i 04:25 25°527'59 16 Aug 25 i 18:58 0° m opposition 22 Jan 07 i 07:54 15°9542'15 4°21'31 22 Jan 07 j 04:24 16 Oct 09 j 14:50 29° m 42'36 greatest brilliancy 15°9545'45 -1.3m morning rise 16 Oct 10 j 01:09 0∘**⊽** min. Earth dist. 22 Jan 06 j 17:23 15°\$56'46 0.67361 AU 16 Nov 22 j 16:03 0°M 22 Feb 16 j 19:45 5°958'47 direct 17 Jan 03 j 18:41 0°×7 22 May 04 j 18:10 $0^{\circ}\Omega$ 17 Jan 04 j 15:11 0°**х** 37′06 22 Jun 27 j 10:05 desc node 0° m 0°る 22 Aug 13 j 04:37 17 Feb 13 j 16:42 0∘∙თ 17 Mar 26 j 00:09 22 Aug 27 j 12:43 9°**£**46'45 0°22 desc. node 17 May 05 j 18:25 0°**)**€ 22 Sep 25 j 02:18 0°M $0^{\circ}\Upsilon$ 22 Nov 04 j 09:11 0°×7 17 Jun 18 j 05:19 0° 8 17 Aug 13 j 00:06 22 Nov 23 j 09:20 14°**₹**38'19 evening set 17 Sep 14 j 15:33 22 Dec 13 j 01:04 0°ಕ retrograde 6°**8**45'06 17 Oct 14 j 22:30 23 Jan 20 j 01:21 min. Earth dist. 0°**8**27'26 0.51360 AU 0°≈ 17 Oct 16 j 04:15 30°**Ŗ**♈ opposition 17 Oct 22 j 15:00 27° Y 34'46 -0° 37'40 conjunction 23 Jan 27 j 17:00 6°≈02'00 -1°05'17 greatest brilliancy 17 Oct 22 j 10:57 27°**Y**38'33 -2.1m minimum elong 23 Jan 27 j 17:14 6°≈02'28 1°05'16 asc. node 17 Nov 04 j 05:44 23°Y17'06 23 Feb 27 j 08:41 0°**)**€ direct 17 Nov 26 j 04:37 20°**Y**02'41 max. Earth dist. 23 Mar 09 j 13:27 7°**¥**51'51 2.38345 AU 18 Jan 09 j 07:25 0° 8 23 Apr 07 j 06:22 29°**)** 35′27 morning rise 18 Mar 11 j 16:32 $\Pi^{\circ}0$ 23 Apr 07 j 19:33 $0^{\circ}\Upsilon$ 18 May 02 j 21:09 0ಂತಾ 23 May 19 j 03:10 0° 8 18 Jun 21 j 06:09 $0^{\circ}\Omega$ 23 Jun 27 j 01:51 26°847'38 asc. node 23 Jul 01 i 21:14 $\Pi^{\circ}0$ 18 Aug 07 j 11:23 0° m 0ಂತಾ evening set 18 Aug 17 i 13:30 6° m 35'42 23 Aug 17 j 17:48 23 Oct 08 j 19:12 max. Earth dist. 18 Sep 06 i 05:37 19° m 39'58 2.57364 AU $0^{\circ}\Omega$ 24 Jan 02 i 08:25 18 Sep 21 j 11:46 0°Ω retrograde 28°**Ω**52'36 24 Feb 10 j 14:43 19°Ω43'12 4°30'24 opposition greatest brilliancy 18 Oct 04 i 03:25 8°**£**42'32 0°29'34 24 Feb 11 j 02:15 19°Ω31'54 -1.4m conjunction 18 Oct 04 j 04:32 8°**£**44'27 0°29'33 min. Earth dist. 24 Feb 13 j 21:38 18°Ω25'49 0.65939 AU minimum elong 18 Nov 03 j 08:06 0°M direct 24 Mar 23 j 00:36 9°Ω41'40 desc. node 18 Nov 22 j 13:39 13°M55'46 24 May 29 j 15:21 0° m morning rise 18 Nov 23 j 00:33 14°ML15'42 desc. node 24 Jul 14 j 10:54 25° m 55'25 18 Dec 14 j 07:22 0°×7 24 Jul 20 j 22:23 0∘**⊽** 0°る 19 Jan 22 j 21:23 24 Sep 03 j 08:35 0°M 19 Mar 02 j 18:21 0°≈ 24 Oct 14 j 02:40 0°**∡**7 19 Apr 10 j 18:41 0°**)**€ 24 Nov 21 j 21:58 0°정 $0^{\circ}\Upsilon$ 19 May 21 j 00:13 0°≈ 24 Dec 30 j 00:34 0°8 25°≈31'39 19 Jul 03 j 01:44 evening set 25 Jan 31 j 16:44 19 Aug 22 j 00:36 Π °0 25 Feb 06 j 11:49 0°**)**€ $0^{\circ}\Upsilon$ asc. node 19 Sep 22 j 05:19 13°**Ⅲ**52′09 25 Mar 18 j 04:25 retrograde 19 Oct 25 j 02:49 20°**Ⅲ**10′52 min. Earth dist. 19 Nov 29 j 13:42 12°**Ⅲ**00′15 0.62244 AU conjunction 25 Apr 05 j 17:09 13°**Y**34'02 -0°23'32 19 Dec 04 j 00:21 10°**Ⅱ**13'56 2°49'18 25 Apr 05 j 18:45 13°Y36'56 0°23'31 opposition minimum elong 19 Dec 03 j 12:29 10°**I**I25'46 -1.6m 25 Apr 28 j 17:16 0°8 greatest brilliancy

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 43

-			• //		10-F60-2023 14.23, 101 BCE in historical cou	page 43	,
asc. node	25 May 14 j 02:11	10° 8 43'47	astronomical coul	opposition	30 Jul 22 j 20:21	26° ♂ 47'16	6°51'06
max. Earth dist.			2.51451 AU	min. Earth dist.	30 Jul 22 j 20.21 30 Jul 21 j 16:54		0.37458 AU
	25 May 15 j 23:46	24° 8 20'22	2.31431 AU			27 3 03 33 26° る 50'45	
morning rise	25 Jun 02 j 23:54	24 O 20 22 0° Ⅱ		greatest brilliancy direct	30 Jul 22 j 15:08	20 3 3043 21° る 51'06	-2.9111
	25 Jun 11 j 09:47	0.∞		direct	30 Aug 21 j 13:16	21 3 3100 0° ≈	
	25 Jul 27 j 07:23				30 Sep 27 j 17:34	0° ∺	
	25 Sep 13 j 13:46	0° N		1	30 Nov 23 j 15:36		
	25 Nov 04 j 13:44	0° m)		asc. node	31 Jan 03 j 22:28	25° ¥ 53'24 0° Ƴ	
	26 Jan 10 j 09:34	0∘ ⊽			31 Jan 10 j 08:25		
retrograde	26 Feb 10 j 19:15	5° 2 10′59			31 Feb 25 j 23:45	0° B	
•,•	26 Mar 11 j 18:57	30°R, Mp	2004117		31 Apr 14 j 00:07	0° I	
opposition	26 Mar 19 j 23:07	27° mp 04'01	3°04'17	. ,	31 May 31 j 11:27	0°95	
greatest brilliancy	26 Mar 20 j 18:31	26° My 45'53		evening set	31 Jun 27 j 00:25	16°545'28	
min. Earth dist.	26 Mar 26 j 22:16	24° m) 27'58	0.58026 AU	To all the	31 Jul 17 j 21:39	0° N	2.66614.444
direct	26 Apr 29 j 12:28	17° m) 24'28		max. Earth dist.	31 Aug 02 j 08:23	9°8650'5/	2.66614 AU
desc. node	26 Jun 01 j 09:26	23° m 37'06			21 4 11 22 47	160 000112	1000114
	26 Jun 17 j 06:35	0∘ 亚		conjunction	31 Aug 11 j 22:47	16° Ω 00'12	
	26 Aug 09 j 06:51	0° ™		minimum elong	31 Aug 11 j 23:13	16° Ω 00'54	1°08'13
	26 Sep 21 j 08:20	0° ∡ ¹			31 Sep 02 j 14:54	0° m	
	26 Oct 31 j 03:56	0°ප		morning rise	31 Sep 25 j 15:02	15° Mp 03'06	
	26 Dec 08 j 22:34	0° ≈			31 Oct 18 j 03:17	0∘ ⊽	
	27 Jan 17 j 00:40	0° ∀			31 Dec 01 j 06:37	0° ™	
_	27 Feb 26 j 08:28	0° Υ			32 Jan 13 j 03:08	0° ∡	
asc. node	27 Apr 01 j 01:13	24° Y ′06′17		desc. node	32 Jan 22 j 07:35	6° ∡ 31'53	
evening set	27 Apr 02 j 23:22	25° Y 27'13			32 Feb 23 j 23:55	0°る	
	27 Apr 09 j 11:42	0°₽			32 Apr 05 j 12:13	0° ≈	
	27 May 23 j 14:14	Π \circ 0			32 May 18 j 04:51	0° ∀	
					32 Jul 06 j 07:05	0° Υ	
conjunction	27 May 27 j 03:33	2° Ⅲ 21'52		retrograde	32 Aug 26 j 14:07	15° Y 23'45	
minimum elong	27 May 27 j 02:14	2° Ⅱ 19'41		min. Earth dist.	32 Sep 23 j 19:33	9° Ƴ 57'09	
max. Earth dist.	27 Jun 16 j 07:24	15° Ⅲ 38'30	2.61792 AU	opposition	32 Oct 01 j 22:43	7° Y ′06′07	
	27 Jul 08 j 10:43	0 \circ		greatest brilliancy	32 Oct 01 j 05:13	7° Y 21'30	-2.4m
morning rise	27 Jul 15 j 15:50	4° © 38'06		direct	32 Nov 03 j 16:05	0° Y 23′07	
	27 Aug 24 j 15:04	0 $^{\circ}\Omega$		asc. node	32 Nov 20 j 21:46	2° Y 12'00	
	27 Oct 11 j 22:06	0° ™			33 Jan 27 j 13:43	9° 8	
	27 Nov 30 j 22:15	0∘ ⊽			33 Mar 21 j 17:24	Π $^{\circ}0$	
	28 Jan 25 j 00:14	0° M			33 May 10 j 20:07	0	
retrograde	28 Apr 05 j 08:48	21°M43'36			33 Jun 28 j 10:00	$0 {\circ} \Omega$	
desc. node	28 Apr 18 j 08:55	20°M39'22		evening set	33 Aug 02 j 11:54	22° Ω 17'48	
opposition	28 May 08 j 14:00	15°M23'13			33 Aug 14 j 09:12	0° m y	
greatest brilliancy	28 May 08 j 22:29	15° ™ 16'19		max. Earth dist.	33 Aug 26 j 04:44	7° ™ ,44'17	2.60970 AU
min. Earth dist.	28 May 16 j 19:30	12°M43'00	0.45314 AU				
direct	28 Jun 13 j 22:44	7° ™ 39'56		conjunction	33 Sep 17 j 22:26	22° m 52'44	0°45'43
	28 Aug 17 j 14:36	0° ∡		minimum elong	33 Sep 17 j 23:43	22° Mp 54'53	0°45'43
	28 Oct 02 j 19:01	0°ಕ			33 Sep 28 j 10:54	0∘ ⊽	
	28 Nov 13 j 10:20	0° ≈		morning rise	33 Nov 04 j 08:01	25° ≏ 35'12	
	28 Dec 24 j 10:44	0° ∀			33 Nov 10 j 13:20	0°M	
	29 Feb 04 j 07:29	0° Y		desc. node	33 Dec 09 j 06:55	20°M43'54	
asc. node	29 Feb 15 j 23:13	8° Y 10'31			33 Dec 21 j 21:24	0° ∡	
	29 Mar 19 j 16:40	0°8			34 Jan 30 j 21:18	0°ಕ	
	29 May 03 j 17:26	Π \circ 0			34 Mar 11 j 03:52	0° ≈	
evening set	29 May 18 j 15:50	9°Ⅱ44'36			34 Apr 19 j 14:12	0° ∀	
	29 Jun 19 j 01:35	0 \circ			34 May 30 j 10:54	0 ° Υ	
					34 Jul 14 j 03:45	0°8	
conjunction	29 Jul 05 j 23:12	10° © 48'43	1°03'40		34 Sep 12 j 02:51	Π °0	
minimum elong	29 Jul 05 j 22:16	10° 5 47'13	1°03'39	asc. node	34 Oct 08 j 19:53	4° Ⅱ 56'01	
max. Earth dist.	29 Jul 09 j 20:27	13° © 17'28	2.66922 AU	retrograde	34 Oct 10 j 10:43	4° Ⅱ 57'06	
	29 Aug 05 j 01:53	0 $^{\circ}$ Ω			34 Nov 06 j 02:33	30° ₹ 8	
morning rise	29 Aug 20 j 09:53	9° Ω 45'43		min. Earth dist.	34 Nov 12 j 23:54	27° 8 26'18	0.58581 AU
	29 Sep 21 j 03:12	0° m		opposition	34 Nov 18 j 20:40	25° 8 07'47	1°45'56
	29 Nov 06 j 21:13	0∘ ⊽		greatest brilliancy	34 Nov 18 j 10:43	25° 8 17'36	-1.7m
	29 Dec 23 j 10:18	0° M .		direct	34 Dec 25 j 20:16	16° 8 37'31	
	30 Feb 08 j 09:01	0° ∡ ¹			35 Feb 17 j 05:25	Π °0	
desc. node	30 Mar 06 j 07:56	16° ∡ ¹08'53			35 Apr 18 j 04:24	0 \circ \odot	
	30 Mar 29 j 13:57	0°ප			35 Jun 08 j 17:30	0 ° Ω	
	30 Jun 05 j 03:38	0° ≈			35 Jul 26 j 17:19	0° ™	
retrograde	30 Jun 22 j 08:33	1° ≈ 53'32			35 Sep 09 j 21:29	0。 亚	
	30 Jul 09 j 19:41	30°₹ ⋜		evening set	35 Sep 11 j 19:34	1° ≏ 18'54	

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 44 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. max. Earth dist. 35 Sep 27 j 00:36 11°**£**50'56 2.50530 AU 40 May 05 j 23:12 0°8 35 Oct 22 j 13:30 0°M 40 May 13 j 22:46 5°836'35 morning rise 40 May 30 j 17:43 35 Oct 27 j 05:28 17°813'53 desc. node 3°M22'43 asc. node $\Pi^{\circ}0$ 40 Jun 18 j 14:22 0.00 conjunction 35 Nov 01 j 12:28 7°M13'57 -0°03'24 40 Aug 03 j 16:43 35 Nov 01 j 12:17 $0^{\circ}\Omega$ minimum elong 7°M13'37 0°03'25 40 Sep 21 j 20:47 35 Oct 31 j 14:14 0° M 40 Nov 16 j 09:44 behind sun begin 6°M33'24 behind sun end 35 Nov 02 j 10:19 7°**IL**53'52 retrograde 41 Jan 25 j 00:24 20° m 32'52 35 Dec 02 j 03:56 0°⊀ opposition 41 Mar 04 j 04:11 11°**m** 57'31 3°51'41 morning rise 35 Dec 27 j 12:58 19°**∡**′21′11 greatest brilliancy 41 Mar 04 j 22:37 11° **m** 39'50 -1.5m 36 Jan 10 j 07:32 0°₹ min. Earth dist. 41 Mar 09 j 18:37 9°**m**48'49 0.61861 AU 36 Feb 17 j 18:15 0°≈ direct 41 Apr 14 j 08:10 2° M 02'230°**)**€ 36 Mar 27 j 08:40 desc. node 41 Jun 18 j 01:39 21° m/47'19 $0^{\circ}\Upsilon$ 36 May 06 j 01:18 41 Jul 03 j 06:15 0∘**⊽** 0°8 36 Jun 16 j 22:12 41 Aug 19 j 18:12 0°M 36 Aug 01 j 16:37 $0^{\circ}II$ 41 Sep 30 j 12:05 0°**⊼** asc. node 36 Aug 25 j 19:18 14°**Ⅲ**09′18 41 Nov 08 j 18:14 0°₹ 36 Sep 26 j 10:17 0ಂತಾ 41 Dec 17 j 04:01 0°**≈** 12°526'36 retrograde 36 Nov 14 j 19:51 42 Jan 24 j 22:04 0°**)** min. Earth dist. 36 Dec 22 j 21:40 3°523'32 0.66116 AU 42 Mar 05 j 22:01 $0^{\circ}\Upsilon$ opposition 36 Dec 25 j 00:25 2°932'40 3°56'38 evening set 42 Mar 12 j 05:22 4° Y 37'01 greatest brilliancy 36 Dec 24 i 16:08 2°9540'58 -1.4m 42 Apr 16 j 17:48 0°8 36 Dec 31 j 11:19 30°RⅡ asc. node 42 Apr 17 j 16:57 0°840'31 direct 37 Feb 02 i 18:32 23°II03'31 37 Mar 11 j 19:07 0ಂತಾ conjunction 42 May 08 j 21:44 15°819'44 0°12'48 37 May 15 j 17:05 $0^{\circ}\Omega$ 42 May 08 j 21:04 15°**8**18'35 0°12'49 minimum elong 37 Jul 05 j 16:40 0°m 42 May 08 j 07:33 behind sun begin 14°**8**55'30 37 Aug 20 j 17:54 0∘**⊽** 42 May 09 j 10:34 15°**8**41'39 behind sun end 16°**♀**12'28 42 May 30 j 14:48 37 Sep 13 j 04:18 0°П desc node 37 Oct 02 j 11:16 42 Jun 05 j 09:16 3°**П**50'50 2.58334 AU 0°M max. Earth dist. 42 Jun 30 j 03:40 20°**Ⅱ**08'04 37 Oct 30 j 13:11 20°M44'51 evening set morning rise 42 Jul 15 j 09:39 37 Nov 11 j 18:32 0°**∡** 0°9 $0^{\circ}\Omega$ max. Earth dist. 37 Dec 02 j 05:34 15°**∡**′44'15 2.38243 AU 42 Aug 31 j 20:21 37 Dec 20 j 12:19 42 Oct 20 j 02:05 0° m 0°궁 42 Dec 11 j 22:02 0∘ଫ 37 Dec 30 j 09:02 7°る45'02 -0°58'39 43 Feb 23 j 16:59 conjunction 0°M 37 Dec 30 j 06:44 minimum elong 7°る40'31 0°58'38 retrograde 43 Mar 13 j 14:39 1°M48'43 38 Jan 27 j 14:13 0°**≈** 43 Mar 30 j 13:34 30°**Ŗ**Ω 38 Mar 06 j 22:05 0°**)**€ opposition 43 Apr 17 j 14:07 24° **△**40'26 0°56'37 morning rise 38 Mar 09 j 15:37 2°\ 06'41 greatest brilliancy 43 Apr 17 j 22:24 24°**♀**33'11 -2.1m 38 Apr 15 j 08:39 $0^{\circ}\Upsilon$ min. Earth dist. 43 Apr 25 j 23:31 21°**2**44'27 0.50550 AU 38 May 26 j 16:25 0° 8 43 May 06 j 00:34 18°**♀**39'31 desc. node 38 Jul 09 j 15:13 $\mathbb{I}^{\circ 0}$ 43 May 26 j 04:11 15°**£**54'49 direct 38 Jul 13 j 19:01 2°**Ⅱ**43'45 43 Jul 15 j 09:52 0°M asc. node 38 Aug 26 j 08:26 0ಂತಾ 43 Sep 03 j 13:08 0°**∡**7 0°궁 38 Oct 21 i 09:32 $0^{\circ}\Omega$ 43 Oct 15 i 13:03 43 Nov 24 i 11:59 retrograde 38 Dec 19 i 09:09 16°**Ω**00'30 0°≈ 39 Jan 28 i 02:54 opposition 6° Ω 34'17 4° 36'33 44 Jan 03 i 10:56 0°**∀** $0^{\circ}\Upsilon$ greatest brilliancy 39 Jan 28 i 08:31 6°Ω28'43 -1.3m 44 Feb 13 i 12:32 44 Mar 04 j 15:49 14°**Y**17'26 min. Earth dist. 39 Jan 29 j 21:17 5°Ω52'18 0.67279 AU asc. node 39 Feb 15 j 07:21 30°R95 44 Mar 27 j 06:40 0°8 direct 39 Mar 10 j 08:18 26°936'17 44 May 01 j 17:42 23°**8**57'27 evening set 39 Apr 04 j 04:12 $0^{\circ}\Omega$ $0^{\circ}\Pi$ 44 May 10 j 20:27 39 Jun 11 j 17:24 0° m 39 Jul 30 j 20:23 0∘**⊽** conjunction 44 Jun 20 j 20:17 26°II43'43 0°54'39 desc. node 39 Aug 01 j 03:27 0°**£**50'57 minimum elong 44 Jun 20 j 18:58 26°II41'37 0°54'38 39 Sep 12 j 11:08 0°M 44 Jun 25 j 22:14 000 39 Oct 22 j 22:44 0°×7 max. Earth dist. 44 Jun 30 j 18:42 3°907'03 2.65564 AU 39 Nov 30 j 15:26 0°る 44 Aug 06 j 10:28 26°930'42 morning rise 40 Jan 04 j 20:42 27°る47'18 0° Ω evening set 44 Aug 11 j 22:16 0° M 40 Jan 07 j 15:58 0°≈ 44 Sep 28 j 07:49 40 Feb 15 j 00:32 0°**)**€ 44 Nov 14 j 23:16 0∘**⊽** 45 Jan 02 j 09:46 0°M conjunction 40 Mar 11 j 18:51 19°¥40'45 -0°46'18 45 Feb 22 j 16:37 0°**∡**7 minimum elong 40 Mar 11 j 21:45 19°**)** 46′13 0°46′15 desc. node 45 Mar 23 j 01:10 14° 🗷 37'54 40 Mar 25 j 13:47 $0^{\circ}\Upsilon$ 0°정 45 May 05 j 22:58 max. Earth dist. 40 Apr 28 j 23:26 25°Υ02'22 2.46291 AU 1°る22'35 retrograde 45 May 21 j 03:26

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 45 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style.

Attention, astronom	nical year style is used: T	The year -400 in	astronomical cou	inting style is the year	401 BCE in historical co	unting style.	
	45 Jun 05 j 00:23	30°₽ ∡ 7			50 Sep 16 j 21:23	0∘ ত	
opposition	45 Jun 20 j 14:35	26° ₹ 15'53	-5°18'34				
greatest brilliancy	45 Jun 21 j 07:54	26° ₰ 04'00		conjunction	50 Oct 13 j 22:23	18° ≏ 46'44	
min. Earth dist.	45 Jun 24 j 20:30	25° ₹ 06'00	0.38709 AU	minimum elong	50 Oct 13 j 23:11	18° ≏ 48'08	0°18'29
direct	45 Jul 22 j 06:15	20° ∡ ³39′06			50 Oct 29 j 16:35	0° M	
	45 Aug 30 j 13:57	0°ප		desc. node	50 Nov 12 j 21:36	10° M ₁7'38	
	45 Oct 23 j 06:53	0° ≈		morning rise	50 Dec 04 j 15:05	26° M 20'06	
	45 Dec 07 j 10:40	0° ∀			50 Dec 09 j 12:42	0° ∡ ¹	
asc. node	46 Jan 20 j 13:39	29°) 56'40			51 Jan 17 j 22:49	0°ප	
	46 Jan 20 j 15:37	0° Υ			51 Feb 25 j 15:35	0° ≈	
	46 Mar 06 j 13:09	0°B			51 Apr 05 j 11:20	0° \	
	46 Apr 21 j 13:45	0° I			51 May 15 j 10:28	0° Υ	
	46 Jun 07 j 11:46	0.20			51 Jun 26 j 21:20	0° X	
evening set	46 Jun 12 j 05:11	3°500'13	2 (7200 444	Ā	51 Aug 13 j 14:36	0°II	
max. Earth dist.	46 Jul 24 j 04:43		2.67390 AU	asc. node	51 Sep 12 j 11:41	15° I I27'08	
	46 Jul 24 j 16:30	0 \circ Ω		retrograde	51 Nov 02 j 04:44	28° Ⅱ 48'49	0.62000 AII
:	46 I-1 20 : 17-10	20 02 4101	1°09'38	min. Earth dist.	51 Dec 08 j 15:24	20 П 17 38 18° П 51'22	0.63889 AU
conjunction	46 Jul 28 j 17:10 46 Jul 28 j 17:04	2° Ω 34'01 2° Ω 33'51	1°09'38 1°09'37	opposition	51 Dec 12 j 05:55	18°Щ31'22 19°Щ02'43	
minimum elong	46 Sep 09 j 11:20	0°M)	1 0937	greatest brilliancy	51 Dec 11 j 18:35	9° Ⅱ 41'07	-1.3111
morning rise	46 Sep 11 j 07:36	1°Mp11'35		direct	52 Jan 20 j 01:29	9 п 4107 0° ©	
morning rise	46 Oct 25 j 08:40	0∘ ⊽			52 Mar 29 j 13:48 52 May 25 j 00:50	0° U	
	46 Dec 09 j 05:13	0°M			52 Jul 13 j 11:14	0° m y	
	47 Jan 22 j 03:45	0° ⊼ ¹			52 Aug 28 j 01:41	0∘ ত المارة	
desc. node	47 Feb 08 j 00:08	11° х 37'30		desc. node	52 Sep 29 j 20:33	22° ≏ 53'28	
desc. node	47 Mar 06 j 13:19	0°る		evening set	52 Oct 09 j 11:42	29° ₽ 49'16	
	47 Apr 19 j 09:57	0° ≈		evening set	52 Oct 09 j 17:38	0°M	
	47 Jun 06 j 12:32	0° ∺		max. Earth dist.	52 Oct 26 j 09:54		2.42701 AU
retrograde	47 Aug 05 j 08:02	19° ¥ 52'09		max. Earth dist.	52 Nov 19 j 02:57	0° ∡ ⊓	2.42701710
min. Earth dist.	47 Sep 01 j 01:28		0.41376 AU		32 110V 17 J 02.37	· ^	
greatest brilliancy	47 Sep 07 j 03:52	13°) 15′26		conjunction	52 Dec 04 j 15:31	11° ∡ 52′29	-0°40'14
opposition	47 Sep 08 j 06:37	12°) (54'16		minimum elong	52 Dec 04 j 13:14	11° × ⁷ 48'05	
direct	47 Oct 09 j 05:05	7°) €07'23			52 Dec 27 j 23:49	0°ප	
asc. node	47 Dec 08 j 13:05	24°) € 56'46			53 Feb 04 j 04:13	0° ≈	
	47 Dec 18 j 15:08	0° Υ		morning rise	53 Feb 07 j 12:43	2° ≈ 38'19	
	48 Feb 09 j 21:46	0°8		, and the second	53 Mar 14 j 13:22	0° ∀	
	48 Mar 30 j 14:31	0°Π			53 Apr 23 j 00:34	$0^{\circ}\Upsilon$	
	48 May 18 j 09:14	0ം ഉ			53 Jun 03 j 10:25	9° 8	
	48 Jul 05 j 09:38	$0^{\circ}\Omega$			53 Jul 17 j 18:29	Π $^{\circ}0$	
evening set	48 Jul 18 j 21:38	8° Ω 33′28		asc. node	53 Jul 30 j 10:09	8° Ⅱ 05'33	
max. Earth dist.	48 Aug 16 j 05:54	26° Ω 46'11	2.63789 AU		53 Sep 05 j 00:13	0 \circ \mathfrak{S}	
	48 Aug 21 j 05:09	0° m			53 Nov 11 j 21:31	$0^{\circ}\Omega$	
				retrograde	53 Dec 05 j 20:58	3° Ω 16′29	
conjunction	48 Sep 02 j 18:44	8° m 13'43	0°57'41		53 Dec 28 j 05:20	30° ℝ	
minimum elong	48 Sep 02 j 19:51	8° Mp 15'33	0°57'41	opposition	54 Jan 14 j 22:02	23° © 36'51	4°30'33
	48 Oct 05 j 09:41	0∘ ত		greatest brilliancy	54 Jan 14 j 21:42	23° © 37'11	-1.3m
morning rise	48 Oct 18 j 14:18	8° ჲ 59'04		min. Earth dist.	54 Jan 15 j 04:09	23° © 30'45	0.67606 AU
	48 Nov 17 j 20:06	0° M ₊		direct	54 Feb 24 j 17:18	13° 5 946'59	
desc. node	48 Dec 25 j 22:25	27°M17'32			54 Apr 26 j 00:40	$0^{\circ}\Omega$	
	48 Dec 29 j 15:36	0° ⊀			54 Jun 21 j 13:50	0° my	
	49 Feb 08 j 04:55	0°ರ			54 Aug 08 j 01:08	0∘ ত	
	49 Mar 20 j 01:50	0° ≈		desc. node	54 Aug 17 j 19:06	6° മ 34'00	
	49 Apr 29 j 05:13	0° ∀			54 Sep 20 j 04:39	0° M ₊	
	49 Jun 10 j 07:58	0° Υ			54 Oct 30 j 13:18	0° ∡ ¹	
	49 Jul 29 j 02:57	0°8		evening set	54 Dec 08 j 04:44	29° ∡ 58'11	
retrograde	49 Sep 24 j 11:54	17° 8 53'25			54 Dec 08 j 05:40	0°ප	
asc. node	49 Oct 25 j 13:01	11° 8 17'44			55 Jan 15 j 05:58	0° ≈	
min. Earth dist.	49 Oct 25 j 22:56	11° 8 08'26	0.54086 AU		## T 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4		1000:0-
opposition	49 Nov 02 j 02:03	8° 8 24'35	0°21'31	conjunction	55 Feb 13 j 00:49	22°≈36'13	
greatest brilliancy	49 Nov 01 j 23:32	8° 8 27'00	-2.0m	minimum elong	55 Feb 13 j 02:45	22°≈39'58	1°02'07
direct	49 Dec 07 j 14:12	0° 8 29'24			55 Feb 22 j 13:17	0°) €	
	50 Mar 04 j 05:08	0° I I			55 Apr 03 j 00:16	0° Υ	2.40025 : **
	50 Apr 27 j 06:58	0° ©		max. Earth dist.	55 Apr 04 j 12:12	1° Υ 06'52	2.40937 AU
	50 Jun 16 j 07:45	0° N		morning rise	55 Apr 21 j 20:28	13° Y 52'49	
	50 Aug 02 j 19:23	0° Mp			55 May 14 j 07:21	0°8	
evening set	50 Aug 26 j 11:13	15° Mp 32'45	0.55104 ***	asc. node	55 Jun 17 j 10:01	23° 8 36'05	
max. Earth dist.	50 Sep 13 j 04:45	27° iip 28′57	2.55104 AU		55 Jun 26 j 22:38	Π °0	

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 46

•	nical year style is used: T		• • •				,
,	55 Aug 12 j 09:40	്0∘ഇ		min. Earth dist.	60 May 30 j 06:10		0.42595 AU
	55 Oct 02 j 01:03	$0^{\circ}\Omega$		direct	60 Jun 26 j 12:38	22°M11'55	
	55 Dec 05 j 02:08	0° m p			60 Jul 31 j 22:18	0° ∡ ″	
retrograde	56 Jan 10 j 15:47	6° My 52′00			60 Sep 23 j 21:55	8°0	
	56 Feb 13 j 01:58	30° R Ω			60 Nov 06 j 10:08	0° ≈	
opposition	56 Feb 18 j 14:04	27° Ω 53'30	4°20'31		60 Dec 18 j 08:50	0° ∀	
greatest brilliancy	56 Feb 19 j 04:34	27° Ω 39'23	-1.4m		61 Jan 29 j 19:45	0 ° Υ	
min. Earth dist.	56 Feb 22 j 17:27	26° Ω 16'43	0.64762 AU	asc. node	61 Feb 06 j 06:09	5° Y ′09'57	
direct	56 Mar 30 j 23:55	17° Ω 52'05			61 Mar 14 j 14:35	0°8	
	56 May 19 j 11:46	0° m		_	61 Apr 28 j 21:49	0°Щ	
desc. node	56 Jul 04 j 18:32	24° m 01'05		evening set	61 May 27 j 20:24	18° Ⅱ 44'23	
	56 Jul 14 j 15:37	0∘ 亚			61 Jun 14 j 09:42	0	
	56 Aug 28 j 21:49	0°M			(1 X 1 14:00 0 0	100007106	1005101
	56 Oct 08 j 22:48	0° ∡		conjunction	61 Jul 14 j 09:07	19°507'26	1°07'01
	56 Nov 16 j 21:13	0° ට		minimum elong	61 Jul 14 j 08:29	19°506'24	
	56 Dec 25 j 01:38 57 Feb 01 j 14:24	0° ≈ 0° ∀		max. Earth dist.	61 Jul 15 j 04:48	19° © 38'46 0° Ω	2.67320 AU
avaning sat	•	0 X 10° ∺ 50'01		morning rise	61 Jul 31 j 11:01 61 Aug 28 j 09:18	17° Ω 49'10	
evening set	57 Feb 15 j 18:44 57 Mar 13 j 08:44	0° Υ		morning rise	61 Sep 16 j 09:27	0° m)	
	37 Mai 13 J 06.44	0 1			61 Nov 01 j 19:04	0∘ ت رابا	
conjunction	57 Apr 18 j 12:40	26° Y 09'53	-0°09'47		61 Dec 17 j 15:02	0°M	
minimum elong	57 Apr 18 j 12:40	26° Υ 10'59			62 Feb 01 j 04:42	0° ⊼ ¹	
behind sun begin	57 Apr 18 j 13:17	25° Υ 36'18	0 0271	desc. node	62 Feb 24 j 15:58	15° ∡ 21'35	
behind sun end	57 Apr 19 j 08:52	26° Y 45'38		dese. Hode	62 Mar 19 j 09:14	0° る	
	57 Apr 23 j 23:02	0°8			62 May 08 j 14:20	0° ≈	
asc. node	57 May 04 j 08:30	7° 8 16'11		retrograde	62 Jul 09 j 15:44	20° ≈ 08'08	
max. Earth dist.	57 May 23 j 23:54	20° 8 46'21	2.54118 AU	min. Earth dist.	62 Aug 05 j 23:08	15° ≈ 40'08	0.38122 AU
	57 Jun 06 j 16:02	$\Pi^{\circ}0$		opposition	62 Aug 09 j 23:24	14° ≈ 33'42	-6°41'02
morning rise	57 Jun 13 j 08:49	4° Ⅲ 28′22		greatest brilliancy	62 Aug 09 j 04:45	14° ≈ 46′36	-2.9m
	57 Jul 22 j 11:14	0°€		direct	62 Sep 08 j 13:48	9° ≈ 31'51	
	57 Sep 08 j 08:10	$0^{\circ}\Omega$			62 Nov 11 j 21:40	0°) €	
	57 Oct 29 j 00:52	O° m þ		asc. node	62 Dec 25 j 05:32	24°) 43′28	
	57 Dec 26 j 14:31	0° ट			63 Jan 02 j 21:30	0 ° Υ	
retrograde	58 Feb 21 j 05:05	14° ≏ 34'34			63 Feb 20 j 01:32	9° 8	
opposition	58 Mar 29 j 16:25	6° £ 46'09			63 Apr 08 j 19:31	$\Pi^{\circ}0$	
greatest brilliancy	58 Mar 30 j 09:58	6° £ 30′03			63 May 26 j 16:00	0°€	
min. Earth dist.	58 Apr 06 j 07:01	3° ≏ 58'43	0.55565 AU	evening set	63 Jul 05 j 09:26	25° © 00'21	
	58 Apr 18 j 19:00	30°R Mp			63 Jul 13 j 06:35	0°N	
direct	58 May 08 j 17:13	27° m 20'28		max. Earth dist.	63 Aug 07 j 19:19	16° 87 17'33	2.65833 AU
desc. node	58 May 22 j 17:32	28° m/36'17			(2.4. 20:04.20	240 0 1 (122	1005122
	58 May 29 j 08:39	0∘ ™		conjunction	63 Aug 20 j 04:29	24°Ω16'23	1°05'32
	58 Aug 01 j 14:50	0° M 0° ∕		minimum elong	63 Aug 20 j 05:12	24° Ω 17'34	1°05'31
	58 Sep 15 j 02:55 58 Oct 25 j 11:34	0°る		morning rise	63 Aug 29 j 00:26 63 Oct 04 j 02:39	0° My 23° My 45'59	
	58 Dec 03 j 13:30	0°≈		morning risc	63 Oct 13 j 10:02	0° ⊡	
	59 Jan 11 j 20:43	0° ℋ			63 Nov 26 j 07:08	0° m	
	59 Feb 21 j 08:58	0° Υ			64 Jan 07 j 17:52	0° ⊼	
asc. node	59 Mar 22 j 06:42	20° Ƴ 39'14		desc. node	64 Jan 12 j 14:50	3° ∡ 30'07	
	59 Apr 04 j 15:53	0°8			64 Feb 18 j 01:35	0° る	
evening set	59 Apr 14 j 08:24	6° 8 41'04			64 Mar 29 j 20:03	0° ≈	
Ü	59 May 18 j 21:09	0°II			64 May 10 j 05:33	0° ∀	
	- "				64 Jun 24 j 04:30	0 ° Υ	
conjunction	59 Jun 05 j 21:01	11° Ⅱ 52'44	0°41'35	retrograde	64 Sep 06 j 18:32	28° Y ′22'40	
minimum elong	59 Jun 05 j 19:35	11° Ⅱ 50′22	0°41'36	min. Earth dist.	64 Oct 06 j 01:46	22° Y ′28'22	0.49065 AU
max. Earth dist.	59 Jun 22 j 05:52	22° II 32'57	2.63378 AU	opposition	64 Oct 14 j 02:23	19° Y 32'49	-1°27'00
	59 Jul 03 j 18:30	0ංම		greatest brilliancy	64 Oct 13 j 16:45	19° Y 41'36	-2.2m
morning rise	59 Jul 24 j 03:48	13° © 03'57		asc. node	64 Nov 11 j 04:12	12° Ƴ 34'30	
	59 Aug 19 j 20:22	0 \circ Ω		direct	64 Nov 16 j 21:08	12° Y 21'31	
	59 Oct 06 j 17:49	0° m p			65 Jan 17 j 12:31	0°B	
	59 Nov 24 j 16:26	0∘ ⊽			65 Mar 15 j 09:06	0°Щ	
	60 Jan 15 j 09:22	0° M			65 May 05 j 14:01	0°50	
	60 Mar 21 j 02:52	0° ∡			65 Jun 23 j 14:47	0° N	
desc. node	60 Apr 08 j 16:22	4° ₹ 12'00			65 Aug 09 j 18:07	0° m/y	
retrograde	60 Apr 20 j 12:40	5° ∡ 702'39		evening set	65 Aug 11 j 01:27	0° m 50'58	2 500 65 :==
•.•	60 May 20 j 02:21	30°RM	2027/52	max. Earth dist.	65 Sep 01 j 11:59	14° m 57'38	2.59062 AU
opposition	60 May 22 j 18:50	29°M10'53			65 Sep 23 j 20:00	0∘ ⊽	
greatest brilliancy	60 May 23 j 11:15	28°M58'15	- ∠.0III				

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 47 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. 65 Sep 27 j 01:15 2°**2**11'51 0°36'52 70 Oct 12 j 19:43 $0^{\circ}\Omega$ conjunction minimum elong 65 Sep 27 j 02:29 2°**2**13'57 0°36'50 70 Dec 27 j 07:54 23°**Ω**49'01 retrograde 65 Nov 05 j 20:05 0°M 71 Feb 04 j 19:59 14°Ω31'47 4°34'18 opposition 65 Nov 14 j 16:44 6°M21'19 71 Feb 05 j 04:59 greatest brilliancy 14°Ω22'55 -1.3m morning rise 65 Nov 29 j 13:19 17°ML08'26 71 Feb 07 j 10:59 desc. node min. Earth dist. 13°**Ω**29'41 0.66671 AU 65 Dec 16 j 23:59 0°×7 71 Mar 18 j 04:30 direct 4°**Ω**31'07 0°ರ 71 Jun 04 j 08:48 66 Jan 25 j 18:50 0° m 0°≈ 28° m 13'58 66 Mar 05 j 20:05 desc. node 71 Jul 22 j 10:44 0°**)**€ 0∘**⊽** 66 Apr 13 j 23:56 71 Jul 25 j 04:52 $0^{\circ}\Upsilon$ 66 May 24 j 10:05 71 Sep 07 j 07:46 0°M 0° 8 66 Jul 06 j 22:52 71 Oct 17 j 23:52 0°**∡**7 $\Pi^{\circ}0$ 71 Nov 25 j 18:28 0°정 66 Aug 28 j 05:24 asc. node 66 Sep 29 j 03:30 11°**Ⅱ**46′13 72 Jan 02 j 20:04 0°≈ retrograde 66 Oct 18 j 23:53 14°**Ⅲ**15'49 evening set 72 Jan 20 j 15:27 13°≈59'39 min. Earth dist. 66 Nov 22 j 14:44 6°**Ⅲ**22'03 0.60710 AU 72 Feb 10 j 05:21 0°**)**€ opposition 66 Nov 27 j 16:27 4°**Ⅲ**21'11 2°25'06 72 Mar 20 j 19:16 $0^{\circ}\Upsilon$ greatest brilliancy 66 Nov 27 j 04:47 4°**Ⅲ**32'48 -1.6m 66 Dec 09 j 09:21 30°₽₩ conjunction 72 Mar 26 j 06:13 4°Υ02'11 -0°33'42 direct 67 Jan 04 j 08:51 25°**8**34'58 minimum elong 72 Mar 26 j 08:31 4°Υ06'26 0°33'39 67 Feb 01 j 21:52 $\mathbb{I}^{\circ 0}$ 72 May 01 j 05:09 0°8 67 Apr 11 j 13:35 0ಂತಾ max. Earth dist. 72 May 09 j 05:10 5°**႘**37'31 2.49186 AU 67 Jun 03 i 10:58 $0^{\circ}\Omega$ asc. node 72 May 21 j 00:35 13°849'36 67 Jul 21 j 21:51 0° m morning rise 72 May 25 i 16:13 17°801'31 67 Sep 05 j 05:41 0∘**⊽** 72 Jun 13 i 19:22 $\Pi^{\circ}0$ 67 Sep 21 j 17:12 11°**♀**22'53 72 Jul 29 j 17:17 0ಂತಾ evening set 67 Oct 06 j 05:58 72 Sep 16 j 06:21 $0^{\circ}\Omega$ max. Earth dist. 21°**£**37'56 2.47762 AU 67 Oct 17 j 13:00 72 Nov 08 j 09:11 0° m desc node 29°**£**43'53 67 Oct 17 j 21:55 73 Feb 03 j 09:13 29° m 13'00 oom. retrograde 73 Mar 13 j 00:22 20° m 52'41 3°26'30 opposition 67 Nov 13 j 02:27 73 Mar 13 j 19:47 conjunction 19°M13'52 -0°16'55 greatest brilliancy 20° m/34'19 -1.6m 67 Nov 13 j 01:29 19°M12'05 0°16'55 73 Mar 19 j 09:32 18° m/27'50 0.59853 AU min. Earth dist. minimum elong 67 Nov 27 j 10:34 0°**√** 73 Apr 22 j 21:31 direct 11° m 04'35 73 Jun 08 j 09:08 68 Jan 05 j 11:36 0°정 22° m 28'33 desc. node 4°**る**24'40 68 Jan 11 j 03:30 73 Jun 24 j 06:48 0∘**⊽** morning rise 68 Feb 12 j 19:47 73 Aug 13 j 09:30 0°M 0°≈ 68 Mar 06 j 21:23 18°≈02'08 1.2m 73 Sep 24 j 20:35 0°**∡**7 greatest brilliancy 68 Mar 22 j 07:41 0°**)**€ 73 Nov 03 j 10:05 0°궁 68 Apr 30 j 21:19 $0^{\circ}\Upsilon$ 73 Dec 12 j 00:27 0°≈ 68 Jun 11 j 12:19 0° 8 74 Jan 19 j 22:02 0°**)**€ 68 Jul 26 j 13:11 $0^{\circ}II$ 74 Mar 01 j 01:07 $0^{\circ}\Upsilon$ 68 Aug 16 j 02:23 12°**Ⅲ**34'50 evening set 74 Mar 24 j 20:47 17°**Y**12'48 asc. node 68 Sep 16 j 17:36 0ಂತಾ 74 Apr 07 j 23:55 27°**℃**12'24 asc. node 68 Nov 22 j 12:42 20°524'39 74 Apr 11 j 23:40 0° 8 retrograde 68 Dec 31 j 10:35 11°505'18 0.66933 AU min. Earth dist. 69 Jan 01 j 16:56 74 May 19 j 12:38 25°**8**42'42 0°24'25 opposition 10°934'54 4°12'41 conjunction 69 Jan 01 i 11:11 74 May 19 j 11:30 greatest brilliancy 10°5540'40 -1.3m minimum elong 25°840'48 0°24'24 69 Feb 10 i 21:10 74 May 25 j 22:15 direct 0°957'15 $0^{\circ}II$ 69 May 08 j 20:48 $0^{\circ}\Omega$ max. Earth dist. 74 Jun 11 i 19:23 11°**Д**11'31 2.60339 AU 74 Jul 09 i 03:51 29°**I**00'32 69 Jun 30 i 07:58 0° m morning rise 69 Aug 15 j 20:11 0∘**⊽** 74 Jul 10 j 16:45 0ಂತಾ desc. node 69 Sep 03 j 12:24 12°**£**48'11 74 Aug 26 j 22:41 $0^{\circ}\Omega$ 69 Sep 27 j 17:22 0°M 74 Oct 14 j 13:43 0° m 69 Nov 07 j 01:16 0°×7 74 Dec 04 j 13:23 0∘**⊽** evening set 69 Nov 12 j 14:56 4°**х** 15′24 75 Feb 01 j 15:17 0°M 69 Dec 15 j 18:24 0°정 retrograde 75 Mar 26 j 12:56 13°M08'10 75 Apr 26 j 08:41 7°M29'11 desc. node 6° ML25'15 $-0^{\circ}10'27$ conjunction 70 Jan 15 j 02:54 23°る55'59 -1°04'13 opposition 75 Apr 29 j 13:33 70 Jan 15 j 01:48 23°る53'49 1°04'14 74 Aug 29 j 16:25 minimum elong greatest brilliancy $1^{\circ}\Omega 42'48 \quad 1.8m$ 70 Jan 22 j 19:19 0°≈ 75 May 08 j 00:21 min. Earth dist. 3°M34'23 0.47657 AU 70 Jan 24 j 08:56 1°≈14'12 2.37192 AU max. Earth dist. 75 May 20 j 18:58 30°**₹**Ω 70 Mar 02 j 02:09 28°**♀**10'51 0°**₩** direct 75 Jun 06 j 00:13 morning rise 70 Mar 26 j 04:23 18°**¥**28'59 75 Jun 22 j 12:38 0°M $0^{\circ}\Upsilon$ 70 Apr 10 j 11:45 75 Aug 25 j 19:17 0°**∡**7 70 May 21 j 17:57 0°8 75 Oct 08 j 15:38 0°궁 asc. node 70 Jul 04 j 00:38 29°**8**41'14 75 Nov 18 j 09:46 0°≈ 70 Jul 04 j 11:57 $\Pi^{\circ}0$ 75 Dec 28 j 20:39 0°**)**€

76 Feb 08 j 06:54

 $0^{\circ}\Upsilon$

70 Aug 20 j 14:04

0ಂತಾ

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 48 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. 11°**Y**'02'05 asc. node 76 Feb 23 j 21:56 80 Dec 24 j 15:26 0°×7 76 Mar 22 j 07:48 0°8 81 Feb 02 j 21:17 0°궁 76 May 06 j 02:17 $\mathbb{I}^{\circ 0}$ 81 Mar 14 j 09:45 0°≈ 3°**I**I35'17 0°**₩** 76 May 11 j 13:20 81 Apr 23 j 01:58 evening set $0^{\circ}\Upsilon$ 76 Jun 21 j 06:43 81 Jun 03 j 07:52 0°9 81 Jul 19 j 03:38 0°8 28°819'42 conjunction 76 Jun 29 j 14:19 5°920'09 1°00'22 retrograde 81 Oct 03 j 19:58 minimum elong 76 Jun 29 j 13:12 5°9518'21 1°00'22 asc. node 81 Oct 15 j 18:37 27°**8**17'56 max. Earth dist. 76 Jul 06 j 04:34 9°**©**33'19 2.66418 AU min. Earth dist. 81 Nov 05 j 11:09 21°**8**08'13 0.56671 AU 76 Aug 07 j 06:24 $0^{\circ}\Omega$ opposition 81 Nov 11 j 21:43 18°**8**37'35 1°13'14 morning rise 76 Aug 14 j 11:43 4°**Ω**35'31 greatest brilliancy 81 Nov 11 j 14:03 18°**8**45'05 -1.8m 76 Sep 23 j 10:53 0° M direct 81 Dec 18 j 06:05 10°**8**21'45 76 Nov 09 j 13:38 0∘**⊽** 82 Feb 23 j 10:24 Π °0 76 Dec 26 j 20:11 0°M 82 Apr 21 j 09:40 0ಂತಾ 77 Feb 13 j 06:14 0°**√** 82 Jun 11 j 06:46 $0^{\circ}\Omega$ desc. node 77 Mar 13 j 07:45 16°**₹**27'22 82 Jul 29 j 02:04 0° m 77 Apr 07 j 15:12 0°ರ evening set 82 Sep 04 j 15:17 24° m/48'41 retrograde 77 Jun 08 j 06:38 18°**පි**36'05 82 Sep 12 j 06:30 0°**⊽** opposition 77 Jul 08 j 12:12 13°る37'23 -6°26'16 max. Earth dist. 82 Sep 20 j 19:43 5°**£**52'14 2.52652 AU greatest brilliancy 77 Jul 08 j 19:05 13°る32'48 -2.9m min. Earth dist. 77 Jul 09 j 21:08 13°る15'26 0.37637 AU conjunction 82 Oct 24 j 05:25 29°**£**24'33 0°06'20 direct 77 Aug 07 j 20:41 8°**る**30'46 minimum elong 82 Oct 24 i 05:42 29°**₽**25'04 0°06'20 77 Oct 11 i 04:50 0°≈ behind sun begin 82 Oct 23 i 09:25 28°**£**48'39 77 Nov 29 i 12:48 0°**)**€ behind sun end 82 Oct 25 i 01:59 0°M01'31 78 Jan 10 j 21:05 27°**)** 43'32 82 Oct 25 i 01:08 $0^{\circ}M$ asc. node 78 Jan 14 j 07:53 $0^{\circ}\Upsilon$ 82 Nov 03 j 05:24 6°MJ38'27 desc node 78 Mar 01 j 01:34 0°8 82 Dec 04 j 19:03 0°**∡**¹ 78 Apr 16 j 13:38 $0^{\circ}II$ 82 Dec 17 j 03:14 9°×19'45 morning rise 78 Jun 02 j 18:16 0ಂತಾ 83 Jan 13 j 01:58 0°궁 78 Jun 20 j 17:53 11°523'10 83 Feb 20 j 15:25 0°22 evening set 78 Jul 20 j 01:58 83 Mar 31 j 07:33 0°**∀** 0° Ω $0^{\circ}\Upsilon$ 78 Jul 29 j 11:29 83 May 10 j 01:29 max. Earth dist. 5°**Ω**59'17 2.67063 AU 0°8 83 Jun 21 j 01:49 78 Aug 05 j 21:00 10°Ω42'49 1°09'17 83 Aug 06 j 09:11 0°Π conjunction 83 Sep 02 j 17:42 15°**Ⅲ**26'31 minimum elong 78 Aug 05 j 21:14 10°**Ω**43'11 1°09'17 asc. node 78 Sep 04 j 20:07 83 Oct 05 j 03:42 0° m 0ಂತಾ 78 Sep 19 j 11:03 83 Nov 10 j 02:47 morning rise 9° m 30'47 retrograde 7°≌10'44 78 Oct 20 j 12:54 0∘**⊽** 83 Dec 13 j 07:18 30°RⅡ 78 Dec 03 j 23:55 0° M min. Earth dist. 83 Dec 17 j 11:21 28°**П**21'19 0.65245 AU 79 Jan 16 j 07:26 0°⊀ 83 Dec 20 j 05:55 27° II 14'33 3°42'34 opposition desc. node 79 Jan 29 j 06:54 9°**х**¹07'13 greatest brilliancy 83 Dec 19 j 19:58 27°**Ⅲ**24'32 -1.4m 79 Feb 27 j 18:37 0°る 84 Jan 28 j 14:07 17°**Ⅲ**53'10 direct 79 Apr 11 j 02:43 84 Mar 19 j 13:13 0ಂತಾ 0°≈ 79 May 25 j 07:55 0°**)**€ 84 May 19 j 00:58 $0^{\circ}\Omega$ 79 Jul 21 j 05:14 $0^{\circ}\Upsilon$ 84 Jul 08 j 08:52 0° M 5°Υ16'36 retrograde 79 Aug 18 j 08:50 84 Aug 23 i 06:44 0∘**⊽** min. Earth dist. 79 Sep 14 j 19:11 0°Υ12'12 0.43956 AU desc. node 84 Sep 20 i 03:56 19°**£**20'54 79 Sep 15 i 10:04 30°R**)**€ 84 Oct 05 i 00:46 0°M 79 Sep 22 i 18:26 27°\(\)31'43 -3°39'02 evening set 84 Oct 21 i 02:09 11°M45'08 opposition 79 Sep 21 j 19:40 27°¥50′52 -2.5m max. Earth dist. 28°ML48'32 2.40053 AU greatest brilliancy 84 Nov 12 j 20:17 direct 79 Oct 24 j 15:30 21°¥13'28 84 Nov 14 j 09:55 0°×7 28°**)**€09'14 79 Nov 28 j 20:40 asc node $0^{\circ}\Upsilon$ 79 Dec 03 j 21:00 84 Dec 18 j 18:09 26°**₹**30'06 -0°51'44 conjunction 80 Feb 02 j 11:34 0° 8 minimum elong 84 Dec 18 j 15:35 26°**₹**'25'05 0°51'42 0°궁 80 Mar 24 j 21:07 $0^{\circ}II$ 84 Dec 23 j 05:32 80 May 13 j 08:40 0ಂತಾ 85 Jan 30 j 08:38 0°≈ 80 Jun 30 j 16:48 $0^{\circ}\Omega$ 85 Feb 24 j 11:14 19°≈42'43 morning rise 80 Jul 27 j 05:18 16°**Ω**49'37 85 Mar 09 j 16:38 0°) evening set 85 Apr 18 j 02:24 $0^{\circ}\Upsilon$ 80 Aug 16 j 15:00 0° m 80 Aug 22 j 00:05 0°8 max. Earth dist. 3° Mp 30'29 2.62333 AU 85 May 29 j 09:33 85 Jul 12 j 09:45 $0^{\circ}\Pi$ 85 Jul 20 j 17:45 conjunction 80 Sep 11 j 08:13 16° m 55'47 0°51'15 5°**Ⅲ**25'25 asc. node minimum elong 80 Sep 11 j 09:28 16° m 57'51 0°51'14 85 Aug 29 j 13:27 0 \circ \odot 80 Sep 30 j 18:56 0∘**⊽** 85 Oct 27 j 08:33 0° Ω morning rise 80 Oct 27 j 22:28 18°**△**39'58 retrograde 85 Dec 13 j 14:44 11°**Ω**02'28 80 Nov 13 j 01:44 86 Jan 22 j 12:04 1° **Ω**29'57 4°35'24 0°M opposition

86 Jan 22 j 15:02

greatest brilliancy

1°**Ω**27'01 -1.3m

desc. node

80 Dec 16 j 06:29

23°M52'06

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 49 Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. 17°**Y**17′00 min. Earth dist. 86 Jan 23 j 14:27 1°**Ω**03'44 0.67553 AU asc. node 91 Mar 12 j 14:18 86 Jan 26 j 06:47 30°R95 91 Mar 30 j 20:05 0°8 direct 86 Mar 04 j 13:20 21°934'59 91 Apr 25 j 00:48 17°811'25 evening set 86 Apr 14 j 14:32 91 May 14 j 04:36 $0^{\circ}\Omega$ Π °0 86 Jun 15 j 08:35 0° m 91 Jun 15 j 03:11 0∘**⊽** 20°II56'38 0°49'39 86 Aug 02 j 19:02 conjunction 91 Jun 15 j 01:46 0°49'39 desc. node 86 Aug 08 j 02:50 3°**£**32'05 minimum elong 20°**Ⅲ**54'21 91 Jun 27 j 22:04 86 Sep 15 j 06:09 $0^{\circ}M$ max. Earth dist. 29°**Ⅱ**12'41 2.64691 AU 0°**√** 86 Oct 25 j 17:25 91 Jun 29 j 03:26 0ಂತಾ 0°ಕ 86 Dec 03 j 10:18 morning rise 91 Aug 01 j 09:41 21°9516'35 evening set 86 Dec 23 j 14:58 15°**ප**55'11 91 Aug 15 j 03:32 0° Ω 87 Jan 10 j 10:39 0°≈ 91 Oct 01 j 17:36 0° M 87 Feb 17 j 18:03 0°**⊽** 0°**)**€ 91 Nov 18 j 21:08 92 Jan 07 j 11:18 0°M conjunction 87 Feb 28 j 23:23 8°\;\;38'53 -0°54'23 92 Mar 02 j 06:11 0°**⊼** minimum elong 87 Mar 01 j 02:14 8°\(\pm\)44'21 0°54'22 desc. node 92 Mar 30 j 00:27 11° 🗷 59'45 87 Mar 29 j 05:09 $0^{\circ}\Upsilon$ retrograde 92 May 07 j 07:04 19°**∡**⁴44'34 max. Earth dist. 87 Apr 20 j 11:46 16°**Y**22'18 2.43873 AU opposition 92 Jun 07 j 10:49 14°**∡**¹20'47 -4°10'31 morning rise 87 May 05 j 08:42 27°**Y**′03′24 greatest brilliancy 92 Jun 08 j 06:54 14°**₹**06'20 -2.7m 87 May 09 j 12:14 0°8 min. Earth dist. 92 Jun 13 j 12:00 12°**х** 36′39 0.40190 AU asc. node 87 Jun 07 j 16:25 20°816'33 direct 92 Jul 10 j 11:09 8°×109'20 87 Jun 22 i 01:42 Π °0 92 Sep 12 i 04:28 0°ಕ 87 Aug 07 i 05:44 0000 92 Oct 29 i 09:12 0°≈ 87 Sep 25 i 20:37 $0^{\circ}\Omega$ 92 Dec 11 i 18:53 0°**∀** 87 Nov 22 j 16:42 0° m 93 Jan 24 j 01:38 $0^{\circ}\Upsilon$ 88 Jan 19 j 07:29 15° m 04'02 93 Jan 27 j 12:15 2°Y21'40 retrograde asc node opposition 88 Feb 26 j 20:05 6° m 17'53 4°05'28 93 Mar 09 j 09:20 0° 8 88 Feb 27 j 13:00 6° Mo 01'31 -1.5m 93 Apr 24 j 00:47 $\Pi^{\circ}0$ greatest brilliancy 88 Mar 02 j 19:07 4° Mp 22'54 0.63279 AU 93 Jun 05 j 17:59 27°**II**27'25 min. Earth dist. evening set 88 Mar 15 j 07:01 30°R€ 93 Jun 09 j 17:37 000 88 Apr 08 j 03:34 93 Jul 20 j 10:31 direct 26°**Ω**18'51 max. Earth dist. 25°954'51 2.67467 AU 88 May 03 j 12:59 0° m 22° m 44'59 desc. node 88 Jun 25 j 01:30 conjunction 93 Jul 22 j 15:20 27°918'55 1°09'00 88 Jul 07 j 18:02 0∘**⊽** 93 Jul 22 j 15:01 27°5518'23 1°09'01 minimum elong 88 Aug 23 j 05:21 $0^{\circ}M$ 93 Jul 26 j 20:32 0 $^{\circ}\Omega$ 88 Oct 03 j 16:29 0°⊀ 93 Sep 05 j 08:26 25°**Ω**54'19 morning rise 0°る 93 Sep 11 j 17:01 88 Nov 11 j 19:22 0° m 88 Dec 20 j 02:31 0°**≈** 93 Oct 27 j 20:01 0∘**⊽** 89 Jan 27 j 17:25 0°**)**€ 93 Dec 12 j 02:30 0°M 89 Mar 01 j 22:27 25°**₭**05'35 94 Jan 25 j 16:51 0°**⊼** evening set 89 Mar 08 j 13:32 $0^{\circ}\Upsilon$ desc. node 94 Feb 14 j 23:44 13°**∡** 43'27 89 Apr 19 j 05:32 0° 8 94 Mar 11 j 02:29 0°る 89 Apr 24 j 15:15 94 Apr 25 j 19:27 0°**≈** asc. node 3°**8**47'12 94 Jun 20 j 02:21 0°**)**€ 7°**)** 46′00 89 Apr 30 j 09:40 7°**と**48'07 0°03'35 94 Jul 25 j 07:31 conjunction retrograde 89 Apr 30 i 09:26 94 Aug 20 i 22:50 minimum elong 7°847'43 0°03'35 min. Earth dist. 3°**)** 16'06 0.39627 AU 89 Apr 29 i 10:24 7°**8**07'45 behind sun begin greatest brilliancy 94 Aug 25 i 23:04 1°**)** 47′07 -2.8m behind sun end 89 May 01 i 08:27 8°**8**27'37 opposition 94 Aug 27 i 00:53 1°**H**27'53 -5°51'39 max. Earth dist. 89 May 31 i 07:18 28°**8**53'04 2.56535 AU 94 Sep 01 i 01:46 30°R≈ 89 Jun 01 j 23:13 $0^{\circ}II$ direct 94 Sep 26 j 06:44 26°≈04'35 89 Jun 23 j 03:26 14°**Ⅱ**02'36 94 Oct 21 j 16:10 0°\ morning rise 89 Jul 17 j 16:56 0ಂತಾ asc. node 94 Dec 15 j 11:26 24° **H** 34'37 $0^{\circ}\Upsilon$ 89 Sep 03 j 06:27 $0^{\circ}\Omega$ 94 Dec 25 j 04:38 95 Feb 13 j 16:57 0°8 89 Oct 23 j 00:08 0° m 95 Apr 03 j 10:22 89 Dec 16 j 14:30 0∘**⊽** $\Pi^{\circ}0$ 24°**₽**34'38 retrograde 90 Mar 04 j 11:22 95 May 21 j 18:36 000 90 Apr 09 j 03:13 17°**≏**07'25 1°38'17 95 Jul 08 j 14:43 $0^{\circ}\Omega$ opposition 90 Apr 09 j 16:29 95 Jul 13 j 17:17 3°**Ω**14'04 greatest brilliancy 16°**≏**55'31 -2.0m evening set 90 Apr 17 j 05:25 0.52849 AU 22°**Ω**46'48 2.64813 AU min. Earth dist. 14°**£**13′22 max. Earth dist. 95 Aug 13 j 06:40 8°**£**13'32 desc. node 90 May 13 j 00:03 95 Aug 24 j 10:01 0° m 8°**≏**01'21 direct 90 May 18 j 10:10 90 Jul 23 j 06:03 0°M conjunction 95 Aug 28 j 11:52 2° m/39'22 1°01'28 90 Sep 08 j 06:44 0°⊀ minimum elong 95 Aug 28 j 12:50 2° m/40'58 1°01'27 90 Oct 19 j 11:05 0°궁 95 Oct 08 j 17:38 0∘**⊽** 90 Nov 27 j 23:31 0°≈ morning rise 95 Oct 12 j 19:49 2°**£**45'49 91 Jan 06 j 14:18 0°**)**€ 95 Nov 21 j 09:23 0°M

desc. node

96 Jan 02 j 22:03

0°**∡**17'55

91 Feb 16 j 08:23

 $0^{\circ}\Upsilon$

Planetary Phenomena of Mars from -400 through 102 (UT), Astrodienst AG 18-Feb-2025 14:23, page 50

Attention, astronomical year style is used: The year -400 in astronomical counting style is the year 401 BCE in historical counting style. 0°**∡**¹ 96 Jan 02 j 12:09 101 Jun 24 j 16:25 0° m ರ°0 96 Feb 12 j 09:27 101 Aug 10 j 18:58 0∘**⊽** 96 Mar 23 j 15:02 0°**≈** 101 Aug 24 j 18:39 9°**£**29'25 desc. node 96 May 03 j 04:52 0°**∀** 101 Sep 22 j 20:59 0°M $0^{\circ}\Upsilon$ 96 Jun 15 j 03:43 101 Nov 02 j 06:26 0°×7 0° 8 101 Nov 26 j 17:07 96 Aug 06 j 19:59 18°**∡** 50′16 evening set 96 Sep 17 j 03:55 10°**8**16'09 101 Dec 10 j 23:40 retrograde 0°궁 96 Oct 17 j 15:15 min. Earth dist. 3°**8**53'21 0.51880 AU 96 Oct 25 j 05:30 opposition 1°**8**02'07 -0°21'30 greatest brilliancy 96 Oct 25 j 03:15 1°**8**04'14 -2.1m 96 Oct 28 j 00:10 30°R℃ 96 Nov 01 j 11:20 28°**Y**'24'42 asc. node 96 Nov 29 j 00:09 23°**Y**25'15 direct 97 Jan 02 j 20:25 0°8 97 Mar 08 j 10:07 $0^{\circ}II$ 97 Apr 30 j 02:57 0ಂತಾ 97 Jun 18 j 17:20 $0^{\circ}\Omega$ 97 Aug 05 j 02:10 0° m evening set 97 Aug 19 j 18:39 9° m 35'52 max. Earth dist. 97 Sep 08 j 02:15 22° m) 27'42 2.56965 AU 97 Sep 19 j 05:22 0∘**⊽** conjunction 97 Oct 06 i 11:45 11°**♀**53'21 0°26'44 minimum elong 97 Oct 06 i 12:47 11°**2**55'09 0°26'42 97 Nov 01 j 03:42 0°M 97 Nov 19 j 21:17 13°MJ32'45 desc node 97 Nov 25 j 16:02 17°M46'52 morning rise 97 Dec 12 j 04:08 0°×7 98 Jan 20 j 18:27 0°る 98 Feb 28 j 14:52 0°≈ 98 Apr 08 j 13:34 0°**₩** $0^{\circ}\Upsilon$ 98 May 18 j 15:43 0°8 98 Jun 30 j 09:56 98 Aug 18 j 08:42 $0^{\circ}\Pi$ 98 Sep 19 j 10:15 15°**Ⅲ**06′08 asc. node 23°**Ⅲ**11′05 98 Oct 27 j 06:20 retrograde 98 Dec 01 j 21:48 min. Earth dist. 14°**I**55'51 0.62580 AU 98 Dec 06 j 03:46 opposition 13°**Ⅱ**13'57 2°58'16 greatest brilliancy 98 Dec 05 j 15:47 13°**II**25'57 -1.5m direct 99 Jan 13 j 11:17 4°**Ⅱ**13'43 99 Apr 04 j 03:32 0ಂತಾ 99 May 28 j 22:25 $0^{\circ}\Omega$ 99 Jul 16 j 23:27 0° M 99 Aug 31 j 12:32 0∘**ত** evening set 99 Oct 02 j 03:13 22°**₽**01'33 99 Oct 07 i 20:23 desc. node 26°**♀**06'46 99 Oct 13 i 05:54 0°M 99 Oct 17 i 06:24 2°M.54'48 2.44971 AU max. Earth dist. 99 Nov 22 j 17:47 0°×7 99 Nov 25 i 11:13 2°×104'04 -0°30'27 conjunction 99 Nov 25 j 09:27 2°×100'43 0°30'26 minimum elong 99 Dec 31 j 16:58 0°궁 100 Jan 26 j 17:40 20°る23'39 morning rise 100 Feb 07 j 23:00 0°≈ 100 Mar 17 j 08:51 0°**₩** $0^{\circ}\Upsilon$ 100 Apr 25 j 19:54 100 Jun 06 j 06:08 0° 8 100 Jul 20 j 18:13 $0^{\circ}\Pi$ 100 Aug 06 j 08:49 10°**Ⅲ**28′21 asc. node 100 Sep 08 j 20:21 0ಂಣ 100 Nov 30 j 05:22 retrograde 28°9517'07 101 Jan 09 j 07:54 opposition 18°932'34 4°24'35 greatest brilliancy 101 Jan 09 j 05:04 18°935'24 -1.3m min. Earth dist. 101 Jan 08 j 21:59 18°942'29 0.67429 AU

direct

101 Feb 18 j 20:32

101 May 01 j 01:11

8°9547'34

 $0^{\circ}\Omega$