

# Mond- und Dämmerungstabelle 2024

## für die visuelle Deep-Sky-Beobachtung

Echallens 46.6414° N 6.6322° E

Berechnung: pyEphem  
Textsatz: L<sup>A</sup>T<sub>E</sub>X

### Atmosphären-Einstellungen in pyEphem

Standort.pressure = 1010.0  
Standort.horizon = '0:00:00.0'

Alle Zeitangaben beziehen sich auf den in der jeweiligen Zeile angegeben Kalendertag. Liegt ein Ereignis bereits nach Mitternacht, also schon am Folgetag, ist die Zeitangabe mit einem \* gekennzeichnet, z.B.: 00:20\*.

**Spalte 1** Kalendertag.

**Spalte 2** Bei »MESZ« sind alle Zeitangaben in dieser Zeile in Mitteleuropäischer Sommerzeit, ansonsten standardmäßig in MEZ.

**Spalte 3** Die für Deep-Sky-Beobachtungen nutzbare Zeitspanne: Es ist astronomisch dunkel (Sonne steht tiefer als  $-18^\circ$ ) und kein Mond stört.

**Spalte 4** Dauer der für Deep-Sky-Beobachtungen nutzbaren Zeitspanne.

**Spalte 5** Ereignisse, die die für Deep-Sky-Beobachtungen nutzbare Zeitspanne begrenzen: AN<sub>+</sub> (Einbruch der astronomischen Nacht = Ende der astr. Abenddämmerung), M<sub>v</sub> (Monduntergang), AN<sub>-</sub> (Ende der astronomischen Nacht = Beginn der astr. Morgendämmerung), M<sub>7</sub>

(Mondaufgang), Astr. MD (Astronomische Mitternachtsdämmerung), Naut. MD (Nautische Mitternachtsdämmerung).

**Spalte 6** Mondphase.

**Spalte 7** Mondaufgang.

**Spalte 8** Monduntergang.

**Spalte 9** Beginn der astr. Morgendämmerung (Sonnenhöhe =  $-18^\circ$ ).

**Spalte 10** Dauer der astr. Morgendämmerung.

**Spalte 11** Beginn der naut. Morgendämmerung (Sonnenhöhe =  $-12^\circ$ ).

**Spalte 12** Dauer der naut. Morgendämmerung.

**Spalte 13** Beginn der bürg. Morgendämmerung (Sonnenhöhe =  $-6^\circ$ ).

**Spalte 14** Dauer der bürg. Morgendämmerung.

**Spalte 15** Sonnenaufgang.

**Spalte 16** Taglänge.

**Spalte 17** Sonnenuntergang.

**Spalte 18** Dauer der bürg. Abenddämmerung.

**Spalte 19** Ende der bürg. Abenddämmerung (Sonnenhöhe =  $-6^\circ$ ).

**Spalte 20** Dauer der naut. Abenddämmerung.

**Spalte 21** Ende der naut. Abenddämmerung (Sonnenhöhe =  $-12^\circ$ ).

**Spalte 22** Dauer der astr. Abenddämmerung.

**Spalte 23** Ende der astr. Abenddämmerung (Sonnenhöhe =  $-18^\circ$ ).

**Spalte 24** Länge der Nacht.

**Spalte 25** Länge der astr. Nacht.

**Für Beobachter, die zu Zeiten der Mitternachtsdämmerung während der astr. Dämmerung beobachten möchten:**

**Spalte 26** Nutzbare Zeitspanne: Es ist »nautisch dunkel« (Sonne steht tiefer als  $-12^\circ$ ) und kein Mond stört.

**Spalte 27** Dauer der in Spalte 26 angegebenen Zeitspanne.

**Spalte 28** Ereignisse, die die nutzbare Zeitspanne begrenzen: ND<sub>+</sub> (Beginn der »naut. Dunkelheit« = Ende der naut. Abenddämmerung), M<sub>v</sub> (Monduntergang), ND<sub>-</sub> (Ende der »naut. Dunkelheit« = Beginn der naut. Morgendämmerung), M<sub>7</sub> (Mondaufgang), Naut. MD (Nautische Mitternachtsdämmerung).

**Spalte 29** Identisch zu Spalte 1.

| 1           | 2             | 3                          | 4          | 5                                   | 6    | 7          | 8          | 9                          | 10         | 11    | 12         | 13    | 14         | 15         | 16         | 17         | 18         | 19                      | 20         | 21    | 22         | 23    | 24         | 25         | 26                         | 27         | 28 | 29   |             |
|-------------|---------------|----------------------------|------------|-------------------------------------|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|------------|------------|-------------------------|------------|-------|------------|-------|------------|------------|----------------------------|------------|----|------|-------------|
| 2024        | Zeit-<br>zone | Astr. dunkel und kein Mond |            |                                     | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            |            |            | Ende der Abenddämmerung |            |       |            |       | Nacht      | Astr. N.   | Naut. dunkel und kein Mond |            |    | 2024 |             |
|             |               |                            | $\Delta t$ |                                     | Ph.  | $\nearrow$ | $\searrow$ | Astr.                      | $\Delta t$ | Naut. | $\Delta t$ | Bürg. | $\Delta t$ | $\nearrow$ | $\Delta t$ | $\searrow$ | $\Delta t$ | Bürg.                   | $\Delta t$ | Naut. | $\Delta t$ | Astr. | $\Delta t$ | $\Delta t$ |                            | $\Delta t$ |    |      |             |
| Mo, 1. Jan  |               | 18:47 – 22:30              | 3h 43m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:30      | 11:31      | 06:26                      | 36m        | 07:02 | 37m        | 07:40 | 37m        | 08:17      | 8h 38m     | 16:56      | 37m        | 17:33                   | 37m        | 18:10 | 36m        | 18:47 | 15h 21m    | 11h 38m    |                            |            |    |      | Mo, 1. Jan  |
| Di, 2. Jan  |               | 18:48 – 23:35              | 4h 46m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 23:35      | 11:46      | 06:26                      | 36m        | 07:02 | 37m        | 07:40 | 37m        | 08:17      | 8h 39m     | 16:57      | 37m        | 17:34                   | 37m        | 18:11 | 36m        | 18:48 | 15h 20m    | 11h 37m    |                            |            |    |      | Di, 2. Jan  |
| Mi, 3. Jan  |               | 18:49 – 00:40*             | 5h 50m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:—        | 12:00      | 06:26                      | 36m        | 07:03 | 37m        | 07:40 | 36m        | 08:17      | 8h 40m     | 16:58      | 36m        | 17:35                   | 37m        | 18:12 | 36m        | 18:49 | 15h 19m    | 11h 37m    |                            |            |    |      | Mi, 3. Jan  |
| Do, 4. Jan  |               | 18:50 – 01:46*             | 6h 56m     | AN <sub>+</sub> bis M <sub>7</sub>  | ☾    | 00:40      | 12:15      | 06:26                      | 36m        | 07:03 | 37m        | 07:40 | 36m        | 08:17      | 8h 41m     | 16:59      | 36m        | 17:36                   | 37m        | 18:13 | 36m        | 18:50 | 15h 18m    | 11h 36m    |                            |            |    |      | Do, 4. Jan  |
| Fr, 5. Jan  |               | 18:51 – 02:55*             | 8h 04m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:46      | 12:31      | 06:26                      | 36m        | 07:03 | 37m        | 07:40 | 36m        | 08:17      | 8h 42m     | 17:00      | 36m        | 17:37                   | 37m        | 18:14 | 36m        | 18:51 | 15h 16m    | 11h 35m    |                            |            |    |      | Fr, 5. Jan  |
| Sa, 6. Jan  |               | 18:51 – 04:08*             | 9h 16m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:55      | 12:50      | 06:26                      | 36m        | 07:02 | 37m        | 07:40 | 36m        | 08:17      | 8h 44m     | 17:01      | 36m        | 17:38                   | 37m        | 18:15 | 36m        | 18:51 | 15h 15m    | 11h 34m    |                            |            |    |      | Sa, 6. Jan  |
| So, 7. Jan  |               | 18:52 – 05:24*             | 10h 32m    | AN <sub>+</sub> bis M <sub>7</sub>  |      | 04:08      | 13:14      | 06:26                      | 36m        | 07:02 | 37m        | 07:40 | 36m        | 08:16      | 8h 45m     | 17:02      | 36m        | 17:39                   | 37m        | 18:16 | 36m        | 18:52 | 15h 14m    | 11h 33m    |                            |            |    |      | So, 7. Jan  |
| Mo, 8. Jan  |               | 18:53 – 06:26*             | 11h 32m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:24      | 13:47      | 06:26                      | 36m        | 07:02 | 37m        | 07:39 | 36m        | 08:16      | 8h 46m     | 17:03      | 36m        | 17:40                   | 37m        | 18:17 | 36m        | 18:53 | 15h 12m    | 11h 32m    |                            |            |    |      | Mo, 8. Jan  |
| Di, 9. Jan  |               | 18:54 – 06:25*             | 11h 31m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:40      | 14:31      | 06:26                      | 36m        | 07:02 | 37m        | 07:39 | 36m        | 08:16      | 8h 48m     | 17:04      | 36m        | 17:41                   | 37m        | 18:18 | 36m        | 18:54 | 15h 11m    | 11h 31m    |                            |            |    |      | Di, 9. Jan  |
| Mi, 10. Jan |               | 18:55 – 06:25*             | 11h 29m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 07:49      | 15:31      | 06:25                      | 36m        | 07:02 | 37m        | 07:39 | 36m        | 08:15      | 8h 49m     | 17:05      | 36m        | 17:42                   | 37m        | 18:19 | 36m        | 18:55 | 15h 09m    | 11h 29m    |                            |            |    |      | Mi, 10. Jan |
| Do, 11. Jan |               | 18:56 – 06:25*             | 11h 28m    | AN <sub>+</sub> bis AN <sub>-</sub> | ☾    | 08:46      | 16:46      | 06:25                      | 36m        | 07:02 | 37m        | 07:39 | 36m        | 08:15      | 8h 51m     | 17:07      | 36m        | 17:43                   | 37m        | 18:20 | 36m        | 18:56 | 15h 08m    | 11h 28m    |                            |            |    |      | Do, 11. Jan |
| Fr, 12. Jan |               | 18:57 – 06:25*             | 11h 27m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 09:29      | 18:11      | 06:25                      | 36m        | 07:01 | 36m        | 07:38 | 36m        | 08:15      | 8h 53m     | 17:08      | 36m        | 17:44                   | 36m        | 18:21 | 36m        | 18:57 | 15h 06m    | 11h 27m    |                            |            |    |      | Fr, 12. Jan |
| Sa, 13. Jan |               | 19:38 – 06:24*             | 10h 46m    | M <sub>7</sub> bis AN <sub>-</sub>  |      | 10:02      | 19:38      | 06:25                      | 36m        | 07:01 | 36m        | 07:38 | 36m        | 08:14      | 8h 54m     | 17:09      | 36m        | 17:45                   | 36m        | 18:22 | 36m        | 18:59 | 15h 04m    | 11h 25m    |                            |            |    |      | Sa, 13. Jan |
| So, 14. Jan |               | 21:03 – 06:24*             | 9h 21m     | M <sub>7</sub> bis AN <sub>-</sub>  |      | 10:27      | 21:03      | 06:24                      | 36m        | 07:01 | 36m        | 07:37 | 36m        | 08:14      | 8h 56m     | 17:10      | 36m        | 17:47                   | 36m        | 18:23 | 36m        | 19:00 | 15h 02m    | 11h 24m    |                            |            |    |      | So, 14. Jan |
| Mo, 15. Jan |               | 22:25 – 06:24*             | 7h 59m     | M <sub>7</sub> bis AN <sub>-</sub>  |      | 10:48      | 22:25      | 06:24                      | 36m        | 07:00 | 36m        | 07:37 | 36m        | 08:13      | 8h 58m     | 17:12      | 36m        | 17:48                   | 36m        | 18:25 | 36m        | 19:01 | 15h 00m    | 11h 22m    |                            |            |    |      | Mo, 15. Jan |
| Di, 16. Jan |               | 23:44 – 06:23*             | 6h 39m     | M <sub>7</sub> bis AN <sub>-</sub>  |      | 11:06      | 23:44      | 06:24                      | 36m        | 07:00 | 36m        | 07:36 | 35m        | 08:12      | 9h 00m     | 17:13      | 35m        | 17:49                   | 36m        | 18:26 | 36m        | 19:02 | 14h 58m    | 11h 21m    |                            |            |    |      | Di, 16. Jan |
| Mi, 17. Jan |               | 01:02* – 06:23*            | 5h 20m     | M <sub>7</sub> bis AN <sub>-</sub>  |      | 11:24      | —:—        | 06:23                      | 36m        | 06:59 | 36m        | 07:36 | 35m        | 08:12      | 9h 02m     | 17:14      | 35m        | 17:50                   | 36m        | 18:27 | 36m        | 19:03 | 14h 56m    | 11h 19m    |                            |            |    |      | Mi, 17. Jan |
| Do, 18. Jan |               | 02:20* – 06:22*            | 4h 02m     | M <sub>7</sub> bis AN <sub>-</sub>  | ☾    | 11:43      | 01:02      | 06:23                      | 36m        | 06:59 | 36m        | 07:35 | 35m        | 08:11      | 9h 04m     | 17:16      | 35m        | 17:52                   | 36m        | 18:28 | 36m        | 19:04 | 14h 54m    | 11h 18m    |                            |            |    |      | Do, 18. Jan |
| Fr, 19. Jan |               | 03:38* – 06:22*            | 2h 44m     | M <sub>7</sub> bis AN <sub>-</sub>  |      | 12:05      | 02:20      | 06:22                      | 35m        | 06:58 | 36m        | 07:35 | 35m        | 08:10      | 9h 06m     | 17:17      | 35m        | 17:53                   | 36m        | 18:29 | 36m        | 19:05 | 14h 52m    | 11h 16m    |                            |            |    |      | Fr, 19. Jan |
| Sa, 20. Jan |               | 04:53* – 06:21*            | 1h 28m     | M <sub>7</sub> bis AN <sub>-</sub>  |      | 12:32      | 03:38      | 06:22                      | 35m        | 06:58 | 36m        | 07:34 | 35m        | 08:10      | 9h 08m     | 17:18      | 35m        | 17:54                   | 36m        | 18:31 | 35m        | 19:07 | 14h 50m    | 11h 14m    |                            |            |    |      | Sa, 20. Jan |
| So, 21. Jan |               | 06:02* – 06:20*            | 18m        | M <sub>7</sub> bis AN <sub>-</sub>  |      | 13:06      | 04:53      | 06:21                      | 35m        | 06:57 | 36m        | 07:33 | 35m        | 08:09      | 9h 11m     | 17:20      | 35m        | 17:55                   | 36m        | 18:32 | 35m        | 19:08 | 14h 48m    | 11h 12m    |                            |            |    |      | So, 21. Jan |
| Mo, 22. Jan |               | —:—:—:—:—                  | –          | Mond stört                          |      | 13:50      | 06:02      | 06:20                      | 35m        | 06:56 | 36m        | 07:33 | 35m        | 08:08      | 9h 13m     | 17:21      | 35m        | 17:57                   | 36m        | 18:33 | 35m        | 19:09 | 14h 45m    | 11h 10m    |                            |            |    |      | Mo, 22. Jan |
| Di, 23. Jan |               | —:—:—:—:—                  | –          | Mond stört                          |      | 14:44      | 07:02      | 06:20                      | 35m        | 06:56 | 36m        | 07:32 | 35m        | 08:07      | 9h 15m     | 17:23      | 35m        | 17:58                   | 36m        | 18:34 | 35m        | 19:10 | 14h 43m    | 11h 08m    |                            |            |    |      | Di, 23. Jan |
| Mi, 24. Jan |               | —:—:—:—:—                  | –          | Mond stört                          |      | 15:47      | 07:50      | 06:19                      | 35m        | 06:55 | 36m        | 07:31 | 35m        | 08:06      | 9h 18m     | 17:24      | 35m        | 17:59                   | 36m        | 18:36 | 35m        | 19:11 | 14h 40m    | 11h 06m    |                            |            |    |      | Mi, 24. Jan |
| Do, 25. Jan |               | —:~:~:~:~:~                | –          | Mond stört                          | ☾    | 16:55      | 08:27      | 06:18                      | 35m        | 06:54 | 36m        | 07:30 | 35m        | 08:05      | 9h 20m     | 17:26      | 35m        | 18:01                   | 36m        | 18:37 | 35m        | 19:13 | 14h 38m    | 11h 04m    |                            |            |    |      | Do, 25. Jan |
| Fr, 26. Jan |               | —:~:~:~:~:~                | –          | Mond stört                          |      | 18:04      | 08:56      | 06:17                      | 35m        | 06:53 | 35m        | 07:29 | 34m        | 08:04      | 9h 23m     | 17:27      | 34m        | 18:02                   | 36m        | 18:38 | 35m        | 19:14 | 14h 35m    | 11h 02m    |                            |            |    |      | Fr, 26. Jan |
| Sa, 27. Jan |               | —:~:~:~:~:~                | –          | Mond stört                          |      | 19:12      | 09:18      | 06:17                      | 35m        | 06:52 | 35m        | 07:28 | 34m        | 08:03      | 9h 25m     | 17:29      | 34m        | 18:03                   | 35m        | 18:39 | 35m        | 19:15 | 14h 33m    | 11h 00m    |                            |            |    |      | Sa, 27. Jan |
| So, 28. Jan |               | 19:16 – 20:19              | 1h 02m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 20:19      | 09:36      | 06:16                      | 35m        | 06:51 | 35m        | 07:27 | 34m        | 08:02      | 9h 28m     | 17:30      | 34m        | 18:05                   | 35m        | 18:41 | 35m        | 19:16 | 14h 30m    | 10h 58m    |                            |            |    |      | So, 28. Jan |
| Mo, 29. Jan |               | 19:18 – 21:23              | 2h 05m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 21:23      | 09:51      | 06:15                      | 35m        | 06:50 | 35m        | 07:26 | 34m        | 08:01      | 9h 30m     | 17:32      | 34m        | 18:06                   | 35m        | 18:42 | 35m        | 19:18 | 14h 28m    | 10h 56m    |                            |            |    |      | Mo, 29. Jan |
| Di, 30. Jan |               | 19:19 – 22:28              | 3h 08m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:28      | 10:06      | 06:14                      | 35m        | 06:49 | 35m        | 07:25 | 34m        | 08:00      | 9h 33m     | 17:33      | 34m        | 18:08                   | 35m        | 18:43 | 35m        | 19:19 | 14h 25m    | 10h 54m    |                            |            |    |      | Di, 30. Jan |
| Mi, 31. Jan |               | 19:20 – 23:33              | 4h 12m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 23:33      | 10:20      | 06:13                      | 35m        | 06:48 | 35m        | 07:24 | 34m        | 07:59      | 9h 36m     | 17:35      | 34m        | 18:09                   | 35m        | 18:45 | 35m        | 19:20 | 14h 22m    | 10h 51m    |                            |            |    |      | Mi, 31. Jan |
| Do, 1. Feb  |               | 19:21 – 00:40*             | 5h 18m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:—        | 10:35      | 06:12                      | 35m        | 06:47 | 35m        | 07:23 | 34m        | 07:57      | 9h 38m     | 17:36      | 34m        | 18:10                   | 35m        | 18:46 | 35m        | 19:21 | 14h 20m    | 10h 49m    |                            |            |    |      | Do, 1. Feb  |
| Fr, 2. Feb  |               | 19:23 – 01:50*             | 6h 26m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:40      | 10:52      | 06:11                      | 35m        | 06:46 | 35m        | 07:22 | 34m        | 07:56      | 9h 41m     | 17:38      | 34m        | 18:12                   | 35m        | 18:47 | 35m        | 19:23 | 14h 17m    | 10h 47m    |                            |            |    |      | Fr, 2. Feb  |
| Sa, 3. Feb  |               | 19:24 – 03:02*             | 7h 38m     | AN <sub>+</sub> bis M <sub>7</sub>  | ☾    | 01:50      | 11:13      | 06:10                      | 35m        | 06:45 | 35m        | 07:21 | 34m        | 07:55      | 9h 44m     | 17:39      | 34m        | 18:13                   | 35m        | 18:49 | 35m        | 19:24 | 14h 14m    | 10h 44m    |                            |            |    |      | Sa, 3. Feb  |
| So, 4. Feb  |               | 19:25 – 04:17*             | 8h 51m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 03:02      | 11:41      | 06:09                      | 35m        | 06:44 | 35m        | 07:19 | 34m        | 07:54      | 9h 47m     | 17:41      | 34m        | 18:15                   | 35m        | 18:50 | 35m        | 19:25 | 14h 11m    | 10h 42m    |                            |            |    |      | So, 4. Feb  |
| Mo, 5. Feb  |               | 19:27 – 05:28*             | 10h 01m    | AN <sub>+</sub> bis M <sub>7</sub>  |      | 04:17      | 12:18      | 06:08                      | 35m        | 06:43 | 35m        | 07:18 | 33m        | 07:52      | 9h 49m     | 17:42      | 33m        | 18:16                   | 35m        | 18:51 | 35m        | 19:27 | 14h 08m    | 10h 39m    |                            |            |    |      | Mo, 5. Feb  |
| Di, 6. Feb  |               | 19:28 – 06:05*             | 10h 37m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:28      | 13:09      | 06:07                      | 35m        | 06:42 | 35m        | 07:17 | 33m        | 07:51      | 9h 52m     | 17:44      | 33m        | 18:18                   | 35m        | 18:53 | 35m        | 19:28 | 14h 05m    | 10h 37m    |                            |            |    |      | Di, 6. Feb  |
| Mi, 7. Feb  |               | 19:29 – 06:04*             | 10h 34m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:30      | 14:16      | 06:05                      | 35m        | 06:41 | 35m        | 07:16 | 33m        | 07:49      | 9h 55m     | 17:45      | 33m        | 18:19                   | 35m        | 18:54 | 35m        | 19:29 | 14h 02m    | 10h 34m    |                            |            |    |      | Mi, 7. Feb  |
| Do, 8. Feb  |               | 19:31 – 06:03*             | 10h 32m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 07:20      | 15:37      | 06:04                      | 35m        | 06:39 | 35m        | 07:14 | 33m        | 07:48      | 9h 58m     | 17:47      | 33m        | 18:20                   | 35m        | 18:56 | 35m        | 19:31 | 13h 59m    | 10h 32m    |                            |            |    |      | Do, 8. Feb  |
| Fr, 9. Feb  |               | 19:32 – 06:02*             | 10h 29m    | AN <sub>+</sub> bis AN <sub>-</sub> | ☾    | 07:58      | 17:04      | 06:03                      | 35m        | 06:38 | 35m        | 07:13 | 33m        | 07:47      | 10h 01m    | 17:48      | 33m        | 18:22                   | 35m        | 18:57 | 35m        | 19:32 | 13h 56m    | 10h 29m    |                            |            |    |      | Fr, 9. Feb  |
| Sa, 10. Feb |               | 19:33 – 06:00*             | 10h 26m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 08:26      | 18:33      | 06:02                      | 35m        | 06:37 | 34m        | 07:12 | 33m        | 07:45      | 10h 04m    | 17:50      | 33m        | 18:23                   | 34m        | 18:58 | 35m        | 19:33 | 13h 53m    | 10h 26m    |                            |            |    |      | Sa, 10. Feb |
| So, 11. Feb |               | 19:59 – 05:59*             | 9h 59m     | M <sub>7</sub> bis AN <sub>-</sub>  |      | 08:49      | 19:59      | 06:00                      | 35m        | 06:35 | 34m        |       |            |            |            |            |            |                         |            |       |            |       |            |            |                            |            |    |      |             |

| 1           | 2        | 3                          | 4          | 5                                   | 6    | 7          | 8          | 9                          | 10         | 11    | 12         | 13    | 14         | 15         | 16         | 17                      | 18         | 19    | 20         | 21    | 22         | 23       | 24                         | 25         | 26 | 27         | 28 | 29          |
|-------------|----------|----------------------------|------------|-------------------------------------|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|-------------------------|------------|-------|------------|-------|------------|----------|----------------------------|------------|----|------------|----|-------------|
| 2024        | Zeitzone | Astr. dunkel und kein Mond |            |                                     | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            | Ende der Abenddämmerung |            |       |            |       | Nacht      | Astr. N. | Naut. dunkel und kein Mond |            |    | 2024       |    |             |
|             |          |                            | $\Delta t$ |                                     | Ph.  | $\nearrow$ | $\searrow$ | Astr.                      | $\Delta t$ | Naut. | $\Delta t$ | Bürg. | $\Delta t$ | $\nearrow$ | $\Delta t$ | $\searrow$              | $\Delta t$ | Bürg. | $\Delta t$ | Naut. | $\Delta t$ | Astr.    | $\Delta t$                 | $\Delta t$ |    | $\Delta t$ |    |             |
| Di, 20. Feb |          | —:—:—:—                    | —          | Mond stört                          |      | 13:38      | 05:50      | 05:47                      | 34m        | 06:22 | 34m        | 06:57 | 32m        | 07:29      | 10h 35m    | 18:05                   | 32m        | 18:38 | 34m        | 19:12 | 35m        | 19:47    | 13h 22m                    | 9h 58m     |    |            |    | Di, 20. Feb |
| Mi, 21. Feb |          | —:—:—:—                    | —          | Mond stört                          |      | 14:44      | 06:30      | 05:45                      | 34m        | 06:20 | 34m        | 06:55 | 32m        | 07:28      | 10h 38m    | 18:06                   | 32m        | 18:39 | 34m        | 19:14 | 35m        | 19:49    | 13h 19m                    | 9h 55m     |    |            |    | Mi, 21. Feb |
| Do, 22. Feb |          | —:—:~:~:~                  | —          | Mond stört                          |      | 15:53      | 07:00      | 05:44                      | 34m        | 06:19 | 34m        | 06:53 | 32m        | 07:26      | 10h 42m    | 18:08                   | 32m        | 18:41 | 34m        | 19:15 | 35m        | 19:50    | 13h 16m                    | 9h 52m     |    |            |    | Do, 22. Feb |
| Fr, 23. Feb |          | —:~:~:~:~                  | —          | Mond stört                          |      | 17:02      | 07:23      | 05:42                      | 34m        | 06:17 | 34m        | 06:52 | 32m        | 07:24      | 10h 45m    | 18:09                   | 32m        | 18:42 | 34m        | 19:16 | 35m        | 19:51    | 13h 12m                    | 9h 49m     |    |            |    | Fr, 23. Feb |
| Sa, 24. Feb |          | —:~:~:~:~                  | —          | Mond stört                          | ○    | 18:09      | 07:42      | 05:41                      | 34m        | 06:15 | 34m        | 06:50 | 32m        | 07:22      | 10h 48m    | 18:11                   | 32m        | 18:43 | 34m        | 19:18 | 35m        | 19:53    | 13h 09m                    | 9h 45m     |    |            |    | Sa, 24. Feb |
| So, 25. Feb |          | —:~:~:~:~                  | —          | Mond stört                          |      | 19:14      | 07:58      | 05:39                      | 34m        | 06:14 | 34m        | 06:48 | 32m        | 07:21      | 10h 51m    | 18:12                   | 32m        | 18:45 | 34m        | 19:19 | 35m        | 19:54    | 13h 06m                    | 9h 42m     |    |            |    | So, 25. Feb |
| Mo, 26. Feb |          | 19:56–20:19                | 22m        | AN <sub>+</sub> bis M <sub>7</sub>  |      | 20:19      | 08:13      | 05:37                      | 34m        | 06:12 | 34m        | 06:46 | 32m        | 07:19      | 10h 54m    | 18:14                   | 32m        | 18:46 | 34m        | 19:21 | 35m        | 19:56    | 13h 03m                    | 9h 39m     |    |            |    | Mo, 26. Feb |
| Di, 27. Feb |          | 19:57–21:23                | 1h 26m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 21:23      | 08:27      | 05:35                      | 35m        | 06:10 | 34m        | 06:45 | 32m        | 07:17      | 10h 58m    | 18:15                   | 32m        | 18:48 | 34m        | 19:22 | 35m        | 19:57    | 12h 59m                    | 9h 36m     |    |            |    | Di, 27. Feb |
| Mi, 28. Feb |          | 19:59–22:29                | 2h 30m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:29      | 08:41      | 05:34                      | 35m        | 06:09 | 34m        | 06:43 | 32m        | 07:15      | 11h 01m    | 18:17                   | 32m        | 18:49 | 34m        | 19:23 | 35m        | 19:59    | 12h 56m                    | 9h 33m     |    |            |    | Mi, 28. Feb |
| Do, 29. Feb |          | 20:00–23:37                | 3h 37m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 23:37      | 08:57      | 05:32                      | 35m        | 06:07 | 34m        | 06:41 | 32m        | 07:13      | 11h 04m    | 18:18                   | 32m        | 18:50 | 34m        | 19:25 | 35m        | 20:00    | 12h 53m                    | 9h 29m     |    |            |    | Do, 29. Feb |
| Fr, 1. Mrz  |          | 20:01–00:48*               | 4h 46m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:—        | 09:16      | 05:30                      | 35m        | 06:05 | 34m        | 06:39 | 32m        | 07:12      | 11h 08m    | 18:20                   | 32m        | 18:52 | 34m        | 19:26 | 35m        | 20:01    | 12h 50m                    | 9h 26m     |    |            |    | Fr, 1. Mrz  |
| Sa, 2. Mrz  |          | 20:03–02:01*               | 5h 57m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:48      | 09:40      | 05:28                      | 35m        | 06:03 | 34m        | 06:37 | 32m        | 07:10      | 11h 11m    | 18:21                   | 32m        | 18:53 | 34m        | 19:28 | 35m        | 20:03    | 12h 46m                    | 9h 23m     |    |            |    | Sa, 2. Mrz  |
| So, 3. Mrz  |          | 20:04–03:11*               | 7h 07m     | AN <sub>+</sub> bis M <sub>7</sub>  | ●    | 02:01      | 10:12      | 05:26                      | 35m        | 06:01 | 34m        | 06:36 | 32m        | 07:08      | 11h 14m    | 18:22                   | 32m        | 18:55 | 34m        | 19:29 | 35m        | 20:04    | 12h 43m                    | 9h 20m     |    |            |    | So, 3. Mrz  |
| Mo, 4. Mrz  |          | 20:06–04:16*               | 8h 10m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 03:11      | 10:55      | 05:24                      | 35m        | 06:00 | 34m        | 06:34 | 32m        | 07:06      | 11h 17m    | 18:24                   | 32m        | 18:56 | 34m        | 19:30 | 35m        | 20:06    | 12h 40m                    | 9h 16m     |    |            |    | Mo, 4. Mrz  |
| Di, 5. Mrz  |          | 20:07–05:10*               | 9h 02m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 04:16      | 11:53      | 05:22                      | 35m        | 05:58 | 34m        | 06:32 | 32m        | 07:04      | 11h 21m    | 18:25                   | 32m        | 18:57 | 34m        | 19:32 | 35m        | 20:07    | 12h 36m                    | 9h 13m     |    |            |    | Di, 5. Mrz  |
| Mi, 6. Mrz  |          | 20:09–05:19*               | 9h 09m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:10      | 13:06      | 05:21                      | 35m        | 05:56 | 34m        | 06:30 | 32m        | 07:02      | 11h 24m    | 18:27                   | 32m        | 18:59 | 34m        | 19:33 | 35m        | 20:09    | 12h 33m                    | 9h 09m     |    |            |    | Mi, 6. Mrz  |
| Do, 7. Mrz  |          | 20:10–05:17*               | 9h 06m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:52      | 14:29      | 05:19                      | 35m        | 05:54 | 34m        | 06:28 | 32m        | 07:00      | 11h 27m    | 18:28                   | 32m        | 19:00 | 34m        | 19:35 | 35m        | 20:10    | 12h 30m                    | 9h 06m     |    |            |    | Do, 7. Mrz  |
| Fr, 8. Mrz  |          | 20:12–05:15*               | 9h 02m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:24      | 15:56      | 05:17                      | 35m        | 05:52 | 34m        | 06:26 | 32m        | 06:58      | 11h 31m    | 18:30                   | 32m        | 19:02 | 34m        | 19:36 | 35m        | 20:12    | 12h 26m                    | 9h 02m     |    |            |    | Fr, 8. Mrz  |
| Sa, 9. Mrz  |          | 20:13–05:13*               | 8h 59m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:49      | 17:24      | 05:15                      | 35m        | 05:50 | 34m        | 06:24 | 31m        | 06:56      | 11h 34m    | 18:31                   | 32m        | 19:03 | 34m        | 19:38 | 35m        | 20:13    | 12h 23m                    | 8h 59m     |    |            |    | Sa, 9. Mrz  |
| So, 10. Mrz |          | 20:15–05:11*               | 8h 55m     | AN <sub>+</sub> bis AN <sub>-</sub> | ●    | 07:10      | 18:51      | 05:13                      | 35m        | 05:48 | 34m        | 06:23 | 31m        | 06:55      | 11h 37m    | 18:32                   | 32m        | 19:05 | 34m        | 19:39 | 35m        | 20:15    | 12h 20m                    | 8h 55m     |    |            |    | So, 10. Mrz |
| Mo, 11. Mrz |          | 20:16–05:09*               | 8h 52m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 07:30      | 20:16      | 05:11                      | 35m        | 05:46 | 34m        | 06:21 | 31m        | 06:53      | 11h 41m    | 18:34                   | 32m        | 19:06 | 34m        | 19:40 | 35m        | 20:16    | 12h 16m                    | 8h 52m     |    |            |    | Mo, 11. Mrz |
| Di, 12. Mrz |          | 21:40–05:07*               | 7h 26m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 07:49      | 21:40      | 05:09                      | 35m        | 05:44 | 34m        | 06:19 | 31m        | 06:51      | 11h 44m    | 18:35                   | 32m        | 19:07 | 34m        | 19:42 | 35m        | 20:18    | 12h 13m                    | 8h 48m     |    |            |    | Di, 12. Mrz |
| Mi, 13. Mrz |          | 23:04–05:04*               | 6h 00m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 08:10      | 23:04      | 05:07                      | 35m        | 05:42 | 34m        | 06:17 | 31m        | 06:49      | 11h 47m    | 18:37                   | 32m        | 19:09 | 34m        | 19:43 | 35m        | 20:19    | 12h 10m                    | 8h 45m     |    |            |    | Mi, 13. Mrz |
| Do, 14. Mrz |          | 00:26*–05:02*              | 4h 36m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 08:34      | —:—        | 05:04                      | 35m        | 05:40 | 34m        | 06:15 | 31m        | 06:47      | 11h 51m    | 18:38                   | 32m        | 19:10 | 34m        | 19:45 | 36m        | 20:21    | 12h 06m                    | 8h 41m     |    |            |    | Do, 14. Mrz |
| Fr, 15. Mrz |          | 01:44*–05:00*              | 3h 16m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 09:04      | 00:26      | 05:02                      | 35m        | 05:38 | 34m        | 06:13 | 31m        | 06:45      | 11h 54m    | 18:39                   | 32m        | 19:12 | 34m        | 19:46 | 36m        | 20:22    | 12h 03m                    | 8h 37m     |    |            |    | Fr, 15. Mrz |
| Sa, 16. Mrz |          | 02:52*–04:58*              | 2h 05m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 09:42      | 01:44      | 05:00                      | 36m        | 05:36 | 34m        | 06:11 | 31m        | 06:43      | 11h 57m    | 18:41                   | 32m        | 19:13 | 34m        | 19:48 | 36m        | 20:24    | 12h 00m                    | 8h 34m     |    |            |    | Sa, 16. Mrz |
| So, 17. Mrz |          | 03:48*–04:56*              | 1h 07m     | M <sub>\</sub> bis AN <sub>-</sub>  | ◐    | 10:31      | 02:52      | 04:58                      | 36m        | 05:34 | 34m        | 06:09 | 31m        | 06:41      | 12h 01m    | 18:42                   | 32m        | 19:14 | 34m        | 19:49 | 36m        | 20:25    | 11h 56m                    | 8h 30m     |    |            |    | So, 17. Mrz |
| Mo, 18. Mrz |          | 04:32*–04:54*              | 22m        | M <sub>\</sub> bis AN <sub>-</sub>  |      | 11:29      | 03:48      | 04:56                      | 36m        | 05:32 | 34m        | 06:07 | 32m        | 06:39      | 12h 04m    | 18:44                   | 32m        | 19:16 | 34m        | 19:51 | 36m        | 20:27    | 11h 53m                    | 8h 26m     |    |            |    | Mo, 18. Mrz |
| Di, 19. Mrz |          | —:~:~:~:~                  | —          | Mond stört                          |      | 12:35      | 04:32      | 04:54                      | 36m        | 05:30 | 34m        | 06:05 | 32m        | 06:37      | 12h 08m    | 18:45                   | 32m        | 19:17 | 34m        | 19:52 | 36m        | 20:29    | 11h 50m                    | 8h 23m     |    |            |    | Di, 19. Mrz |
| Mi, 20. Mrz |          | —:~:~:~:~                  | —          | Mond stört                          |      | 13:43      | 05:04      | 04:52                      | 36m        | 05:28 | 34m        | 06:03 | 32m        | 06:35      | 12h 11m    | 18:46                   | 32m        | 19:19 | 34m        | 19:53 | 36m        | 20:30    | 11h 46m                    | 8h 19m     |    |            |    | Mi, 20. Mrz |
| Do, 21. Mrz |          | —:~:~:~:~                  | —          | Mond stört                          |      | 14:52      | 05:29      | 04:49                      | 36m        | 05:26 | 34m        | 06:01 | 32m        | 06:33      | 12h 14m    | 18:48                   | 32m        | 19:20 | 34m        | 19:55 | 36m        | 20:32    | 11h 43m                    | 8h 15m     |    |            |    | Do, 21. Mrz |
| Fr, 22. Mrz |          | —:~:~:~:~                  | —          | Mond stört                          |      | 15:59      | 05:49      | 04:47                      | 36m        | 05:24 | 34m        | 05:59 | 32m        | 06:31      | 12h 18m    | 18:49                   | 32m        | 19:21 | 35m        | 19:56 | 36m        | 20:33    | 11h 39m                    | 8h 11m     |    |            |    | Fr, 22. Mrz |
| Sa, 23. Mrz |          | —:~:~:~:~                  | —          | Mond stört                          |      | 17:05      | 06:06      | 04:45                      | 36m        | 05:22 | 35m        | 05:57 | 32m        | 06:29      | 12h 21m    | 18:51                   | 32m        | 19:23 | 35m        | 19:58 | 37m        | 20:35    | 11h 36m                    | 8h 07m     |    |            |    | Sa, 23. Mrz |
| So, 24. Mrz |          | —:~:~:~:~                  | —          | Mond stört                          |      | 18:10      | 06:20      | 04:43                      | 37m        | 05:20 | 35m        | 05:55 | 32m        | 06:27      | 12h 24m    | 18:52                   | 32m        | 19:24 | 35m        | 19:59 | 37m        | 20:37    | 11h 33m                    | 8h 04m     |    |            |    | So, 24. Mrz |
| Mo, 25. Mrz |          | —:~:~:~:~                  | —          | Mond stört                          | ○    | 19:15      | 06:34      | 04:41                      | 37m        | 05:18 | 35m        | 05:53 | 32m        | 06:25      | 12h 28m    | 18:53                   | 32m        | 19:26 | 35m        | 20:01 | 37m        | 20:38    | 11h 29m                    | 8h 00m     |    |            |    | Mo, 25. Mrz |
| Di, 26. Mrz |          | —:~:~:~:~                  | —          | Mond stört                          |      | 20:20      | 06:49      | 04:38                      | 37m        | 05:16 | 35m        | 05:51 | 32m        | 06:23      | 12h 31m    | 18:55                   | 32m        | 19:27 | 35m        | 20:02 | 37m        | 20:40    | 11h 26m                    | 7h 56m     |    |            |    | Di, 26. Mrz |
| Mi, 27. Mrz |          | 20:42–21:28                | 46m        | AN <sub>+</sub> bis M <sub>7</sub>  |      | 21:28      | 07:04      | 04:36                      | 37m        | 05:14 | 35m        | 05:49 | 32m        | 06:21      | 12h 34m    | 18:56                   | 32m        | 19:28 | 35m        | 20:04 | 37m        | 20:42    | 11h 23m                    | 7h 52m     |    |            |    | Mi, 27. Mrz |
| Do, 28. Mrz |          | 20:43–22:38                | 1h 55m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:38      | 07:22      | 04:34                      | 37m        | 05:11 | 35m        | 05:47 | 32m        | 06:19      | 12h 38m    | 18:57                   | 32m        | 19:30 | 35m        | 20:05 | 37m        | 20:43    | 11h 19m                    | 7h 48m     |    |            |    | Do, 28. Mrz |
| Fr, 29. Mrz |          | 20:45–23:50                | 3h 05m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 23:50      | 07:44      | 04:32                      | 37m        | 05:09 | 35m        | 05:45 | 32m        | 06:17      | 12h 41m    | 18:59                   | 32m        | 19:31 | 35m        | 20:07 | 38m        | 20:45    | 11h 16m                    | 7h 44m     |    |            |    | Fr, 29. Mrz |
| Sa, 30. Mrz |          | 20:47–01:01*               | 4h 14m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:—        | 08:13      | 04:29                      | 37m        | 05:07 | 35m        | 05:43 | 32m        | 06:15      | 12h 44m    | 19:00                   | 32m        | 19:33 | 35m        | 20:08 | 38m        | 20:47    | 11h 13m                    | 7h 40m     |    |            |    | Sa, 30. Mrz |
| So, 31. Mrz | MESZ     | 21:48–03:07*               | 5h 18m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:01      | 09:51      | 05:27                      | 38m        | 06:05 | 35m        | 06:41 | 32m        | 07:13      | 12h 48m    | 20:01                   | 32m        | 20:34 | 35m        | 21:10 | 38m        | 21:48    | 11h 10m                    | 7h 36m     |    |            |    | So, 31. Mrz |
| Mo, 1. Apr  | MESZ     | 21:50–04:03*               | 6h 13m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 03:07      | 10:42      | 05:25                      | 38m        | 06:03 | 35m        | 06:39 | 32m        | 07:11      | 12h 51m    | 20:03                   | 32m        | 20:35 | 36m        | 21:11 | 38m        | 21:50    | 11h 06m                    | 7h 32m     |    |            |    | Mo, 1. Apr  |
| Di, 2. Apr  | MESZ     | 21:52–04:48*               | 6h 56m     | AN <sub>+</sub> bis M <sub>7</sub>  | ◑    | 04:03      | 11:47      | 05:22                      | 38m        | 06:01 | 35m        | 06:37 |            |            |            |                         |            |       |            |       |            |          |                            |            |    |            |    |             |

| 1           | 2             | 3                          | 4          | 5                                   | 6    | 7          | 8          | 9                          | 10         | 11    | 12         | 13    | 14         | 15         | 16         | 17                      | 18         | 19    | 20         | 21    | 22         | 23       | 24                         | 25         | 26 | 27         | 28 | 29          |
|-------------|---------------|----------------------------|------------|-------------------------------------|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|-------------------------|------------|-------|------------|-------|------------|----------|----------------------------|------------|----|------------|----|-------------|
| 2024        | Zeit-<br>zone | Astr. dunkel und kein Mond |            |                                     | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            | Ende der Abenddämmerung |            |       |            |       | Nacht      | Astr. N. | Naut. dunkel und kein Mond |            |    | 2024       |    |             |
|             |               |                            | $\Delta t$ |                                     | Ph.  | $\nearrow$ | $\searrow$ | Astr.                      | $\Delta t$ | Naut. | $\Delta t$ | Bürg. | $\Delta t$ | $\nearrow$ | $\Delta t$ | $\searrow$              | $\Delta t$ | Bürg. | $\Delta t$ | Naut. | $\Delta t$ | Astr.    | $\Delta t$                 | $\Delta t$ |    | $\Delta t$ |    |             |
| Mi, 10. Apr | MESZ          | 22:58–05:01*               | 6h 03m     | M <sub>\</sub> bis AN <sub>\</sub>  |      | 07:33      | 22:58      | 05:03                      | 40m        | 05:44 | 37m        | 06:21 | 33m        | 06:54      | 13h 20m    | 20:15                   | 33m        | 20:48 | 37m        | 21:26 | 40m        | 22:06    | 10h 37m                    | 6h 54m     |    |            |    | Mi, 10. Apr |
| Do, 11. Apr | MESZ          | 00:21*–04:59*              | 4h 38m     | M <sub>\</sub> bis AN <sub>\</sub>  |      | 08:00      | —:—        | 05:01                      | 40m        | 05:42 | 37m        | 06:19 | 33m        | 06:52      | 13h 24m    | 20:16                   | 33m        | 20:50 | 37m        | 21:27 | 41m        | 22:08    | 10h 34m                    | 6h 50m     |    |            |    | Do, 11. Apr |
| Fr, 12. Apr | MESZ          | 01:36*–04:56*              | 3h 20m     | M <sub>\</sub> bis AN <sub>\</sub>  |      | 08:36      | 00:21      | 04:59                      | 40m        | 05:40 | 37m        | 06:17 | 33m        | 06:50      | 13h 27m    | 20:18                   | 33m        | 20:51 | 37m        | 21:29 | 41m        | 22:10    | 10h 30m                    | 6h 45m     |    |            |    | Fr, 12. Apr |
| Sa, 13. Apr | MESZ          | 02:40*–04:54*              | 2h 14m     | M <sub>\</sub> bis AN <sub>\</sub>  |      | 09:21      | 01:36      | 04:56                      | 41m        | 05:37 | 37m        | 06:15 | 33m        | 06:49      | 13h 30m    | 20:19                   | 33m        | 20:53 | 37m        | 21:31 | 41m        | 22:12    | 10h 27m                    | 6h 41m     |    |            |    | Sa, 13. Apr |
| So, 14. Apr | MESZ          | 03:29*–04:51*              | 1h 22m     | M <sub>\</sub> bis AN <sub>\</sub>  |      | 10:17      | 02:40      | 04:54                      | 41m        | 05:35 | 37m        | 06:13 | 33m        | 06:47      | 13h 33m    | 20:20                   | 33m        | 20:54 | 37m        | 21:32 | 41m        | 22:14    | 10h 24m                    | 6h 37m     |    |            |    | So, 14. Apr |
| Mo, 15. Apr | MESZ          | 04:06*–04:49*              | 42m        | M <sub>\</sub> bis AN <sub>\</sub>  | ☾    | 11:22      | 03:29      | 04:51                      | 41m        | 05:33 | 37m        | 06:11 | 33m        | 06:45      | 13h 36m    | 20:22                   | 33m        | 20:56 | 38m        | 21:34 | 42m        | 22:16    | 10h 21m                    | 6h 32m     |    |            |    | Mo, 15. Apr |
| Di, 16. Apr | MESZ          | 04:34*–04:46*              | 12m        | M <sub>\</sub> bis AN <sub>\</sub>  |      | 12:31      | 04:06      | 04:49                      | 42m        | 05:31 | 38m        | 06:09 | 33m        | 06:43      | 13h 40m    | 20:23                   | 34m        | 20:57 | 38m        | 21:36 | 42m        | 22:18    | 10h 18m                    | 6h 28m     |    |            |    | Di, 16. Apr |
| Mi, 17. Apr | MESZ          | —:—:—:—                    | –          | Mond stört                          |      | 13:41      | 04:34      | 04:46                      | 42m        | 05:29 | 38m        | 06:07 | 33m        | 06:41      | 13h 43m    | 20:25                   | 34m        | 20:59 | 38m        | 21:37 | 42m        | 22:20    | 10h 14m                    | 6h 23m     |    |            |    | Mi, 17. Apr |
| Do, 18. Apr | MESZ          | —:—:—:—                    | –          | Mond stört                          |      | 14:49      | 04:55      | 04:44                      | 42m        | 05:27 | 38m        | 06:05 | 34m        | 06:39      | 13h 46m    | 20:26                   | 34m        | 21:00 | 38m        | 21:39 | 43m        | 22:22    | 10h 11m                    | 6h 19m     |    |            |    | Do, 18. Apr |
| Fr, 19. Apr | MESZ          | —:—:~:~:~                  | –          | Mond stört                          |      | 15:55      | 05:13      | 04:42                      | 43m        | 05:25 | 38m        | 06:03 | 34m        | 06:38      | 13h 49m    | 20:27                   | 34m        | 21:02 | 38m        | 21:41 | 43m        | 22:24    | 10h 08m                    | 6h 14m     |    |            |    | Fr, 19. Apr |
| Sa, 20. Apr | MESZ          | —:~:~:~:~                  | –          | Mond stört                          |      | 17:00      | 05:28      | 04:39                      | 43m        | 05:23 | 38m        | 06:02 | 34m        | 06:36      | 13h 52m    | 20:29                   | 34m        | 21:03 | 39m        | 21:42 | 43m        | 22:26    | 10h 05m                    | 6h 10m     |    |            |    | Sa, 20. Apr |
| So, 21. Apr | MESZ          | —:~:~:~:~                  | –          | Mond stört                          |      | 18:05      | 05:42      | 04:37                      | 43m        | 05:21 | 39m        | 06:00 | 34m        | 06:34      | 13h 55m    | 20:30                   | 34m        | 21:05 | 39m        | 21:44 | 44m        | 22:28    | 10h 02m                    | 6h 05m     |    |            |    | So, 21. Apr |
| Mo, 22. Apr | MESZ          | —:~:~:~:~                  | –          | Mond stört                          |      | 19:10      | 05:56      | 04:34                      | 44m        | 05:18 | 39m        | 05:58 | 34m        | 06:32      | 13h 58m    | 20:31                   | 34m        | 21:06 | 39m        | 21:46 | 44m        | 22:30    | 9h 59m                     | 6h 01m     |    |            |    | Mo, 22. Apr |
| Di, 23. Apr | MESZ          | —:~:~:~:~                  | –          | Mond stört                          |      | 20:18      | 06:11      | 04:32                      | 44m        | 05:16 | 39m        | 05:56 | 34m        | 06:31      | 14h 02m    | 20:33                   | 34m        | 21:08 | 39m        | 21:47 | 45m        | 22:32    | 9h 56m                     | 5h 56m     |    |            |    | Di, 23. Apr |
| Mi, 24. Apr | MESZ          | —:~:~:~:~                  | –          | Mond stört                          | ☾    | 21:28      | 06:28      | 04:29                      | 45m        | 05:14 | 39m        | 05:54 | 34m        | 06:29      | 14h 05m    | 20:34                   | 35m        | 21:09 | 40m        | 21:49 | 45m        | 22:35    | 9h 53m                     | 5h 52m     |    |            |    | Mi, 24. Apr |
| Do, 25. Apr | MESZ          | 22:37–22:40                | 3m         | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:40      | 06:49      | 04:27                      | 45m        | 05:12 | 40m        | 05:52 | 34m        | 06:27      | 14h 08m    | 20:35                   | 35m        | 21:10 | 40m        | 21:51 | 45m        | 22:37    | 9h 50m                     | 5h 47m     |    |            |    | Do, 25. Apr |
| Fr, 26. Apr | MESZ          | 22:39–23:52                | 1h 13m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 23:52      | 07:16      | 04:24                      | 45m        | 05:10 | 40m        | 05:50 | 35m        | 06:26      | 14h 11m    | 20:37                   | 35m        | 21:12 | 40m        | 21:52 | 46m        | 22:39    | 9h 47m                     | 5h 43m     |    |            |    | Fr, 26. Apr |
| Sa, 27. Apr | MESZ          | 22:41–01:00*               | 2h 19m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:—        | 07:51      | 04:22                      | 46m        | 05:08 | 40m        | 05:49 | 35m        | 06:24      | 14h 14m    | 20:38                   | 35m        | 21:13 | 40m        | 21:54 | 46m        | 22:41    | 9h 44m                     | 5h 38m     |    |            |    | Sa, 27. Apr |
| So, 28. Apr | MESZ          | 22:43–01:59*               | 3h 16m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:00      | 08:38      | 04:19                      | 46m        | 05:06 | 40m        | 05:47 | 35m        | 06:22      | 14h 17m    | 20:39                   | 35m        | 21:15 | 40m        | 21:56 | 47m        | 22:43    | 9h 41m                     | 5h 33m     |    |            |    | So, 28. Apr |
| Mo, 29. Apr | MESZ          | 22:45–02:47*               | 4h 01m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:59      | 09:39      | 04:17                      | 47m        | 05:04 | 40m        | 05:45 | 35m        | 06:21      | 14h 20m    | 20:41                   | 35m        | 21:16 | 41m        | 21:58 | 47m        | 22:45    | 9h 38m                     | 5h 29m     |    |            |    | Mo, 29. Apr |
| Di, 30. Apr | MESZ          | 22:48–03:24*               | 4h 36m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:47      | 10:51      | 04:14                      | 47m        | 05:02 | 41m        | 05:43 | 35m        | 06:19      | 14h 22m    | 20:42                   | 35m        | 21:18 | 41m        | 21:59 | 48m        | 22:48    | 9h 35m                     | 5h 24m     |    |            |    | Di, 30. Apr |
| Mi, 1. Mai  | MESZ          | 22:50–03:52*               | 5h 02m     | AN <sub>+</sub> bis M <sub>7</sub>  | ☾    | 03:24      | 12:10      | 04:12                      | 48m        | 05:00 | 41m        | 05:42 | 35m        | 06:17      | 14h 25m    | 20:43                   | 36m        | 21:19 | 41m        | 22:01 | 48m        | 22:50    | 9h 32m                     | 5h 19m     |    |            |    | Mi, 1. Mai  |
| Do, 2. Mai  | MESZ          | 22:52–04:07*               | 5h 15m     | AN <sub>+</sub> bis AN <sub>\</sub> |      | 03:52      | 13:32      | 04:10                      | 48m        | 04:58 | 41m        | 05:40 | 35m        | 06:16      | 14h 28m    | 20:45                   | 36m        | 21:21 | 42m        | 22:03 | 49m        | 22:52    | 9h 29m                     | 5h 15m     |    |            |    | Do, 2. Mai  |
| Fr, 3. Mai  | MESZ          | 22:54–04:05*               | 5h 10m     | AN <sub>+</sub> bis AN <sub>\</sub> |      | 04:15      | 14:54      | 04:07                      | 49m        | 04:56 | 41m        | 05:38 | 36m        | 06:14      | 14h 31m    | 20:46                   | 36m        | 21:22 | 42m        | 22:05 | 49m        | 22:54    | 9h 26m                     | 5h 10m     |    |            |    | Fr, 3. Mai  |
| Sa, 4. Mai  | MESZ          | 22:57–04:02*               | 5h 05m     | AN <sub>+</sub> bis AN <sub>\</sub> |      | 04:35      | 16:16      | 04:05                      | 49m        | 04:54 | 42m        | 05:37 | 36m        | 06:13      | 14h 34m    | 20:47                   | 36m        | 21:24 | 42m        | 22:06 | 50m        | 22:57    | 9h 24m                     | 5h 05m     |    |            |    | Sa, 4. Mai  |
| So, 5. Mai  | MESZ          | 22:59–04:00*               | 5h 00m     | AN <sub>+</sub> bis AN <sub>\</sub> |      | 04:53      | 17:38      | 04:02                      | 50m        | 04:52 | 42m        | 05:35 | 36m        | 06:11      | 14h 37m    | 20:49                   | 36m        | 21:25 | 42m        | 22:08 | 50m        | 22:59    | 9h 21m                     | 5h 00m     |    |            |    | So, 5. Mai  |
| Mo, 6. Mai  | MESZ          | 23:01–03:57*               | 4h 56m     | AN <sub>+</sub> bis AN <sub>\</sub> |      | 05:12      | 19:01      | 04:00                      | 50m        | 04:51 | 42m        | 05:33 | 36m        | 06:10      | 14h 39m    | 20:50                   | 36m        | 21:27 | 43m        | 22:10 | 51m        | 23:01    | 9h 18m                     | 4h 56m     |    |            |    | Mo, 6. Mai  |
| Di, 7. Mai  | MESZ          | 23:04–03:55*               | 4h 51m     | AN <sub>+</sub> bis AN <sub>\</sub> |      | 05:32      | 20:26      | 03:57                      | 51m        | 04:49 | 43m        | 05:32 | 36m        | 06:09      | 14h 42m    | 20:51                   | 36m        | 21:28 | 43m        | 22:12 | 51m        | 23:04    | 9h 15m                     | 4h 51m     |    |            |    | Di, 7. Mai  |
| Mi, 8. Mai  | MESZ          | 23:06–03:52*               | 4h 46m     | AN <sub>+</sub> bis AN <sub>\</sub> | ☾    | 05:57      | 21:51      | 03:55                      | 51m        | 04:47 | 43m        | 05:30 | 36m        | 06:07      | 14h 45m    | 20:53                   | 37m        | 21:30 | 43m        | 22:13 | 52m        | 23:06    | 9h 13m                     | 4h 46m     |    |            |    | Mi, 8. Mai  |
| Do, 9. Mai  | MESZ          | 23:11–03:50*               | 4h 38m     | M <sub>\</sub> bis AN <sub>\</sub>  |      | 06:29      | 23:11      | 03:52                      | 52m        | 04:45 | 43m        | 05:29 | 37m        | 06:06      | 14h 48m    | 20:54                   | 37m        | 21:31 | 43m        | 22:15 | 53m        | 23:08    | 9h 10m                     | 4h 41m     |    |            |    | Do, 9. Mai  |
| Fr, 10. Mai | MESZ          | 00:23*–03:48*              | 3h 25m     | M <sub>\</sub> bis AN <sub>\</sub>  |      | 07:10      | —:—        | 03:50                      | 53m        | 04:43 | 43m        | 05:27 | 37m        | 06:04      | 14h 50m    | 20:55                   | 37m        | 21:33 | 44m        | 22:17 | 53m        | 23:11    | 9h 07m                     | 4h 37m     |    |            |    | Fr, 10. Mai |
| Sa, 11. Mai | MESZ          | 01:20*–03:45*              | 2h 25m     | M <sub>\</sub> bis AN <sub>\</sub>  |      | 08:02      | 00:23      | 03:48                      | 53m        | 04:41 | 44m        | 05:26 | 37m        | 06:03      | 14h 53m    | 20:56                   | 37m        | 21:34 | 44m        | 22:19 | 54m        | 23:13    | 9h 05m                     | 4h 32m     |    |            |    | Sa, 11. Mai |
| So, 12. Mai | MESZ          | 02:03*–03:43*              | 1h 39m     | M <sub>\</sub> bis AN <sub>\</sub>  |      | 09:06      | 01:20      | 03:45                      | 54m        | 04:40 | 44m        | 05:24 | 37m        | 06:02      | 14h 55m    | 20:58                   | 37m        | 21:35 | 44m        | 22:20 | 55m        | 23:15    | 9h 02m                     | 4h 27m     |    |            |    | So, 12. Mai |
| Mo, 13. Mai | MESZ          | 02:35*–03:40*              | 1h 05m     | M <sub>\</sub> bis AN <sub>\</sub>  |      | 10:15      | 02:03      | 03:43                      | 55m        | 04:38 | 44m        | 05:23 | 37m        | 06:01      | 14h 58m    | 20:59                   | 37m        | 21:37 | 45m        | 22:22 | 55m        | 23:18    | 9h 00m                     | 4h 22m     |    |            |    | Mo, 13. Mai |
| Di, 14. Mai | MESZ          | 02:59*–03:38*              | 39m        | M <sub>\</sub> bis AN <sub>\</sub>  |      | 11:26      | 02:35      | 03:41                      | 55m        | 04:36 | 45m        | 05:21 | 37m        | 05:59      | 15h 00m    | 21:00                   | 38m        | 21:38 | 45m        | 22:24 | 56m        | 23:20    | 8h 57m                     | 4h 18m     |    |            |    | Di, 14. Mai |
| Mi, 15. Mai | MESZ          | 03:18*–03:36*              | 17m        | M <sub>\</sub> bis AN <sub>\</sub>  | ☾    | 12:35      | 02:59      | 03:38                      | 56m        | 04:35 | 45m        | 05:20 | 38m        | 05:58      | 15h 03m    | 21:01                   | 38m        | 21:40 | 45m        | 22:25 | 57m        | 23:22    | 8h 55m                     | 4h 13m     |    |            |    | Mi, 15. Mai |
| Do, 16. Mai | MESZ          | —:~:~:~:~                  | –          | Mond stört                          |      | 13:43      | 03:18      | 03:36                      | 57m        | 04:33 | 45m        | 05:19 | 38m        | 05:57      | 15h 05m    | 21:03                   | 38m        | 21:41 | 46m        | 22:27 | 57m        | 23:25    | 8h 53m                     | 4h 08m     |    |            |    | Do, 16. Mai |
| Fr, 17. Mai | MESZ          | —:~:~:~:~                  | –          | Mond stört                          |      | 14:48      | 03:34      | 03:33                      | 57m        | 04:31 | 46m        | 05:17 | 38m        | 05:56      | 15h 08m    | 21:04                   | 38m        | 21:42 | 46m        | 22:29 | 58m        | 23:27    | 8h 50m                     | 4h 03m     |    |            |    | Fr, 17. Mai |
| Sa, 18. Mai | MESZ          | —:~:~:~:~                  | –          | Mond stört                          |      | 15:53      | 03:49      | 03:31                      | 58m        | 04:30 | 46m        | 05:16 | 38m        | 05:55      | 15h 10m    | 21:05                   | 38m        | 21:44 | 46m        | 22:30 | 59m        | 23:30    | 8h 48m                     | 3h 59m     |    |            |    | Sa, 18. Mai |
| So, 19. Mai | MESZ          | —:~:~:~:~                  | –          | Mond stört                          |      | 16:58      | 04:03      | 03:29                      | 59m        | 04:28 | 46m        | 05:15 | 38m        | 05:54      | 15h 12m    | 21:06                   | 38m        | 21:45 | 46m        | 22:32 | 1h 00m     | 23:32    | 8h 46m                     | 3h 54m     |    |            |    | So, 19. Mai |
| Mo, 20. Mai | MESZ          | —:~:~:~:~                  | –          | Mond stört                          |      | 18:04      | 04:17      | 03:27                      | 1h 00m     | 04:27 | 46m        | 05:14 | 38m        | 05:53      | 15h 14m    | 21:07                   | 39m        | 21:46 | 47m        | 22:34 | 1h 00m     | 23:34    | 8h 44m                     | 3h 49m     |    |            |    | Mo, 20. Mai |
| Di, 21. Mai | MESZ          | —:~:~:~:~                  | –          | Mond stört                          |      | 19:14      | 04:34      | 03:24                      | 1h 00m     | 04:25 | 47m        | 05:12 | 39m        | 05:51      | 15h 16m    | 21:08                   | 39m        | 21:48 | 47m        | 22:35 | 1h 01m     | 23:37    | 8h 42m                     | 3h 45m     |    |            |    | Di, 21. Mai |
| Mi, 22. Mai | MESZ          | —:~:~:~:~                  | –          | Mond stört                          |      | 20:26      | 04:53      | 03:22                      | 1h 01m     | 04:   |            |       |            |            |            |                         |            |       |            |       |            |          |                            |            |    |            |    |             |

| 1           | 2             | 3                          | 4          | 5                                   | 6    | 7          | 8          | 9                          | 10         | 11    | 12         | 13    | 14         | 15         | 16         | 17                      | 18         | 19    | 20         | 21    | 22         | 23       | 24                         | 25         | 26 | 27         | 28 | 29 |             |
|-------------|---------------|----------------------------|------------|-------------------------------------|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|-------------------------|------------|-------|------------|-------|------------|----------|----------------------------|------------|----|------------|----|----|-------------|
| 2024        | Zeit-<br>zone | Astr. dunkel und kein Mond |            |                                     | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            | Ende der Abenddämmerung |            |       |            |       | Nacht      | Astr. N. | Naut. dunkel und kein Mond |            |    | 2024       |    |    |             |
|             |               |                            | $\Delta t$ |                                     | Ph.  | $\nearrow$ | $\searrow$ | Astr.                      | $\Delta t$ | Naut. | $\Delta t$ | Bürg. | $\Delta t$ | $\nearrow$ | $\Delta t$ | $\searrow$              | $\Delta t$ | Bürg. | $\Delta t$ | Naut. | $\Delta t$ | Astr.    | $\Delta t$                 | $\Delta t$ |    | $\Delta t$ |    |    |             |
| Do, 30. Mai | MESZ          | 23:58–02:40*               | 2h 42m     | AN <sub>+</sub> bis M <sub>J</sub>  | ☾    | 02:20      | 12:41      | 03:05                      | 1h 08m     | 04:14 | 49m        | 05:04 | 40m        | 05:44      | 15h 33m    | 21:18                   | 40m        | 21:58 | 50m        | 22:48 | 1h 09m     | 23:58    | 8h 25m                     | 3h 05m     |    |            |    |    | Do, 30. Mai |
| Fr, 31. Mai | MESZ          | 00:00*–02:58*              | 2h 58m     | AN <sub>+</sub> bis M <sub>J</sub>  |      | 02:40      | 14:01      | 03:03                      | 1h 09m     | 04:13 | 50m        | 05:03 | 40m        | 05:43      | 15h 35m    | 21:19                   | 40m        | 21:59 | 50m        | 22:50 | 1h 09m     | 00:00*   | 8h 24m                     | 3h 01m     |    |            |    |    | Fr, 31. Mai |
| Sa, 1. Jun  | MESZ          | 00:02*–03:00*              | 2h 57m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 02:58      | 15:20      | 03:02                      | 1h 09m     | 04:12 | 50m        | 05:02 | 40m        | 05:43      | 15h 36m    | 21:20                   | 40m        | 22:00 | 50m        | 22:51 | 1h 10m     | 00:02*   | 8h 22m                     | 2h 57m     |    |            |    |    | Sa, 1. Jun  |
| So, 2. Jun  | MESZ          | 00:04*–02:58*              | 2h 54m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 03:16      | 16:40      | 03:00                      | 1h 10m     | 04:11 | 50m        | 05:01 | 40m        | 05:42      | 15h 38m    | 21:20                   | 40m        | 22:01 | 50m        | 22:52 | 1h 11m     | 00:04*   | 8h 21m                     | 2h 54m     |    |            |    |    | So, 2. Jun  |
| Mo, 3. Jun  | MESZ          | 00:06*–02:56*              | 2h 50m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 03:35      | 18:02      | 02:58                      | 1h 11m     | 04:10 | 50m        | 05:01 | 40m        | 05:42      | 15h 39m    | 21:21                   | 41m        | 22:02 | 51m        | 22:54 | 1h 12m     | 00:06*   | 8h 19m                     | 2h 50m     |    |            |    |    | Mo, 3. Jun  |
| Di, 4. Jun  | MESZ          | 00:08*–02:55*              | 2h 46m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 03:57      | 19:25      | 02:56                      | 1h 12m     | 04:09 | 51m        | 05:00 | 41m        | 05:41      | 15h 40m    | 21:22                   | 41m        | 22:03 | 51m        | 22:55 | 1h 13m     | 00:08*   | 8h 18m                     | 2h 46m     |    |            |    |    | Di, 4. Jun  |
| Mi, 5. Jun  | MESZ          | 00:10*–02:53*              | 2h 43m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 04:25      | 20:47      | 02:55                      | 1h 13m     | 04:08 | 51m        | 04:59 | 41m        | 05:41      | 15h 42m    | 21:23                   | 41m        | 22:04 | 51m        | 22:56 | 1h 14m     | 00:10*   | 8h 17m                     | 2h 43m     |    |            |    |    | Mi, 5. Jun  |
| Do, 6. Jun  | MESZ          | 00:12*–02:52*              | 2h 40m     | AN <sub>+</sub> bis AN <sub>-</sub> | ☉    | 05:01      | 22:02      | 02:53                      | 1h 14m     | 04:07 | 51m        | 04:59 | 41m        | 05:40      | 15h 43m    | 21:24                   | 41m        | 22:05 | 51m        | 22:57 | 1h 14m     | 00:12*   | 8h 16m                     | 2h 40m     |    |            |    |    | Do, 6. Jun  |
| Fr, 7. Jun  | MESZ          | 00:13*–02:50*              | 2h 36m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:49      | 23:06      | 02:52                      | 1h 14m     | 04:07 | 51m        | 04:59 | 41m        | 05:40      | 15h 44m    | 21:24                   | 41m        | 22:06 | 52m        | 22:58 | 1h 15m     | 00:13*   | 8h 15m                     | 2h 36m     |    |            |    |    | Fr, 7. Jun  |
| Sa, 8. Jun  | MESZ          | 00:15*–02:49*              | 2h 33m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:48      | 23:56      | 02:50                      | 1h 15m     | 04:06 | 52m        | 04:58 | 41m        | 05:40      | 15h 45m    | 21:25                   | 41m        | 22:07 | 52m        | 22:59 | 1h 16m     | 00:15*   | 8h 14m                     | 2h 33m     |    |            |    |    | Sa, 8. Jun  |
| So, 9. Jun  | MESZ          | 00:33*–02:48*              | 2h 15m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 07:56      | —:—        | 02:49                      | 1h 16m     | 04:06 | 52m        | 04:58 | 41m        | 05:39      | 15h 46m    | 21:26                   | 41m        | 22:07 | 52m        | 23:00 | 1h 17m     | 00:17*   | 8h 13m                     | 2h 31m     |    |            |    |    | So, 9. Jun  |
| Mo, 10. Jun | MESZ          | 01:00*–02:47*              | 1h 46m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 09:08      | 00:33      | 02:48                      | 1h 17m     | 04:05 | 52m        | 04:57 | 41m        | 05:39      | 15h 47m    | 21:26                   | 41m        | 22:08 | 52m        | 23:01 | 1h 17m     | 00:18*   | 8h 12m                     | 2h 28m     |    |            |    |    | Mo, 10. Jun |
| Di, 11. Jun | MESZ          | 01:22*–02:46*              | 1h 24m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 10:19      | 01:00      | 02:47                      | 1h 17m     | 04:05 | 52m        | 04:57 | 41m        | 05:39      | 15h 47m    | 21:27                   | 41m        | 22:09 | 52m        | 23:01 | 1h 18m     | 00:20*   | 8h 11m                     | 2h 26m     |    |            |    |    | Di, 11. Jun |
| Mi, 12. Jun | MESZ          | 01:39*–02:45*              | 1h 06m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 11:28      | 01:22      | 02:46                      | 1h 18m     | 04:04 | 52m        | 04:57 | 41m        | 05:39      | 15h 48m    | 21:27                   | 41m        | 22:09 | 52m        | 23:02 | 1h 18m     | 00:21*   | 8h 11m                     | 2h 24m     |    |            |    |    | Mi, 12. Jun |
| Do, 13. Jun | MESZ          | 01:54*–02:44*              | 50m        | M <sub>\</sub> bis AN <sub>-</sub>  |      | 12:35      | 01:39      | 02:45                      | 1h 18m     | 04:04 | 52m        | 04:57 | 41m        | 05:39      | 15h 49m    | 21:28                   | 41m        | 22:10 | 52m        | 23:03 | 1h 19m     | 00:22*   | 8h 10m                     | 2h 22m     |    |            |    |    | Do, 13. Jun |
| Fr, 14. Jun | MESZ          | 02:08*–02:44*              | 35m        | M <sub>\</sub> bis AN <sub>-</sub>  | ☾    | 13:40      | 01:54      | 02:44                      | 1h 19m     | 04:04 | 52m        | 04:57 | 41m        | 05:39      | 15h 49m    | 21:28                   | 42m        | 22:10 | 53m        | 23:03 | 1h 19m     | 00:23*   | 8h 10m                     | 2h 20m     |    |            |    |    | Fr, 14. Jun |
| Sa, 15. Jun | MESZ          | 02:22*–02:43*              | 20m        | M <sub>\</sub> bis AN <sub>-</sub>  |      | 14:44      | 02:08      | 02:44                      | 1h 19m     | 04:03 | 53m        | 04:57 | 42m        | 05:39      | 15h 50m    | 21:29                   | 42m        | 22:11 | 53m        | 23:04 | 1h 20m     | 00:24*   | 8h 09m                     | 2h 18m     |    |            |    |    | Sa, 15. Jun |
| So, 16. Jun | MESZ          | 02:38*–02:43*              | 4m         | M <sub>\</sub> bis AN <sub>-</sub>  |      | 15:50      | 02:22      | 02:43                      | 1h 20m     | 04:03 | 53m        | 04:56 | 42m        | 05:39      | 15h 50m    | 21:29                   | 42m        | 22:11 | 53m        | 23:04 | 1h 20m     | 00:25*   | 8h 09m                     | 2h 17m     |    |            |    |    | So, 16. Jun |
| Mo, 17. Jun | MESZ          | —:—:—:—                    | –          | Mond stört                          |      | 16:57      | 02:38      | 02:43                      | 1h 20m     | 04:03 | 53m        | 04:56 | 42m        | 05:39      | 15h 50m    | 21:30                   | 42m        | 22:12 | 53m        | 23:05 | 1h 20m     | 00:26*   | 8h 09m                     | 2h 16m     |    |            |    |    | Mo, 17. Jun |
| Di, 18. Jun | MESZ          | —:—:—:—                    | –          | Mond stört                          |      | 18:08      | 02:56      | 02:43                      | 1h 20m     | 04:03 | 53m        | 04:57 | 42m        | 05:39      | 15h 51m    | 21:30                   | 42m        | 22:12 | 53m        | 23:05 | 1h 20m     | 00:26*   | 8h 08m                     | 2h 16m     |    |            |    |    | Di, 18. Jun |
| Mi, 19. Jun | MESZ          | —:—:—:—                    | –          | Mond stört                          |      | 19:21      | 03:18      | 02:42                      | 1h 20m     | 04:03 | 53m        | 04:57 | 42m        | 05:39      | 15h 51m    | 21:30                   | 42m        | 22:12 | 53m        | 23:06 | 1h 21m     | 00:27*   | 8h 08m                     | 2h 15m     |    |            |    |    | Mi, 19. Jun |
| Do, 20. Jun | MESZ          | —:—:~:~                    | –          | Mond stört                          |      | 20:34      | 03:48      | 02:42                      | 1h 21m     | 04:04 | 53m        | 04:57 | 42m        | 05:39      | 15h 51m    | 21:30                   | 42m        | 22:13 | 53m        | 23:06 | 1h 21m     | 00:27*   | 8h 08m                     | 2h 15m     |    |            |    |    | Do, 20. Jun |
| Fr, 21. Jun | MESZ          | —:~:~:~                    | –          | Mond stört                          |      | 21:42      | 04:27      | 02:43                      | 1h 21m     | 04:04 | 53m        | 04:57 | 42m        | 05:39      | 15h 51m    | 21:31                   | 42m        | 22:13 | 53m        | 23:06 | 1h 21m     | 00:27*   | 8h 08m                     | 2h 15m     |    |            |    |    | Fr, 21. Jun |
| Sa, 22. Jun | MESZ          | —:~:~:~                    | –          | Mond stört                          | ☉    | 22:39      | 05:20      | 02:43                      | 1h 21m     | 04:04 | 53m        | 04:57 | 42m        | 05:39      | 15h 51m    | 21:31                   | 42m        | 22:13 | 53m        | 23:06 | 1h 20m     | 00:27*   | 8h 08m                     | 2h 16m     |    |            |    |    | Sa, 22. Jun |
| So, 23. Jun | MESZ          | —:~:~:~                    | –          | Mond stört                          |      | 23:24      | 06:28      | 02:43                      | 1h 20m     | 04:04 | 53m        | 04:58 | 42m        | 05:40      | 15h 51m    | 21:31                   | 42m        | 22:13 | 53m        | 23:06 | 1h 20m     | 00:27*   | 8h 09m                     | 2h 17m     |    |            |    |    | So, 23. Jun |
| Mo, 24. Jun | MESZ          | —:~:~:~                    | –          | Mond stört                          |      | 23:58      | 07:45      | 02:44                      | 1h 20m     | 04:05 | 53m        | 04:58 | 42m        | 05:40      | 15h 50m    | 21:31                   | 42m        | 22:13 | 53m        | 23:06 | 1h 20m     | 00:27*   | 8h 09m                     | 2h 18m     |    |            |    |    | Mo, 24. Jun |
| Di, 25. Jun | MESZ          | —:~:~:~                    | –          | Mond stört                          |      | —:—        | 09:07      | 02:45                      | 1h 20m     | 04:05 | 53m        | 04:58 | 42m        | 05:40      | 15h 50m    | 21:31                   | 42m        | 22:13 | 53m        | 23:06 | 1h 20m     | 00:26*   | 8h 09m                     | 2h 19m     |    |            |    |    | Di, 25. Jun |
| Mi, 26. Jun | MESZ          | 00:26*–00:46*              | 19m        | AN <sub>+</sub> bis M <sub>J</sub>  |      | 00:24      | 10:30      | 02:46                      | 1h 20m     | 04:06 | 53m        | 04:59 | 42m        | 05:41      | 15h 50m    | 21:31                   | 41m        | 22:13 | 53m        | 23:06 | 1h 19m     | 00:26*   | 8h 10m                     | 2h 20m     |    |            |    |    | Mi, 26. Jun |
| Do, 27. Jun | MESZ          | 00:25*–01:04*              | 39m        | AN <sub>+</sub> bis M <sub>J</sub>  |      | 00:46      | 11:50      | 02:46                      | 1h 19m     | 04:06 | 53m        | 04:59 | 41m        | 05:41      | 15h 49m    | 21:31                   | 41m        | 22:13 | 52m        | 23:06 | 1h 19m     | 00:25*   | 8h 10m                     | 2h 22m     |    |            |    |    | Do, 27. Jun |
| Fr, 28. Jun | MESZ          | 00:24*–01:22*              | 57m        | AN <sub>+</sub> bis M <sub>J</sub>  | ☾    | 01:04      | 13:09      | 02:48                      | 1h 19m     | 04:07 | 52m        | 05:00 | 41m        | 05:42      | 15h 49m    | 21:31                   | 41m        | 22:13 | 52m        | 23:05 | 1h 18m     | 00:24*   | 8h 11m                     | 2h 24m     |    |            |    |    | Fr, 28. Jun |
| Sa, 29. Jun | MESZ          | 00:23*–01:40*              | 1h 16m     | AN <sub>+</sub> bis M <sub>J</sub>  |      | 01:22      | 14:28      | 02:49                      | 1h 18m     | 04:08 | 52m        | 05:00 | 41m        | 05:42      | 15h 48m    | 21:31                   | 41m        | 22:13 | 52m        | 23:05 | 1h 18m     | 00:23*   | 8h 12m                     | 2h 26m     |    |            |    |    | Sa, 29. Jun |
| So, 30. Jun | MESZ          | 00:22*–02:01*              | 1h 38m     | AN <sub>+</sub> bis M <sub>J</sub>  |      | 01:40      | 15:48      | 02:50                      | 1h 18m     | 04:08 | 52m        | 05:01 | 41m        | 05:43      | 15h 47m    | 21:31                   | 41m        | 22:12 | 52m        | 23:05 | 1h 17m     | 00:22*   | 8h 12m                     | 2h 29m     |    |            |    |    | So, 30. Jun |
| Mo, 1. Jul  | MESZ          | 00:21*–02:26*              | 2h 04m     | AN <sub>+</sub> bis M <sub>J</sub>  |      | 02:01      | 17:08      | 02:51                      | 1h 17m     | 04:09 | 52m        | 05:02 | 41m        | 05:43      | 15h 46m    | 21:30                   | 41m        | 22:12 | 52m        | 23:04 | 1h 16m     | 00:21*   | 8h 13m                     | 2h 31m     |    |            |    |    | Mo, 1. Jul  |
| Di, 2. Jul  | MESZ          | 00:20*–02:55*              | 2h 34m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 02:26      | 18:29      | 02:53                      | 1h 16m     | 04:10 | 52m        | 05:02 | 41m        | 05:44      | 15h 46m    | 21:30                   | 41m        | 22:12 | 52m        | 23:04 | 1h 16m     | 00:20*   | 8h 14m                     | 2h 34m     |    |            |    |    | Di, 2. Jul  |
| Mi, 3. Jul  | MESZ          | 00:19*–02:56*              | 2h 37m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 02:58      | 19:46      | 02:55                      | 1h 16m     | 04:11 | 52m        | 05:03 | 41m        | 05:45      | 15h 45m    | 21:30                   | 41m        | 22:11 | 51m        | 23:03 | 1h 15m     | 00:19*   | 8h 15m                     | 2h 37m     |    |            |    |    | Mi, 3. Jul  |
| Do, 4. Jul  | MESZ          | 00:17*–02:58*              | 2h 40m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 03:40      | 20:54      | 02:56                      | 1h 15m     | 04:12 | 51m        | 05:04 | 41m        | 05:45      | 15h 44m    | 21:29                   | 41m        | 22:11 | 51m        | 23:03 | 1h 14m     | 00:17*   | 8h 16m                     | 2h 40m     |    |            |    |    | Do, 4. Jul  |
| Fr, 5. Jul  | MESZ          | 00:16*–03:00*              | 2h 44m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 04:34      | 21:48      | 02:58                      | 1h 14m     | 04:13 | 51m        | 05:05 | 41m        | 05:46      | 15h 43m    | 21:29                   | 41m        | 22:10 | 51m        | 23:02 | 1h 13m     | 00:16*   | 8h 17m                     | 2h 44m     |    |            |    |    | Fr, 5. Jul  |
| Sa, 6. Jul  | MESZ          | 00:14*–03:02*              | 2h 47m     | AN <sub>+</sub> bis AN <sub>-</sub> | ☉    | 05:39      | 22:30      | 03:00                      | 1h 13m     | 04:14 | 51m        | 05:05 | 41m        | 05:47      | 15h 41m    | 21:29                   | 41m        | 22:10 | 51m        | 23:01 | 1h 13m     | 00:14*   | 8h 18m                     | 2h 47m     |    |            |    |    | Sa, 6. Jul  |
| So, 7. Jul  | MESZ          | 00:13*–03:04*              | 2h 51m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:50      | 23:01      | 03:02                      | 1h 13m     | 04:15 | 51m        | 05:06 | 41m        | 05:47      | 15h 40m    | 21:28                   | 41m        | 22:09 | 51m        | 23:00 | 1h 12m     | 00:13*   | 8h 20m                     | 2h 51m     |    |            |    |    | So, 7. Jul  |
| Mo, 8. Jul  | MESZ          | 00:11*–03:06*              | 2h 54m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 08:02      | 23:24      | 03:04                      | 1h 12m     | 04:16 | 51m        | 05:07 | 41m        | 05:48      | 15h 39m    | 21:28                   | 40m        | 22:09 | 50m        | 22:59 | 1h 11m     | 00:11*   | 8h 21m                     | 2h 54m     |    |            |    |    | Mo, 8. Jul  |
| Di, 9. Jul  | MESZ          | 00:09*–03:08*              | 2h 58m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 09:13      | 23:43      | 03:06                      | 1h 11m     | 04:17 | 50m        | 05:08 | 40m        | 05:49      | 15h 37m    | 21:27                   | 40m        | 22:08 | 50m        | 22:59 | 1h 10m     | 00       |                            |            |    |            |    |    |             |

| 1           | 2     | 3                          | 4          | 5                                   | 6    | 7          | 8          | 9                          | 10         | 11    | 12         | 13    | 14         | 15         | 16         | 17                      | 18         | 19    | 20         | 21    | 22         | 23       | 24                         | 25         | 26 | 27         | 28 | 29          |
|-------------|-------|----------------------------|------------|-------------------------------------|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|-------------------------|------------|-------|------------|-------|------------|----------|----------------------------|------------|----|------------|----|-------------|
| 2024        | Zeit- | Astr. dunkel und kein Mond |            |                                     | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            | Ende der Abenddämmerung |            |       |            |       | Nacht      | Astr. N. | Naut. dunkel und kein Mond |            |    | 2024       |    |             |
|             | zone  |                            | $\Delta t$ |                                     | Ph.  | $\nearrow$ | $\searrow$ | Astr.                      | $\Delta t$ | Naut. | $\Delta t$ | Bürg. | $\Delta t$ | $\nearrow$ | $\Delta t$ | $\searrow$              | $\Delta t$ | Bürg. | $\Delta t$ | Naut. | $\Delta t$ | Astr.    | $\Delta t$                 | $\Delta t$ |    | $\Delta t$ |    |             |
| Fr, 19. Jul | MESZ  | —:—:—:—                    | —          | Mond stört                          |      | 20:27      | 03:06      | 03:28                      | 1h 03m     | 04:31 | 48m        | 05:19 | 39m        | 05:59      | 15h 20m    | 21:19                   | 39m        | 21:59 | 47m        | 22:47 | 1h 02m     | 23:49    | 8h 40m                     | 3h 41m     |    |            |    | Fr, 19. Jul |
| Sa, 20. Jul | MESZ  | —:—:—:—                    | —          | Mond stört                          |      | 21:18      | 04:08      | 03:30                      | 1h 02m     | 04:32 | 47m        | 05:20 | 39m        | 06:00      | 15h 18m    | 21:18                   | 39m        | 21:58 | 47m        | 22:45 | 1h 01m     | 23:47    | 8h 42m                     | 3h 45m     |    |            |    | Sa, 20. Jul |
| So, 21. Jul | MESZ  | —:—:~:~:~                  | —          | Mond stört                          | ○    | 21:57      | 05:23      | 03:32                      | 1h 01m     | 04:34 | 47m        | 05:22 | 39m        | 06:01      | 15h 16m    | 21:17                   | 39m        | 21:57 | 47m        | 22:44 | 1h 00m     | 23:44    | 8h 44m                     | 3h 50m     |    |            |    | So, 21. Jul |
| Mo, 22. Jul | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 22:26      | 06:46      | 03:35                      | 1h 00m     | 04:36 | 47m        | 05:23 | 39m        | 06:02      | 15h 14m    | 21:16                   | 38m        | 21:55 | 46m        | 22:42 | 59m        | 23:42    | 8h 46m                     | 3h 54m     |    |            |    | Mo, 22. Jul |
| Di, 23. Jul | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 22:50      | 08:11      | 03:37                      | 59m        | 04:37 | 46m        | 05:24 | 38m        | 06:03      | 15h 12m    | 21:15                   | 38m        | 21:54 | 46m        | 22:41 | 59m        | 23:40    | 8h 48m                     | 3h 59m     |    |            |    | Di, 23. Jul |
| Mi, 24. Jul | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 23:09      | 09:35      | 03:40                      | 59m        | 04:39 | 46m        | 05:25 | 38m        | 06:04      | 15h 10m    | 21:14                   | 38m        | 21:53 | 46m        | 22:39 | 58m        | 23:38    | 8h 51m                     | 4h 04m     |    |            |    | Mi, 24. Jul |
| Do, 25. Jul | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 23:27      | 10:56      | 03:42                      | 58m        | 04:40 | 46m        | 05:27 | 38m        | 06:05      | 15h 07m    | 21:13                   | 38m        | 21:51 | 46m        | 22:37 | 57m        | 23:35    | 8h 53m                     | 4h 08m     |    |            |    | Do, 25. Jul |
| Fr, 26. Jul | MESZ  | 23:33 – 23:46              | 12m        | AN <sub>+</sub> bis M <sub>J</sub>  |      | 23:46      | 12:17      | 03:44                      | 57m        | 04:42 | 46m        | 05:28 | 38m        | 06:06      | 15h 05m    | 21:12                   | 38m        | 21:50 | 45m        | 22:36 | 57m        | 23:33    | 8h 55m                     | 4h 13m     |    |            |    | Fr, 26. Jul |
| Sa, 27. Jul | MESZ  | 23:31 – 00:06*             | 35m        | AN <sub>+</sub> bis M <sub>J</sub>  |      | —:—        | 13:37      | 03:47                      | 57m        | 04:44 | 45m        | 05:29 | 38m        | 06:08      | 15h 03m    | 21:11                   | 38m        | 21:49 | 45m        | 22:34 | 56m        | 23:31    | 8h 58m                     | 4h 18m     |    |            |    | Sa, 27. Jul |
| So, 28. Jul | MESZ  | 23:28 – 00:29*             | 1h 00m     | AN <sub>+</sub> bis M <sub>J</sub>  | ☾    | 00:06      | 14:58      | 03:49                      | 56m        | 04:45 | 45m        | 05:31 | 38m        | 06:09      | 15h 00m    | 21:09                   | 37m        | 21:47 | 45m        | 22:32 | 55m        | 23:28    | 9h 00m                     | 4h 23m     |    |            |    | So, 28. Jul |
| Mo, 29. Jul | MESZ  | 23:26 – 00:58*             | 1h 32m     | AN <sub>+</sub> bis M <sub>J</sub>  |      | 00:29      | 16:18      | 03:51                      | 55m        | 04:47 | 45m        | 05:32 | 37m        | 06:10      | 14h 58m    | 21:08                   | 37m        | 21:46 | 44m        | 22:31 | 55m        | 23:26    | 9h 02m                     | 4h 27m     |    |            |    | Mo, 29. Jul |
| Di, 30. Jul | MESZ  | 23:23 – 01:37*             | 2h 13m     | AN <sub>+</sub> bis M <sub>J</sub>  |      | 00:58      | 17:36      | 03:54                      | 55m        | 04:49 | 44m        | 05:33 | 37m        | 06:11      | 14h 55m    | 21:07                   | 37m        | 21:44 | 44m        | 22:29 | 54m        | 23:23    | 9h 05m                     | 4h 32m     |    |            |    | Di, 30. Jul |
| Mi, 31. Jul | MESZ  | 23:21 – 02:26*             | 3h 05m     | AN <sub>+</sub> bis M <sub>J</sub>  |      | 01:37      | 18:46      | 03:56                      | 54m        | 04:50 | 44m        | 05:35 | 37m        | 06:12      | 14h 53m    | 21:06                   | 37m        | 21:43 | 44m        | 22:27 | 53m        | 23:21    | 9h 07m                     | 4h 37m     |    |            |    | Mi, 31. Jul |
| Do, 1. Aug  | MESZ  | 23:19 – 03:27*             | 4h 08m     | AN <sub>+</sub> bis M <sub>J</sub>  |      | 02:26      | 19:44      | 03:58                      | 53m        | 04:52 | 44m        | 05:36 | 37m        | 06:14      | 14h 50m    | 21:04                   | 37m        | 21:41 | 43m        | 22:25 | 53m        | 23:19    | 9h 10m                     | 4h 41m     |    |            |    | Do, 1. Aug  |
| Fr, 2. Aug  | MESZ  | 23:16 – 04:03*             | 4h 46m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 03:27      | 20:29      | 04:00                      | 53m        | 04:54 | 43m        | 05:37 | 37m        | 06:15      | 14h 48m    | 21:03                   | 37m        | 21:40 | 43m        | 22:24 | 52m        | 23:16    | 9h 13m                     | 4h 46m     |    |            |    | Fr, 2. Aug  |
| Sa, 3. Aug  | MESZ  | 23:14 – 04:05*             | 4h 51m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 04:35      | 21:02      | 04:03                      | 52m        | 04:55 | 43m        | 05:39 | 37m        | 06:16      | 14h 45m    | 21:01                   | 36m        | 21:38 | 43m        | 22:22 | 51m        | 23:14    | 9h 15m                     | 4h 51m     |    |            |    | Sa, 3. Aug  |
| So, 4. Aug  | MESZ  | 23:11 – 04:07*             | 4h 56m     | AN <sub>+</sub> bis AN <sub>-</sub> | ●    | 05:47      | 21:28      | 04:05                      | 51m        | 04:57 | 43m        | 05:40 | 36m        | 06:17      | 14h 42m    | 21:00                   | 36m        | 21:37 | 43m        | 22:20 | 51m        | 23:11    | 9h 18m                     | 4h 56m     |    |            |    | So, 4. Aug  |
| Mo, 5. Aug  | MESZ  | 23:09 – 04:09*             | 5h 00m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:58      | 21:48      | 04:07                      | 51m        | 04:59 | 43m        | 05:42 | 36m        | 06:19      | 14h 40m    | 20:59                   | 36m        | 21:35 | 42m        | 22:18 | 50m        | 23:09    | 9h 21m                     | 5h 00m     |    |            |    | Mo, 5. Aug  |
| Di, 6. Aug  | MESZ  | 23:06 – 04:12*             | 5h 05m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 08:07      | 22:05      | 04:09                      | 50m        | 05:00 | 42m        | 05:43 | 36m        | 06:20      | 14h 37m    | 20:57                   | 36m        | 21:34 | 42m        | 22:16 | 50m        | 23:06    | 9h 23m                     | 5h 05m     |    |            |    | Di, 6. Aug  |
| Mi, 7. Aug  | MESZ  | 23:04 – 04:14*             | 5h 10m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 09:14      | 22:19      | 04:12                      | 50m        | 05:02 | 42m        | 05:45 | 36m        | 06:21      | 14h 34m    | 20:56                   | 36m        | 21:32 | 42m        | 22:14 | 49m        | 23:04    | 9h 26m                     | 5h 10m     |    |            |    | Mi, 7. Aug  |
| Do, 8. Aug  | MESZ  | 23:01 – 04:16*             | 5h 14m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 10:19      | 22:33      | 04:14                      | 49m        | 05:04 | 42m        | 05:46 | 36m        | 06:22      | 14h 31m    | 20:54                   | 36m        | 21:30 | 42m        | 22:12 | 49m        | 23:01    | 9h 29m                     | 5h 14m     |    |            |    | Do, 8. Aug  |
| Fr, 9. Aug  | MESZ  | 22:59 – 04:18*             | 5h 19m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 11:23      | 22:47      | 04:16                      | 49m        | 05:05 | 42m        | 05:47 | 36m        | 06:24      | 14h 28m    | 20:52                   | 36m        | 21:28 | 41m        | 22:10 | 48m        | 22:59    | 9h 32m                     | 5h 19m     |    |            |    | Fr, 9. Aug  |
| Sa, 10. Aug | MESZ  | 23:03 – 04:20*             | 5h 17m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 12:29      | 23:03      | 04:18                      | 48m        | 05:07 | 41m        | 05:49 | 36m        | 06:25      | 14h 26m    | 20:51                   | 35m        | 21:27 | 41m        | 22:08 | 48m        | 22:56    | 9h 35m                     | 5h 24m     |    |            |    | Sa, 10. Aug |
| So, 11. Aug | MESZ  | 23:21 – 04:23*             | 5h 01m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 13:36      | 23:21      | 04:20                      | 48m        | 05:09 | 41m        | 05:50 | 35m        | 06:26      | 14h 23m    | 20:49                   | 35m        | 21:25 | 41m        | 22:06 | 47m        | 22:54    | 9h 38m                     | 5h 28m     |    |            |    | So, 11. Aug |
| Mo, 12. Aug | MESZ  | 23:44 – 04:25*             | 4h 41m     | M <sub>\</sub> bis AN <sub>-</sub>  | ☾    | 14:45      | 23:44      | 04:23                      | 47m        | 05:10 | 41m        | 05:52 | 35m        | 06:27      | 14h 20m    | 20:48                   | 35m        | 21:23 | 40m        | 22:04 | 47m        | 22:51    | 9h 40m                     | 5h 33m     |    |            |    | Mo, 12. Aug |
| Di, 13. Aug | MESZ  | 00:13* – 04:27*            | 4h 13m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 15:56      | —:—        | 04:25                      | 47m        | 05:12 | 41m        | 05:53 | 35m        | 06:29      | 14h 17m    | 20:46                   | 35m        | 21:21 | 40m        | 22:02 | 46m        | 22:49    | 9h 43m                     | 5h 37m     |    |            |    | Di, 13. Aug |
| Mi, 14. Aug | MESZ  | 00:53* – 04:29*            | 3h 35m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 17:07      | 00:13      | 04:27                      | 46m        | 05:14 | 40m        | 05:54 | 35m        | 06:30      | 14h 14m    | 20:44                   | 35m        | 21:20 | 40m        | 22:00 | 46m        | 22:47    | 9h 46m                     | 5h 42m     |    |            |    | Mi, 14. Aug |
| Do, 15. Aug | MESZ  | 01:47* – 04:31*            | 2h 43m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 18:12      | 00:53      | 04:29                      | 46m        | 05:15 | 40m        | 05:56 | 35m        | 06:31      | 14h 11m    | 20:43                   | 35m        | 21:18 | 40m        | 21:58 | 45m        | 22:44    | 9h 49m                     | 5h 47m     |    |            |    | Do, 15. Aug |
| Fr, 16. Aug | MESZ  | 02:56* – 04:33*            | 1h 37m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 19:07      | 01:47      | 04:31                      | 45m        | 05:17 | 40m        | 05:57 | 35m        | 06:32      | 14h 08m    | 20:41                   | 35m        | 21:16 | 40m        | 21:56 | 45m        | 22:42    | 9h 52m                     | 5h 51m     |    |            |    | Fr, 16. Aug |
| Sa, 17. Aug | MESZ  | 04:16* – 04:35*            | 19m        | M <sub>\</sub> bis AN <sub>-</sub>  |      | 19:51      | 02:56      | 04:33                      | 45m        | 05:19 | 40m        | 05:59 | 35m        | 06:34      | 14h 05m    | 20:39                   | 34m        | 21:14 | 39m        | 21:54 | 45m        | 22:39    | 9h 55m                     | 5h 56m     |    |            |    | Sa, 17. Aug |
| So, 18. Aug | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 20:25      | 04:16      | 04:35                      | 45m        | 05:20 | 39m        | 06:00 | 34m        | 06:35      | 14h 02m    | 20:38                   | 34m        | 21:12 | 39m        | 21:52 | 44m        | 22:37    | 9h 58m                     | 6h 00m     |    |            |    | So, 18. Aug |
| Mo, 19. Aug | MESZ  | —:~:~:~:~                  | —          | Mond stört                          | ○    | 20:51      | 05:42      | 04:37                      | 44m        | 05:22 | 39m        | 06:02 | 34m        | 06:36      | 13h 59m    | 20:36                   | 34m        | 21:10 | 39m        | 21:50 | 44m        | 22:34    | 10h 01m                    | 6h 05m     |    |            |    | Mo, 19. Aug |
| Di, 20. Aug | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 21:12      | 07:08      | 04:39                      | 44m        | 05:24 | 39m        | 06:03 | 34m        | 06:38      | 13h 56m    | 20:34                   | 34m        | 21:09 | 39m        | 21:48 | 43m        | 22:32    | 10h 04m                    | 6h 09m     |    |            |    | Di, 20. Aug |
| Mi, 21. Aug | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 21:31      | 08:33      | 04:41                      | 43m        | 05:25 | 39m        | 06:04 | 34m        | 06:39      | 13h 53m    | 20:32                   | 34m        | 21:07 | 38m        | 21:46 | 43m        | 22:29    | 10h 07m                    | 6h 13m     |    |            |    | Mi, 21. Aug |
| Do, 22. Aug | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 21:50      | 09:57      | 04:43                      | 43m        | 05:27 | 38m        | 06:06 | 34m        | 06:40      | 13h 50m    | 20:30                   | 34m        | 21:05 | 38m        | 21:43 | 43m        | 22:27    | 10h 10m                    | 6h 18m     |    |            |    | Do, 22. Aug |
| Fr, 23. Aug | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 22:10      | 11:20      | 04:45                      | 43m        | 05:28 | 38m        | 06:07 | 34m        | 06:41      | 13h 47m    | 20:29                   | 34m        | 21:03 | 38m        | 21:41 | 42m        | 22:24    | 10h 14m                    | 6h 22m     |    |            |    | Fr, 23. Aug |
| Sa, 24. Aug | MESZ  | 22:22 – 22:32              | 10m        | AN <sub>+</sub> bis M <sub>J</sub>  |      | 22:32      | 12:43      | 04:47                      | 42m        | 05:30 | 38m        | 06:09 | 34m        | 06:43      | 13h 44m    | 20:27                   | 34m        | 21:01 | 38m        | 21:39 | 42m        | 22:22    | 10h 17m                    | 6h 27m     |    |            |    | Sa, 24. Aug |
| So, 25. Aug | MESZ  | 22:19 – 23:00              | 40m        | AN <sub>+</sub> bis M <sub>J</sub>  |      | 23:00      | 14:06      | 04:49                      | 42m        | 05:32 | 38m        | 06:10 | 34m        | 06:44      | 13h 40m    | 20:25                   | 33m        | 20:59 | 38m        | 21:37 | 42m        | 22:19    | 10h 20m                    | 6h 31m     |    |            |    | So, 25. Aug |
| Mo, 26. Aug | MESZ  | 22:17 – 23:35              | 1h 18m     | AN <sub>+</sub> bis M <sub>J</sub>  | ☾    | 23:35      | 15:26      | 04:51                      | 42m        | 05:33 | 38m        | 06:11 | 33m        | 06:45      | 13h 37m    | 20:23                   | 33m        | 20:57 | 37m        | 21:35 | 41m        | 22:17    | 10h 23m                    | 6h 35m     |    |            |    | Mo, 26. Aug |
| Di, 27. Aug | MESZ  | 22:14 – 00:21*             | 2h 07m     | AN <sub>+</sub> bis M <sub>J</sub>  |      | —:—        | 16:39      | 04:53                      | 41m        | 05:35 | 38m        | 06:13 | 33m        | 06:47      | 13h 34m    | 20:21                   | 33m        | 20:55 | 37m        | 21:33 | 41m        | 22:14    | 10h 26m                    | 6h 40m     |    |            |    | Di, 27. Aug |
| Mi, 28. Aug | MESZ  | 22:12 – 01:19*             | 3h 06m     | AN <sub>+</sub> bis M <sub>J</sub>  |      | 00:21      | 17:41      | 04:55                      | 41m        | 05:36 | 37m        | 06:14 | 33m        | 06:48      | 13h 31m    | 20:19                   | 33m        | 20:53 | 37m        | 21:31 | 41m        | 22:12    | 10h 29m                    | 6h 44m     |    |            |    | Mi, 28. Aug |
| Do, 29. Aug | MESZ  | 22:10 – 02:25*             | 4h 15m     | AN <sub>+</sub> bis M <sub>J</sub>  |      | 01:19      | 18:29      | 04:56                      | 41m        | 05:38 | 37m        | 06:16 | 33m        | 06:49      | 13h 28m    | 20:17                   | 33m        | 20:51 | 37m        | 21:28 | 41m        | 22:10    | 10h 32m                    | 6h 48m     |    |            |    | Do, 29. Aug |
| Fr, 30. Aug | MESZ  | 22:07 – 03:36*             | 5h 28m     | AN <sub>+</sub>                     |      |            |            |                            |            |       |            |       |            |            |            |                         |            |       |            |       |            |          |                            |            |    |            |    |             |

| 1           | 2             | 3                          | 4          | 5                                   | 6    | 7          | 8          | 9                          | 10         | 11    | 12         | 13    | 14         | 15         | 16         | 17                      | 18         | 19    | 20         | 21    | 22         | 23       | 24                         | 25         | 26 | 27         | 28 | 29          |
|-------------|---------------|----------------------------|------------|-------------------------------------|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|-------------------------|------------|-------|------------|-------|------------|----------|----------------------------|------------|----|------------|----|-------------|
| 2024        | Zeit-<br>zone | Astr. dunkel und kein Mond |            |                                     | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            | Ende der Abenddämmerung |            |       |            |       | Nacht      | Astr. N. | Naut. dunkel und kein Mond |            |    | 2024       |    |             |
|             |               |                            | $\Delta t$ |                                     | Ph.  | $\nearrow$ | $\searrow$ | Astr.                      | $\Delta t$ | Naut. | $\Delta t$ | Bürg. | $\Delta t$ | $\nearrow$ | $\Delta t$ | $\searrow$              | $\Delta t$ | Bürg. | $\Delta t$ | Naut. | $\Delta t$ | Astr.    | $\Delta t$                 | $\Delta t$ |    | $\Delta t$ |    |             |
| Sa, 7. Sep  | MESZ          | 21:48–05:14*               | 7h 26m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 11:24      | 21:26      | 05:12                      | 39m        | 05:51 | 36m        | 06:28 | 32m        | 07:01      | 12h 59m    | 20:00                   | 32m        | 20:33 | 36m        | 21:09 | 38m        | 21:48    | 11h 01m                    | 7h 26m     |    |            |    | Sa, 7. Sep  |
| So, 8. Sep  | MESZ          | 21:46–05:16*               | 7h 29m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 12:32      | 21:46      | 05:14                      | 38m        | 05:53 | 36m        | 06:29 | 32m        | 07:02      | 12h 56m    | 19:58                   | 32m        | 20:31 | 36m        | 21:07 | 38m        | 21:46    | 11h 05m                    | 7h 30m     |    |            |    | So, 8. Sep  |
| Mo, 9. Sep  | MESZ          | 22:12–05:17*               | 7h 05m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 13:42      | 22:12      | 05:16                      | 38m        | 05:54 | 36m        | 06:31 | 32m        | 07:03      | 12h 52m    | 19:56                   | 32m        | 20:29 | 35m        | 21:05 | 38m        | 21:43    | 11h 08m                    | 7h 34m     |    |            |    | Mo, 9. Sep  |
| Di, 10. Sep | MESZ          | 22:47–05:19*               | 6h 32m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 14:52      | 22:47      | 05:17                      | 38m        | 05:56 | 35m        | 06:32 | 32m        | 07:05      | 12h 49m    | 19:54                   | 32m        | 20:27 | 35m        | 21:03 | 38m        | 21:41    | 11h 11m                    | 7h 38m     |    |            |    | Di, 10. Sep |
| Mi, 11. Sep | MESZ          | 23:33–05:21*               | 5h 47m     | M <sub>\</sub> bis AN <sub>-</sub>  | ☾    | 15:58      | 23:33      | 05:19                      | 38m        | 05:57 | 35m        | 06:33 | 32m        | 07:06      | 12h 46m    | 19:52                   | 32m        | 20:25 | 35m        | 21:00 | 38m        | 21:38    | 11h 14m                    | 7h 42m     |    |            |    | Mi, 11. Sep |
| Do, 12. Sep | MESZ          | 00:34*–05:22*              | 4h 48m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 16:56      | —:—        | 05:21                      | 38m        | 05:59 | 35m        | 06:35 | 32m        | 07:07      | 12h 43m    | 19:50                   | 32m        | 20:23 | 35m        | 20:58 | 37m        | 21:36    | 11h 18m                    | 7h 46m     |    |            |    | Do, 12. Sep |
| Fr, 13. Sep | MESZ          | 01:47*–05:24*              | 3h 36m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 17:44      | 00:34      | 05:22                      | 37m        | 06:00 | 35m        | 06:36 | 32m        | 07:08      | 12h 39m    | 19:48                   | 32m        | 20:21 | 35m        | 20:56 | 37m        | 21:34    | 11h 21m                    | 7h 50m     |    |            |    | Fr, 13. Sep |
| Sa, 14. Sep | MESZ          | 03:09*–05:25*              | 2h 16m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 18:21      | 01:47      | 05:24                      | 37m        | 06:02 | 35m        | 06:37 | 32m        | 07:10      | 12h 36m    | 19:46                   | 32m        | 20:19 | 35m        | 20:54 | 37m        | 21:32    | 11h 24m                    | 7h 53m     |    |            |    | Sa, 14. Sep |
| So, 15. Sep | MESZ          | 04:35*–05:27*              | 52m        | M <sub>\</sub> bis AN <sub>-</sub>  |      | 18:50      | 03:09      | 05:25                      | 37m        | 06:03 | 35m        | 06:39 | 32m        | 07:11      | 12h 33m    | 19:44                   | 32m        | 20:16 | 35m        | 20:52 | 37m        | 21:29    | 11h 27m                    | 7h 57m     |    |            |    | So, 15. Sep |
| Mo, 16. Sep | MESZ          | —:—:—:—                    | –          | Mond stört                          |      | 19:13      | 04:35      | 05:27                      | 37m        | 06:05 | 35m        | 06:40 | 32m        | 07:12      | 12h 30m    | 19:42                   | 32m        | 20:14 | 35m        | 20:50 | 37m        | 21:27    | 11h 31m                    | 8h 01m     |    |            |    | Mo, 16. Sep |
| Di, 17. Sep | MESZ          | —:—:—:—                    | –          | Mond stört                          |      | 19:33      | 06:01      | 05:29                      | 37m        | 06:06 | 35m        | 06:41 | 32m        | 07:13      | 12h 26m    | 19:40                   | 32m        | 20:12 | 35m        | 20:48 | 37m        | 21:25    | 11h 34m                    | 8h 05m     |    |            |    | Di, 17. Sep |
| Mi, 18. Sep | MESZ          | —:—:—:—                    | –          | Mond stört                          | ☾    | 19:52      | 07:26      | 05:30                      | 37m        | 06:07 | 35m        | 06:43 | 32m        | 07:15      | 12h 23m    | 19:38                   | 32m        | 20:10 | 35m        | 20:45 | 36m        | 21:22    | 11h 37m                    | 8h 09m     |    |            |    | Mi, 18. Sep |
| Do, 19. Sep | MESZ          | —:—:~:~                    | –          | Mond stört                          |      | 20:12      | 08:52      | 05:32                      | 37m        | 06:09 | 35m        | 06:44 | 32m        | 07:16      | 12h 20m    | 19:36                   | 32m        | 20:08 | 34m        | 20:43 | 36m        | 21:20    | 11h 41m                    | 8h 13m     |    |            |    | Do, 19. Sep |
| Fr, 20. Sep | MESZ          | —:~:~:~                    | –          | Mond stört                          |      | 20:34      | 10:18      | 05:33                      | 36m        | 06:10 | 35m        | 06:45 | 32m        | 07:17      | 12h 16m    | 19:34                   | 32m        | 20:06 | 34m        | 20:41 | 36m        | 21:18    | 11h 44m                    | 8h 16m     |    |            |    | Fr, 20. Sep |
| Sa, 21. Sep | MESZ          | —:~:~:~                    | –          | Mond stört                          |      | 21:00      | 11:44      | 05:35                      | 36m        | 06:12 | 34m        | 06:46 | 32m        | 07:19      | 12h 13m    | 19:32                   | 32m        | 20:04 | 34m        | 20:39 | 36m        | 21:16    | 11h 47m                    | 8h 20m     |    |            |    | Sa, 21. Sep |
| So, 22. Sep | MESZ          | 21:14–21:33                | 19m        | AN <sub>+</sub> bis M <sub>7</sub>  |      | 21:33      | 13:09      | 05:36                      | 36m        | 06:13 | 34m        | 06:48 | 32m        | 07:20      | 12h 10m    | 19:30                   | 32m        | 20:02 | 34m        | 20:37 | 36m        | 21:14    | 11h 51m                    | 8h 24m     |    |            |    | So, 22. Sep |
| Mo, 23. Sep | MESZ          | 21:11–22:16                | 1h 05m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:16      | 14:28      | 05:38                      | 36m        | 06:14 | 34m        | 06:49 | 32m        | 07:21      | 12h 07m    | 19:28                   | 32m        | 20:00 | 34m        | 20:35 | 36m        | 21:11    | 11h 54m                    | 8h 27m     |    |            |    | Mo, 23. Sep |
| Di, 24. Sep | MESZ          | 21:09–23:11                | 2h 01m     | AN <sub>+</sub> bis M <sub>7</sub>  | ☾    | 23:11      | 15:35      | 05:39                      | 36m        | 06:16 | 34m        | 06:50 | 32m        | 07:23      | 12h 03m    | 19:26                   | 32m        | 19:58 | 34m        | 20:33 | 36m        | 21:09    | 11h 57m                    | 8h 31m     |    |            |    | Di, 24. Sep |
| Mi, 25. Sep | MESZ          | 21:07–00:16*               | 3h 08m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:—        | 16:29      | 05:41                      | 36m        | 06:17 | 34m        | 06:52 | 32m        | 07:24      | 12h 00m    | 19:24                   | 31m        | 19:56 | 34m        | 20:31 | 36m        | 21:07    | 12h 00m                    | 8h 35m     |    |            |    | Mi, 25. Sep |
| Do, 26. Sep | MESZ          | 21:05–01:26*               | 4h 20m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:16      | 17:09      | 05:42                      | 36m        | 06:18 | 34m        | 06:53 | 32m        | 07:25      | 11h 57m    | 19:22                   | 31m        | 19:54 | 34m        | 20:29 | 36m        | 21:05    | 12h 04m                    | 8h 38m     |    |            |    | Do, 26. Sep |
| Fr, 27. Sep | MESZ          | 21:03–02:37*               | 5h 34m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:26      | 17:38      | 05:44                      | 36m        | 06:20 | 34m        | 06:54 | 32m        | 07:26      | 11h 53m    | 19:20                   | 31m        | 19:52 | 34m        | 20:27 | 35m        | 21:03    | 12h 07m                    | 8h 42m     |    |            |    | Fr, 27. Sep |
| Sa, 28. Sep | MESZ          | 21:01–03:47*               | 6h 46m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:37      | 18:01      | 05:45                      | 35m        | 06:21 | 34m        | 06:56 | 32m        | 07:28      | 11h 50m    | 19:18                   | 31m        | 19:50 | 34m        | 20:25 | 35m        | 21:01    | 12h 10m                    | 8h 45m     |    |            |    | Sa, 28. Sep |
| So, 29. Sep | MESZ          | 20:59–04:54*               | 7h 55m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 03:47      | 18:19      | 05:47                      | 35m        | 06:22 | 34m        | 06:57 | 32m        | 07:29      | 11h 47m    | 19:16                   | 31m        | 19:48 | 34m        | 20:23 | 35m        | 20:59    | 12h 14m                    | 8h 49m     |    |            |    | So, 29. Sep |
| Mo, 30. Sep | MESZ          | 20:56–05:49*               | 8h 53m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 04:54      | 18:34      | 05:48                      | 35m        | 06:24 | 34m        | 06:58 | 32m        | 07:30      | 11h 43m    | 19:14                   | 31m        | 19:46 | 34m        | 20:21 | 35m        | 20:56    | 12h 17m                    | 8h 53m     |    |            |    | Mo, 30. Sep |
| Di, 1. Okt  | MESZ          | 20:54–05:51*               | 8h 56m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:00      | 18:48      | 05:49                      | 35m        | 06:25 | 34m        | 07:00 | 32m        | 07:32      | 11h 40m    | 19:12                   | 31m        | 19:44 | 34m        | 20:19 | 35m        | 20:54    | 12h 20m                    | 8h 56m     |    |            |    | Di, 1. Okt  |
| Mi, 2. Okt  | MESZ          | 20:52–05:52*               | 8h 59m     | AN <sub>+</sub> bis AN <sub>-</sub> | ☾    | 07:05      | 19:02      | 05:51                      | 35m        | 06:27 | 34m        | 07:01 | 32m        | 07:33      | 11h 37m    | 19:10                   | 31m        | 19:42 | 34m        | 20:17 | 35m        | 20:52    | 12h 23m                    | 8h 59m     |    |            |    | Mi, 2. Okt  |
| Do, 3. Okt  | MESZ          | 20:50–05:54*               | 9h 03m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 08:09      | 19:16      | 05:52                      | 35m        | 06:28 | 34m        | 07:02 | 32m        | 07:34      | 11h 34m    | 19:08                   | 32m        | 19:40 | 34m        | 20:15 | 35m        | 20:50    | 12h 27m                    | 9h 03m     |    |            |    | Do, 3. Okt  |
| Fr, 4. Okt  | MESZ          | 20:48–05:55*               | 9h 06m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 09:15      | 19:32      | 05:54                      | 35m        | 06:29 | 34m        | 07:04 | 32m        | 07:36      | 11h 30m    | 19:07                   | 32m        | 19:39 | 34m        | 20:13 | 35m        | 20:48    | 12h 30m                    | 9h 06m     |    |            |    | Fr, 4. Okt  |
| Sa, 5. Okt  | MESZ          | 20:46–05:57*               | 9h 10m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 10:22      | 19:51      | 05:55                      | 35m        | 06:31 | 34m        | 07:05 | 32m        | 07:37      | 11h 27m    | 19:05                   | 32m        | 19:37 | 34m        | 20:11 | 35m        | 20:46    | 12h 33m                    | 9h 10m     |    |            |    | Sa, 5. Okt  |
| So, 6. Okt  | MESZ          | 20:44–05:58*               | 9h 13m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 11:32      | 20:15      | 05:57                      | 35m        | 06:32 | 34m        | 07:06 | 32m        | 07:38      | 11h 24m    | 19:03                   | 32m        | 19:35 | 34m        | 20:09 | 35m        | 20:44    | 12h 37m                    | 9h 13m     |    |            |    | So, 6. Okt  |
| Mo, 7. Okt  | MESZ          | 20:46–05:59*               | 9h 12m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 12:41      | 20:46      | 05:58                      | 35m        | 06:33 | 34m        | 07:08 | 32m        | 07:40      | 11h 20m    | 19:01                   | 32m        | 19:33 | 34m        | 20:07 | 35m        | 20:42    | 12h 40m                    | 9h 16m     |    |            |    | Mo, 7. Okt  |
| Di, 8. Okt  | MESZ          | 21:28–06:01*               | 8h 33m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 13:48      | 21:28      | 05:59                      | 35m        | 06:35 | 34m        | 07:09 | 32m        | 07:41      | 11h 17m    | 18:59                   | 32m        | 19:31 | 34m        | 20:05 | 35m        | 20:40    | 12h 43m                    | 9h 20m     |    |            |    | Di, 8. Okt  |
| Mi, 9. Okt  | MESZ          | 22:22–06:02*               | 7h 40m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 14:48      | 22:22      | 06:01                      | 35m        | 06:36 | 34m        | 07:10 | 32m        | 07:42      | 11h 14m    | 18:57                   | 32m        | 19:29 | 34m        | 20:03 | 35m        | 20:39    | 12h 46m                    | 9h 23m     |    |            |    | Mi, 9. Okt  |
| Do, 10. Okt | MESZ          | 23:28–06:03*               | 6h 35m     | M <sub>\</sub> bis AN <sub>-</sub>  | ☾    | 15:39      | 23:28      | 06:02                      | 35m        | 06:37 | 34m        | 07:12 | 32m        | 07:44      | 11h 11m    | 18:55                   | 32m        | 19:27 | 34m        | 20:02 | 35m        | 20:37    | 12h 50m                    | 9h 26m     |    |            |    | Do, 10. Okt |
| Fr, 11. Okt | MESZ          | 00:44*–06:05*              | 5h 20m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 16:18      | —:—        | 06:03                      | 35m        | 06:39 | 34m        | 07:13 | 32m        | 07:45      | 11h 07m    | 18:53                   | 32m        | 19:25 | 34m        | 20:00 | 35m        | 20:35    | 12h 53m                    | 9h 30m     |    |            |    | Fr, 11. Okt |
| Sa, 12. Okt | MESZ          | 02:06*–06:06*              | 4h 00m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 16:49      | 00:44      | 06:05                      | 35m        | 06:40 | 34m        | 07:14 | 32m        | 07:47      | 11h 04m    | 18:51                   | 32m        | 19:24 | 34m        | 19:58 | 35m        | 20:33    | 12h 56m                    | 9h 33m     |    |            |    | Sa, 12. Okt |
| So, 13. Okt | MESZ          | 03:29*–06:07*              | 2h 38m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 17:14      | 02:06      | 06:06                      | 35m        | 06:41 | 34m        | 07:16 | 32m        | 07:48      | 11h 01m    | 18:49                   | 32m        | 19:22 | 34m        | 19:56 | 35m        | 20:31    | 12h 59m                    | 9h 36m     |    |            |    | So, 13. Okt |
| Mo, 14. Okt | MESZ          | 04:53*–06:09*              | 1h 16m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 17:35      | 03:29      | 06:07                      | 35m        | 06:43 | 34m        | 07:17 | 32m        | 07:49      | 10h 58m    | 18:48                   | 32m        | 19:20 | 34m        | 19:54 | 35m        | 20:29    | 13h 03m                    | 9h 39m     |    |            |    | Mo, 14. Okt |
| Di, 15. Okt | MESZ          | —:~:~:~                    | –          | Mond stört                          |      | 17:54      | 04:53      | 06:09                      | 35m        | 06:44 | 34m        | 07:18 | 32m        | 07:51      | 10h 55m    | 18:46                   | 32m        | 19:18 | 34m        | 19:53 | 34m        | 20:27    | 13h 06m                    | 9h 42m     |    |            |    | Di, 15. Okt |
| Mi, 16. Okt | MESZ          | —:~:~:~                    | –          | Mond stört                          |      | 18:13      | 06:17      | 06:10                      | 35m        | 06:45 | 34m        | 07:20 | 32m        | 07:52      | 10h 51m    | 18:44                   | 32m        | 19:16 | 34m        | 19:51 | 34m        | 20:26    | 13h 09m                    | 9h 45m     |    |            |    | Mi, 16. Okt |
| Do, 17. Okt | MESZ          | —:~:~:~                    | –          | Mond stört                          | ☾    | 18:33      | 07:43      | 06:12                      | 35m        | 06:47 | 34m        | 07:21 | 32m        | 07:54      | 10h 48m    | 18:42                   | 32m        | 19:15 | 34m        | 19:49 | 34m        | 20:24    | 13h 12m                    | 9h 48m     |    |            |    | Do, 17. Okt |
| Fr, 18. Okt | MESZ          | —:~:~:~                    | –          | Mond stört                          |      | 18:58      | 09:11      | 06:13                      | 35m        | 06:48 | 34m        | 07:22 | 32m        | 07:55      | 10h 45m    | 18:40                   | 32m        | 19:13 | 34m        | 19:47 | 34m        | 20:22    | 13h 15m                    | 9h 51m     |    |            |    | Fr, 18. Okt |
| Sa, 19. Okt | MESZ          | —:~:~:~                    | –          | Mond stört                          |      |            |            |                            |            |       |            |       |            |            |            |                         |            |       |            |       |            |          |                            |            |    |            |    |             |

| 1           | 2             | 3                          | 4       | 5                                   | 6    | 7          | 8          | 9                          | 10         | 11    | 12         | 13    | 14         | 15         | 16         | 17                      | 18         | 19    | 20         | 21    | 22         | 23       | 24                         | 25         | 26 | 27         | 28 | 29          |
|-------------|---------------|----------------------------|---------|-------------------------------------|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|-------------------------|------------|-------|------------|-------|------------|----------|----------------------------|------------|----|------------|----|-------------|
| 2024        | Zeit-<br>zone | Astr. dunkel und kein Mond |         |                                     | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            | Ende der Abenddämmerung |            |       |            |       | Nacht      | Astr. N. | Naut. dunkel und kein Mond |            |    | 2024       |    |             |
|             |               | $\Delta t$                 |         |                                     | Ph.  | $\nearrow$ | $\searrow$ | Astr.                      | $\Delta t$ | Naut. | $\Delta t$ | Bürg. | $\Delta t$ | $\nearrow$ | $\Delta t$ | $\searrow$              | $\Delta t$ | Bürg. | $\Delta t$ | Naut. | $\Delta t$ | Astr.    | $\Delta t$                 | $\Delta t$ |    | $\Delta t$ |    |             |
| So, 27. Okt |               | 19:08–02:51*               | 7h 43m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:45      | 15:42      | 05:25                      | 35m        | 06:00 | 34m        | 06:35 | 33m        | 07:08      | 10h 17m    | 17:25                   | 33m        | 17:58 | 34m        | 18:33 | 34m        | 19:08    | 13h 44m                    | 10h 18m    |    |            |    | So, 27. Okt |
| Mo, 28. Okt |               | 19:07–03:56*               | 8h 49m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:51      | 15:56      | 05:26                      | 35m        | 06:01 | 34m        | 06:36 | 33m        | 07:09      | 10h 14m    | 17:24                   | 33m        | 17:57 | 34m        | 18:32 | 35m        | 19:07    | 13h 47m                    | 10h 20m    |    |            |    | Mo, 28. Okt |
| Di, 29. Okt |               | 19:05–05:00*               | 9h 55m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 03:56      | 16:10      | 05:27                      | 35m        | 06:02 | 34m        | 06:37 | 33m        | 07:11      | 10h 11m    | 17:22                   | 33m        | 17:55 | 34m        | 18:30 | 35m        | 19:05    | 13h 50m                    | 10h 23m    |    |            |    | Di, 29. Okt |
| Mi, 30. Okt |               | 19:04–05:30*               | 10h 26m | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:00      | 16:24      | 05:29                      | 35m        | 06:04 | 34m        | 06:39 | 33m        | 07:12      | 10h 08m    | 17:20                   | 33m        | 17:54 | 34m        | 18:29 | 35m        | 19:04    | 13h 53m                    | 10h 26m    |    |            |    | Mi, 30. Okt |
| Do, 31. Okt |               | 19:02–05:31*               | 10h 28m | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:06      | 16:40      | 05:30                      | 35m        | 06:05 | 34m        | 06:40 | 33m        | 07:14      | 10h 05m    | 17:19                   | 33m        | 17:52 | 34m        | 18:27 | 35m        | 19:02    | 13h 56m                    | 10h 28m    |    |            |    | Do, 31. Okt |
| Fr, 1. Nov  |               | 19:01–05:33*               | 10h 31m | AN <sub>+</sub> bis AN <sub>-</sub> | ●    | 07:13      | 16:58      | 05:31                      | 35m        | 06:06 | 35m        | 06:41 | 33m        | 07:15      | 10h 02m    | 17:17                   | 33m        | 17:51 | 35m        | 18:26 | 35m        | 19:01    | 13h 59m                    | 10h 31m    |    |            |    | Fr, 1. Nov  |
| Sa, 2. Nov  |               | 19:00–05:34*               | 10h 34m | AN <sub>+</sub> bis AN <sub>-</sub> |      | 08:22      | 17:20      | 05:33                      | 35m        | 06:08 | 35m        | 06:43 | 33m        | 07:16      | 9h 59m     | 17:16                   | 33m        | 17:50 | 35m        | 18:25 | 35m        | 19:00    | 14h 02m                    | 10h 34m    |    |            |    | Sa, 2. Nov  |
| So, 3. Nov  |               | 18:59–05:35*               | 10h 36m | AN <sub>+</sub> bis AN <sub>-</sub> |      | 09:32      | 17:49      | 05:34                      | 35m        | 06:09 | 35m        | 06:44 | 33m        | 07:18      | 9h 56m     | 17:14                   | 33m        | 17:48 | 35m        | 18:23 | 35m        | 18:59    | 14h 04m                    | 10h 36m    |    |            |    | So, 3. Nov  |
| Mo, 4. Nov  |               | 18:57–05:36*               | 10h 39m | AN <sub>+</sub> bis AN <sub>-</sub> |      | 10:40      | 18:27      | 05:35                      | 35m        | 06:10 | 35m        | 06:46 | 33m        | 07:19      | 9h 53m     | 17:13                   | 33m        | 17:47 | 35m        | 18:22 | 35m        | 18:57    | 14h 07m                    | 10h 39m    |    |            |    | Mo, 4. Nov  |
| Di, 5. Nov  |               | 19:17–05:38*               | 10h 20m | M <sub>\</sub> bis AN <sub>-</sub>  |      | 11:43      | 19:17      | 05:36                      | 35m        | 06:12 | 35m        | 06:47 | 33m        | 07:21      | 9h 50m     | 17:12                   | 33m        | 17:46 | 35m        | 18:21 | 35m        | 18:56    | 14h 10m                    | 10h 41m    |    |            |    | Di, 5. Nov  |
| Mi, 6. Nov  |               | 20:19–05:39*               | 9h 19m  | M <sub>\</sub> bis AN <sub>-</sub>  |      | 12:36      | 20:19      | 05:38                      | 35m        | 06:13 | 35m        | 06:48 | 34m        | 07:22      | 9h 47m     | 17:10                   | 34m        | 17:44 | 35m        | 18:20 | 35m        | 18:55    | 14h 13m                    | 10h 43m    |    |            |    | Mi, 6. Nov  |
| Do, 7. Nov  |               | 21:31–05:40*               | 8h 09m  | M <sub>\</sub> bis AN <sub>-</sub>  |      | 13:18      | 21:31      | 05:39                      | 35m        | 06:14 | 35m        | 06:50 | 34m        | 07:24      | 9h 45m     | 17:09                   | 34m        | 17:43 | 35m        | 18:18 | 35m        | 18:54    | 14h 16m                    | 10h 46m    |    |            |    | Do, 7. Nov  |
| Fr, 8. Nov  |               | 22:48–05:41*               | 6h 53m  | M <sub>\</sub> bis AN <sub>-</sub>  |      | 13:51      | 22:48      | 05:40                      | 35m        | 06:16 | 35m        | 06:51 | 34m        | 07:25      | 9h 42m     | 17:08                   | 34m        | 17:42 | 35m        | 18:17 | 35m        | 18:53    | 14h 19m                    | 10h 48m    |    |            |    | Fr, 8. Nov  |
| Sa, 9. Nov  |               | 00:08*–05:43*              | 5h 34m  | M <sub>\</sub> bis AN <sub>-</sub>  | ◐    | 14:16      | —:—        | 05:41                      | 35m        | 06:17 | 35m        | 06:52 | 34m        | 07:27      | 9h 39m     | 17:06                   | 34m        | 17:41 | 35m        | 18:16 | 35m        | 18:52    | 14h 21m                    | 10h 51m    |    |            |    | Sa, 9. Nov  |
| So, 10. Nov |               | 01:28*–05:44*              | 4h 15m  | M <sub>\</sub> bis AN <sub>-</sub>  |      | 14:38      | 00:08      | 05:43                      | 35m        | 06:18 | 35m        | 06:54 | 34m        | 07:28      | 9h 36m     | 17:05                   | 34m        | 17:40 | 35m        | 18:15 | 35m        | 18:51    | 14h 24m                    | 10h 53m    |    |            |    | So, 10. Nov |
| Mo, 11. Nov |               | 02:49*–05:45*              | 2h 56m  | M <sub>\</sub> bis AN <sub>-</sub>  |      | 14:57      | 01:28      | 05:44                      | 35m        | 06:19 | 35m        | 06:55 | 34m        | 07:30      | 9h 34m     | 17:04                   | 34m        | 17:38 | 35m        | 18:14 | 35m        | 18:50    | 14h 27m                    | 10h 55m    |    |            |    | Mo, 11. Nov |
| Di, 12. Nov |               | 04:11*–05:46*              | 1h 35m  | M <sub>\</sub> bis AN <sub>-</sub>  |      | 15:15      | 02:49      | 05:45                      | 35m        | 06:21 | 35m        | 06:56 | 34m        | 07:31      | 9h 31m     | 17:03                   | 34m        | 17:37 | 35m        | 18:13 | 35m        | 18:49    | 14h 29m                    | 10h 57m    |    |            |    | Di, 12. Nov |
| Mi, 13. Nov |               | 05:36*–05:48*              | 11m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 15:34      | 04:11      | 05:46                      | 35m        | 06:22 | 35m        | 06:58 | 34m        | 07:33      | 9h 29m     | 17:02                   | 34m        | 17:36 | 35m        | 18:12 | 35m        | 18:48    | 14h 32m                    | 10h 59m    |    |            |    | Mi, 13. Nov |
| Do, 14. Nov |               | —:—:—:—                    | –       | Mond stört                          |      | 15:56      | 05:36      | 05:48                      | 35m        | 06:23 | 35m        | 06:59 | 34m        | 07:34      | 9h 26m     | 17:00                   | 34m        | 17:35 | 35m        | 18:11 | 35m        | 18:47    | 14h 34m                    | 11h 02m    |    |            |    | Do, 14. Nov |
| Fr, 15. Nov |               | —:—:—:—                    | –       | Mond stört                          | ○    | 16:23      | 07:03      | 05:49                      | 35m        | 06:24 | 35m        | 07:00 | 34m        | 07:35      | 9h 23m     | 16:59                   | 34m        | 17:34 | 35m        | 18:10 | 35m        | 18:46    | 14h 37m                    | 11h 04m    |    |            |    | Fr, 15. Nov |
| Sa, 16. Nov |               | —:—:—:—                    | –       | Mond stört                          |      | 16:58      | 08:31      | 05:50                      | 35m        | 06:26 | 36m        | 07:02 | 35m        | 07:37      | 9h 21m     | 16:58                   | 35m        | 17:33 | 36m        | 18:09 | 35m        | 18:45    | 14h 39m                    | 11h 06m    |    |            |    | Sa, 16. Nov |
| So, 17. Nov |               | —:—:~:~                    | –       | Mond stört                          |      | 17:44      | 09:54      | 05:51                      | 35m        | 06:27 | 36m        | 07:03 | 35m        | 07:38      | 9h 19m     | 16:57                   | 35m        | 17:32 | 36m        | 18:09 | 35m        | 18:44    | 14h 42m                    | 11h 08m    |    |            |    | So, 17. Nov |
| Mo, 18. Nov |               | 18:44–18:44                | 0m      | AN <sub>+</sub> bis M <sub>7</sub>  |      | 18:44      | 11:04      | 05:52                      | 35m        | 06:28 | 36m        | 07:04 | 35m        | 07:40      | 9h 16m     | 16:56                   | 35m        | 17:32 | 36m        | 18:08 | 35m        | 18:44    | 14h 44m                    | 11h 09m    |    |            |    | Mo, 18. Nov |
| Di, 19. Nov |               | 18:43–19:54                | 1h 11m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 19:54      | 11:59      | 05:54                      | 35m        | 06:29 | 36m        | 07:06 | 35m        | 07:41      | 9h 14m     | 16:55                   | 35m        | 17:31 | 36m        | 18:07 | 35m        | 18:43    | 14h 47m                    | 11h 11m    |    |            |    | Di, 19. Nov |
| Mi, 20. Nov |               | 18:42–21:08                | 2h 26m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 21:08      | 12:39      | 05:55                      | 35m        | 06:31 | 36m        | 07:07 | 35m        | 07:42      | 9h 12m     | 16:55                   | 35m        | 17:30 | 36m        | 18:06 | 35m        | 18:42    | 14h 49m                    | 11h 13m    |    |            |    | Mi, 20. Nov |
| Do, 21. Nov |               | 18:42–22:22                | 3h 40m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:22      | 13:08      | 05:56                      | 35m        | 06:32 | 36m        | 07:08 | 35m        | 07:44      | 9h 09m     | 16:54                   | 35m        | 17:29 | 36m        | 18:06 | 35m        | 18:42    | 14h 51m                    | 11h 15m    |    |            |    | Do, 21. Nov |
| Fr, 22. Nov |               | 18:41–23:33                | 4h 51m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 23:33      | 13:30      | 05:57                      | 35m        | 06:33 | 36m        | 07:09 | 35m        | 07:45      | 9h 07m     | 16:53                   | 35m        | 17:28 | 36m        | 18:05 | 35m        | 18:41    | 14h 53m                    | 11h 17m    |    |            |    | Fr, 22. Nov |
| Sa, 23. Nov |               | 18:40–00:40*               | 5h 59m  | AN <sub>+</sub> bis M <sub>7</sub>  | ◑    | —:—        | 13:48      | 05:58                      | 36m        | 06:34 | 36m        | 07:11 | 35m        | 07:46      | 9h 05m     | 16:52                   | 35m        | 17:28 | 36m        | 18:04 | 36m        | 18:40    | 14h 55m                    | 11h 18m    |    |            |    | Sa, 23. Nov |
| So, 24. Nov |               | 18:40–01:45*               | 7h 05m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:40      | 14:03      | 05:59                      | 36m        | 06:35 | 36m        | 07:12 | 35m        | 07:48      | 9h 03m     | 16:51                   | 35m        | 17:27 | 36m        | 18:04 | 36m        | 18:40    | 14h 57m                    | 11h 20m    |    |            |    | So, 24. Nov |
| Mo, 25. Nov |               | 18:39–02:50*               | 8h 10m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:45      | 14:17      | 06:00                      | 36m        | 06:37 | 36m        | 07:13 | 35m        | 07:49      | 9h 01m     | 16:51                   | 35m        | 17:27 | 36m        | 18:03 | 36m        | 18:39    | 14h 59m                    | 11h 22m    |    |            |    | Mo, 25. Nov |
| Di, 26. Nov |               | 18:39–03:55*               | 9h 15m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:50      | 14:31      | 06:01                      | 36m        | 06:38 | 36m        | 07:14 | 36m        | 07:50      | 8h 59m     | 16:50                   | 36m        | 17:26 | 36m        | 18:03 | 36m        | 18:39    | 15h 01m                    | 11h 23m    |    |            |    | Di, 26. Nov |
| Mi, 27. Nov |               | 18:38–05:01*               | 10h 22m | AN <sub>+</sub> bis M <sub>7</sub>  |      | 03:55      | 14:46      | 06:03                      | 36m        | 06:39 | 36m        | 07:16 | 36m        | 07:52      | 8h 57m     | 16:49                   | 36m        | 17:25 | 36m        | 18:02 | 36m        | 18:38    | 15h 03m                    | 11h 25m    |    |            |    | Mi, 27. Nov |
| Do, 28. Nov |               | 18:38–06:05*               | 11h 26m | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:01      | 15:03      | 06:04                      | 36m        | 06:40 | 36m        | 07:17 | 36m        | 07:53      | 8h 55m     | 16:49                   | 36m        | 17:25 | 36m        | 18:02 | 36m        | 18:38    | 15h 05m                    | 11h 26m    |    |            |    | Do, 28. Nov |
| Fr, 29. Nov |               | 18:38–06:06*               | 11h 27m | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:09      | 15:24      | 06:05                      | 36m        | 06:41 | 36m        | 07:18 | 36m        | 07:54      | 8h 54m     | 16:48                   | 36m        | 17:25 | 36m        | 18:02 | 36m        | 18:38    | 15h 07m                    | 11h 27m    |    |            |    | Fr, 29. Nov |
| Sa, 30. Nov |               | 18:38–06:07*               | 11h 29m | AN <sub>+</sub> bis AN <sub>-</sub> |      | 07:20      | 15:51      | 06:06                      | 36m        | 06:42 | 37m        | 07:19 | 36m        | 07:55      | 8h 52m     | 16:48                   | 36m        | 17:24 | 37m        | 18:01 | 36m        | 18:38    | 15h 08m                    | 11h 29m    |    |            |    | Sa, 30. Nov |
| So, 1. Dez  |               | 18:37–06:08*               | 11h 30m | AN <sub>+</sub> bis AN <sub>-</sub> | ●    | 08:29      | 16:26      | 06:07                      | 36m        | 06:43 | 37m        | 07:20 | 36m        | 07:57      | 8h 50m     | 16:47                   | 36m        | 17:24 | 37m        | 18:01 | 36m        | 18:37    | 15h 10m                    | 11h 30m    |    |            |    | So, 1. Dez  |
| Mo, 2. Dez  |               | 18:37–06:09*               | 11h 31m | AN <sub>+</sub> bis AN <sub>-</sub> |      | 09:35      | 17:13      | 06:08                      | 36m        | 06:44 | 37m        | 07:21 | 36m        | 07:58      | 8h 49m     | 16:47                   | 36m        | 17:24 | 37m        | 18:01 | 36m        | 18:37    | 15h 12m                    | 11h 31m    |    |            |    | Mo, 2. Dez  |
| Di, 3. Dez  |               | 18:37–06:10*               | 11h 32m | AN <sub>+</sub> bis AN <sub>-</sub> |      | 10:32      | 18:12      | 06:09                      | 36m        | 06:45 | 37m        | 07:22 | 36m        | 07:59      | 8h 47m     | 16:47                   | 36m        | 17:23 | 37m        | 18:00 | 36m        | 18:37    | 15h 13m                    | 11h 32m    |    |            |    | Di, 3. Dez  |
| Mi, 4. Dez  |               | 19:22–06:11*               | 10h 48m | M <sub>\</sub> bis AN <sub>-</sub>  |      | 11:18      | 19:22      | 06:10                      | 36m        | 06:46 | 37m        | 07:23 | 36m        | 08:00      | 8h 46m     | 16:46                   | 36m        | 17:23 | 37m        | 18:00 | 36m        | 18:37    | 15h 14m                    | 11h 33m    |    |            |    | Mi, 4. Dez  |
| Do, 5. Dez  |               | 20:38–06:12*               | 9h 33m  | M <sub>\</sub> bis AN <sub>-</sub>  |      | 11:53      | 20:38      | 06:11                      | 36m        | 06:47 | 37m        | 07:24 | 36m        | 08:01      | 8h 44m     | 16:46                   | 36m        | 17:23 | 37m        | 18:00 | 36m        | 18:37    | 15h 16m                    | 11h 34m    |    |            |    | Do, 5. Dez  |
| Fr, 6. Dez  |               | 21:57–06:12*               | 8h 15m  | M <sub>\</sub> bis AN <sub>-</sub>  |      | 12:20      | 21:57      | 06:12                      | 36m        | 06:48 | 37m        | 07:25 | 36m        | 08:02      | 8h 43m     | 16:46                   | 36m        | 17:23 | 37m        | 18:00 | 36m        | 18:37    | 15h 17m                    | 11h 35m    |    |            |    | Fr, 6. Dez  |
| Sa, 7. Dez  |               | 23:15–06:13*               | 6h 58m  | M <sub>\</sub> bis AN <sub>-</sub>  |      | 12:43      | 23:15      | 06:12                      | 36m        | 06:49 | 37m        | 07:26 | 36m        | 08:03      | 8h 42m     | 16:46                   | 36m        | 17:23 | 37m        | 18:00 | 36m        | 18:37    | 15h 18m                    | 11h 36m    |    |            |    | Sa, 7. Dez  |
| So, 8. Dez  |               | 00:33*–06:14*              | 5h 41m  |                                     |      |            |            |                            |            |       |            |       |            |            |            |                         |            |       |            |       |            |          |                            |            |    |            |    |             |



| 1           | 2             | 3                          | 4          | 5                                   | 6    | 7          | 8          | 9                          | 10         | 11    | 12         | 13    | 14         | 15         | 16         | 17         | 18                      | 19    | 20         | 21    | 22         | 23    | 24         | 25                         | 26 | 27         | 28      | 29          |
|-------------|---------------|----------------------------|------------|-------------------------------------|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|------------|-------------------------|-------|------------|-------|------------|-------|------------|----------------------------|----|------------|---------|-------------|
| 2024/25     | Zeit-<br>zone | Astr. dunkel und kein Mond |            |                                     | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            |            | Ende der Abenddämmerung |       |            |       |            | Nacht | Astr. N.   | Naut. dunkel und kein Mond |    |            | 2024/25 |             |
|             |               |                            | $\Delta t$ |                                     | Ph.  | $\nearrow$ | $\searrow$ | Astr.                      | $\Delta t$ | Naut. | $\Delta t$ | Bürg. | $\Delta t$ | $\nearrow$ | $\Delta t$ | $\searrow$ | $\Delta t$              | Bürg. | $\Delta t$ | Naut. | $\Delta t$ | Astr. | $\Delta t$ | $\Delta t$                 |    | $\Delta t$ |         |             |
| Mo, 16. Dez |               | —:—:—:—                    | —          | Mond stört                          |      | 17:31      | 09:44      | 06:19                      | 36m        | 06:56 | 37m        | 07:34 | 37m        | 08:11      | 8h 35m     | 16:46      | 37m                     | 17:24 | 37m        | 18:01 | 36m        | 18:38 | 15h 25m    | 11h 41m                    |    |            |         | Mo, 16. Dez |
| Di, 17. Dez |               | 18:38–18:45                | 6m         | AN <sub>+</sub> bis M <sub>7</sub>  |      | 18:45      | 10:31      | 06:20                      | 36m        | 06:57 | 37m        | 07:35 | 37m        | 08:12      | 8h 34m     | 16:47      | 37m                     | 17:24 | 37m        | 18:02 | 36m        | 18:38 | 15h 25m    | 11h 42m                    |    |            |         | Di, 17. Dez |
| Mi, 18. Dez |               | 18:39–20:01                | 1h 22m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 20:01      | 11:06      | 06:21                      | 36m        | 06:57 | 37m        | 07:35 | 37m        | 08:12      | 8h 34m     | 16:47      | 37m                     | 17:24 | 37m        | 18:02 | 36m        | 18:39 | 15h 26m    | 11h 42m                    |    |            |         | Mi, 18. Dez |
| Do, 19. Dez |               | 18:39–21:15                | 2h 35m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 21:15      | 11:31      | 06:21                      | 36m        | 06:58 | 37m        | 07:36 | 37m        | 08:13      | 8h 34m     | 16:47      | 37m                     | 17:25 | 37m        | 18:02 | 36m        | 18:39 | 15h 26m    | 11h 42m                    |    |            |         | Do, 19. Dez |
| Fr, 20. Dez |               | 18:40–22:25                | 3h 45m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:25      | 11:51      | 06:22                      | 36m        | 06:59 | 37m        | 07:36 | 37m        | 08:14      | 8h 34m     | 16:48      | 37m                     | 17:25 | 37m        | 18:03 | 36m        | 18:40 | 15h 26m    | 11h 42m                    |    |            |         | Fr, 20. Dez |
| Sa, 21. Dez |               | 18:40–23:32                | 4h 51m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 23:32      | 12:07      | 06:22                      | 36m        | 06:59 | 37m        | 07:37 | 37m        | 08:14      | 8h 34m     | 16:48      | 37m                     | 17:26 | 37m        | 18:03 | 36m        | 18:40 | 15h 26m    | 11h 42m                    |    |            |         | Sa, 21. Dez |
| So, 22. Dez |               | 18:41–00:37*               | 5h 56m     | AN <sub>+</sub> bis M <sub>7</sub>  | ☉    | —:—        | 12:22      | 06:23                      | 36m        | 07:00 | 37m        | 07:37 | 37m        | 08:15      | 8h 34m     | 16:49      | 37m                     | 17:26 | 37m        | 18:04 | 36m        | 18:41 | 15h 26m    | 11h 42m                    |    |            |         | So, 22. Dez |
| Mo, 23. Dez |               | 18:41–01:42*               | 7h 00m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:37      | 12:36      | 06:23                      | 36m        | 07:00 | 37m        | 07:38 | 37m        | 08:15      | 8h 34m     | 16:49      | 37m                     | 17:27 | 37m        | 18:04 | 36m        | 18:41 | 15h 26m    | 11h 42m                    |    |            |         | Mo, 23. Dez |
| Di, 24. Dez |               | 18:42–02:47*               | 8h 05m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:42      | 12:50      | 06:24                      | 36m        | 07:00 | 37m        | 07:38 | 37m        | 08:15      | 8h 34m     | 16:50      | 37m                     | 17:27 | 37m        | 18:05 | 36m        | 18:42 | 15h 25m    | 11h 42m                    |    |            |         | Di, 24. Dez |
| Mi, 25. Dez |               | 18:43–03:55*               | 9h 12m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:47      | 13:07      | 06:24                      | 36m        | 07:01 | 37m        | 07:39 | 37m        | 08:16      | 8h 34m     | 16:51      | 37m                     | 17:28 | 37m        | 18:06 | 36m        | 18:43 | 15h 25m    | 11h 41m                    |    |            |         | Mi, 25. Dez |
| Do, 26. Dez |               | 18:43–05:04*               | 10h 20m    | AN <sub>+</sub> bis M <sub>7</sub>  |      | 03:55      | 13:26      | 06:24                      | 36m        | 07:01 | 37m        | 07:39 | 37m        | 08:16      | 8h 35m     | 16:51      | 37m                     | 17:29 | 37m        | 18:06 | 36m        | 18:43 | 15h 24m    | 11h 41m                    |    |            |         | Do, 26. Dez |
| Fr, 27. Dez |               | 18:44–06:14*               | 11h 30m    | AN <sub>+</sub> bis M <sub>7</sub>  |      | 05:04      | 13:50      | 06:25                      | 36m        | 07:01 | 37m        | 07:39 | 37m        | 08:16      | 8h 35m     | 16:52      | 37m                     | 17:29 | 37m        | 18:07 | 36m        | 18:44 | 15h 24m    | 11h 41m                    |    |            |         | Fr, 27. Dez |
| Sa, 28. Dez |               | 18:45–06:25*               | 11h 40m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:14      | 14:22      | 06:25                      | 36m        | 07:02 | 37m        | 07:39 | 37m        | 08:17      | 8h 36m     | 16:53      | 37m                     | 17:30 | 37m        | 18:08 | 36m        | 18:45 | 15h 23m    | 11h 40m                    |    |            |         | Sa, 28. Dez |
| So, 29. Dez |               | 18:45–06:25*               | 11h 40m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 07:22      | 15:05      | 06:25                      | 36m        | 07:02 | 37m        | 07:40 | 37m        | 08:17      | 8h 37m     | 16:54      | 37m                     | 17:31 | 37m        | 18:09 | 36m        | 18:45 | 15h 23m    | 11h 40m                    |    |            |         | So, 29. Dez |
| Mo, 30. Dez |               | 18:46–06:26*               | 11h 39m    | AN <sub>+</sub> bis AN <sub>-</sub> | ☉    | 08:23      | 16:01      | 06:25                      | 36m        | 07:02 | 37m        | 07:40 | 37m        | 08:17      | 8h 37m     | 16:55      | 37m                     | 17:32 | 37m        | 18:09 | 36m        | 18:46 | 15h 22m    | 11h 39m                    |    |            |         | Mo, 30. Dez |
| Di, 31. Dez |               | 18:47–06:26*               | 11h 38m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 09:14      | 17:09      | 06:26                      | 36m        | 07:02 | 37m        | 07:40 | 37m        | 08:17      | 8h 38m     | 16:56      | 37m                     | 17:33 | 37m        | 18:10 | 36m        | 18:47 | 15h 21m    | 11h 38m                    |    |            |         | Di, 31. Dez |
| Mi, 1. Jan  |               | 18:48–06:26*               | 11h 38m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 09:53      | 18:25      | 06:26                      | 36m        | 07:02 | 37m        | 07:40 | 37m        | 08:17      | 8h 39m     | 16:56      | 37m                     | 17:34 | 37m        | 18:11 | 36m        | 18:48 | 15h 20m    | 11h 38m                    |    |            |         | Mi, 1. Jan  |
| Do, 2. Jan  |               | 19:45–06:26*               | 10h 40m    | M <sub>\</sub> bis AN <sub>-</sub>  |      | 10:24      | 19:45      | 06:26                      | 36m        | 07:03 | 37m        | 07:40 | 36m        | 08:17      | 8h 40m     | 16:57      | 36m                     | 17:34 | 37m        | 18:12 | 36m        | 18:49 | 15h 19m    | 11h 37m                    |    |            |         | Do, 2. Jan  |
| Fr, 3. Jan  |               | 21:05–06:26*               | 9h 21m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 10:47      | 21:05      | 06:26                      | 36m        | 07:03 | 37m        | 07:40 | 36m        | 08:17      | 8h 41m     | 16:58      | 36m                     | 17:35 | 37m        | 18:13 | 36m        | 18:49 | 15h 18m    | 11h 36m                    |    |            |         | Fr, 3. Jan  |
| Sa, 4. Jan  |               | 22:23–06:26*               | 8h 02m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 11:07      | 22:23      | 06:26                      | 36m        | 07:03 | 37m        | 07:40 | 36m        | 08:17      | 8h 42m     | 16:59      | 36m                     | 17:36 | 37m        | 18:14 | 36m        | 18:50 | 15h 17m    | 11h 35m                    |    |            |         | Sa, 4. Jan  |
| So, 5. Jan  |               | 23:41–06:26*               | 6h 44m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 11:25      | 23:41      | 06:26                      | 36m        | 07:03 | 37m        | 07:40 | 36m        | 08:17      | 8h 43m     | 17:01      | 36m                     | 17:37 | 37m        | 18:15 | 36m        | 18:51 | 15h 15m    | 11h 34m                    |    |            |         | So, 5. Jan  |
| Mo, 6. Jan  |               | 01:00*–06:26*              | 5h 26m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 11:43      | —:—        | 06:26                      | 36m        | 07:02 | 37m        | 07:40 | 36m        | 08:16      | 8h 45m     | 17:02      | 36m                     | 17:38 | 37m        | 18:16 | 36m        | 18:52 | 15h 14m    | 11h 33m                    |    |            |         | Mo, 6. Jan  |
| Di, 7. Jan  |               | 02:20*–06:26*              | 4h 05m     | M <sub>\</sub> bis AN <sub>-</sub>  | ☉    | 12:01      | 01:00      | 06:26                      | 36m        | 07:02 | 37m        | 07:40 | 36m        | 08:16      | 8h 46m     | 17:03      | 36m                     | 17:39 | 37m        | 18:17 | 36m        | 18:53 | 15h 13m    | 11h 32m                    |    |            |         | Di, 7. Jan  |
| Mi, 8. Jan  |               | 03:42*–06:26*              | 2h 43m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 12:22      | 02:20      | 06:26                      | 36m        | 07:02 | 37m        | 07:39 | 36m        | 08:16      | 8h 47m     | 17:04      | 36m                     | 17:41 | 37m        | 18:18 | 36m        | 18:54 | 15h 11m    | 11h 31m                    |    |            |         | Mi, 8. Jan  |
| Do, 9. Jan  |               | 05:05*–06:25*              | 1h 20m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 12:49      | 03:42      | 06:26                      | 36m        | 07:02 | 37m        | 07:39 | 36m        | 08:16      | 8h 49m     | 17:05      | 36m                     | 17:42 | 37m        | 18:19 | 36m        | 18:55 | 15h 10m    | 11h 30m                    |    |            |         | Do, 9. Jan  |
| Fr, 10. Jan |               | 06:23*–06:25*              | 2m         | M <sub>\</sub> bis AN <sub>-</sub>  |      | 13:24      | 05:05      | 06:25                      | 36m        | 07:02 | 37m        | 07:39 | 36m        | 08:15      | 8h 51m     | 17:06      | 36m                     | 17:43 | 37m        | 18:20 | 36m        | 18:56 | 15h 08m    | 11h 28m                    |    |            |         | Fr, 10. Jan |
| Sa, 11. Jan |               | —:—:—:—                    | —          | Mond stört                          |      | 14:11      | 06:23      | 06:25                      | 36m        | 07:01 | 36m        | 07:38 | 36m        | 08:15      | 8h 52m     | 17:08      | 36m                     | 17:44 | 37m        | 18:21 | 36m        | 18:57 | 15h 06m    | 11h 27m                    |    |            |         | Sa, 11. Jan |
| So, 12. Jan |               | —:—:—:—                    | —          | Mond stört                          |      | 15:11      | 07:30      | 06:25                      | 36m        | 07:01 | 36m        | 07:38 | 36m        | 08:14      | 8h 54m     | 17:09      | 36m                     | 17:45 | 36m        | 18:22 | 36m        | 18:58 | 15h 04m    | 11h 26m                    |    |            |         | So, 12. Jan |
| Mo, 13. Jan |               | —:—:—:—                    | —          | Mond stört                          | ☉    | 16:22      | 08:23      | 06:24                      | 36m        | 07:01 | 36m        | 07:38 | 36m        | 08:14      | 8h 56m     | 17:10      | 36m                     | 17:46 | 36m        | 18:23 | 36m        | 18:59 | 15h 03m    | 11h 24m                    |    |            |         | Mo, 13. Jan |
| Di, 14. Jan |               | —:~:~:~:~                  | —          | Mond stört                          |      | 17:38      | 09:02      | 06:24                      | 36m        | 07:00 | 36m        | 07:37 | 36m        | 08:13      | 8h 58m     | 17:11      | 36m                     | 17:47 | 36m        | 18:24 | 36m        | 19:00 | 15h 01m    | 11h 23m                    |    |            |         | Di, 14. Jan |
| Mi, 15. Jan |               | —:~:~:~:~                  | —          | Mond stört                          |      | 18:53      | 09:31      | 06:24                      | 36m        | 07:00 | 36m        | 07:37 | 35m        | 08:13      | 9h 00m     | 17:13      | 36m                     | 17:49 | 36m        | 18:25 | 36m        | 19:02 | 14h 59m    | 11h 21m                    |    |            |         | Mi, 15. Jan |
| Do, 16. Jan |               | 19:03–20:06                | 1h 03m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 20:06      | 09:53      | 06:23                      | 36m        | 06:59 | 36m        | 07:36 | 35m        | 08:12      | 9h 02m     | 17:14      | 35m                     | 17:50 | 36m        | 18:27 | 36m        | 19:03 | 14h 57m    | 11h 20m                    |    |            |         | Do, 16. Jan |
| Fr, 17. Jan |               | 19:04–21:15                | 2h 11m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 21:15      | 10:11      | 06:23                      | 36m        | 06:59 | 36m        | 07:35 | 35m        | 08:11      | 9h 04m     | 17:15      | 35m                     | 17:51 | 36m        | 18:28 | 36m        | 19:04 | 14h 55m    | 11h 18m                    |    |            |         | Fr, 17. Jan |
| Sa, 18. Jan |               | 19:05–22:22                | 3h 17m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:22      | 10:26      | 06:22                      | 36m        | 06:58 | 36m        | 07:35 | 35m        | 08:11      | 9h 06m     | 17:17      | 35m                     | 17:52 | 36m        | 18:29 | 36m        | 19:05 | 14h 53m    | 11h 16m                    |    |            |         | Sa, 18. Jan |
| So, 19. Jan |               | 19:06–23:27                | 4h 21m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 23:27      | 10:41      | 06:22                      | 35m        | 06:58 | 36m        | 07:34 | 35m        | 08:10      | 9h 08m     | 17:18      | 35m                     | 17:54 | 36m        | 18:30 | 35m        | 19:06 | 14h 50m    | 11h 14m                    |    |            |         | So, 19. Jan |
| Mo, 20. Jan |               | 19:07–00:33*               | 5h 25m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:—        | 10:55      | 06:21                      | 35m        | 06:57 | 36m        | 07:33 | 35m        | 08:09      | 9h 10m     | 17:20      | 35m                     | 17:55 | 36m        | 18:31 | 35m        | 19:07 | 14h 48m    | 11h 13m                    |    |            |         | Mo, 20. Jan |
| Di, 21. Jan |               | 19:09–01:39*               | 6h 30m     | AN <sub>+</sub> bis M <sub>7</sub>  | ☉    | 00:33      | 11:10      | 06:21                      | 35m        | 06:56 | 36m        | 07:33 | 35m        | 08:08      | 9h 12m     | 17:21      | 35m                     | 17:56 | 36m        | 18:33 | 35m        | 19:09 | 14h 46m    | 11h 11m                    |    |            |         | Di, 21. Jan |
| Mi, 22. Jan |               | 19:10–02:47*               | 7h 37m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:39      | 11:28      | 06:20                      | 35m        | 06:56 | 36m        | 07:32 | 35m        | 08:07      | 9h 15m     | 17:22      | 35m                     | 17:58 | 36m        | 18:34 | 35m        | 19:10 | 14h 43m    | 11h 09m                    |    |            |         | Mi, 22. Jan |
| Do, 23. Jan |               | 19:11–03:57*               | 8h 45m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:47      | 11:50      | 06:19                      | 35m        | 06:55 | 36m        | 07:31 | 35m        | 08:06      | 9h 17m     | 17:24      | 35m                     | 17:59 | 36m        | 18:35 | 35m        | 19:11 | 14h 41m    | 11h 07m                    |    |            |         | Do, 23. Jan |
| Fr, 24. Jan |               | 19:12–05:06*               | 9h 53m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 03:57      | 12:18      | 06:18                      | 35m        | 06:54 | 36m        | 07:30 | 35m        | 08:05      | 9h 19m     | 17:25      | 35m                     | 18:00 | 36m        | 18:37 | 35m        | 19:12 | 14h 39m    | 11h 05m                    |    |            |         | Fr, 24. Jan |
| Sa, 25. Jan |               | 19:14–06:10*               | 10h 56m    | AN <sub>+</sub> bis M <sub>7</sub>  |      | 05:06      | 12:55      | 06:18                      | 35m        | 06:53 | 36m        | 07:29 | 35m        | 08:04      | 9h 22m     | 17:27      | 35m                     | 18:02 | 36m        | 18:38 | 35m        | 19:14 | 14h 36m    | 11h 03m                    |    |            |         | Sa, 25. Jan |
| So, 26. Jan |               | 19:15–06:16*               | 11h 01m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:10      | 13:45      | 06:17                      | 35m        | 06:52 | 35m        | 07:28 | 34m        | 08:03      | 9h 24m     | 17:28      | 34m                     | 18:03 | 35m        | 18:39 | 35m        | 19:15 | 14h 34m    | 11h 01m                    |    |            |         | So, 26. Jan |
| Mo, 27. Jan |               | 19:16–06:15*               | 10h 59m    | AN <sub>+</sub> bis AN <sub>-</sub> |      |            |            |                            |            |       |            |       |            |            |            |            |                         |       |            |       |            |       |            |                            |    |            |         |             |