

# Mond- und Dämmerungstabelle 2023

für die visuelle Deep-Sky-Beobachtung

Hallein 47.6831° N 13.0969° 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 angegebenen 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          |
|-------------|----------|----------------------------|------------|-------------------------------------|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|-------------------------|------------|-------|------------|-------|------------|----------|----------------------------|------------|----|------------|----|-------------|
| 2023        | Zeitzone | Astr. dunkel und kein Mond |            |                                     | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            | Ende der Abenddämmerung |            |       |            |       | Nacht      | Astr. N. | Naut. dunkel und kein Mond |            |    | 2023       |    |             |
|             |          |                            | $\Delta t$ |                                     | 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, 1. Jan  |          | 03:42* - 06:02*            | 2h 19m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 12:48      | 02:30      | 06:01                      | 37m        | 06:39 | 38m        | 07:17 | 38m        | 07:55      | 8h 30m     | 16:26                   | 38m        | 17:04 | 38m        | 17:42 | 37m        | 18:20    | 15h 29m                    | 11h 41m    |    |            |    | So, 1. Jan  |
| Mo, 2. Jan  |          | 04:54* - 06:02*            | 1h 07m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 13:09      | 03:42      | 06:02                      | 37m        | 06:39 | 38m        | 07:17 | 37m        | 07:55      | 8h 31m     | 16:27                   | 37m        | 17:05 | 38m        | 17:43 | 37m        | 18:21    | 15h 28m                    | 11h 40m    |    |            |    | Mo, 2. Jan  |
| Di, 3. Jan  |          | —:—:—:—:—                  | —          | Mond stört                          |      | 13:35      | 04:54      | 06:02                      | 37m        | 06:39 | 38m        | 07:17 | 37m        | 07:55      | 8h 32m     | 16:28                   | 37m        | 17:06 | 38m        | 17:44 | 37m        | 18:22    | 15h 27m                    | 11h 40m    |    |            |    | Di, 3. Jan  |
| Mi, 4. Jan  |          | —:—:—:—:—                  | —          | Mond stört                          |      | 14:08      | 06:02      | 06:02                      | 37m        | 06:39 | 38m        | 07:17 | 37m        | 07:55      | 8h 33m     | 16:29                   | 37m        | 17:07 | 38m        | 17:45 | 37m        | 18:22    | 15h 25m                    | 11h 39m    |    |            |    | Mi, 4. Jan  |
| Do, 5. Jan  |          | —:—:—:—:—                  | —          | Mond stört                          |      | 14:49      | 07:06      | 06:02                      | 37m        | 06:39 | 38m        | 07:17 | 37m        | 07:55      | 8h 35m     | 16:30                   | 37m        | 17:08 | 38m        | 17:46 | 37m        | 18:23    | 15h 24m                    | 11h 38m    |    |            |    | Do, 5. Jan  |
| Fr, 6. Jan  |          | —:~:~:~:~:~                | ~          | Mond stört                          |      | 15:41      | 08:01      | 06:02                      | 37m        | 06:39 | 38m        | 07:17 | 37m        | 07:55      | 8h 36m     | 16:31                   | 37m        | 17:09 | 38m        | 17:47 | 37m        | 18:24    | 15h 23m                    | 11h 37m    |    |            |    | Fr, 6. Jan  |
| Sa, 7. Jan  |          | —:~:~:~:~:~                | ~          | Mond stört                          | ☉    | 16:40      | 08:46      | 06:01                      | 37m        | 06:39 | 38m        | 07:17 | 37m        | 07:54      | 8h 37m     | 16:32                   | 37m        | 17:10 | 38m        | 17:48 | 37m        | 18:25    | 15h 21m                    | 11h 36m    |    |            |    | Sa, 7. Jan  |
| So, 8. Jan  |          | —:~:~:~:~:~                | ~          | Mond stört                          |      | 17:45      | 09:21      | 06:01                      | 37m        | 06:39 | 38m        | 07:17 | 37m        | 07:54      | 8h 39m     | 16:33                   | 37m        | 17:11 | 38m        | 17:49 | 37m        | 18:26    | 15h 20m                    | 11h 34m    |    |            |    | So, 8. Jan  |
| Mo, 9. Jan  |          | 18:27 - 18:53              | 25m        | AN <sub>+</sub> bis M <sub>7</sub>  |      | 18:53      | 09:49      | 06:01                      | 37m        | 06:38 | 37m        | 07:16 | 37m        | 07:54      | 8h 40m     | 16:35                   | 37m        | 17:12 | 37m        | 17:50 | 37m        | 18:27    | 15h 18m                    | 11h 33m    |    |            |    | Mo, 9. Jan  |
| Di, 10. Jan |          | 18:28 - 20:00              | 1h 31m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 20:00      | 10:11      | 06:01                      | 37m        | 06:38 | 37m        | 07:16 | 37m        | 07:53      | 8h 42m     | 16:36                   | 37m        | 17:13 | 37m        | 17:51 | 37m        | 18:28    | 15h 17m                    | 11h 32m    |    |            |    | Di, 10. Jan |
| Mi, 11. Jan |          | 18:29 - 21:08              | 2h 38m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 21:08      | 10:29      | 06:01                      | 37m        | 06:38 | 37m        | 07:16 | 37m        | 07:53      | 8h 44m     | 16:37                   | 37m        | 17:14 | 37m        | 17:52 | 37m        | 18:29    | 15h 15m                    | 11h 31m    |    |            |    | Mi, 11. Jan |
| Do, 12. Jan |          | 18:30 - 22:15              | 3h 44m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:15      | 10:45      | 06:00                      | 37m        | 06:37 | 37m        | 07:15 | 37m        | 07:52      | 8h 45m     | 16:38                   | 37m        | 17:16 | 37m        | 17:53 | 37m        | 18:30    | 15h 13m                    | 11h 29m    |    |            |    | Do, 12. Jan |
| Fr, 13. Jan |          | 18:32 - 23:23              | 4h 51m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 23:23      | 11:00      | 06:00                      | 36m        | 06:37 | 37m        | 07:15 | 37m        | 07:52      | 8h 47m     | 16:40                   | 37m        | 17:17 | 37m        | 17:55 | 37m        | 18:32    | 15h 11m                    | 11h 28m    |    |            |    | Fr, 13. Jan |
| Sa, 14. Jan |          | 18:33 - 00:33*             | 6h 00m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:—        | 11:15      | 06:00                      | 36m        | 06:37 | 37m        | 07:14 | 37m        | 07:51      | 8h 49m     | 16:41                   | 37m        | 17:18 | 37m        | 17:56 | 36m        | 18:33    | 15h 09m                    | 11h 26m    |    |            |    | Sa, 14. Jan |
| So, 15. Jan |          | 18:34 - 01:47*             | 7h 12m     | AN <sub>+</sub> bis M <sub>7</sub>  | ☾    | 00:33      | 11:32      | 05:59                      | 36m        | 06:36 | 37m        | 07:14 | 36m        | 07:51      | 8h 51m     | 16:42                   | 36m        | 17:19 | 37m        | 17:57 | 36m        | 18:34    | 15h 07m                    | 11h 25m    |    |            |    | So, 15. Jan |
| Mo, 16. Jan |          | 18:35 - 03:05*             | 8h 29m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:47      | 11:52      | 05:59                      | 36m        | 06:36 | 37m        | 07:13 | 36m        | 07:50      | 8h 53m     | 16:44                   | 36m        | 17:21 | 37m        | 17:58 | 36m        | 18:35    | 15h 05m                    | 11h 23m    |    |            |    | Mo, 16. Jan |
| Di, 17. Jan |          | 18:36 - 04:26*             | 9h 50m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 03:05      | 12:17      | 05:58                      | 36m        | 06:35 | 37m        | 07:13 | 36m        | 07:49      | 8h 55m     | 16:45                   | 36m        | 17:22 | 37m        | 17:59 | 36m        | 18:36    | 15h 03m                    | 11h 21m    |    |            |    | Di, 17. Jan |
| Mi, 18. Jan |          | 18:37 - 05:47*             | 11h 09m    | AN <sub>+</sub> bis M <sub>7</sub>  |      | 04:26      | 12:50      | 05:58                      | 36m        | 06:35 | 37m        | 07:12 | 36m        | 07:49      | 8h 57m     | 16:47                   | 36m        | 17:23 | 37m        | 18:01 | 36m        | 18:37    | 15h 01m                    | 11h 19m    |    |            |    | Mi, 18. Jan |
| Do, 19. Jan |          | 18:39 - 05:57*             | 11h 18m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:47      | 13:37      | 05:57                      | 36m        | 06:34 | 37m        | 07:11 | 36m        | 07:48      | 9h 00m     | 16:48                   | 36m        | 17:25 | 37m        | 18:02 | 36m        | 18:39    | 14h 58m                    | 11h 18m    |    |            |    | Do, 19. Jan |
| Fr, 20. Jan |          | 18:40 - 05:56*             | 11h 16m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 07:00      | 14:41      | 05:57                      | 36m        | 06:33 | 37m        | 07:11 | 36m        | 07:47      | 9h 02m     | 16:49                   | 36m        | 17:26 | 37m        | 18:03 | 36m        | 18:40    | 14h 56m                    | 11h 16m    |    |            |    | Fr, 20. Jan |
| Sa, 21. Jan |          | 18:41 - 05:55*             | 11h 14m    | AN <sub>+</sub> bis AN <sub>-</sub> | ☾    | 07:59      | 16:01      | 05:56                      | 36m        | 06:33 | 37m        | 07:10 | 36m        | 07:46      | 9h 04m     | 16:51                   | 36m        | 17:27 | 37m        | 18:04 | 36m        | 18:41    | 14h 54m                    | 11h 14m    |    |            |    | Sa, 21. Jan |
| So, 22. Jan |          | 18:42 - 05:55*             | 11h 12m    | AN <sub>+</sub> bis AN <sub>-</sub> |      | 08:43      | 17:30      | 05:55                      | 36m        | 06:32 | 37m        | 07:09 | 36m        | 07:45      | 9h 07m     | 16:52                   | 36m        | 17:29 | 37m        | 18:06 | 36m        | 18:42    | 14h 51m                    | 11h 12m    |    |            |    | So, 22. Jan |
| Mo, 23. Jan |          | 18:59 - 05:54*             | 10h 54m    | M <sub>\</sub> bis AN <sub>-</sub>  |      | 09:14      | 18:59      | 05:55                      | 36m        | 06:31 | 36m        | 07:08 | 36m        | 07:44      | 9h 09m     | 16:54                   | 36m        | 17:30 | 36m        | 18:07 | 36m        | 18:44    | 14h 49m                    | 11h 10m    |    |            |    | Mo, 23. Jan |
| Di, 24. Jan |          | 20:25 - 05:53*             | 9h 28m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 09:39      | 20:25      | 05:54                      | 36m        | 06:30 | 36m        | 07:07 | 35m        | 07:43      | 9h 12m     | 16:55                   | 35m        | 17:31 | 36m        | 18:08 | 36m        | 18:45    | 14h 46m                    | 11h 08m    |    |            |    | Di, 24. Jan |
| Mi, 25. Jan |          | 21:46 - 05:52*             | 8h 06m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 09:59      | 21:46      | 05:53                      | 36m        | 06:30 | 36m        | 07:06 | 35m        | 07:42      | 9h 14m     | 16:57                   | 35m        | 17:33 | 36m        | 18:10 | 36m        | 18:46    | 14h 44m                    | 11h 06m    |    |            |    | Mi, 25. Jan |
| Do, 26. Jan |          | 23:03 - 05:51*             | 6h 48m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 10:17      | 23:03      | 05:52                      | 36m        | 06:29 | 36m        | 07:05 | 35m        | 07:41      | 9h 17m     | 16:58                   | 35m        | 17:34 | 36m        | 18:11 | 36m        | 18:47    | 14h 41m                    | 11h 04m    |    |            |    | Do, 26. Jan |
| Fr, 27. Jan |          | 00:18* - 05:51*            | 5h 32m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 10:34      | —:—        | 05:51                      | 36m        | 06:28 | 36m        | 07:04 | 35m        | 07:40      | 9h 19m     | 17:00                   | 35m        | 17:36 | 36m        | 18:12 | 36m        | 18:49    | 14h 38m                    | 11h 01m    |    |            |    | Fr, 27. Jan |
| Sa, 28. Jan |          | 01:32* - 05:50*            | 4h 17m     | M <sub>\</sub> bis AN <sub>-</sub>  | ☾    | 10:52      | 00:18      | 05:51                      | 36m        | 06:27 | 36m        | 07:03 | 35m        | 07:39      | 9h 22m     | 17:02                   | 35m        | 17:37 | 36m        | 18:14 | 36m        | 18:50    | 14h 36m                    | 10h 59m    |    |            |    | Sa, 28. Jan |
| So, 29. Jan |          | 02:45* - 05:49*            | 3h 03m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 11:13      | 01:32      | 05:50                      | 36m        | 06:26 | 36m        | 07:02 | 35m        | 07:38      | 9h 25m     | 17:03                   | 35m        | 17:39 | 36m        | 18:15 | 36m        | 18:51    | 14h 33m                    | 10h 57m    |    |            |    | So, 29. Jan |
| Mo, 30. Jan |          | 03:55* - 05:48*            | 1h 52m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 11:37      | 02:45      | 05:49                      | 36m        | 06:25 | 36m        | 07:01 | 35m        | 07:37      | 9h 28m     | 17:05                   | 35m        | 17:40 | 36m        | 18:16 | 36m        | 18:53    | 14h 30m                    | 10h 55m    |    |            |    | Mo, 30. Jan |
| Di, 31. Jan |          | 05:00* - 05:47*            | 46m        | M <sub>\</sub> bis AN <sub>-</sub>  |      | 12:08      | 03:55      | 05:48                      | 36m        | 06:24 | 36m        | 07:00 | 35m        | 07:35      | 9h 30m     | 17:06                   | 35m        | 17:41 | 36m        | 18:18 | 36m        | 18:54    | 14h 27m                    | 10h 52m    |    |            |    | Di, 31. Jan |
| Mi, 1. Feb  |          | —:~:~:~:~:~                | ~          | Mond stört                          |      | 12:47      | 05:00      | 05:47                      | 36m        | 06:23 | 36m        | 06:59 | 35m        | 07:34      | 9h 33m     | 17:08                   | 35m        | 17:43 | 36m        | 18:19 | 36m        | 18:55    | 14h 24m                    | 10h 50m    |    |            |    | Mi, 1. Feb  |
| Do, 2. Feb  |          | —:~:~:~:~:~                | ~          | Mond stört                          |      | 13:35      | 05:57      | 05:45                      | 36m        | 06:22 | 36m        | 06:58 | 35m        | 07:33      | 9h 36m     | 17:09                   | 35m        | 17:44 | 36m        | 18:21 | 36m        | 18:57    | 14h 22m                    | 10h 47m    |    |            |    | Do, 2. Feb  |
| Fr, 3. Feb  |          | —:~:~:~:~:~                | ~          | Mond stört                          |      | 14:32      | 06:45      | 05:44                      | 35m        | 06:20 | 36m        | 06:56 | 34m        | 07:31      | 9h 39m     | 17:11                   | 34m        | 17:46 | 36m        | 18:22 | 36m        | 18:58    | 14h 19m                    | 10h 45m    |    |            |    | Fr, 3. Feb  |
| Sa, 4. Feb  |          | —:~:~:~:~:~                | ~          | Mond stört                          |      | 15:36      | 07:23      | 05:43                      | 35m        | 06:19 | 36m        | 06:55 | 34m        | 07:30      | 9h 42m     | 17:12                   | 34m        | 17:47 | 36m        | 18:23 | 36m        | 18:59    | 14h 16m                    | 10h 42m    |    |            |    | Sa, 4. Feb  |
| So, 5. Feb  |          | —:~:~:~:~:~                | ~          | Mond stört                          | ☉    | 16:43      | 07:53      | 05:42                      | 35m        | 06:18 | 35m        | 06:54 | 34m        | 07:29      | 9h 45m     | 17:14                   | 34m        | 17:49 | 36m        | 18:25 | 35m        | 19:01    | 14h 13m                    | 10h 40m    |    |            |    | So, 5. Feb  |
| Mo, 6. Feb  |          | —:~:~:~:~:~                | ~          | Mond stört                          |      | 17:51      | 08:16      | 05:41                      | 35m        | 06:17 | 35m        | 06:53 | 34m        | 07:27      | 9h 48m     | 17:16                   | 34m        | 17:50 | 35m        | 18:26 | 35m        | 19:02    | 14h 10m                    | 10h 37m    |    |            |    | Mo, 6. Feb  |
| Di, 7. Feb  |          | —:~:~:~:~:~                | ~          | Mond stört                          |      | 18:59      | 08:35      | 05:40                      | 35m        | 06:15 | 35m        | 06:51 | 34m        | 07:26      | 9h 51m     | 17:17                   | 34m        | 17:52 | 35m        | 18:28 | 35m        | 19:04    | 14h 07m                    | 10h 34m    |    |            |    | Di, 7. Feb  |
| Mi, 8. Feb  |          | 19:05 - 20:07              | 1h 01m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 20:07      | 08:52      | 05:38                      | 35m        | 06:14 | 35m        | 06:50 | 34m        | 07:24      | 9h 54m     | 17:19                   | 34m        | 17:53 | 35m        | 18:29 | 35m        | 19:05    | 14h 03m                    | 10h 32m    |    |            |    | Mi, 8. Feb  |
| Do, 9. Feb  |          | 19:06 - 21:14              | 2h 07m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 21:14      | 09:07      | 05:37                      | 35m        | 06:13 | 35m        | 06:48 | 34m        | 07:23      | 9h 57m     | 17:20                   | 34m        | 17:55 | 35m        | 18:30 | 35m        | 19:06    | 14h 00m                    | 10h 29m    |    |            |    | Do, 9. Feb  |
| Fr, 10. Feb |          | 19:08 - 22:23              | 3h 15m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:23      | 09:22      | 05:36                      | 35m        | 06:11 | 35m        | 06:47 | 34m        | 07:21      | 10h 00m    | 17:22                   | 34m        | 17:56 | 35m        | 18:32 | 35m        | 19:08    | 13h 57m                    | 10h 26m    |    |            |    | Fr, 10. Feb |
| Sa, 11. Feb |          | 19:09 - 23:34              | 4h 25m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 23:34      | 09:37      | 05:34                      | 35m        | 06:10 | 35m        | 06:46 | 34m        | 07:20      | 10h 03m    | 17:24                   | 34m        | 17:58 | 35m        | 18:33 | 35m        | 19:09    | 13h 54m                    | 10h 23m    |    |            |    | Sa, 11. Feb |
| So, 12. Feb |          | 19:11 - 00:49*             | 5h 38m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:~        | 09:55      | 05:33                      | 35m        | 06:09 | 35m        | 06:44 |            |            |            |                         |            |       |            |       |            |          |                            |            |    |            |    |             |

| 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 |             |
|-------------|---------------|----------------------------|------------|---|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|-------------------------|------------|-------|------------|-------|------------|----------|----------------------------|------------|----|------------|----|----|-------------|
| 2023        | Zeit-<br>zone | Astr. dunkel und kein Mond |            |   | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            | Ende der Abenddämmerung |            |       |            |       | Nacht      | Astr. N. | Naut. dunkel und kein Mond |            |    | 2023       |    |    |             |
|             |               |                            | $\Delta t$ |   | Ph.  | $\uparrow$ | $\searrow$ | Astr.                      | $\Delta t$ | Naut. | $\Delta t$ | Bürg. | $\Delta t$ | $\uparrow$ | $\Delta t$ | $\searrow$              | $\Delta t$ | Bürg. | $\Delta t$ | Naut. | $\Delta t$ | Astr.    | $\Delta t$                 | $\Delta t$ |    | $\Delta t$ |    |    |             |
| Mo, 20. Feb |               | 19:22–05:19*               | 9h 56m     | AN <sub>+</sub> bis AN <sub>-</sub>       | ●    | 07:38      | 17:51      | 05:21                      | 35m        | 05:56 | 35m        | 06:31 | 33m        | 07:05      | 10h 33m    | 17:38                   | 33m        | 18:11 | 35m        | 18:46 | 35m        | 19:22    | 13h 25m                    | 9h 56m     |    |            |    |    | Mo, 20. Feb |
| Di, 21. Feb |               | 19:24–05:17*               | 9h 53m     | AN <sub>+</sub> bis AN <sub>-</sub>       |      | 08:00      | 19:16      | 05:19                      | 35m        | 05:54 | 35m        | 06:30 | 33m        | 07:03      | 10h 36m    | 17:39                   | 33m        | 18:13 | 35m        | 18:48 | 35m        | 19:24    | 13h 21m                    | 9h 53m     |    |            |    |    | Di, 21. Feb |
| Mi, 22. Feb |               | 20:38–05:15*               | 8h 37m     | M <sub>\searrow</sub> bis AN <sub>-</sub> |      | 08:19      | 20:38      | 05:17                      | 35m        | 05:53 | 35m        | 06:28 | 33m        | 07:01      | 10h 39m    | 17:41                   | 33m        | 18:14 | 35m        | 18:49 | 35m        | 19:25    | 13h 18m                    | 9h 50m     |    |            |    |    | Mi, 22. Feb |
| Do, 23. Feb |               | 21:57–05:14*               | 7h 16m     | M <sub>\searrow</sub> bis AN <sub>-</sub> |      | 08:36      | 21:57      | 05:15                      | 35m        | 05:51 | 35m        | 06:26 | 33m        | 06:59      | 10h 43m    | 17:42                   | 33m        | 18:16 | 35m        | 18:51 | 35m        | 19:26    | 13h 15m                    | 9h 47m     |    |            |    |    | Do, 23. Feb |
| Fr, 24. Feb |               | 23:14–05:12*               | 5h 57m     | M <sub>\searrow</sub> bis AN <sub>-</sub> |      | 08:54      | 23:14      | 05:14                      | 35m        | 05:49 | 35m        | 06:24 | 33m        | 06:58      | 10h 46m    | 17:44                   | 33m        | 18:17 | 35m        | 18:52 | 35m        | 19:28    | 13h 11m                    | 9h 43m     |    |            |    |    | Fr, 24. Feb |
| Sa, 25. Feb |               | 00:30*–05:10*              | 4h 40m     | M <sub>\searrow</sub> bis AN <sub>-</sub> |      | 09:14      | —:—        | 05:12                      | 35m        | 05:48 | 35m        | 06:23 | 33m        | 06:56      | 10h 49m    | 17:45                   | 33m        | 18:19 | 35m        | 18:54 | 35m        | 19:29    | 13h 08m                    | 9h 40m     |    |            |    |    | Sa, 25. Feb |
| So, 26. Feb |               | 01:43*–05:08*              | 3h 25m     | M <sub>\searrow</sub> bis AN <sub>-</sub> |      | 09:38      | 00:30      | 05:10                      | 35m        | 05:46 | 34m        | 06:21 | 33m        | 06:54      | 10h 53m    | 17:47                   | 33m        | 18:20 | 35m        | 18:55 | 35m        | 19:31    | 13h 05m                    | 9h 37m     |    |            |    |    | So, 26. Feb |
| Mo, 27. Feb |               | 02:52*–05:06*              | 2h 14m     | M <sub>\searrow</sub> bis AN <sub>-</sub> | ◐    | 10:06      | 01:43      | 05:08                      | 35m        | 05:44 | 34m        | 06:19 | 32m        | 06:52      | 10h 56m    | 17:48                   | 33m        | 18:22 | 35m        | 18:57 | 35m        | 19:32    | 13h 01m                    | 9h 34m     |    |            |    |    | Mo, 27. Feb |
| Di, 28. Feb |               | 03:53*–05:05*              | 1h 11m     | M <sub>\searrow</sub> bis AN <sub>-</sub> |      | 10:43      | 02:52      | 05:06                      | 35m        | 05:42 | 34m        | 06:17 | 32m        | 06:50      | 10h 59m    | 17:50                   | 32m        | 18:23 | 35m        | 18:58 | 35m        | 19:34    | 12h 58m                    | 9h 30m     |    |            |    |    | Di, 28. Feb |
| Mi, 1. Mär  |               | 04:44*–05:03*              | 18m        | M <sub>\searrow</sub> bis AN <sub>-</sub> |      | 11:28      | 03:53      | 05:05                      | 35m        | 05:40 | 34m        | 06:15 | 32m        | 06:48      | 11h 03m    | 17:52                   | 32m        | 18:24 | 35m        | 18:59 | 35m        | 19:35    | 12h 54m                    | 9h 27m     |    |            |    |    | Mi, 1. Mär  |
| Do, 2. Mär  |               | —:—:—:—                    | –          | Mond stört                                |      | 12:23      | 04:44      | 05:03                      | 35m        | 05:39 | 34m        | 06:13 | 32m        | 06:46      | 11h 06m    | 17:53                   | 32m        | 18:26 | 35m        | 19:01 | 35m        | 19:37    | 12h 51m                    | 9h 23m     |    |            |    |    | Do, 2. Mär  |
| Fr, 3. Mär  |               | —:—:—:—                    | –          | Mond stört                                |      | 13:25      | 05:25      | 05:01                      | 35m        | 05:37 | 34m        | 06:12 | 32m        | 06:44      | 11h 10m    | 17:55                   | 32m        | 18:27 | 35m        | 19:02 | 35m        | 19:38    | 12h 47m                    | 9h 20m     |    |            |    |    | Fr, 3. Mär  |
| Sa, 4. Mär  |               | —:—:~:~:~                  | –          | Mond stört                                |      | 14:32      | 05:56      | 04:59                      | 35m        | 05:35 | 34m        | 06:10 | 32m        | 06:42      | 11h 13m    | 17:56                   | 32m        | 18:29 | 35m        | 19:04 | 36m        | 19:40    | 12h 44m                    | 9h 16m     |    |            |    |    | Sa, 4. Mär  |
| So, 5. Mär  |               | —:~:~:~:~                  | –          | Mond stört                                |      | 15:40      | 06:21      | 04:57                      | 35m        | 05:33 | 34m        | 06:08 | 32m        | 06:41      | 11h 17m    | 17:58                   | 32m        | 18:30 | 35m        | 19:05 | 36m        | 19:41    | 12h 41m                    | 9h 13m     |    |            |    |    | So, 5. Mär  |
| Mo, 6. Mär  |               | —:~:~:~:~                  | –          | Mond stört                                |      | 16:49      | 06:41      | 04:55                      | 36m        | 05:31 | 34m        | 06:06 | 32m        | 06:39      | 11h 20m    | 17:59                   | 32m        | 18:32 | 35m        | 19:07 | 36m        | 19:43    | 12h 37m                    | 9h 09m     |    |            |    |    | Mo, 6. Mär  |
| Di, 7. Mär  |               | —:~:~:~:~                  | –          | Mond stört                                | ○    | 17:57      | 06:59      | 04:53                      | 36m        | 05:29 | 34m        | 06:04 | 32m        | 06:37      | 11h 23m    | 18:01                   | 32m        | 18:33 | 35m        | 19:08 | 36m        | 19:45    | 12h 34m                    | 9h 06m     |    |            |    |    | Di, 7. Mär  |
| Mi, 8. Mär  |               | —:~:~:~:~                  | –          | Mond stört                                |      | 19:05      | 07:14      | 04:51                      | 36m        | 05:27 | 34m        | 06:02 | 32m        | 06:35      | 11h 27m    | 18:02                   | 32m        | 18:35 | 35m        | 19:10 | 36m        | 19:46    | 12h 30m                    | 9h 02m     |    |            |    |    | Mi, 8. Mär  |
| Do, 9. Mär  |               | 19:48–20:14                | 26m        | AN <sub>+</sub> bis M <sub>\uparrow</sub> |      | 20:14      | 07:29      | 04:49                      | 36m        | 05:25 | 35m        | 06:00 | 32m        | 06:33      | 11h 30m    | 18:03                   | 32m        | 18:36 | 35m        | 19:11 | 36m        | 19:48    | 12h 27m                    | 8h 59m     |    |            |    |    | Do, 9. Mär  |
| Fr, 10. Mär |               | 19:49–21:25                | 1h 36m     | AN <sub>+</sub> bis M <sub>\uparrow</sub> |      | 21:25      | 07:44      | 04:47                      | 36m        | 05:23 | 35m        | 05:58 | 32m        | 06:31      | 11h 34m    | 18:05                   | 32m        | 18:38 | 35m        | 19:13 | 36m        | 19:49    | 12h 23m                    | 8h 55m     |    |            |    |    | Fr, 10. Mär |
| Sa, 11. Mär |               | 19:51–22:39                | 2h 48m     | AN <sub>+</sub> bis M <sub>\uparrow</sub> |      | 22:39      | 08:01      | 04:45                      | 36m        | 05:21 | 35m        | 05:56 | 32m        | 06:29      | 11h 37m    | 18:06                   | 32m        | 18:39 | 35m        | 19:14 | 36m        | 19:51    | 12h 20m                    | 8h 51m     |    |            |    |    | Sa, 11. Mär |
| So, 12. Mär |               | 19:52–23:56                | 4h 03m     | AN <sub>+</sub> bis M <sub>\uparrow</sub> |      | 23:56      | 08:21      | 04:43                      | 36m        | 05:19 | 35m        | 05:54 | 32m        | 06:27      | 11h 41m    | 18:08                   | 32m        | 18:41 | 35m        | 19:16 | 36m        | 19:52    | 12h 16m                    | 8h 48m     |    |            |    |    | So, 12. Mär |
| Mo, 13. Mär |               | 19:54–01:13*               | 5h 19m     | AN <sub>+</sub> bis M <sub>\uparrow</sub> |      | —:—        | 08:46      | 04:41                      | 36m        | 05:17 | 35m        | 05:52 | 32m        | 06:25      | 11h 44m    | 18:09                   | 32m        | 18:42 | 35m        | 19:17 | 36m        | 19:54    | 12h 13m                    | 8h 44m     |    |            |    |    | Mo, 13. Mär |
| Di, 14. Mär |               | 19:56–02:28*               | 6h 32m     | AN <sub>+</sub> bis M <sub>\uparrow</sub> |      | 01:13      | 09:21      | 04:38                      | 36m        | 05:15 | 35m        | 05:50 | 32m        | 06:23      | 11h 48m    | 18:11                   | 32m        | 18:44 | 35m        | 19:19 | 36m        | 19:56    | 12h 09m                    | 8h 40m     |    |            |    |    | Di, 14. Mär |
| Mi, 15. Mär |               | 19:57–03:34*               | 7h 36m     | AN <sub>+</sub> bis M <sub>\uparrow</sub> | ◑    | 02:28      | 10:08      | 04:36                      | 36m        | 05:13 | 35m        | 05:48 | 32m        | 06:21      | 11h 51m    | 18:12                   | 32m        | 18:45 | 35m        | 19:20 | 36m        | 19:57    | 12h 06m                    | 8h 36m     |    |            |    |    | Mi, 15. Mär |
| Do, 16. Mär |               | 19:59–04:27*               | 8h 28m     | AN <sub>+</sub> bis M <sub>\uparrow</sub> |      | 03:34      | 11:10      | 04:34                      | 36m        | 05:11 | 35m        | 05:46 | 32m        | 06:19      | 11h 55m    | 18:14                   | 32m        | 18:46 | 35m        | 19:22 | 36m        | 19:59    | 12h 02m                    | 8h 33m     |    |            |    |    | Do, 16. Mär |
| Fr, 17. Mär |               | 20:00–04:30*               | 8h 29m     | AN <sub>+</sub> bis AN <sub>-</sub>       |      | 04:27      | 12:26      | 04:32                      | 36m        | 05:09 | 35m        | 05:44 | 32m        | 06:17      | 11h 58m    | 18:15                   | 32m        | 18:48 | 35m        | 19:23 | 37m        | 20:00    | 11h 59m                    | 8h 29m     |    |            |    |    | Fr, 17. Mär |
| Sa, 18. Mär |               | 20:02–04:27*               | 8h 25m     | AN <sub>+</sub> bis AN <sub>-</sub>       |      | 05:07      | 13:51      | 04:30                      | 37m        | 05:07 | 35m        | 05:42 | 32m        | 06:15      | 12h 01m    | 18:17                   | 32m        | 18:49 | 35m        | 19:25 | 37m        | 20:02    | 11h 56m                    | 8h 25m     |    |            |    |    | Sa, 18. Mär |
| So, 19. Mär |               | 20:04–04:25*               | 8h 21m     | AN <sub>+</sub> bis AN <sub>-</sub>       |      | 05:37      | 15:18      | 04:27                      | 37m        | 05:05 | 35m        | 05:40 | 32m        | 06:13      | 12h 05m    | 18:18                   | 32m        | 18:51 | 35m        | 19:26 | 37m        | 20:04    | 11h 52m                    | 8h 21m     |    |            |    |    | So, 19. Mär |
| Mo, 20. Mär |               | 20:05–04:23*               | 8h 17m     | AN <sub>+</sub> bis AN <sub>-</sub>       |      | 06:01      | 16:44      | 04:25                      | 37m        | 05:02 | 35m        | 05:38 | 32m        | 06:11      | 12h 08m    | 18:20                   | 32m        | 18:52 | 35m        | 19:28 | 37m        | 20:05    | 11h 49m                    | 8h 17m     |    |            |    |    | Mo, 20. Mär |
| Di, 21. Mär |               | 20:07–04:21*               | 8h 13m     | AN <sub>+</sub> bis AN <sub>-</sub>       | ●    | 06:21      | 18:07      | 04:23                      | 37m        | 05:00 | 35m        | 05:36 | 32m        | 06:09      | 12h 12m    | 18:21                   | 32m        | 18:54 | 35m        | 19:29 | 37m        | 20:07    | 11h 45m                    | 8h 13m     |    |            |    |    | Di, 21. Mär |
| Mi, 22. Mär |               | 20:09–04:18*               | 8h 09m     | AN <sub>+</sub> bis AN <sub>-</sub>       |      | 06:39      | 19:28      | 04:21                      | 37m        | 04:58 | 35m        | 05:34 | 32m        | 06:07      | 12h 15m    | 18:22                   | 32m        | 18:55 | 35m        | 19:31 | 37m        | 20:09    | 11h 42m                    | 8h 09m     |    |            |    |    | Mi, 22. Mär |
| Do, 23. Mär |               | 20:48–04:16*               | 7h 28m     | M <sub>\searrow</sub> bis AN <sub>-</sub> |      | 06:56      | 20:48      | 04:18                      | 37m        | 04:56 | 35m        | 05:32 | 32m        | 06:05      | 12h 19m    | 18:24                   | 32m        | 18:57 | 35m        | 19:33 | 37m        | 20:10    | 11h 38m                    | 8h 05m     |    |            |    |    | Do, 23. Mär |
| Fr, 24. Mär |               | 22:07–04:14*               | 6h 07m     | M <sub>\searrow</sub> bis AN <sub>-</sub> |      | 07:15      | 22:07      | 04:16                      | 37m        | 04:54 | 35m        | 05:30 | 32m        | 06:03      | 12h 22m    | 18:25                   | 32m        | 18:58 | 35m        | 19:34 | 38m        | 20:12    | 11h 35m                    | 8h 01m     |    |            |    |    | Fr, 24. Mär |
| Sa, 25. Mär |               | 23:24–04:12*               | 4h 47m     | M <sub>\searrow</sub> bis AN <sub>-</sub> |      | 07:37      | 23:24      | 04:14                      | 37m        | 04:52 | 35m        | 05:28 | 32m        | 06:00      | 12h 26m    | 18:27                   | 32m        | 19:00 | 36m        | 19:36 | 38m        | 20:14    | 11h 31m                    | 7h 57m     |    |            |    |    | Sa, 25. Mär |
| So, 26. Mär | MESZ          | 01:37*–05:09*              | 3h 32m     | M <sub>\searrow</sub> bis AN <sub>-</sub> |      | 09:04      | 00:24      | 05:12                      | 38m        | 05:50 | 35m        | 06:26 | 32m        | 06:58      | 12h 29m    | 19:28                   | 32m        | 20:01 | 36m        | 20:37 | 38m        | 21:16    | 11h 28m                    | 7h 53m     |    |            |    |    | So, 26. Mär |
| Mo, 27. Mär | MESZ          | 02:43*–05:07*              | 2h 24m     | M <sub>\searrow</sub> bis AN <sub>-</sub> |      | 09:38      | 01:37      | 05:09                      | 38m        | 05:47 | 36m        | 06:24 | 32m        | 06:56      | 12h 33m    | 19:30                   | 33m        | 20:03 | 36m        | 20:39 | 38m        | 21:17    | 11h 24m                    | 7h 49m     |    |            |    |    | Mo, 27. Mär |
| Di, 28. Mär | MESZ          | 03:39*–05:04*              | 1h 25m     | M <sub>\searrow</sub> bis AN <sub>-</sub> |      | 10:20      | 02:43      | 05:07                      | 38m        | 05:45 | 36m        | 06:21 | 32m        | 06:54      | 12h 36m    | 19:31                   | 33m        | 20:04 | 36m        | 20:40 | 38m        | 21:19    | 11h 21m                    | 7h 45m     |    |            |    |    | Di, 28. Mär |
| Mi, 29. Mär | MESZ          | 04:24*–05:02*              | 38m        | M <sub>\searrow</sub> bis AN <sub>-</sub> | ◒    | 11:12      | 03:39      | 05:04                      | 38m        | 05:43 | 36m        | 06:19 | 33m        | 06:52      | 12h 40m    | 19:32                   | 33m        | 20:06 | 36m        | 20:42 | 38m        | 21:21    | 11h 17m                    | 7h 41m     |    |            |    |    | Mi, 29. Mär |
| Do, 30. Mär | MESZ          | 04:59*–05:00*              | 1m         | M <sub>\searrow</sub> bis AN <sub>-</sub> |      | 12:12      | 04:24      | 05:02                      | 38m        | 05:41 | 36m        | 06:17 | 33m        | 06:50      | 12h 43m    | 19:34                   | 33m        | 20:07 | 36m        | 20:44 | 39m        | 21:23    | 11h 14m                    | 7h 37m     |    |            |    |    | Do, 30. Mär |
| Fr, 31. Mär | MESZ          | —:~:~:~:~                  | –          | Mond stört                                |      | 13:18      | 04:59      | 05:00                      | 39m        | 05:39 | 36m        | 06:15 | 33m        | 06:48      | 12h 46m    | 19:35                   | 33m        | 20:09 | 36m        | 20:45 | 39m        | 21:24    | 11h 10m                    | 7h 32m     |    |            |    |    | Fr, 31. Mär |
| Sa, 1. Apr  | MESZ          | —:~:~:~:~                  | –          | Mond stört                                |      | 14:26      | 05:26      | 04:57                      | 39m        | 05:37 | 36m        | 06:13 | 33m        | 06:46      | 12h 50m    | 19:37                   | 33m        | 20:10 | 36m        | 20:47 | 39m        | 21:26    | 11h 07m                    | 7h 28m     |    |            |    |    | Sa, 1. Apr  |
| So, 2. Apr  | MESZ          | —:~:~:~:~                  | –          | Mond stört                                |      | 15:35      | 05:47      | 04:55                      | 39m        | 05:34 | 36m        | 06:11 | 33m        | 06:44      | 12h 53m    | 19:38                   | 33m        | 2     |            |       |            |          |                            |            |    |            |    |    |             |

| 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          |
|-------------|-------|----------------------------|------------|-------------------------------------|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|-------------------------|------------|-------|------------|-------|------------|----------|----------------------------|------------|----|------------|----|-------------|
| 2023        | Zeit- | Astr. dunkel und kein Mond |            |                                     | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            | Ende der Abenddämmerung |            |       |            |       | Nacht      | Astr. N. | Naut. dunkel und kein Mond |            |    | 2023       |    |             |
|             | 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.    | $\Delta t$                 | $\Delta t$ |    | $\Delta t$ |    |             |
| Di, 11. Apr | MESZ  | 21:45–02:29*               | 4h 43m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:20      | 09:04      | 04:33                      | 41m        | 05:14 | 38m        | 05:52 | 33m        | 06:26      | 13h 24m    | 19:51                   | 34m        | 20:25 | 38m        | 21:03 | 42m        | 21:45    | 10h 33m                    | 6h 44m     |    |            |    | Di, 11. Apr |
| Mi, 12. Apr | MESZ  | 21:47–03:25*               | 5h 37m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:29      | 10:01      | 04:30                      | 42m        | 05:12 | 38m        | 05:50 | 34m        | 06:25      | 13h 27m    | 19:52                   | 34m        | 20:27 | 38m        | 21:05 | 42m        | 21:47    | 10h 30m                    | 6h 40m     |    |            |    | Mi, 12. Apr |
| Do, 13. Apr | MESZ  | 21:49–04:08*               | 6h 18m     | AN <sub>+</sub> bis M <sub>7</sub>  | ☾    | 03:25      | 11:12      | 04:28                      | 42m        | 05:10 | 38m        | 05:48 | 34m        | 06:23      | 13h 31m    | 19:54                   | 34m        | 20:28 | 38m        | 21:07 | 42m        | 21:49    | 10h 26m                    | 6h 35m     |    |            |    | Do, 13. Apr |
| Fr, 14. Apr | MESZ  | 21:51–04:23*               | 6h 31m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 04:08      | 12:33      | 04:25                      | 42m        | 05:08 | 38m        | 05:46 | 34m        | 06:21      | 13h 34m    | 19:55                   | 34m        | 20:30 | 38m        | 21:08 | 43m        | 21:51    | 10h 23m                    | 6h 31m     |    |            |    | Fr, 14. Apr |
| Sa, 15. Apr | MESZ  | 21:54–04:20*               | 6h 26m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 04:40      | 13:57      | 04:23                      | 42m        | 05:06 | 38m        | 05:44 | 34m        | 06:19      | 13h 37m    | 19:57                   | 34m        | 20:31 | 39m        | 21:10 | 43m        | 21:54    | 10h 20m                    | 6h 26m     |    |            |    | Sa, 15. Apr |
| So, 16. Apr | MESZ  | 21:56–04:17*               | 6h 21m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:04      | 15:21      | 04:20                      | 43m        | 05:03 | 38m        | 05:42 | 34m        | 06:17      | 13h 41m    | 19:58                   | 34m        | 20:33 | 39m        | 21:12 | 43m        | 21:56    | 10h 16m                    | 6h 21m     |    |            |    | So, 16. Apr |
| Mo, 17. Apr | MESZ  | 21:58–04:15*               | 6h 17m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:25      | 16:43      | 04:17                      | 43m        | 05:01 | 39m        | 05:40 | 34m        | 06:15      | 13h 44m    | 19:59                   | 34m        | 20:34 | 39m        | 21:14 | 44m        | 21:58    | 10h 13m                    | 6h 17m     |    |            |    | Mo, 17. Apr |
| Di, 18. Apr | MESZ  | 22:00–04:12*               | 6h 12m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:43      | 18:03      | 04:15                      | 44m        | 04:59 | 39m        | 05:38 | 34m        | 06:13      | 13h 47m    | 20:01                   | 34m        | 20:36 | 39m        | 21:15 | 44m        | 22:00    | 10h 10m                    | 6h 12m     |    |            |    | Di, 18. Apr |
| Mi, 19. Apr | MESZ  | 22:02–04:10*               | 6h 07m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:00      | 19:22      | 04:12                      | 44m        | 04:57 | 39m        | 05:36 | 34m        | 06:11      | 13h 51m    | 20:02                   | 35m        | 20:37 | 39m        | 21:17 | 44m        | 22:02    | 10h 07m                    | 6h 07m     |    |            |    | Mi, 19. Apr |
| Do, 20. Apr | MESZ  | 22:04–04:07*               | 6h 02m     | AN <sub>+</sub> bis AN <sub>-</sub> | ☀    | 06:18      | 20:41      | 04:10                      | 44m        | 04:55 | 39m        | 05:34 | 35m        | 06:09      | 13h 54m    | 20:04                   | 35m        | 20:39 | 40m        | 21:19 | 45m        | 22:04    | 10h 03m                    | 6h 02m     |    |            |    | Do, 20. Apr |
| Fr, 21. Apr | MESZ  | 22:06–04:05*               | 5h 58m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:38      | 21:59      | 04:07                      | 45m        | 04:52 | 40m        | 05:32 | 35m        | 06:08      | 13h 57m    | 20:05                   | 35m        | 20:40 | 40m        | 21:21 | 45m        | 22:06    | 10h 00m                    | 5h 58m     |    |            |    | Fr, 21. Apr |
| Sa, 22. Apr | MESZ  | 23:16–04:02*               | 4h 46m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 07:02      | 23:16      | 04:05                      | 45m        | 04:50 | 40m        | 05:30 | 35m        | 06:06      | 14h 00m    | 20:07                   | 35m        | 20:42 | 40m        | 21:23 | 46m        | 22:09    | 9h 57m                     | 5h 53m     |    |            |    | Sa, 22. Apr |
| So, 23. Apr | MESZ  | 00:27*–03:59*              | 3h 32m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 07:33      | —:—        | 04:02                      | 46m        | 04:48 | 40m        | 05:29 | 35m        | 06:04      | 14h 04m    | 20:08                   | 35m        | 20:44 | 40m        | 21:24 | 46m        | 22:11    | 9h 54m                     | 5h 48m     |    |            |    | So, 23. Apr |
| Mo, 24. Apr | MESZ  | 01:29*–03:57*              | 2h 28m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 08:12      | 00:27      | 03:59                      | 46m        | 04:46 | 40m        | 05:27 | 35m        | 06:02      | 14h 07m    | 20:09                   | 35m        | 20:45 | 41m        | 21:26 | 46m        | 22:13    | 9h 51m                     | 5h 43m     |    |            |    | Mo, 24. Apr |
| Di, 25. Apr | MESZ  | 02:19*–03:54*              | 1h 35m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 09:01      | 01:29      | 03:57                      | 46m        | 04:44 | 40m        | 05:25 | 35m        | 06:00      | 14h 10m    | 20:11                   | 35m        | 20:47 | 41m        | 21:28 | 47m        | 22:15    | 9h 47m                     | 5h 38m     |    |            |    | Di, 25. Apr |
| Mi, 26. Apr | MESZ  | 02:58*–03:52*              | 53m        | M <sub>\</sub> bis AN <sub>-</sub>  |      | 09:58      | 02:19      | 03:54                      | 47m        | 04:42 | 41m        | 05:23 | 35m        | 05:59      | 14h 13m    | 20:12                   | 36m        | 20:48 | 41m        | 21:30 | 47m        | 22:18    | 9h 44m                     | 5h 33m     |    |            |    | Mi, 26. Apr |
| Do, 27. Apr | MESZ  | 03:28*–03:49*              | 20m        | M <sub>\</sub> bis AN <sub>-</sub>  | ☾    | 11:03      | 02:58      | 03:52                      | 47m        | 04:39 | 41m        | 05:21 | 36m        | 05:57      | 14h 16m    | 20:14                   | 36m        | 20:50 | 41m        | 21:32 | 48m        | 22:20    | 9h 41m                     | 5h 28m     |    |            |    | Do, 27. Apr |
| Fr, 28. Apr | MESZ  | —:—:—:—                    | –          | Mond stört                          |      | 12:10      | 03:28      | 03:49                      | 48m        | 04:37 | 41m        | 05:19 | 36m        | 05:55      | 14h 19m    | 20:15                   | 36m        | 20:51 | 42m        | 21:33 | 48m        | 22:22    | 9h 38m                     | 5h 23m     |    |            |    | Fr, 28. Apr |
| Sa, 29. Apr | MESZ  | —:—:—:—                    | –          | Mond stört                          |      | 13:19      | 03:51      | 03:46                      | 48m        | 04:35 | 42m        | 05:17 | 36m        | 05:54      | 14h 22m    | 20:16                   | 36m        | 20:53 | 42m        | 21:35 | 49m        | 22:25    | 9h 35m                     | 5h 18m     |    |            |    | Sa, 29. Apr |
| So, 30. Apr | MESZ  | —:—:~:~:~                  | –          | Mond stört                          |      | 14:27      | 04:10      | 03:44                      | 49m        | 04:33 | 42m        | 05:15 | 36m        | 05:52      | 14h 25m    | 20:18                   | 36m        | 20:54 | 42m        | 21:37 | 49m        | 22:27    | 9h 32m                     | 5h 13m     |    |            |    | So, 30. Apr |
| Mo, 1. Mai  | MESZ  | —:~:~:~:~                  | –          | Mond stört                          |      | 15:35      | 04:27      | 03:41                      | 49m        | 04:31 | 42m        | 05:14 | 36m        | 05:50      | 14h 28m    | 20:19                   | 36m        | 20:56 | 42m        | 21:39 | 50m        | 22:29    | 9h 29m                     | 5h 08m     |    |            |    | Mo, 1. Mai  |
| Di, 2. Mai  | MESZ  | —:~:~:~:~                  | –          | Mond stört                          |      | 16:44      | 04:42      | 03:38                      | 50m        | 04:29 | 42m        | 05:12 | 36m        | 05:49      | 14h 32m    | 20:21                   | 36m        | 20:58 | 43m        | 21:41 | 51m        | 22:32    | 9h 26m                     | 5h 03m     |    |            |    | Di, 2. Mai  |
| Mi, 3. Mai  | MESZ  | —:~:~:~:~                  | –          | Mond stört                          |      | 17:55      | 04:56      | 03:36                      | 51m        | 04:27 | 43m        | 05:10 | 36m        | 05:47      | 14h 34m    | 20:22                   | 37m        | 20:59 | 43m        | 21:43 | 51m        | 22:34    | 9h 23m                     | 4h 58m     |    |            |    | Mi, 3. Mai  |
| Do, 4. Mai  | MESZ  | —:~:~:~:~                  | –          | Mond stört                          |      | 19:08      | 05:12      | 03:33                      | 51m        | 04:25 | 43m        | 05:08 | 37m        | 05:45      | 14h 37m    | 20:23                   | 37m        | 21:01 | 43m        | 21:44 | 52m        | 22:37    | 9h 20m                     | 4h 53m     |    |            |    | Do, 4. Mai  |
| Fr, 5. Mai  | MESZ  | —:~:~:~:~                  | –          | Mond stört                          | ☽    | 20:26      | 05:30      | 03:30                      | 52m        | 04:23 | 43m        | 05:07 | 37m        | 05:44      | 14h 40m    | 20:25                   | 37m        | 21:02 | 44m        | 21:46 | 52m        | 22:39    | 9h 17m                     | 4h 48m     |    |            |    | Fr, 5. Mai  |
| Sa, 6. Mai  | MESZ  | —:~:~:~:~                  | –          | Mond stört                          |      | 21:46      | 05:52      | 03:28                      | 52m        | 04:21 | 44m        | 05:05 | 37m        | 05:42      | 14h 43m    | 20:26                   | 37m        | 21:04 | 44m        | 21:48 | 53m        | 22:42    | 9h 14m                     | 4h 43m     |    |            |    | Sa, 6. Mai  |
| So, 7. Mai  | MESZ  | 22:44–23:06                | 21m        | AN <sub>+</sub> bis M <sub>7</sub>  |      | 23:06      | 06:21      | 03:25                      | 53m        | 04:19 | 44m        | 05:03 | 37m        | 05:41      | 14h 46m    | 20:27                   | 37m        | 21:05 | 44m        | 21:50 | 54m        | 22:44    | 9h 11m                     | 4h 38m     |    |            |    | So, 7. Mai  |
| Mo, 8. Mai  | MESZ  | 22:47–00:20*               | 1h 33m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:—        | 07:00      | 03:23                      | 54m        | 04:17 | 44m        | 05:01 | 37m        | 05:39      | 14h 49m    | 20:29                   | 38m        | 21:07 | 45m        | 21:52 | 54m        | 22:47    | 9h 09m                     | 4h 33m     |    |            |    | Mo, 8. Mai  |
| Di, 9. Mai  | MESZ  | 22:49–01:22*               | 2h 32m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:20      | 07:54      | 03:20                      | 54m        | 04:15 | 44m        | 05:00 | 38m        | 05:38      | 14h 52m    | 20:30                   | 38m        | 21:08 | 45m        | 21:54 | 55m        | 22:49    | 9h 06m                     | 4h 27m     |    |            |    | Di, 9. Mai  |
| Mi, 10. Mai | MESZ  | 22:52–02:09*               | 3h 16m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:22      | 09:02      | 03:17                      | 55m        | 04:13 | 45m        | 04:58 | 38m        | 05:36      | 14h 55m    | 20:31                   | 38m        | 21:10 | 45m        | 21:56 | 56m        | 22:52    | 9h 03m                     | 4h 22m     |    |            |    | Mi, 10. Mai |
| Do, 11. Mai | MESZ  | 22:55–02:44*               | 3h 49m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:09      | 10:21      | 03:15                      | 56m        | 04:11 | 45m        | 04:57 | 38m        | 05:35      | 14h 57m    | 20:33                   | 38m        | 21:11 | 45m        | 21:57 | 57m        | 22:55    | 9h 00m                     | 4h 17m     |    |            |    | Do, 11. Mai |
| Fr, 12. Mai | MESZ  | 22:57–03:09*               | 4h 12m     | AN <sub>+</sub> bis AN <sub>-</sub> | ☾    | 02:44      | 11:44      | 03:12                      | 57m        | 04:09 | 45m        | 04:55 | 38m        | 05:34      | 15h 00m    | 20:34                   | 38m        | 21:13 | 46m        | 21:59 | 57m        | 22:57    | 8h 58m                     | 4h 12m     |    |            |    | Fr, 12. Mai |
| Sa, 13. Mai | MESZ  | 23:00–03:07*               | 4h 06m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 03:10      | 13:07      | 03:09                      | 57m        | 04:07 | 46m        | 04:54 | 38m        | 05:32      | 15h 03m    | 20:35                   | 38m        | 21:14 | 46m        | 22:01 | 58m        | 23:00    | 8h 55m                     | 4h 06m     |    |            |    | Sa, 13. Mai |
| So, 14. Mai | MESZ  | 23:02–03:04*               | 4h 01m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 03:31      | 14:28      | 03:07                      | 58m        | 04:05 | 46m        | 04:52 | 38m        | 05:31      | 15h 05m    | 20:37                   | 39m        | 21:16 | 46m        | 22:03 | 59m        | 23:02    | 8h 52m                     | 4h 01m     |    |            |    | So, 14. Mai |
| Mo, 15. Mai | MESZ  | 23:05–03:01*               | 3h 56m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 03:49      | 15:46      | 03:04                      | 59m        | 04:04 | 46m        | 04:51 | 39m        | 05:30      | 15h 08m    | 20:38                   | 39m        | 21:17 | 47m        | 22:05 | 1h 00m     | 23:05    | 8h 50m                     | 3h 56m     |    |            |    | Mo, 15. Mai |
| Di, 16. Mai | MESZ  | 23:08–02:59*               | 3h 51m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 04:06      | 17:04      | 03:01                      | 1h 00m     | 04:02 | 47m        | 04:49 | 39m        | 05:28      | 15h 10m    | 20:39                   | 39m        | 21:19 | 47m        | 22:06 | 1h 01m     | 23:08    | 8h 47m                     | 3h 51m     |    |            |    | Di, 16. Mai |
| Mi, 17. Mai | MESZ  | 23:10–02:56*               | 3h 45m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 04:23      | 18:21      | 02:59                      | 1h 01m     | 04:00 | 47m        | 04:48 | 39m        | 05:27      | 15h 13m    | 20:41                   | 39m        | 21:20 | 48m        | 22:08 | 1h 02m     | 23:10    | 8h 45m                     | 3h 45m     |    |            |    | Mi, 17. Mai |
| Do, 18. Mai | MESZ  | 23:13–02:54*               | 3h 40m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 04:41      | 19:38      | 02:56                      | 1h 02m     | 03:58 | 47m        | 04:46 | 39m        | 05:26      | 15h 15m    | 20:42                   | 39m        | 21:22 | 48m        | 22:10 | 1h 03m     | 23:13    | 8h 43m                     | 3h 40m     |    |            |    | Do, 18. Mai |
| Fr, 19. Mai | MESZ  | 23:16–02:51*               | 3h 35m     | AN <sub>+</sub> bis AN <sub>-</sub> | ☀    | 05:03      | 20:55      | 02:54                      | 1h 03m     | 03:57 | 48m        | 04:45 | 39m        | 05:25      | 15h 18m    | 20:43                   | 40m        | 21:23 | 48m        | 22:12 | 1h 04m     | 23:16    | 8h 40m                     | 3h 35m     |    |            |    | Fr, 19. Mai |
| Sa, 20. Mai | MESZ  | 23:19–02:48*               | 3h 29m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:31      | 22:09      | 02:51                      | 1h 04m     | 03:55 | 48m        | 04:44 | 39m        | 05:24      | 15h 20m    | 20:44                   | 40m        | 21:24 | 49m        | 22:14 | 1h 05m     | 23:19    | 8h 38m                     | 3h 29m     |    |            |    | Sa, 20. Mai |
| So, 21. Mai | MESZ  | 23:21–02:46*               | 3h 24m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:06      | 23:15      | 02:48                      | 1h 05m     | 03:53 | 49m        | 04:42 | 40m        | 05:23      | 15h 22m    | 20:45                   | 40m        | 21:26 | 49m        | 22:15 | 1h 06m     | 23:21    | 8h 36m                     | 3h 24m     |    |            |    | So, 21. Mai |
| Mo, 22. Mai | MESZ  | 00:11*–02:43*              | 2h 32m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 06:51      | —:—        | 02:46                      | 1h 06m     | 03:52 | 49m        | 04:41 | 40m        | 05:22      | 15h 25m    | 20:47                   | 40m        | 21:27 | 49m        | 22:17 | 1h 07m     | 23:24    | 8h 33m                     | 3h 19m     |    |            |    | Mo, 22. Mai |

| 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          |
|-------------|-------|----------------------------|------------|-------------------------------------|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|-------------------------|------------|-------|------------|-------|------------|----------|----------------------------|------------|----|------------|----|-------------|
| 2023        | Zeit- | Astr. dunkel und kein Mond |            |                                     | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            | Ende der Abenddämmerung |            |       |            |       | Nacht      | Astr. N. | Naut. dunkel und kein Mond |            |    | 2023       |    |             |
|             | zone  |                            | $\Delta t$ |                                     | Ph.  | $\uparrow$ | $\searrow$ | Astr.                      | $\Delta t$ | Naut. | $\Delta t$ | Bürg. | $\Delta t$ | $\uparrow$ | $\Delta t$ | $\searrow$              | $\Delta t$ | Bürg. | $\Delta t$ | Naut. | $\Delta t$ | Astr.    | $\Delta t$                 | $\Delta t$ |    | $\Delta t$ |    |             |
| Mi, 31. Mai | MESZ  | —:—:—:—                    | —          | Mond stört                          |      | 16:47      | 03:17      | 02:23                      | 1h 16m     | 03:40 | 52m        | 04:32 | 41m        | 05:14      | 15h 42m    | 20:56                   | 42m        | 21:38 | 52m        | 22:31 | 1h 17m     | 23:49    | 8h 16m                     | 2h 32m     |    |            |    | Mi, 31. Mai |
| Do, 1. Jun  | MESZ  | —:—:—:—                    | —          | Mond stört                          |      | 18:02      | 03:33      | 02:21                      | 1h 17m     | 03:38 | 52m        | 04:31 | 42m        | 05:13      | 15h 44m    | 20:57                   | 42m        | 21:39 | 53m        | 22:32 | 1h 18m     | 23:51    | 8h 15m                     | 2h 27m     |    |            |    | Do, 1. Jun  |
| Fr, 2. Jun  | MESZ  | —:—:~:~:~                  | —          | Mond stört                          |      | 19:21      | 03:53      | 02:19                      | 1h 18m     | 03:37 | 53m        | 04:30 | 42m        | 05:12      | 15h 45m    | 20:58                   | 42m        | 21:40 | 53m        | 22:34 | 1h 20m     | 23:54    | 8h 13m                     | 2h 22m     |    |            |    | Fr, 2. Jun  |
| Sa, 3. Jun  | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 20:43      | 04:19      | 02:16                      | 1h 20m     | 03:36 | 53m        | 04:30 | 42m        | 05:12      | 15h 47m    | 20:59                   | 42m        | 21:42 | 53m        | 22:35 | 1h 21m     | 23:56    | 8h 12m                     | 2h 17m     |    |            |    | Sa, 3. Jun  |
| So, 4. Jun  | MESZ  | —:~:~:~:~                  | —          | Mond stört                          | ○    | 22:02      | 04:54      | 02:14                      | 1h 21m     | 03:35 | 53m        | 04:29 | 42m        | 05:11      | 15h 48m    | 21:00                   | 42m        | 21:43 | 53m        | 22:36 | 1h 22m     | 23:59    | 8h 10m                     | 2h 12m     |    |            |    | So, 4. Jun  |
| Mo, 5. Jun  | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 23:11      | 05:42      | 02:12                      | 1h 22m     | 03:34 | 53m        | 04:28 | 42m        | 05:11      | 15h 49m    | 21:01                   | 42m        | 21:43 | 54m        | 22:38 | 1h 23m     | 00:02*   | 8h 09m                     | 2h 07m     |    |            |    | Mo, 5. Jun  |
| Di, 6. Jun  | MESZ  | 00:04*–00:05*              | 1m         | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:—        | 06:47      | 02:10                      | 1h 23m     | 03:34 | 54m        | 04:28 | 42m        | 05:10      | 15h 51m    | 21:02                   | 42m        | 21:44 | 54m        | 22:39 | 1h 25m     | 00:04*   | 8h 08m                     | 2h 03m     |    |            |    | Di, 6. Jun  |
| Mi, 7. Jun  | MESZ  | 00:06*–00:45*              | 38m        | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:05      | 08:05      | 02:07                      | 1h 25m     | 03:33 | 54m        | 04:27 | 42m        | 05:10      | 15h 52m    | 21:02                   | 42m        | 21:45 | 54m        | 22:40 | 1h 26m     | 00:06*   | 8h 07m                     | 1h 58m     |    |            |    | Mi, 7. Jun  |
| Do, 8. Jun  | MESZ  | 00:09*–01:14*              | 1h 05m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:45      | 09:30      | 02:05                      | 1h 26m     | 03:32 | 54m        | 04:27 | 42m        | 05:10      | 15h 53m    | 21:03                   | 43m        | 21:46 | 54m        | 22:41 | 1h 27m     | 00:09*   | 8h 06m                     | 1h 54m     |    |            |    | Do, 8. Jun  |
| Fr, 9. Jun  | MESZ  | 00:11*–01:37*              | 1h 25m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:14      | 10:55      | 02:03                      | 1h 27m     | 03:31 | 54m        | 04:26 | 43m        | 05:09      | 15h 54m    | 21:04                   | 43m        | 21:47 | 55m        | 22:42 | 1h 29m     | 00:11*   | 8h 05m                     | 1h 50m     |    |            |    | Fr, 9. Jun  |
| Sa, 10. Jun | MESZ  | 00:13*–01:55*              | 1h 42m     | AN <sub>+</sub> bis M <sub>7</sub>  | ◐    | 01:37      | 12:17      | 02:02                      | 1h 29m     | 03:31 | 55m        | 04:26 | 43m        | 05:09      | 15h 55m    | 21:04                   | 43m        | 21:48 | 55m        | 22:43 | 1h 30m     | 00:13*   | 8h 04m                     | 1h 46m     |    |            |    | Sa, 10. Jun |
| So, 11. Jun | MESZ  | 00:15*–01:58*              | 1h 42m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 01:55      | 13:36      | 02:00                      | 1h 30m     | 03:30 | 55m        | 04:25 | 43m        | 05:09      | 15h 56m    | 21:05                   | 43m        | 21:48 | 55m        | 22:44 | 1h 31m     | 00:15*   | 8h 03m                     | 1h 42m     |    |            |    | So, 11. Jun |
| Mo, 12. Jun | MESZ  | 00:17*–01:57*              | 1h 39m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 02:12      | 14:53      | 01:58                      | 1h 31m     | 03:30 | 55m        | 04:25 | 43m        | 05:08      | 15h 57m    | 21:06                   | 43m        | 21:49 | 55m        | 22:45 | 1h 32m     | 00:17*   | 8h 02m                     | 1h 39m     |    |            |    | Mo, 12. Jun |
| Di, 13. Jun | MESZ  | 00:19*–01:55*              | 1h 36m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 02:29      | 16:09      | 01:57                      | 1h 32m     | 03:29 | 55m        | 04:25 | 43m        | 05:08      | 15h 57m    | 21:06                   | 43m        | 21:50 | 55m        | 22:45 | 1h 33m     | 00:19*   | 8h 01m                     | 1h 36m     |    |            |    | Di, 13. Jun |
| Mi, 14. Jun | MESZ  | 00:21*–01:54*              | 1h 33m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 02:47      | 17:25      | 01:55                      | 1h 33m     | 03:29 | 55m        | 04:25 | 43m        | 05:08      | 15h 58m    | 21:07                   | 43m        | 21:50 | 55m        | 22:46 | 1h 34m     | 00:21*   | 8h 01m                     | 1h 33m     |    |            |    | Mi, 14. Jun |
| Do, 15. Jun | MESZ  | 00:22*–01:53*              | 1h 30m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 03:07      | 18:40      | 01:54                      | 1h 34m     | 03:29 | 55m        | 04:25 | 43m        | 05:08      | 15h 59m    | 21:07                   | 43m        | 21:51 | 56m        | 22:47 | 1h 35m     | 00:22*   | 8h 00m                     | 1h 30m     |    |            |    | Do, 15. Jun |
| Fr, 16. Jun | MESZ  | 00:24*–01:52*              | 1h 28m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 03:32      | 19:54      | 01:53                      | 1h 35m     | 03:28 | 56m        | 04:25 | 43m        | 05:08      | 15h 59m    | 21:08                   | 43m        | 21:51 | 56m        | 22:47 | 1h 36m     | 00:24*   | 8h 00m                     | 1h 28m     |    |            |    | Fr, 16. Jun |
| Sa, 17. Jun | MESZ  | 00:25*–01:51*              | 1h 26m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 04:04      | 21:03      | 01:52                      | 1h 36m     | 03:28 | 56m        | 04:24 | 43m        | 05:08      | 15h 59m    | 21:08                   | 43m        | 21:52 | 56m        | 22:48 | 1h 36m     | 00:25*   | 8h 00m                     | 1h 26m     |    |            |    | Sa, 17. Jun |
| So, 18. Jun | MESZ  | 00:26*–01:51*              | 1h 25m     | AN <sub>+</sub> bis AN <sub>-</sub> | ◑    | 04:45      | 22:02      | 01:51                      | 1h 36m     | 03:28 | 56m        | 04:25 | 43m        | 05:08      | 16h 00m    | 21:08                   | 43m        | 21:52 | 56m        | 22:48 | 1h 37m     | 00:26*   | 7h 59m                     | 1h 25m     |    |            |    | So, 18. Jun |
| Mo, 19. Jun | MESZ  | 00:26*–01:51*              | 1h 24m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:36      | 22:51      | 01:51                      | 1h 37m     | 03:28 | 56m        | 04:25 | 43m        | 05:08      | 16h 00m    | 21:09                   | 43m        | 21:52 | 56m        | 22:49 | 1h 37m     | 00:26*   | 7h 59m                     | 1h 24m     |    |            |    | Mo, 19. Jun |
| Di, 20. Jun | MESZ  | 00:27*–01:51*              | 1h 23m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:36      | 23:28      | 01:51                      | 1h 37m     | 03:28 | 56m        | 04:25 | 43m        | 05:08      | 16h 00m    | 21:09                   | 43m        | 21:53 | 56m        | 22:49 | 1h 37m     | 00:27*   | 7h 59m                     | 1h 23m     |    |            |    | Di, 20. Jun |
| Mi, 21. Jun | MESZ  | 00:27*–01:51*              | 1h 23m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 07:42      | 23:56      | 01:51                      | 1h 37m     | 03:28 | 56m        | 04:25 | 43m        | 05:09      | 16h 00m    | 21:09                   | 43m        | 21:53 | 56m        | 22:49 | 1h 37m     | 00:27*   | 7h 59m                     | 1h 23m     |    |            |    | Mi, 21. Jun |
| Do, 22. Jun | MESZ  | 00:27*–01:51*              | 1h 23m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 08:50      | —:—        | 01:51                      | 1h 37m     | 03:29 | 56m        | 04:25 | 43m        | 05:09      | 16h 00m    | 21:09                   | 43m        | 21:53 | 56m        | 22:49 | 1h 37m     | 00:27*   | 7h 59m                     | 1h 23m     |    |            |    | Do, 22. Jun |
| Fr, 23. Jun | MESZ  | 00:37*–01:52*              | 1h 15m     | M <sub>7</sub> bis AN <sub>-</sub>  |      | 09:58      | 00:19      | 01:51                      | 1h 37m     | 03:29 | 56m        | 04:25 | 43m        | 05:09      | 16h 00m    | 21:10                   | 43m        | 21:53 | 56m        | 22:50 | 1h 37m     | 00:27*   | 7h 59m                     | 1h 24m     |    |            |    | Fr, 23. Jun |
| Sa, 24. Jun | MESZ  | 00:52*–01:53*              | 1h 00m     | M <sub>7</sub> bis AN <sub>-</sub>  |      | 11:05      | 00:37      | 01:52                      | 1h 37m     | 03:29 | 56m        | 04:26 | 43m        | 05:09      | 16h 00m    | 21:10                   | 43m        | 21:53 | 56m        | 22:50 | 1h 37m     | 00:27*   | 8h 00m                     | 1h 26m     |    |            |    | Sa, 24. Jun |
| So, 25. Jun | MESZ  | 01:07*–01:54*              | 47m        | M <sub>7</sub> bis AN <sub>-</sub>  |      | 12:12      | 00:52      | 01:53                      | 1h 37m     | 03:30 | 56m        | 04:26 | 43m        | 05:10      | 16h 00m    | 21:10                   | 43m        | 21:53 | 56m        | 22:50 | 1h 36m     | 00:26*   | 8h 00m                     | 1h 27m     |    |            |    | So, 25. Jun |
| Mo, 26. Jun | MESZ  | 01:21*–01:55*              | 33m        | M <sub>7</sub> bis AN <sub>-</sub>  | ◒    | 13:19      | 01:07      | 01:54                      | 1h 36m     | 03:30 | 56m        | 04:26 | 43m        | 05:10      | 15h 59m    | 21:10                   | 43m        | 21:53 | 56m        | 22:49 | 1h 35m     | 00:25*   | 8h 00m                     | 1h 29m     |    |            |    | Mo, 26. Jun |
| Di, 27. Jun | MESZ  | 01:37*–01:57*              | 19m        | M <sub>7</sub> bis AN <sub>-</sub>  |      | 14:27      | 01:21      | 01:55                      | 1h 35m     | 03:31 | 56m        | 04:27 | 43m        | 05:10      | 15h 59m    | 21:10                   | 43m        | 21:53 | 55m        | 22:49 | 1h 34m     | 00:24*   | 8h 01m                     | 1h 32m     |    |            |    | Di, 27. Jun |
| Mi, 28. Jun | MESZ  | 01:54*–01:58*              | 3m         | M <sub>7</sub> bis AN <sub>-</sub>  |      | 15:39      | 01:37      | 01:57                      | 1h 34m     | 03:31 | 55m        | 04:27 | 43m        | 05:11      | 15h 58m    | 21:10                   | 43m        | 21:53 | 55m        | 22:49 | 1h 33m     | 00:23*   | 8h 01m                     | 1h 35m     |    |            |    | Mi, 28. Jun |
| Do, 29. Jun | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 16:55      | 01:54      | 01:58                      | 1h 33m     | 03:32 | 55m        | 04:28 | 43m        | 05:11      | 15h 58m    | 21:10                   | 43m        | 21:53 | 55m        | 22:49 | 1h 32m     | 00:22*   | 8h 02m                     | 1h 38m     |    |            |    | Do, 29. Jun |
| Fr, 30. Jun | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 18:15      | 02:17      | 02:00                      | 1h 32m     | 03:33 | 55m        | 04:29 | 43m        | 05:12      | 15h 57m    | 21:09                   | 43m        | 21:53 | 55m        | 22:48 | 1h 31m     | 00:20*   | 8h 03m                     | 1h 41m     |    |            |    | Fr, 30. Jun |
| Sa, 1. Jul  | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 19:36      | 02:47      | 02:02                      | 1h 31m     | 03:34 | 55m        | 04:29 | 43m        | 05:13      | 15h 56m    | 21:09                   | 43m        | 21:52 | 55m        | 22:48 | 1h 30m     | 00:18*   | 8h 03m                     | 1h 45m     |    |            |    | Sa, 1. Jul  |
| So, 2. Jul  | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 20:51      | 03:29      | 02:04                      | 1h 30m     | 03:35 | 55m        | 04:30 | 43m        | 05:13      | 15h 55m    | 21:09                   | 43m        | 21:52 | 55m        | 22:47 | 1h 29m     | 00:17*   | 8h 04m                     | 1h 49m     |    |            |    | So, 2. Jul  |
| Mo, 3. Jul  | MESZ  | —:~:~:~:~                  | —          | Mond stört                          | ○    | 21:54      | 04:26      | 02:06                      | 1h 29m     | 03:35 | 55m        | 04:31 | 43m        | 05:14      | 15h 54m    | 21:09                   | 43m        | 21:52 | 54m        | 22:47 | 1h 28m     | 00:15*   | 8h 05m                     | 1h 53m     |    |            |    | Mo, 3. Jul  |
| Di, 4. Jul  | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 22:40      | 05:41      | 02:08                      | 1h 28m     | 03:36 | 54m        | 04:31 | 43m        | 05:14      | 15h 53m    | 21:08                   | 42m        | 21:51 | 54m        | 22:46 | 1h 26m     | 00:13*   | 8h 06m                     | 1h 57m     |    |            |    | Di, 4. Jul  |
| Mi, 5. Jul  | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 23:15      | 07:06      | 02:10                      | 1h 26m     | 03:37 | 54m        | 04:32 | 42m        | 05:15      | 15h 52m    | 21:08                   | 42m        | 21:51 | 54m        | 22:45 | 1h 25m     | 00:11*   | 8h 07m                     | 2h 01m     |    |            |    | Mi, 5. Jul  |
| Do, 6. Jul  | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | 23:40      | 08:35      | 02:13                      | 1h 25m     | 03:39 | 54m        | 04:33 | 42m        | 05:16      | 15h 51m    | 21:07                   | 42m        | 21:50 | 54m        | 22:44 | 1h 24m     | 00:09*   | 8h 09m                     | 2h 06m     |    |            |    | Do, 6. Jul  |
| Fr, 7. Jul  | MESZ  | —:~:~:~:~                  | —          | Mond stört                          |      | —:—        | 10:01      | 02:15                      | 1h 24m     | 03:40 | 54m        | 04:34 | 42m        | 05:17      | 15h 50m    | 21:07                   | 42m        | 21:50 | 53m        | 22:44 | 1h 23m     | 00:07*   | 8h 10m                     | 2h 11m     |    |            |    | Fr, 7. Jul  |
| Sa, 8. Jul  | MESZ  | 00:05*–00:18*              | 13m        | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:01      | 11:23      | 02:18                      | 1h 23m     | 03:41 | 53m        | 04:35 | 42m        | 05:17      | 15h 49m    | 21:06                   | 42m        | 21:49 | 53m        | 22:43 | 1h 21m     | 00:05*   | 8h 11m                     | 2h 15m     |    |            |    | Sa, 8. Jul  |
| So, 9. Jul  | MESZ  | 00:02*–00:35*              | 33m        | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:18      | 12:42      | 02:20                      | 1h 21m     | 03:42 | 53m        | 04:36 | 42m        | 05:18      | 15h 47m    | 21:06                   | 42m        | 21:48 | 53m        | 22:42 | 1h 20m     | 00:02*   | 8h 13m                     | 2h 20m     |    |            |    | So, 9. Jul  |
| Mo, 10. Jul | MESZ  | 00:00*–00:53*              | 52m        | AN <sub>+</sub> bis M <sub>7</sub>  | ◓    | 00:35      | 13:59      | 02:23                      | 1h 20m     | 03:43 | 53m        | 04:37 | 42m        | 05:19      | 15h 46m    | 21:05                   | 42m        | 21:48 | 53m        | 22:41 | 1h 19m     | 00:00*   | 8h 14m                     | 2h 25m     |    |            |    | Mo, 10. Jul |
| Di, 11. Jul | MESZ  | 23:58–01:12*               | 1h 14m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:53      | 15:15      | 02:25                      | 1h 19m     | 03:45 | 53m        | 04:38 | 42m        | 05:20      | 15h 44m    | 21:05                   |            |       |            |       |            |          |                            |            |    |            |    |             |



| 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          |
|-------------|---------------|----------------------------|------------|-------------------------------------|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|-------------------------|------------|-------|------------|-------|------------|----------|----------------------------|------------|----|------------|----|-------------|
| 2023        | Zeit-<br>zone | Astr. dunkel und kein Mond |            |                                     | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            | Ende der Abenddämmerung |            |       |            |       | Nacht      | Astr. N. | Naut. dunkel und kein Mond |            |    | 2023       |    |             |
|             |               |                            | $\Delta t$ |                                     | 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, 20. Jul | MESZ          | 23:35 – 02:52*             | 3h 16m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 07:47      | 22:42      | 02:49                      | 1h 08m     | 03:58 | 50m        | 04:48 | 40m        | 05:29      | 15h 28m    | 20:57                   | 40m        | 21:38 | 49m        | 22:28 | 1h 07m     | 23:35    | 8h 33m                     | 3h 16m     |    |            |    | Do, 20. Jul |
| Fr, 21. Jul | MESZ          | 23:33 – 02:55*             | 3h 22m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 08:55      | 22:58      | 02:52                      | 1h 07m     | 04:00 | 49m        | 04:50 | 40m        | 05:30      | 15h 25m    | 20:56                   | 40m        | 21:37 | 49m        | 22:26 | 1h 06m     | 23:33    | 8h 35m                     | 3h 22m     |    |            |    | Fr, 21. Jul |
| Sa, 22. Jul | MESZ          | 23:30 – 02:58*             | 3h 27m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 10:01      | 23:13      | 02:55                      | 1h 06m     | 04:01 | 49m        | 04:51 | 40m        | 05:31      | 15h 23m    | 20:55                   | 40m        | 21:35 | 49m        | 22:25 | 1h 05m     | 23:30    | 8h 37m                     | 3h 27m     |    |            |    | Sa, 22. Jul |
| So, 23. Jul | MESZ          | 23:27 – 03:00*             | 3h 32m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 11:07      | 23:27      | 02:58                      | 1h 05m     | 04:03 | 49m        | 04:52 | 40m        | 05:33      | 15h 21m    | 20:54                   | 40m        | 21:34 | 48m        | 22:23 | 1h 04m     | 23:27    | 8h 39m                     | 3h 32m     |    |            |    | So, 23. Jul |
| Mo, 24. Jul | MESZ          | 23:41 – 03:03*             | 3h 21m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 12:14      | 23:41      | 03:00                      | 1h 04m     | 04:05 | 48m        | 04:54 | 40m        | 05:34      | 15h 19m    | 20:53                   | 39m        | 21:33 | 48m        | 22:21 | 1h 03m     | 23:25    | 8h 41m                     | 3h 37m     |    |            |    | Mo, 24. Jul |
| Di, 25. Jul | MESZ          | 23:57 – 03:06*             | 3h 08m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 13:23      | 23:57      | 03:03                      | 1h 03m     | 04:06 | 48m        | 04:55 | 39m        | 05:35      | 15h 16m    | 20:52                   | 39m        | 21:31 | 48m        | 22:20 | 1h 02m     | 23:22    | 8h 44m                     | 3h 43m     |    |            |    | Di, 25. Jul |
| Mi, 26. Jul | MESZ          | 00:17* – 03:08*            | 2h 51m     | M <sub>\</sub> bis AN <sub>-</sub>  | ☾    | 14:35      | —:—        | 03:06                      | 1h 02m     | 04:08 | 48m        | 04:56 | 39m        | 05:36      | 15h 14m    | 20:51                   | 39m        | 21:30 | 47m        | 22:18 | 1h 01m     | 23:20    | 8h 46m                     | 3h 48m     |    |            |    | Mi, 26. Jul |
| Do, 27. Jul | MESZ          | 00:42* – 03:11*            | 2h 28m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 15:52      | 00:17      | 03:08                      | 1h 01m     | 04:10 | 47m        | 04:58 | 39m        | 05:37      | 15h 12m    | 20:49                   | 39m        | 21:29 | 47m        | 22:16 | 1h 00m     | 23:17    | 8h 49m                     | 3h 53m     |    |            |    | Do, 27. Jul |
| Fr, 28. Jul | MESZ          | 01:17* – 03:13*            | 1h 56m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 17:10      | 00:42      | 03:11                      | 1h 00m     | 04:12 | 47m        | 04:59 | 39m        | 05:38      | 15h 09m    | 20:48                   | 39m        | 21:27 | 47m        | 22:14 | 1h 00m     | 23:14    | 8h 51m                     | 3h 59m     |    |            |    | Fr, 28. Jul |
| Sa, 29. Jul | MESZ          | 02:06* – 03:16*            | 1h 10m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 18:28      | 01:17      | 03:13                      | 1h 00m     | 04:13 | 47m        | 05:01 | 39m        | 05:40      | 15h 07m    | 20:47                   | 38m        | 21:26 | 46m        | 22:13 | 59m        | 23:12    | 8h 54m                     | 4h 04m     |    |            |    | Sa, 29. Jul |
| So, 30. Jul | MESZ          | 03:12* – 03:19*            | 6m         | M <sub>\</sub> bis AN <sub>-</sub>  |      | 19:36      | 02:06      | 03:16                      | 59m        | 04:15 | 46m        | 05:02 | 39m        | 05:41      | 15h 04m    | 20:45                   | 38m        | 21:24 | 46m        | 22:11 | 58m        | 23:09    | 8h 56m                     | 4h 09m     |    |            |    | So, 30. Jul |
| Mo, 31. Jul | MESZ          | —:—:—:—                    | –          | Mond stört                          |      | 20:30      | 03:12      | 03:19                      | 58m        | 04:17 | 46m        | 05:03 | 38m        | 05:42      | 15h 01m    | 20:44                   | 38m        | 21:23 | 46m        | 22:09 | 57m        | 23:06    | 8h 59m                     | 4h 14m     |    |            |    | Mo, 31. Jul |
| Di, 1. Aug  | MESZ          | —:—:—:—                    | –          | Mond stört                          | ☾    | 21:10      | 04:33      | 03:21                      | 57m        | 04:19 | 46m        | 05:05 | 38m        | 05:43      | 14h 59m    | 20:43                   | 38m        | 21:21 | 45m        | 22:07 | 56m        | 23:04    | 9h 02m                     | 4h 19m     |    |            |    | Di, 1. Aug  |
| Mi, 2. Aug  | MESZ          | —:—:~:~                    | –          | Mond stört                          |      | 21:40      | 06:03      | 03:24                      | 56m        | 04:20 | 45m        | 05:06 | 38m        | 05:45      | 14h 56m    | 20:41                   | 38m        | 21:20 | 45m        | 22:05 | 56m        | 23:01    | 9h 04m                     | 4h 25m     |    |            |    | Mi, 2. Aug  |
| Do, 3. Aug  | MESZ          | —:~:~:~                    | –          | Mond stört                          |      | 22:03      | 07:33      | 03:26                      | 56m        | 04:22 | 45m        | 05:08 | 38m        | 05:46      | 14h 53m    | 20:40                   | 38m        | 21:18 | 45m        | 22:03 | 55m        | 22:58    | 9h 07m                     | 4h 30m     |    |            |    | Do, 3. Aug  |
| Fr, 4. Aug  | MESZ          | —:~:~:~                    | –          | Mond stört                          |      | 22:22      | 09:00      | 03:29                      | 55m        | 04:24 | 45m        | 05:09 | 38m        | 05:47      | 14h 51m    | 20:38                   | 37m        | 21:16 | 44m        | 22:01 | 54m        | 22:56    | 9h 10m                     | 4h 35m     |    |            |    | Fr, 4. Aug  |
| Sa, 5. Aug  | MESZ          | —:~:~:~                    | –          | Mond stört                          |      | 22:40      | 10:23      | 03:31                      | 54m        | 04:26 | 44m        | 05:11 | 37m        | 05:49      | 14h 48m    | 20:37                   | 37m        | 21:15 | 44m        | 21:59 | 53m        | 22:53    | 9h 13m                     | 4h 40m     |    |            |    | Sa, 5. Aug  |
| So, 6. Aug  | MESZ          | 22:50 – 22:57              | 6m         | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:57      | 11:44      | 03:34                      | 54m        | 04:28 | 44m        | 05:12 | 37m        | 05:50      | 14h 45m    | 20:35                   | 37m        | 21:13 | 44m        | 21:57 | 53m        | 22:50    | 9h 15m                     | 4h 45m     |    |            |    | So, 6. Aug  |
| Mo, 7. Aug  | MESZ          | 22:48 – 23:17              | 28m        | AN <sub>+</sub> bis M <sub>7</sub>  |      | 23:17      | 13:03      | 03:36                      | 53m        | 04:29 | 44m        | 05:14 | 37m        | 05:51      | 14h 42m    | 20:34                   | 37m        | 21:11 | 43m        | 21:55 | 52m        | 22:48    | 9h 18m                     | 4h 50m     |    |            |    | Mo, 7. Aug  |
| Di, 8. Aug  | MESZ          | 22:45 – 23:39              | 53m        | AN <sub>+</sub> bis M <sub>7</sub>  | ☾    | 23:39      | 14:20      | 03:38                      | 52m        | 04:31 | 43m        | 05:15 | 37m        | 05:53      | 14h 39m    | 20:32                   | 37m        | 21:09 | 43m        | 21:53 | 52m        | 22:45    | 9h 21m                     | 4h 55m     |    |            |    | Di, 8. Aug  |
| Mi, 9. Aug  | MESZ          | 22:43 – 00:06*             | 1h 23m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:—        | 15:36      | 03:41                      | 52m        | 04:33 | 43m        | 05:17 | 37m        | 05:54      | 14h 36m    | 20:31                   | 37m        | 21:08 | 43m        | 21:51 | 51m        | 22:43    | 9h 24m                     | 5h 00m     |    |            |    | Mi, 9. Aug  |
| Do, 10. Aug | MESZ          | 22:40 – 00:41*             | 2h 01m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:06      | 16:48      | 03:43                      | 51m        | 04:35 | 43m        | 05:18 | 37m        | 05:55      | 14h 33m    | 20:29                   | 36m        | 21:06 | 43m        | 21:49 | 50m        | 22:40    | 9h 27m                     | 5h 05m     |    |            |    | Do, 10. Aug |
| Fr, 11. Aug | MESZ          | 22:37 – 01:26*             | 2h 48m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:41      | 17:52      | 03:46                      | 50m        | 04:37 | 43m        | 05:20 | 36m        | 05:56      | 14h 30m    | 20:27                   | 36m        | 21:04 | 42m        | 21:47 | 50m        | 22:37    | 9h 30m                     | 5h 10m     |    |            |    | Fr, 11. Aug |
| Sa, 12. Aug | MESZ          | 22:35 – 02:20*             | 3h 45m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:26      | 18:46      | 03:48                      | 50m        | 04:38 | 42m        | 05:21 | 36m        | 05:58      | 14h 27m    | 20:26                   | 36m        | 21:02 | 42m        | 21:45 | 49m        | 22:35    | 9h 33m                     | 5h 15m     |    |            |    | Sa, 12. Aug |
| So, 13. Aug | MESZ          | 22:32 – 03:23*             | 4h 50m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:20      | 19:29      | 03:50                      | 49m        | 04:40 | 42m        | 05:23 | 36m        | 05:59      | 14h 24m    | 20:24                   | 36m        | 21:00 | 42m        | 21:43 | 49m        | 22:32    | 9h 36m                     | 5h 20m     |    |            |    | So, 13. Aug |
| Mo, 14. Aug | MESZ          | 22:29 – 03:55*             | 5h 25m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 03:23      | 20:03      | 03:53                      | 49m        | 04:42 | 42m        | 05:24 | 36m        | 06:00      | 14h 21m    | 20:22                   | 36m        | 20:59 | 41m        | 21:41 | 48m        | 22:29    | 9h 39m                     | 5h 25m     |    |            |    | Mo, 14. Aug |
| Di, 15. Aug | MESZ          | 22:27 – 03:57*             | 5h 30m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 04:30      | 20:28      | 03:55                      | 48m        | 04:44 | 41m        | 05:26 | 36m        | 06:02      | 14h 18m    | 20:21                   | 36m        | 20:57 | 41m        | 21:38 | 48m        | 22:27    | 9h 42m                     | 5h 30m     |    |            |    | Di, 15. Aug |
| Mi, 16. Aug | MESZ          | 22:24 – 03:59*             | 5h 35m     | AN <sub>+</sub> bis AN <sub>-</sub> | ☾    | 05:38      | 20:48      | 03:57                      | 48m        | 04:45 | 41m        | 05:27 | 36m        | 06:03      | 14h 15m    | 20:19                   | 35m        | 20:55 | 41m        | 21:36 | 47m        | 22:24    | 9h 45m                     | 5h 35m     |    |            |    | Mi, 16. Aug |
| Do, 17. Aug | MESZ          | 22:21 – 04:02*             | 5h 40m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 06:46      | 21:05      | 03:59                      | 47m        | 04:47 | 41m        | 05:29 | 35m        | 06:05      | 14h 12m    | 20:17                   | 35m        | 20:53 | 41m        | 21:34 | 47m        | 22:21    | 9h 48m                     | 5h 40m     |    |            |    | Do, 17. Aug |
| Fr, 18. Aug | MESZ          | 22:19 – 04:04*             | 5h 44m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 07:53      | 21:20      | 04:02                      | 47m        | 04:49 | 41m        | 05:30 | 35m        | 06:06      | 14h 09m    | 20:15                   | 35m        | 20:51 | 40m        | 21:32 | 46m        | 22:19    | 9h 51m                     | 5h 44m     |    |            |    | Fr, 18. Aug |
| Sa, 19. Aug | MESZ          | 22:16 – 04:06*             | 5h 49m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 08:59      | 21:34      | 04:04                      | 46m        | 04:51 | 40m        | 05:31 | 35m        | 06:07      | 14h 06m    | 20:14                   | 35m        | 20:49 | 40m        | 21:30 | 46m        | 22:16    | 9h 55m                     | 5h 49m     |    |            |    | Sa, 19. Aug |
| So, 20. Aug | MESZ          | 22:13 – 04:08*             | 5h 54m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 10:05      | 21:48      | 04:06                      | 46m        | 04:52 | 40m        | 05:33 | 35m        | 06:09      | 14h 03m    | 20:12                   | 35m        | 20:47 | 40m        | 21:28 | 45m        | 22:13    | 9h 58m                     | 5h 54m     |    |            |    | So, 20. Aug |
| Mo, 21. Aug | MESZ          | 22:11 – 04:10*             | 5h 59m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 11:12      | 22:03      | 04:08                      | 45m        | 04:54 | 40m        | 05:34 | 35m        | 06:10      | 13h 59m    | 20:10                   | 35m        | 20:45 | 40m        | 21:25 | 45m        | 22:11    | 10h 01m                    | 5h 59m     |    |            |    | Mo, 21. Aug |
| Di, 22. Aug | MESZ          | 22:20 – 04:12*             | 5h 51m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 12:23      | 22:20      | 04:10                      | 45m        | 04:56 | 40m        | 05:36 | 35m        | 06:11      | 13h 56m    | 20:08                   | 35m        | 20:43 | 39m        | 21:23 | 45m        | 22:08    | 10h 04m                    | 6h 03m     |    |            |    | Di, 22. Aug |
| Mi, 23. Aug | MESZ          | 22:43 – 04:14*             | 5h 31m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 13:36      | 22:43      | 04:12                      | 45m        | 04:57 | 40m        | 05:37 | 35m        | 06:13      | 13h 53m    | 20:06                   | 35m        | 20:41 | 39m        | 21:21 | 44m        | 22:06    | 10h 07m                    | 6h 08m     |    |            |    | Mi, 23. Aug |
| Do, 24. Aug | MESZ          | 23:12 – 04:16*             | 5h 04m     | M <sub>\</sub> bis AN <sub>-</sub>  | ☾    | 14:52      | 23:12      | 04:14                      | 44m        | 04:59 | 39m        | 05:39 | 35m        | 06:14      | 13h 50m    | 20:04                   | 34m        | 20:39 | 39m        | 21:19 | 44m        | 22:03    | 10h 10m                    | 6h 13m     |    |            |    | Do, 24. Aug |
| Fr, 25. Aug | MESZ          | 23:53 – 04:18*             | 4h 25m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 16:08      | 23:53      | 04:16                      | 44m        | 05:01 | 39m        | 05:40 | 34m        | 06:15      | 13h 47m    | 20:02                   | 34m        | 20:37 | 39m        | 21:17 | 43m        | 22:00    | 10h 14m                    | 6h 17m     |    |            |    | Fr, 25. Aug |
| Sa, 26. Aug | MESZ          | 00:49* – 04:20*            | 3h 31m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 17:19      | —:—        | 04:18                      | 44m        | 05:02 | 39m        | 05:42 | 34m        | 06:17      | 13h 43m    | 20:00                   | 34m        | 20:35 | 39m        | 21:14 | 43m        | 21:58    | 10h 17m                    | 6h 22m     |    |            |    | Sa, 26. Aug |
| So, 27. Aug | MESZ          | 02:02* – 04:22*            | 2h 20m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 18:18      | 00:49      | 04:20                      | 43m        | 05:04 | 39m        | 05:43 | 34m        | 06:18      | 13h 40m    | 19:59                   | 34m        | 20:33 | 38m        | 21:12 | 43m        | 21:55    | 10h 20m                    | 6h 27m     |    |            |    | So, 27. Aug |
| Mo, 28. Aug | MESZ          | 03:27* – 04:24*            | 57m        | M <sub>\</sub> bis AN <sub>-</sub>  |      | 19:03      | 02:02      | 04:22                      | 43m        | 05:06 | 38m        | 05:45 | 34m        | 06:19      | 13h 37m    | 19:57                   | 34m        | 20:31 | 38m        | 21:10 | 42m        | 21:53    | 10h 23m                    | 6h 31m     |    |            |    | Mo, 28. Aug |
| Di, 29. Aug | MESZ          | —:~:~:~                    | –          | Mond stört                          |      | 19:37      | 03:27      | 04:24                      | 42m        | 05:07 | 38m        | 05:46 | 34m        | 06:21      | 13h 34m    | 19:55                   | 34m        | 20:29 | 38m        | 21:08 | 42m        | 21:50    | 10h 27m                    | 6h 36m     |    |            |    | Di, 29. Aug |
| Mi, 30. Aug | MESZ          | —:~:~:~                    | –          | Mond stört                          |      | 20:03      | 04:57      | 04:26                      | 42m        | 05:09 | 38m        | 05:48 | 34m        | 06:22      | 13h 30m    | 19:53                   | 34m        | 20:27 | 38m        | 21:05 |            |          |                            |            |    |            |    |             |

| 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 |             |
|-------------|---------------|----------------------------|------------|-------------------------------------|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|------------|-------------------------|-------|------------|-------|------------|-------|------------|----------------------------|----|------------|------|----|-------------|
| 2023        | Zeit-<br>zone | Astr. dunkel und kein Mond |            |                                     | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            |            | Ende der Abenddämmerung |       |            |       |            | Nacht | Astr. N.   | Naut. dunkel und kein Mond |    |            | 2023 |    |             |
|             |               |                            | $\Delta t$ |                                     | 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, 8. Sep  | MESZ          | 21:25–00:13*               | 2h 47m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:—        | 16:44      | 04:43                      | 40m        | 05:23 | 37m        | 06:01 | 33m        | 06:34      | 13h 00m    | 19:35      | 33m                     | 20:08 | 36m        | 20:45 | 39m        | 21:25 | 11h 00m    | 7h 19m                     |    |            |      |    | Fr, 8. Sep  |
| Sa, 9. Sep  | MESZ          | 21:23–01:13*               | 3h 50m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:13      | 17:30      | 04:45                      | 39m        | 05:25 | 37m        | 06:02 | 33m        | 06:35      | 12h 57m    | 19:33      | 33m                     | 20:06 | 36m        | 20:43 | 39m        | 21:23 | 11h 03m    | 7h 24m                     |    |            |      |    | Sa, 9. Sep  |
| So, 10. Sep | MESZ          | 21:20–02:20*               | 4h 59m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:13      | 18:06      | 04:47                      | 39m        | 05:26 | 36m        | 06:03 | 33m        | 06:37      | 12h 53m    | 19:31      | 33m                     | 20:04 | 36m        | 20:41 | 39m        | 21:20 | 11h 07m    | 7h 28m                     |    |            |      |    | So, 10. Sep |
| Mo, 11. Sep | MESZ          | 21:18–03:28*               | 6h 10m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:20      | 18:34      | 04:49                      | 39m        | 05:28 | 36m        | 06:05 | 33m        | 06:38      | 12h 50m    | 19:29      | 33m                     | 20:02 | 36m        | 20:38 | 39m        | 21:18 | 11h 10m    | 7h 32m                     |    |            |      |    | Mo, 11. Sep |
| Di, 12. Sep | MESZ          | 21:15–04:36*               | 7h 20m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 03:28      | 18:55      | 04:50                      | 39m        | 05:30 | 36m        | 06:06 | 33m        | 06:39      | 12h 47m    | 19:27      | 33m                     | 20:00 | 36m        | 20:36 | 39m        | 21:15 | 11h 14m    | 7h 36m                     |    |            |      |    | Di, 12. Sep |
| Mi, 13. Sep | MESZ          | 21:13–04:54*               | 7h 40m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 04:36      | 19:13      | 04:52                      | 39m        | 05:31 | 36m        | 06:08 | 33m        | 06:41      | 12h 43m    | 19:25      | 33m                     | 19:58 | 36m        | 20:34 | 38m        | 21:13 | 11h 17m    | 7h 40m                     |    |            |      |    | Mi, 13. Sep |
| Do, 14. Sep | MESZ          | 21:10–04:55*               | 7h 44m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:44      | 19:28      | 04:54                      | 38m        | 05:33 | 36m        | 06:09 | 33m        | 06:42      | 12h 40m    | 19:23      | 33m                     | 19:56 | 36m        | 20:32 | 38m        | 21:10 | 11h 20m    | 7h 44m                     |    |            |      |    | Do, 14. Sep |
| Fr, 15. Sep | MESZ          | 21:08–04:57*               | 7h 48m     | AN <sub>+</sub> bis AN <sub>-</sub> | ●    | 06:50      | 19:42      | 04:55                      | 38m        | 05:34 | 36m        | 06:10 | 33m        | 06:43      | 12h 37m    | 19:20      | 32m                     | 19:53 | 36m        | 20:30 | 38m        | 21:08 | 11h 24m    | 7h 48m                     |    |            |      |    | Fr, 15. Sep |
| Sa, 16. Sep | MESZ          | 21:06–04:59*               | 7h 52m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 07:57      | 19:55      | 04:57                      | 38m        | 05:36 | 36m        | 06:12 | 33m        | 06:45      | 12h 33m    | 19:18      | 32m                     | 19:51 | 36m        | 20:27 | 38m        | 21:06 | 11h 27m    | 7h 52m                     |    |            |      |    | Sa, 16. Sep |
| So, 17. Sep | MESZ          | 21:03–05:00*               | 7h 57m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 09:04      | 20:10      | 04:59                      | 38m        | 05:37 | 36m        | 06:13 | 32m        | 06:46      | 12h 30m    | 19:16      | 32m                     | 19:49 | 35m        | 20:25 | 38m        | 21:03 | 11h 31m    | 7h 57m                     |    |            |      |    | So, 17. Sep |
| Mo, 18. Sep | MESZ          | 21:01–05:02*               | 8h 00m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 10:14      | 20:26      | 05:00                      | 38m        | 05:39 | 36m        | 06:15 | 32m        | 06:48      | 12h 26m    | 19:14      | 32m                     | 19:47 | 35m        | 20:23 | 37m        | 21:01 | 11h 34m    | 8h 00m                     |    |            |      |    | Mo, 18. Sep |
| Di, 19. Sep | MESZ          | 20:59–05:04*               | 8h 04m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 11:26      | 20:47      | 05:02                      | 38m        | 05:40 | 35m        | 06:16 | 32m        | 06:49      | 12h 23m    | 19:12      | 32m                     | 19:45 | 35m        | 20:21 | 37m        | 20:59 | 11h 37m    | 8h 04m                     |    |            |      |    | Di, 19. Sep |
| Mi, 20. Sep | MESZ          | 21:13–05:05*               | 7h 52m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 12:41      | 21:13      | 05:04                      | 37m        | 05:42 | 35m        | 06:17 | 32m        | 06:50      | 12h 19m    | 19:10      | 32m                     | 19:43 | 35m        | 20:19 | 37m        | 20:56 | 11h 41m    | 8h 08m                     |    |            |      |    | Mi, 20. Sep |
| Do, 21. Sep | MESZ          | 21:48–05:07*               | 7h 18m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 13:56      | 21:48      | 05:05                      | 37m        | 05:43 | 35m        | 06:19 | 32m        | 06:52      | 12h 16m    | 19:08      | 32m                     | 19:41 | 35m        | 20:16 | 37m        | 20:54 | 11h 44m    | 8h 12m                     |    |            |      |    | Do, 21. Sep |
| Fr, 22. Sep | MESZ          | 22:37–05:08*               | 6h 31m     | M <sub>\</sub> bis AN <sub>-</sub>  | ☾    | 15:07      | 22:37      | 05:07                      | 37m        | 05:44 | 35m        | 06:20 | 32m        | 06:53      | 12h 13m    | 19:06      | 32m                     | 19:39 | 35m        | 20:14 | 37m        | 20:52 | 11h 48m    | 8h 16m                     |    |            |      |    | Fr, 22. Sep |
| Sa, 23. Sep | MESZ          | 23:41–05:10*               | 5h 28m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 16:09      | 23:41      | 05:08                      | 37m        | 05:46 | 35m        | 06:22 | 32m        | 06:54      | 12h 09m    | 19:04      | 32m                     | 19:37 | 35m        | 20:12 | 37m        | 20:49 | 11h 51m    | 8h 20m                     |    |            |      |    | Sa, 23. Sep |
| So, 24. Sep | MESZ          | 00:59*–05:12*              | 4h 12m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 16:58      | —:—        | 05:10                      | 37m        | 05:47 | 35m        | 06:23 | 32m        | 06:56      | 12h 06m    | 19:02      | 32m                     | 19:35 | 35m        | 20:10 | 37m        | 20:47 | 11h 55m    | 8h 24m                     |    |            |      |    | So, 24. Sep |
| Mo, 25. Sep | MESZ          | 02:25*–05:13*              | 2h 47m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 17:35      | 00:59      | 05:12                      | 37m        | 05:49 | 35m        | 06:24 | 32m        | 06:57      | 12h 02m    | 19:00      | 32m                     | 19:33 | 35m        | 20:08 | 37m        | 20:45 | 11h 58m    | 8h 28m                     |    |            |      |    | Mo, 25. Sep |
| Di, 26. Sep | MESZ          | 03:53*–05:15*              | 1h 21m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 18:03      | 02:25      | 05:13                      | 37m        | 05:50 | 35m        | 06:26 | 32m        | 06:58      | 11h 59m    | 18:58      | 32m                     | 19:30 | 35m        | 20:06 | 36m        | 20:43 | 12h 01m    | 8h 31m                     |    |            |      |    | Di, 26. Sep |
| Mi, 27. Sep | MESZ          | —:—:—:—                    | –          | Mond stört                          |      | 18:25      | 03:53      | 05:15                      | 36m        | 05:52 | 35m        | 06:27 | 32m        | 07:00      | 11h 56m    | 18:56      | 32m                     | 19:28 | 35m        | 20:04 | 36m        | 20:41 | 12h 05m    | 8h 35m                     |    |            |      |    | Mi, 27. Sep |
| Do, 28. Sep | MESZ          | —:—:—:—                    | –          | Mond stört                          |      | 18:45      | 05:21      | 05:16                      | 36m        | 05:53 | 35m        | 06:28 | 32m        | 07:01      | 11h 52m    | 18:54      | 32m                     | 19:26 | 35m        | 20:02 | 36m        | 20:38 | 12h 08m    | 8h 39m                     |    |            |      |    | Do, 28. Sep |
| Fr, 29. Sep | MESZ          | —:—:—:—                    | –          | Mond stört                          | ☉    | 19:02      | 06:46      | 05:18                      | 36m        | 05:55 | 35m        | 06:30 | 32m        | 07:02      | 11h 49m    | 18:52      | 32m                     | 19:24 | 35m        | 19:59 | 36m        | 20:36 | 12h 12m    | 8h 43m                     |    |            |      |    | Fr, 29. Sep |
| Sa, 30. Sep | MESZ          | —:—:—:—                    | –          | Mond stört                          |      | 19:21      | 08:10      | 05:19                      | 36m        | 05:56 | 35m        | 06:31 | 32m        | 07:04      | 11h 45m    | 18:50      | 32m                     | 19:22 | 35m        | 19:57 | 36m        | 20:34 | 12h 15m    | 8h 46m                     |    |            |      |    | Sa, 30. Sep |
| So, 1. Okt  | MESZ          | —:—:—:—                    | –          | Mond stört                          |      | 19:41      | 09:34      | 05:21                      | 36m        | 05:57 | 35m        | 06:33 | 32m        | 07:05      | 11h 42m    | 18:48      | 32m                     | 19:20 | 35m        | 19:55 | 36m        | 20:32 | 12h 18m    | 8h 50m                     |    |            |      |    | So, 1. Okt  |
| Mo, 2. Okt  | MESZ          | —:—:—:—                    | –          | Mond stört                          |      | 20:05      | 10:56      | 05:22                      | 36m        | 05:59 | 35m        | 06:34 | 32m        | 07:07      | 11h 39m    | 18:46      | 32m                     | 19:18 | 35m        | 19:53 | 36m        | 20:30 | 12h 22m    | 8h 54m                     |    |            |      |    | Mo, 2. Okt  |
| Di, 3. Okt  | MESZ          | 20:28–20:35                | 7m         | AN <sub>+</sub> bis M <sub>7</sub>  |      | 20:35      | 12:17      | 05:24                      | 36m        | 06:00 | 35m        | 06:35 | 32m        | 07:08      | 11h 35m    | 18:44      | 32m                     | 19:16 | 35m        | 19:51 | 36m        | 20:28 | 12h 25m    | 8h 57m                     |    |            |      |    | Di, 3. Okt  |
| Mi, 4. Okt  | MESZ          | 20:25–21:14                | 48m        | AN <sub>+</sub> bis M <sub>7</sub>  |      | 21:14      | 13:31      | 05:25                      | 36m        | 06:02 | 35m        | 06:37 | 32m        | 07:09      | 11h 32m    | 18:42      | 32m                     | 19:14 | 35m        | 19:49 | 36m        | 20:25 | 12h 29m    | 9h 01m                     |    |            |      |    | Mi, 4. Okt  |
| Do, 5. Okt  | MESZ          | 20:23–22:03                | 1h 39m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:03      | 14:36      | 05:27                      | 36m        | 06:03 | 35m        | 06:38 | 32m        | 07:11      | 11h 28m    | 18:40      | 32m                     | 19:12 | 34m        | 19:47 | 36m        | 20:23 | 12h 32m    | 9h 04m                     |    |            |      |    | Do, 5. Okt  |
| Fr, 6. Okt  | MESZ          | 20:21–23:02                | 2h 40m     | AN <sub>+</sub> bis M <sub>7</sub>  | ☾    | 23:02      | 15:28      | 05:28                      | 36m        | 06:04 | 35m        | 06:39 | 32m        | 07:12      | 11h 25m    | 18:38      | 32m                     | 19:10 | 34m        | 19:45 | 36m        | 20:21 | 12h 36m    | 9h 08m                     |    |            |      |    | Fr, 6. Okt  |
| Sa, 7. Okt  | MESZ          | 20:19–00:07*               | 3h 47m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:—        | 16:08      | 05:30                      | 36m        | 06:06 | 35m        | 06:41 | 32m        | 07:14      | 11h 21m    | 18:36      | 32m                     | 19:08 | 34m        | 19:43 | 36m        | 20:19 | 12h 39m    | 9h 11m                     |    |            |      |    | Sa, 7. Okt  |
| So, 8. Okt  | MESZ          | 20:17–01:16*               | 4h 58m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:07      | 16:38      | 05:31                      | 36m        | 06:07 | 35m        | 06:42 | 32m        | 07:15      | 11h 18m    | 18:34      | 32m                     | 19:06 | 34m        | 19:41 | 35m        | 20:17 | 12h 42m    | 9h 15m                     |    |            |      |    | So, 8. Okt  |
| Mo, 9. Okt  | MESZ          | 20:15–02:24*               | 6h 08m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:16      | 17:01      | 05:33                      | 36m        | 06:09 | 35m        | 06:44 | 32m        | 07:16      | 11h 15m    | 18:32      | 32m                     | 19:04 | 34m        | 19:39 | 35m        | 20:15 | 12h 46m    | 9h 18m                     |    |            |      |    | Mo, 9. Okt  |
| Di, 10. Okt | MESZ          | 20:13–03:32*               | 7h 18m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:24      | 17:20      | 05:34                      | 35m        | 06:10 | 35m        | 06:45 | 32m        | 07:18      | 11h 11m    | 18:30      | 32m                     | 19:02 | 34m        | 19:37 | 35m        | 20:13 | 12h 49m    | 9h 22m                     |    |            |      |    | Di, 10. Okt |
| Mi, 11. Okt | MESZ          | 20:11–04:39*               | 8h 27m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 03:32      | 17:35      | 05:35                      | 35m        | 06:11 | 35m        | 06:46 | 32m        | 07:19      | 11h 08m    | 18:28      | 32m                     | 19:01 | 34m        | 19:36 | 35m        | 20:11 | 12h 52m    | 9h 25m                     |    |            |      |    | Mi, 11. Okt |
| Do, 12. Okt | MESZ          | 20:09–05:38*               | 9h 28m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 04:39      | 17:49      | 05:37                      | 35m        | 06:13 | 35m        | 06:48 | 32m        | 07:21      | 11h 05m    | 18:26      | 32m                     | 18:59 | 34m        | 19:34 | 35m        | 20:09 | 12h 56m    | 9h 28m                     |    |            |      |    | Do, 12. Okt |
| Fr, 13. Okt | MESZ          | 20:08–05:40*               | 9h 32m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:46      | 18:03      | 05:38                      | 35m        | 06:14 | 35m        | 06:49 | 32m        | 07:22      | 11h 01m    | 18:24      | 32m                     | 18:57 | 34m        | 19:32 | 35m        | 20:08 | 12h 59m    | 9h 32m                     |    |            |      |    | Fr, 13. Okt |
| Sa, 14. Okt | MESZ          | 20:06–05:41*               | 9h 35m     | AN <sub>+</sub> bis AN <sub>-</sub> | ●    | 06:53      | 18:17      | 05:40                      | 35m        | 06:16 | 35m        | 06:51 | 33m        | 07:24      | 10h 58m    | 18:22      | 32m                     | 18:55 | 34m        | 19:30 | 35m        | 20:06 | 13h 03m    | 9h 35m                     |    |            |      |    | Sa, 14. Okt |
| So, 15. Okt | MESZ          | 20:04–05:43*               | 9h 38m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 08:03      | 18:33      | 05:41                      | 35m        | 06:17 | 35m        | 06:52 | 33m        | 07:25      | 10h 55m    | 18:20      | 32m                     | 18:53 | 34m        | 19:28 | 35m        | 20:04 | 13h 06m    | 9h 38m                     |    |            |      |    | So, 15. Okt |
| Mo, 16. Okt | MESZ          | 20:02–05:44*               | 9h 42m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 09:15      | 18:52      | 05:43                      | 35m        | 06:18 | 35m        | 06:53 | 33m        | 07:27      | 10h 51m    | 18:18      | 33m                     | 18:51 | 35m        | 19:26 | 35m        | 20:02 | 13h 09m    | 9h 42m                     |    |            |      |    | Mo, 16. Okt |
| Di, 17. Okt | MESZ          | 20:00–05:45*               | 9h 45m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 10:30      | 19:16      | 05:44                      | 35m        | 06:20 | 35m        | 06:55 | 33m        | 07:28      | 10h 48m    | 18:16      | 33m                     | 18:49 | 35m        | 19:24 | 35m        | 20:00 | 13h 13m    | 9h 45m                     |    |            |      |    | Di, 17. Okt |
| Mi, 18. Okt | MESZ          | 19:58–05:47*               | 9h 48m     | AN <sub>+</sub> bis AN <sub>-</sub> |      | 11:46      | 19:49      | 05:45                      | 35m        | 06:21 | 35m        | 06:56 | 33m        | 07:29      | 10h 45m    | 18:14      | 33m                     | 18:48 | 35m        | 19:23 | 35m        | 19:58 | 13h 16m    | 9h 48m                     |    |            |      |    | Mi, 18. Okt |
| Do, 19. Okt | MESZ          | 20:33–05:48*               | 9h 15m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 13:00      |            |                            |            |       |            |       |            |            |            |            |                         |       |            |       |            |       |            |                            |    |            |      |    |             |

| 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          |
|-------------|---------------|----------------------------|---------|-------------------------------------|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|-------------------------|------------|-------|------------|-------|------------|----------|----------------------------|------------|----|------------|----|-------------|
| 2023        | Zeit-<br>zone | Astr. dunkel und kein Mond |         |                                     | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            | Ende der Abenddämmerung |            |       |            |       | Nacht      | Astr. N. | Naut. dunkel und kein Mond |            |    | 2023       |    |             |
|             |               | $\Delta t$                 |         |                                     | 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, 28. Okt | MESZ          | —:—:—:—                    | —       | Mond stört                          | ○    | 17:42      | 07:03      | 05:59                      | 35m        | 06:35 | 35m        | 07:10 | 33m        | 07:44      | 10h 12m    | 17:57                   | 33m        | 18:31 | 35m        | 19:06 | 35m        | 19:42    | 13h 48m                    | 10h 18m    |    |            |    | Sa, 28. Okt |
| So, 29. Okt |               | —:—:—:—                    | —       | Mond stört                          |      | 17:04      | 07:26      | 05:01                      | 35m        | 05:36 | 35m        | 06:12 | 33m        | 06:46      | 10h 09m    | 16:55                   | 33m        | 17:29 | 35m        | 18:05 | 35m        | 18:40    | 13h 52m                    | 10h 21m    |    |            |    | So, 29. Okt |
| Mo, 30. Okt |               | —:—:—:—                    | —       | Mond stört                          |      | 17:31      | 08:49      | 05:02                      | 35m        | 05:38 | 35m        | 06:13 | 34m        | 06:47      | 10h 06m    | 16:54                   | 34m        | 17:28 | 35m        | 18:03 | 35m        | 18:39    | 13h 55m                    | 10h 24m    |    |            |    | Mo, 30. Okt |
| Di, 31. Okt |               | —:—:—:—                    | —       | Mond stört                          |      | 18:07      | 10:08      | 05:03                      | 35m        | 05:39 | 35m        | 06:15 | 34m        | 06:49      | 10h 03m    | 16:52                   | 34m        | 17:26 | 35m        | 18:02 | 35m        | 18:37    | 13h 58m                    | 10h 27m    |    |            |    | Di, 31. Okt |
| Mi, 1. Nov  |               | 18:36–18:52                | 15m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 18:52      | 11:19      | 05:05                      | 35m        | 05:40 | 35m        | 06:16 | 34m        | 06:50      | 10h 00m    | 16:50                   | 34m        | 17:25 | 35m        | 18:00 | 35m        | 18:36    | 14h 01m                    | 10h 29m    |    |            |    | Mi, 1. Nov  |
| Do, 2. Nov  |               | 18:35–19:48                | 1h 13m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 19:48      | 12:19      | 05:06                      | 35m        | 05:42 | 35m        | 06:17 | 34m        | 06:52      | 9h 57m     | 16:49                   | 34m        | 17:23 | 35m        | 17:59 | 35m        | 18:35    | 14h 04m                    | 10h 32m    |    |            |    | Do, 2. Nov  |
| Fr, 3. Nov  |               | 18:33–20:52                | 2h 18m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 20:52      | 13:04      | 05:07                      | 35m        | 05:43 | 35m        | 06:19 | 34m        | 06:53      | 9h 53m     | 16:47                   | 34m        | 17:22 | 35m        | 17:58 | 35m        | 18:33    | 14h 07m                    | 10h 35m    |    |            |    | Fr, 3. Nov  |
| Sa, 4. Nov  |               | 18:32–22:00                | 3h 28m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:00      | 13:39      | 05:09                      | 35m        | 05:44 | 35m        | 06:20 | 34m        | 06:55      | 9h 50m     | 16:46                   | 34m        | 17:20 | 35m        | 17:56 | 35m        | 18:32    | 14h 10m                    | 10h 37m    |    |            |    | Sa, 4. Nov  |
| So, 5. Nov  |               | 18:31–23:10                | 4h 38m  | AN <sub>+</sub> bis M <sub>7</sub>  | ●    | 23:10      | 14:05      | 05:10                      | 35m        | 05:46 | 35m        | 06:22 | 34m        | 06:56      | 9h 47m     | 16:44                   | 34m        | 17:19 | 35m        | 17:55 | 35m        | 18:31    | 14h 13m                    | 10h 40m    |    |            |    | So, 5. Nov  |
| Mo, 6. Nov  |               | 18:30–00:18*               | 5h 48m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:—        | 14:25      | 05:11                      | 35m        | 05:47 | 36m        | 06:23 | 34m        | 06:58      | 9h 44m     | 16:43                   | 34m        | 17:18 | 35m        | 17:54 | 35m        | 18:30    | 14h 16m                    | 10h 42m    |    |            |    | Mo, 6. Nov  |
| Di, 7. Nov  |               | 18:28–01:25*               | 6h 56m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:18      | 14:41      | 05:13                      | 36m        | 05:49 | 36m        | 06:25 | 34m        | 06:59      | 9h 42m     | 16:41                   | 34m        | 17:16 | 36m        | 17:52 | 35m        | 18:28    | 14h 19m                    | 10h 45m    |    |            |    | Di, 7. Nov  |
| Mi, 8. Nov  |               | 18:27–02:31*               | 8h 04m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:25      | 14:56      | 05:14                      | 36m        | 05:50 | 36m        | 06:26 | 34m        | 07:01      | 9h 39m     | 16:40                   | 34m        | 17:15 | 36m        | 17:51 | 35m        | 18:27    | 14h 22m                    | 10h 47m    |    |            |    | Mi, 8. Nov  |
| Do, 9. Nov  |               | 18:26–03:39*               | 9h 12m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:31      | 15:10      | 05:15                      | 36m        | 05:51 | 36m        | 06:27 | 35m        | 07:02      | 9h 36m     | 16:39                   | 35m        | 17:14 | 36m        | 17:50 | 36m        | 18:26    | 14h 25m                    | 10h 50m    |    |            |    | Do, 9. Nov  |
| Fr, 10. Nov |               | 18:25–04:47*               | 10h 22m | AN <sub>+</sub> bis M <sub>7</sub>  |      | 03:39      | 15:24      | 05:16                      | 36m        | 05:53 | 36m        | 06:29 | 35m        | 07:04      | 9h 33m     | 16:37                   | 35m        | 17:13 | 36m        | 17:49 | 36m        | 18:25    | 14h 28m                    | 10h 52m    |    |            |    | Fr, 10. Nov |
| Sa, 11. Nov |               | 18:24–05:19*               | 10h 55m | AN <sub>+</sub> bis AN <sub>-</sub> |      | 04:47      | 15:39      | 05:18                      | 36m        | 05:54 | 36m        | 06:30 | 35m        | 07:06      | 9h 30m     | 16:36                   | 35m        | 17:11 | 36m        | 17:48 | 36m        | 18:24    | 14h 30m                    | 10h 55m    |    |            |    | Sa, 11. Nov |
| So, 12. Nov |               | 18:23–05:20*               | 10h 57m | AN <sub>+</sub> bis AN <sub>-</sub> |      | 05:59      | 15:57      | 05:19                      | 36m        | 05:55 | 36m        | 06:32 | 35m        | 07:07      | 9h 27m     | 16:35                   | 35m        | 17:10 | 36m        | 17:47 | 36m        | 18:23    | 14h 33m                    | 10h 57m    |    |            |    | So, 12. Nov |
| Mo, 13. Nov |               | 18:22–05:22*               | 10h 59m | AN <sub>+</sub> bis AN <sub>-</sub> | ●    | 07:14      | 16:19      | 05:20                      | 36m        | 05:57 | 36m        | 06:33 | 35m        | 07:09      | 9h 25m     | 16:34                   | 35m        | 17:09 | 36m        | 17:46 | 36m        | 18:22    | 14h 36m                    | 10h 59m    |    |            |    | Mo, 13. Nov |
| Di, 14. Nov |               | 18:21–05:23*               | 11h 02m | AN <sub>+</sub> bis AN <sub>-</sub> |      | 08:32      | 16:49      | 05:22                      | 36m        | 05:58 | 36m        | 06:34 | 35m        | 07:10      | 9h 22m     | 16:32                   | 35m        | 17:08 | 36m        | 17:45 | 36m        | 18:21    | 14h 39m                    | 11h 02m    |    |            |    | Di, 14. Nov |
| Mi, 15. Nov |               | 18:20–05:24*               | 11h 04m | AN <sub>+</sub> bis AN <sub>-</sub> |      | 09:48      | 17:30      | 05:23                      | 36m        | 05:59 | 36m        | 06:36 | 35m        | 07:12      | 9h 19m     | 16:31                   | 35m        | 17:07 | 36m        | 17:44 | 36m        | 18:20    | 14h 41m                    | 11h 04m    |    |            |    | Mi, 15. Nov |
| Do, 16. Nov |               | 18:25–05:25*               | 11h 00m | M <sub>\</sub> bis AN <sub>-</sub>  |      | 10:57      | 18:25      | 05:24                      | 36m        | 06:00 | 36m        | 06:37 | 35m        | 07:13      | 9h 17m     | 16:30                   | 35m        | 17:06 | 36m        | 17:43 | 36m        | 18:19    | 14h 44m                    | 11h 06m    |    |            |    | Do, 16. Nov |
| Fr, 17. Nov |               | 19:34–05:27*               | 9h 52m  | M <sub>\</sub> bis AN <sub>-</sub>  |      | 11:54      | 19:34      | 05:25                      | 36m        | 06:02 | 36m        | 06:39 | 35m        | 07:14      | 9h 14m     | 16:29                   | 35m        | 17:05 | 36m        | 17:42 | 36m        | 18:18    | 14h 46m                    | 11h 08m    |    |            |    | Fr, 17. Nov |
| Sa, 18. Nov |               | 20:54–05:28*               | 8h 34m  | M <sub>\</sub> bis AN <sub>-</sub>  |      | 12:37      | 20:54      | 05:27                      | 36m        | 06:03 | 36m        | 06:40 | 36m        | 07:16      | 9h 12m     | 16:28                   | 35m        | 17:04 | 36m        | 17:41 | 36m        | 18:17    | 14h 49m                    | 11h 10m    |    |            |    | Sa, 18. Nov |
| So, 19. Nov |               | 22:17–05:29*               | 7h 12m  | M <sub>\</sub> bis AN <sub>-</sub>  |      | 13:09      | 22:17      | 05:28                      | 36m        | 06:04 | 36m        | 06:41 | 36m        | 07:17      | 9h 09m     | 16:27                   | 36m        | 17:03 | 36m        | 17:40 | 36m        | 18:17    | 14h 51m                    | 11h 12m    |    |            |    | So, 19. Nov |
| Mo, 20. Nov |               | 23:40–05:30*               | 5h 50m  | M <sub>\</sub> bis AN <sub>-</sub>  | ●    | 13:34      | 23:40      | 05:29                      | 36m        | 06:06 | 37m        | 06:43 | 36m        | 07:19      | 9h 07m     | 16:26                   | 36m        | 17:02 | 37m        | 17:39 | 36m        | 18:16    | 14h 54m                    | 11h 14m    |    |            |    | Mo, 20. Nov |
| Di, 21. Nov |               | 01:01*–05:31*              | 4h 30m  | M <sub>\</sub> bis AN <sub>-</sub>  |      | 13:54      | —:—        | 05:30                      | 36m        | 06:07 | 37m        | 06:44 | 36m        | 07:20      | 9h 04m     | 16:25                   | 36m        | 17:01 | 37m        | 17:38 | 36m        | 18:15    | 14h 56m                    | 11h 16m    |    |            |    | Di, 21. Nov |
| Mi, 22. Nov |               | 02:21*–05:33*              | 3h 11m  | M <sub>\</sub> bis AN <sub>-</sub>  |      | 14:11      | 01:01      | 05:31                      | 36m        | 06:08 | 37m        | 06:45 | 36m        | 07:22      | 9h 02m     | 16:24                   | 36m        | 17:01 | 37m        | 17:38 | 36m        | 18:14    | 14h 58m                    | 11h 18m    |    |            |    | Mi, 22. Nov |
| Do, 23. Nov |               | 03:41*–05:34*              | 1h 53m  | M <sub>\</sub> bis AN <sub>-</sub>  |      | 14:28      | 02:21      | 05:33                      | 36m        | 06:09 | 37m        | 06:47 | 36m        | 07:23      | 9h 00m     | 16:23                   | 36m        | 17:00 | 37m        | 17:37 | 36m        | 18:14    | 15h 01m                    | 11h 19m    |    |            |    | Do, 23. Nov |
| Fr, 24. Nov |               | 05:01*–05:35*              | 33m     | M <sub>\</sub> bis AN <sub>-</sub>  |      | 14:46      | 03:41      | 05:34                      | 36m        | 06:10 | 37m        | 06:48 | 36m        | 07:24      | 8h 58m     | 16:23                   | 36m        | 16:59 | 37m        | 17:36 | 36m        | 18:13    | 15h 03m                    | 11h 21m    |    |            |    | Fr, 24. Nov |
| Sa, 25. Nov |               | —:—:—:—                    | —       | Mond stört                          |      | 15:06      | 05:01      | 05:35                      | 36m        | 06:12 | 37m        | 06:49 | 36m        | 07:26      | 8h 55m     | 16:22                   | 36m        | 16:58 | 37m        | 17:36 | 36m        | 18:13    | 15h 05m                    | 11h 23m    |    |            |    | Sa, 25. Nov |
| So, 26. Nov |               | —:—:~:~                    | —       | Mond stört                          |      | 15:30      | 06:23      | 05:36                      | 36m        | 06:13 | 37m        | 06:50 | 36m        | 07:27      | 8h 53m     | 16:21                   | 36m        | 16:58 | 37m        | 17:35 | 36m        | 18:12    | 15h 07m                    | 11h 24m    |    |            |    | So, 26. Nov |
| Mo, 27. Nov |               | —:~:~:~                    | —       | Mond stört                          | ○    | 16:01      | 07:43      | 05:37                      | 36m        | 06:14 | 37m        | 06:52 | 36m        | 07:29      | 8h 51m     | 16:20                   | 36m        | 16:57 | 37m        | 17:35 | 36m        | 18:12    | 15h 09m                    | 11h 26m    |    |            |    | Mo, 27. Nov |
| Di, 28. Nov |               | —:~:~:~                    | —       | Mond stört                          |      | 16:42      | 08:58      | 05:38                      | 36m        | 06:15 | 37m        | 06:53 | 37m        | 07:30      | 8h 49m     | 16:20                   | 37m        | 16:57 | 37m        | 17:34 | 36m        | 18:11    | 15h 11m                    | 11h 28m    |    |            |    | Di, 28. Nov |
| Mi, 29. Nov |               | —:~:~:~                    | —       | Mond stört                          |      | 17:34      | 10:04      | 05:39                      | 36m        | 06:16 | 37m        | 06:54 | 37m        | 07:31      | 8h 47m     | 16:19                   | 37m        | 16:56 | 37m        | 17:34 | 36m        | 18:11    | 15h 13m                    | 11h 29m    |    |            |    | Mi, 29. Nov |
| Do, 30. Nov |               | 18:11–18:35                | 24m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 18:35      | 10:56      | 05:40                      | 37m        | 06:17 | 37m        | 06:55 | 37m        | 07:32      | 8h 46m     | 16:19                   | 37m        | 16:56 | 37m        | 17:33 | 37m        | 18:11    | 15h 15m                    | 11h 30m    |    |            |    | Do, 30. Nov |
| Fr, 1. Dez  |               | 18:10–19:43                | 1h 33m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 19:43      | 11:36      | 05:41                      | 37m        | 06:19 | 37m        | 06:56 | 37m        | 07:34      | 8h 44m     | 16:18                   | 37m        | 16:55 | 37m        | 17:33 | 37m        | 18:10    | 15h 16m                    | 11h 32m    |    |            |    | Fr, 1. Dez  |
| Sa, 2. Dez  |               | 18:10–20:53                | 2h 43m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 20:53      | 12:06      | 05:42                      | 37m        | 06:20 | 37m        | 06:58 | 37m        | 07:35      | 8h 42m     | 16:18                   | 37m        | 16:55 | 37m        | 17:33 | 37m        | 18:10    | 15h 18m                    | 11h 33m    |    |            |    | Sa, 2. Dez  |
| So, 3. Dez  |               | 18:10–22:02                | 3h 52m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:02      | 12:28      | 05:44                      | 37m        | 06:21 | 37m        | 06:59 | 37m        | 07:36      | 8h 41m     | 16:17                   | 37m        | 16:55 | 37m        | 17:33 | 37m        | 18:10    | 15h 20m                    | 11h 34m    |    |            |    | So, 3. Dez  |
| Mo, 4. Dez  |               | 18:10–23:10                | 5h 00m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 23:10      | 12:46      | 05:45                      | 37m        | 06:22 | 38m        | 07:00 | 37m        | 07:37      | 8h 39m     | 16:17                   | 37m        | 16:54 | 38m        | 17:32 | 37m        | 18:10    | 15h 21m                    | 11h 35m    |    |            |    | Mo, 4. Dez  |
| Di, 5. Dez  |               | 18:09–00:16*               | 6h 06m  | AN <sub>+</sub> bis M <sub>7</sub>  | ●    | —:—        | 13:01      | 05:45                      | 37m        | 06:23 | 38m        | 07:01 | 37m        | 07:38      | 8h 37m     | 16:16                   | 37m        | 16:54 | 38m        | 17:32 | 37m        | 18:09    | 15h 23m                    | 11h 37m    |    |            |    | Di, 5. Dez  |
| Mi, 6. Dez  |               | 18:09–01:22*               | 7h 12m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 00:16      | 13:15      | 05:46                      | 37m        | 06:24 | 38m        | 07:02 | 37m        | 07:40      | 8h 36m     | 16:16                   | 37m        | 16:54 | 38m        | 17:32 | 37m        | 18:09    | 15h 24m                    | 11h 38m    |    |            |    | Mi, 6. Dez  |
| Do, 7. Dez  |               | 18:09–02:29*               | 8h 20m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:22      | 13:29      | 05:47                      | 37m        | 06:25 | 38m        | 07:03 | 37m        | 07:41      | 8h 35m     | 16:16                   | 37m        | 16:54 | 38m        | 17:32 | 37m        | 18:09    | 15h 25m                    | 11h 39m    |    |            |    | Do, 7. Dez  |
| Fr, 8. Dez  |               | 18:09–03:39*               | 9h 30m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:29      | 13:43      | 05:48                      | 37m        | 06:26 | 38m        | 07:04 | 37m        | 07:42      | 8h 34m     | 16:16                   | 37m        | 16:54 | 38m        | 17:32 | 37m        | 18:09    | 15h 26m                    | 11h 39m    |    |            |    | Fr, 8. Dez  |
| Sa, 9. Dez  |               | 18:09–04:53*               | 10h 43m | AN <sub>+</sub> bis M <sub>7</sub>  |      | 03:39      | 14:00      | 05:49                      | 37m        | 06:27 | 38m        | 07:05 | 37m        | 07:        |            |                         |            |       |            |       |            |          |                            |            |    |            |    |             |



| 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          |
|-------------|---------------|----------------------------|---------|-------------------------------------|------|------------|------------|----------------------------|------------|-------|------------|-------|------------|------------|------------|-------------------------|------------|-------|------------|-------|------------|----------|----------------------------|------------|----|------------|----|-------------|
| 2023/24     | Zeit-<br>zone | Astr. dunkel und kein Mond |         |                                     | Mond |            |            | Beginn der Morgendämmerung |            |       |            |       | Sonne      |            |            | Ende der Abenddämmerung |            |       |            |       | Nacht      | Astr. N. | Naut. dunkel und kein Mond |            |    | 2023/24    |    |             |
|             |               | $\Delta t$                 |         |                                     | 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, 17. Dez |               | 21:28–05:56*               | 8h 28m  | M <sub>\</sub> bis AN <sub>\</sub>  |      | 11:38      | 21:28      | 05:55                      | 37m        | 06:33 | 38m        | 07:11 | 38m        | 07:50      | 8h 26m     | 16:16                   | 38m        | 16:55 | 38m        | 17:33 | 37m        | 18:11    | 15h 33m                    | 11h 45m    |    |            |    | So, 17. Dez |
| Mo, 18. Dez |               | 22:50–05:57*               | 7h 06m  | M <sub>\</sub> bis AN <sub>\</sub>  |      | 12:00      | 22:50      | 05:56                      | 37m        | 06:34 | 38m        | 07:12 | 38m        | 07:50      | 8h 26m     | 16:17                   | 38m        | 16:55 | 38m        | 17:34 | 37m        | 18:11    | 15h 34m                    | 11h 45m    |    |            |    | Mo, 18. Dez |
| Di, 19. Dez |               | 00:10*–05:57*              | 5h 47m  | M <sub>\</sub> bis AN <sub>\</sub>  | ☾    | 12:18      | —:—        | 05:57                      | 37m        | 06:34 | 38m        | 07:13 | 38m        | 07:51      | 8h 26m     | 16:17                   | 38m        | 16:55 | 38m        | 17:34 | 37m        | 18:11    | 15h 34m                    | 11h 45m    |    |            |    | Di, 19. Dez |
| Mi, 20. Dez |               | 01:28*–05:58*              | 4h 29m  | M <sub>\</sub> bis AN <sub>\</sub>  |      | 12:34      | 00:10      | 05:57                      | 37m        | 06:35 | 38m        | 07:13 | 38m        | 07:52      | 8h 25m     | 16:17                   | 38m        | 16:56 | 38m        | 17:34 | 37m        | 18:12    | 15h 34m                    | 11h 45m    |    |            |    | Mi, 20. Dez |
| Do, 21. Dez |               | 02:47*–05:58*              | 3h 11m  | M <sub>\</sub> bis AN <sub>\</sub>  |      | 12:51      | 01:28      | 05:58                      | 37m        | 06:35 | 38m        | 07:14 | 38m        | 07:52      | 8h 25m     | 16:18                   | 38m        | 16:56 | 38m        | 17:35 | 37m        | 18:12    | 15h 34m                    | 11h 45m    |    |            |    | Do, 21. Dez |
| Fr, 22. Dez |               | 04:06*–05:59*              | 1h 52m  | M <sub>\</sub> bis AN <sub>\</sub>  |      | 13:10      | 02:47      | 05:58                      | 37m        | 06:36 | 38m        | 07:14 | 38m        | 07:53      | 8h 25m     | 16:18                   | 38m        | 16:57 | 38m        | 17:35 | 37m        | 18:13    | 15h 34m                    | 11h 45m    |    |            |    | Fr, 22. Dez |
| Sa, 23. Dez |               | 05:25*–05:59*              | 34m     | M <sub>\</sub> bis AN <sub>\</sub>  |      | 13:32      | 04:06      | 05:59                      | 37m        | 06:36 | 38m        | 07:15 | 38m        | 07:53      | 8h 25m     | 16:19                   | 38m        | 16:57 | 38m        | 17:36 | 37m        | 18:13    | 15h 34m                    | 11h 45m    |    |            |    | Sa, 23. Dez |
| So, 24. Dez |               | —:—:—:—                    | –       | Mond stört                          |      | 14:00      | 05:25      | 05:59                      | 37m        | 06:37 | 38m        | 07:15 | 38m        | 07:54      | 8h 25m     | 16:20                   | 38m        | 16:58 | 38m        | 17:36 | 37m        | 18:14    | 15h 34m                    | 11h 45m    |    |            |    | So, 24. Dez |
| Mo, 25. Dez |               | —:—:—:—                    | –       | Mond stört                          |      | 14:36      | 06:41      | 06:00                      | 37m        | 06:37 | 38m        | 07:16 | 38m        | 07:54      | 8h 26m     | 16:20                   | 38m        | 16:58 | 38m        | 17:37 | 37m        | 18:15    | 15h 34m                    | 11h 45m    |    |            |    | Mo, 25. Dez |
| Di, 26. Dez |               | —:—:—:—                    | –       | Mond stört                          |      | 15:23      | 07:50      | 06:00                      | 37m        | 06:37 | 38m        | 07:16 | 38m        | 07:54      | 8h 26m     | 16:21                   | 38m        | 16:59 | 38m        | 17:38 | 37m        | 18:15    | 15h 33m                    | 11h 45m    |    |            |    | Di, 26. Dez |
| Mi, 27. Dez |               | —:—:~:~:~                  | –       | Mond stört                          | ☾    | 16:21      | 08:47      | 06:00                      | 37m        | 06:38 | 38m        | 07:16 | 38m        | 07:55      | 8h 26m     | 16:22                   | 38m        | 17:00 | 38m        | 17:38 | 37m        | 18:16    | 15h 33m                    | 11h 44m    |    |            |    | Mi, 27. Dez |
| Do, 28. Dez |               | —:~:~:~:~                  | –       | Mond stört                          |      | 17:27      | 09:32      | 06:01                      | 37m        | 06:38 | 38m        | 07:17 | 38m        | 07:55      | 8h 27m     | 16:22                   | 38m        | 17:01 | 38m        | 17:39 | 37m        | 18:17    | 15h 32m                    | 11h 44m    |    |            |    | Do, 28. Dez |
| Fr, 29. Dez |               | 18:17–18:37                | 19m     | AN <sub>+</sub> bis M <sub>7</sub>  |      | 18:37      | 10:05      | 06:01                      | 37m        | 06:38 | 38m        | 07:17 | 38m        | 07:55      | 8h 28m     | 16:23                   | 38m        | 17:01 | 38m        | 17:40 | 37m        | 18:17    | 15h 32m                    | 11h 43m    |    |            |    | Fr, 29. Dez |
| Sa, 30. Dez |               | 18:18–19:47                | 1h 28m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 19:47      | 10:30      | 06:01                      | 37m        | 06:39 | 38m        | 07:17 | 38m        | 07:55      | 8h 28m     | 16:24                   | 38m        | 17:02 | 38m        | 17:41 | 37m        | 18:18    | 15h 31m                    | 11h 43m    |    |            |    | Sa, 30. Dez |
| So, 31. Dez |               | 18:19–20:55                | 2h 36m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 20:55      | 10:50      | 06:01                      | 37m        | 06:39 | 38m        | 07:17 | 38m        | 07:55      | 8h 29m     | 16:25                   | 38m        | 17:03 | 38m        | 17:41 | 37m        | 18:19    | 15h 30m                    | 11h 42m    |    |            |    | So, 31. Dez |
| Mo, 1. Jan  |               | 18:20–22:02                | 3h 42m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 22:02      | 11:06      | 06:01                      | 37m        | 06:39 | 38m        | 07:17 | 38m        | 07:55      | 8h 30m     | 16:26                   | 38m        | 17:04 | 38m        | 17:42 | 37m        | 18:20    | 15h 29m                    | 11h 41m    |    |            |    | Mo, 1. Jan  |
| Di, 2. Jan  |               | 18:20–23:07                | 4h 46m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 23:07      | 11:20      | 06:02                      | 37m        | 06:39 | 38m        | 07:17 | 37m        | 07:55      | 8h 31m     | 16:27                   | 38m        | 17:05 | 38m        | 17:43 | 37m        | 18:20    | 15h 28m                    | 11h 41m    |    |            |    | Di, 2. Jan  |
| Mi, 3. Jan  |               | 18:21–00:13*               | 5h 51m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | —:—        | 11:34      | 06:02                      | 37m        | 06:39 | 38m        | 07:17 | 37m        | 07:55      | 8h 32m     | 16:28                   | 37m        | 17:06 | 38m        | 17:44 | 37m        | 18:21    | 15h 27m                    | 11h 40m    |    |            |    | Mi, 3. Jan  |
| Do, 4. Jan  |               | 18:22–01:21*               | 6h 58m  | AN <sub>+</sub> bis M <sub>7</sub>  | ☾    | 00:13      | 11:48      | 06:02                      | 37m        | 06:39 | 38m        | 07:17 | 37m        | 07:55      | 8h 33m     | 16:29                   | 37m        | 17:07 | 38m        | 17:45 | 37m        | 18:22    | 15h 26m                    | 11h 39m    |    |            |    | Do, 4. Jan  |
| Fr, 5. Jan  |               | 18:23–02:31*               | 8h 07m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 01:21      | 12:03      | 06:02                      | 37m        | 06:39 | 38m        | 07:17 | 37m        | 07:55      | 8h 34m     | 16:30                   | 37m        | 17:08 | 38m        | 17:46 | 37m        | 18:23    | 15h 24m                    | 11h 38m    |    |            |    | Fr, 5. Jan  |
| Sa, 6. Jan  |               | 18:24–03:45*               | 9h 20m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 02:31      | 12:21      | 06:02                      | 37m        | 06:39 | 38m        | 07:17 | 37m        | 07:55      | 8h 36m     | 16:31                   | 37m        | 17:09 | 38m        | 17:47 | 37m        | 18:24    | 15h 23m                    | 11h 37m    |    |            |    | Sa, 6. Jan  |
| So, 7. Jan  |               | 18:25–05:02*               | 10h 37m | AN <sub>+</sub> bis M <sub>7</sub>  |      | 03:45      | 12:44      | 06:02                      | 37m        | 06:39 | 38m        | 07:17 | 37m        | 07:55      | 8h 37m     | 16:32                   | 37m        | 17:10 | 38m        | 17:48 | 37m        | 18:25    | 15h 22m                    | 11h 36m    |    |            |    | So, 7. Jan  |
| Mo, 8. Jan  |               | 18:26–06:01*               | 11h 35m | AN <sub>+</sub> bis AN <sub>\</sub> |      | 05:02      | 13:15      | 06:01                      | 37m        | 06:39 | 38m        | 07:17 | 37m        | 07:54      | 8h 38m     | 16:33                   | 37m        | 17:11 | 38m        | 17:49 | 37m        | 18:26    | 15h 20m                    | 11h 35m    |    |            |    | Mo, 8. Jan  |
| Di, 9. Jan  |               | 18:27–06:01*               | 11h 33m | AN <sub>+</sub> bis AN <sub>\</sub> |      | 06:19      | 13:58      | 06:01                      | 37m        | 06:38 | 37m        | 07:16 | 37m        | 07:54      | 8h 40m     | 16:34                   | 37m        | 17:12 | 37m        | 17:50 | 37m        | 18:27    | 15h 19m                    | 11h 33m    |    |            |    | Di, 9. Jan  |
| Mi, 10. Jan |               | 18:28–06:01*               | 11h 32m | AN <sub>+</sub> bis AN <sub>\</sub> |      | 07:28      | 14:58      | 06:01                      | 37m        | 06:38 | 37m        | 07:16 | 37m        | 07:54      | 8h 42m     | 16:36                   | 37m        | 17:13 | 37m        | 17:51 | 37m        | 18:28    | 15h 17m                    | 11h 32m    |    |            |    | Mi, 10. Jan |
| Do, 11. Jan |               | 18:29–06:01*               | 11h 31m | AN <sub>+</sub> bis AN <sub>\</sub> | ☾    | 08:25      | 16:13      | 06:01                      | 37m        | 06:38 | 37m        | 07:16 | 37m        | 07:53      | 8h 43m     | 16:37                   | 37m        | 17:14 | 37m        | 17:52 | 37m        | 18:29    | 15h 15m                    | 11h 31m    |    |            |    | Do, 11. Jan |
| Fr, 12. Jan |               | 18:30–06:00*               | 11h 29m | AN <sub>+</sub> bis AN <sub>\</sub> |      | 09:08      | 17:39      | 06:01                      | 37m        | 06:38 | 37m        | 07:15 | 37m        | 07:53      | 8h 45m     | 16:38                   | 37m        | 17:15 | 37m        | 17:53 | 37m        | 18:30    | 15h 13m                    | 11h 29m    |    |            |    | Fr, 12. Jan |
| Sa, 13. Jan |               | 19:07–06:00*               | 10h 52m | M <sub>\</sub> bis AN <sub>\</sub>  |      | 09:39      | 19:07      | 06:00                      | 36m        | 06:37 | 37m        | 07:15 | 37m        | 07:52      | 8h 47m     | 16:39                   | 37m        | 17:17 | 37m        | 17:54 | 37m        | 18:31    | 15h 12m                    | 11h 28m    |    |            |    | Sa, 13. Jan |
| So, 14. Jan |               | 20:33–05:59*               | 9h 25m  | M <sub>\</sub> bis AN <sub>\</sub>  |      | 10:03      | 20:33      | 06:00                      | 36m        | 06:37 | 37m        | 07:14 | 37m        | 07:52      | 8h 49m     | 16:41                   | 37m        | 17:18 | 37m        | 17:55 | 36m        | 18:32    | 15h 10m                    | 11h 27m    |    |            |    | So, 14. Jan |
| Mo, 15. Jan |               | 21:57–05:59*               | 8h 02m  | M <sub>\</sub> bis AN <sub>\</sub>  |      | 10:23      | 21:57      | 05:59                      | 36m        | 06:36 | 37m        | 07:14 | 36m        | 07:51      | 8h 51m     | 16:42                   | 36m        | 17:19 | 37m        | 17:57 | 36m        | 18:34    | 15h 08m                    | 11h 25m    |    |            |    | Mo, 15. Jan |
| Di, 16. Jan |               | 23:17–05:59*               | 6h 41m  | M <sub>\</sub> bis AN <sub>\</sub>  |      | 10:40      | 23:17      | 05:59                      | 36m        | 06:36 | 37m        | 07:13 | 36m        | 07:50      | 8h 53m     | 16:43                   | 36m        | 17:20 | 37m        | 17:58 | 36m        | 18:35    | 15h 06m                    | 11h 23m    |    |            |    | Di, 16. Jan |
| Mi, 17. Jan |               | 00:37*–05:58*              | 5h 21m  | M <sub>\</sub> bis AN <sub>\</sub>  |      | 10:57      | —:—        | 05:59                      | 36m        | 06:35 | 37m        | 07:13 | 36m        | 07:50      | 8h 55m     | 16:45                   | 36m        | 17:22 | 37m        | 17:59 | 36m        | 18:36    | 15h 03m                    | 11h 22m    |    |            |    | Mi, 17. Jan |
| Do, 18. Jan |               | 01:56*–05:57*              | 4h 01m  | M <sub>\</sub> bis AN <sub>\</sub>  | ☾    | 11:15      | 00:37      | 05:58                      | 36m        | 06:35 | 37m        | 07:12 | 36m        | 07:49      | 8h 57m     | 16:46                   | 36m        | 17:23 | 37m        | 18:00 | 36m        | 18:37    | 15h 01m                    | 11h 20m    |    |            |    | Do, 18. Jan |
| Fr, 19. Jan |               | 03:14*–05:57*              | 2h 42m  | M <sub>\</sub> bis AN <sub>\</sub>  |      | 11:36      | 01:56      | 05:57                      | 36m        | 06:34 | 37m        | 07:11 | 36m        | 07:48      | 8h 59m     | 16:48                   | 36m        | 17:24 | 37m        | 18:02 | 36m        | 18:38    | 14h 59m                    | 11h 18m    |    |            |    | Fr, 19. Jan |
| Sa, 20. Jan |               | 04:31*–05:56*              | 1h 25m  | M <sub>\</sub> bis AN <sub>\</sub>  |      | 12:01      | 03:14      | 05:57                      | 36m        | 06:34 | 37m        | 07:11 | 36m        | 07:47      | 9h 01m     | 16:49                   | 36m        | 17:26 | 37m        | 18:03 | 36m        | 18:40    | 14h 57m                    | 11h 16m    |    |            |    | Sa, 20. Jan |
| So, 21. Jan |               | 05:41*–05:56*              | 14m     | M <sub>\</sub> bis AN <sub>\</sub>  |      | 12:34      | 04:31      | 05:56                      | 36m        | 06:33 | 37m        | 07:10 | 36m        | 07:46      | 9h 04m     | 16:51                   | 36m        | 17:27 | 37m        | 18:04 | 36m        | 18:41    | 14h 54m                    | 11h 14m    |    |            |    | So, 21. Jan |
| Mo, 22. Jan |               | —:~:~:~:~                  | –       | Mond stört                          |      | 13:17      | 05:41      | 05:56                      | 36m        | 06:32 | 37m        | 07:09 | 36m        | 07:45      | 9h 06m     | 16:52                   | 36m        | 17:28 | 37m        | 18:05 | 36m        | 18:42    | 14h 52m                    | 11h 12m    |    |            |    | Mo, 22. Jan |
| Di, 23. Jan |               | —:~:~:~:~                  | –       | Mond stört                          |      | 14:11      | 06:41      | 05:55                      | 36m        | 06:31 | 36m        | 07:08 | 36m        | 07:44      | 9h 09m     | 16:54                   | 36m        | 17:30 | 36m        | 18:07 | 36m        | 18:43    | 14h 49m                    | 11h 10m    |    |            |    | Di, 23. Jan |
| Mi, 24. Jan |               | —:~:~:~:~                  | –       | Mond stört                          |      | 15:14      | 07:29      | 05:54                      | 36m        | 06:31 | 36m        | 07:08 | 36m        | 07:44      | 9h 11m     | 16:55                   | 36m        | 17:31 | 36m        | 18:08 | 36m        | 18:45    | 14h 47m                    | 11h 08m    |    |            |    | Mi, 24. Jan |
| Do, 25. Jan |               | —:~:~:~:~                  | –       | Mond stört                          | ☾    | 16:23      | 08:06      | 05:53                      | 36m        | 06:30 | 36m        | 07:07 | 35m        | 07:42      | 9h 14m     | 16:57                   | 35m        | 17:32 | 36m        | 18:09 | 36m        | 18:46    | 14h 44m                    | 11h 06m    |    |            |    | Do, 25. Jan |
| Fr, 26. Jan |               | —:~:~:~:~                  | –       | Mond stört                          |      | 17:33      | 08:33      | 05:53                      | 36m        | 06:29 | 36m        | 07:06 | 35m        | 07:41      | 9h 16m     | 16:58                   | 35m        | 17:34 | 36m        | 18:11 | 36m        | 18:47    | 14h 42m                    | 11h 04m    |    |            |    | Fr, 26. Jan |
| Sa, 27. Jan |               | —:~:~:~:~                  | –       | Mond stört                          |      | 18:43      | 08:54      | 05:52                      | 36m        | 06:28 | 36m        | 07:05 | 35m        | 07:40      | 9h 19m     | 17:00                   | 35m        | 17:35 | 36m        | 18:12 | 36m        | 18:48    | 14h 39m                    | 11h 02m    |    |            |    | Sa, 27. Jan |
| So, 28. Jan |               | 18:50–19:50                | 1h 00m  | AN <sub>+</sub> bis M <sub>7</sub>  |      | 19:50      | 09:12      | 05:51                      | 36m        | 06:27 | 36m        | 07:04 | 35m        | 07:39      | 9h 21m</   |                         |            |       |            |       |            |          |                            |            |    |            |    |             |