

# Mond- und Dämmerungstabelle 2023

für die visuelle Deep-Sky-Beobachtung

Neuruppin 52.9249° N 12.8053° E

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

## Atmosphären-Einstellungen in pyEphem

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

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

**Spalte 1** Kalendertag.

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

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

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

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

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

**Spalte 6** Mondphase.

**Spalte 7** Mondaufgang.

**Spalte 8** Monduntergang.

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

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

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

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

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

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

**Spalte 15** Sonnenaufgang.

**Spalte 16** Taglänge.

**Spalte 17** Sonnenuntergang.

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

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

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

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

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

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

**Spalte 24** Länge der Nacht.

**Spalte 25** Länge der astr. Nacht.

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

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

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

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

**Spalte 29** Identisch zu Spalte 1.

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

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

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

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

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



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