

# Mond- und Dämmerungstabelle 2023

## für die visuelle Deep-Sky-Beobachtung

Passau 48.5733° N 13.4569° E

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

### Atmosphären-Einstellungen in pyEphem

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

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

**Spalte 1** Kalendertag.

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

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

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

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

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

**Spalte 6** Mondphase.

**Spalte 7** Mondaufgang.

**Spalte 8** Monduntergang.

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

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

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

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

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

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

**Spalte 15** Sonnenaufgang.

**Spalte 16** Taglänge.

**Spalte 17** Sonnenuntergang.

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

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

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

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

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

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

**Spalte 24** Länge der Nacht.

**Spalte 25** Länge der astr. Nacht.

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

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

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

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

**Spalte 29** Identisch zu Spalte 1.











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

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

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