

# Mond- und Dämmerungstabelle 2023

für die visuelle Deep-Sky-Beobachtung

Sonneberg 50.3575° N 11.1756° 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-	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	00:32* - 02:10*	1h 37m	AN <sub>+</sub> bis AN <sub>-</sub>		07:47	22:57	02:04	1h 39m	03:44	57m	04:41	44m	05:26	15h 49m	21:16	44m	22:00	56m	22:57	1h 35m	00:32*	8h 11m	1h 37m				Do, 20. Jul
Fr, 21. Jul	MESZ	00:27* - 02:16*	1h 48m	AN <sub>+</sub> bis AN <sub>-</sub>		08:57	23:10	02:10	1h 35m	03:46	56m	04:43	44m	05:27	15h 47m	21:15	44m	21:59	56m	22:55	1h 31m	00:27*	8h 13m	1h 48m				Fr, 21. Jul
Sa, 22. Jul	MESZ	00:22* - 02:21*	1h 58m	AN <sub>+</sub> bis AN <sub>-</sub>		10:06	23:22	02:16	1h 31m	03:48	56m	04:44	44m	05:28	15h 45m	21:13	43m	21:57	55m	22:53	1h 28m	00:22*	8h 16m	1h 58m				Sa, 22. Jul
So, 23. Jul	MESZ	00:17* - 02:26*	2h 08m	AN <sub>+</sub> bis AN <sub>-</sub>		11:14	23:34	02:21	1h 28m	03:50	55m	04:46	43m	05:30	15h 42m	21:12	43m	21:56	55m	22:51	1h 26m	00:17*	8h 18m	2h 08m				So, 23. Jul
Mo, 24. Jul	MESZ	00:13* - 02:30*	2h 17m	AN <sub>+</sub> bis AN <sub>-</sub>		12:24	23:46	02:26	1h 26m	03:52	55m	04:47	43m	05:31	15h 39m	21:11	43m	21:54	54m	22:49	1h 23m	00:13*	8h 21m	2h 17m				Mo, 24. Jul
Di, 25. Jul	MESZ	00:08* - 02:35*	2h 26m	AN <sub>+</sub> bis AN <sub>-</sub>		13:36	23:59	02:30	1h 23m	03:54	54m	04:49	43m	05:32	15h 37m	21:10	43m	21:53	54m	22:47	1h 21m	00:08*	8h 24m	2h 26m				Di, 25. Jul
Mi, 26. Jul	MESZ	00:16* - 02:39*	2h 22m	M <sub>\</sub> bis AN <sub>-</sub>	☾	14:51	—:—	02:35	1h 21m	03:56	54m	04:50	43m	05:34	15h 34m	21:08	43m	21:51	53m	22:45	1h 19m	00:04*	8h 26m	2h 34m				Mi, 26. Jul
Do, 27. Jul	MESZ	00:38* - 02:43*	2h 04m	M <sub>\</sub> bis AN <sub>-</sub>		16:11	00:16	02:39	1h 19m	03:58	53m	04:52	43m	05:35	15h 31m	21:07	42m	21:50	53m	22:43	1h 17m	00:00*	8h 29m	2h 42m				Do, 27. Jul
Fr, 28. Jul	MESZ	01:10* - 02:47*	1h 36m	M <sub>\</sub> bis AN <sub>-</sub>		17:33	00:38	02:43	1h 17m	04:00	53m	04:54	42m	05:36	15h 29m	21:05	42m	21:48	52m	22:41	1h 15m	23:56	8h 32m	2h 50m				Fr, 28. Jul
Sa, 29. Jul	MESZ	01:57* - 02:51*	54m	M <sub>\</sub> bis AN <sub>-</sub>		18:53	01:10	02:47	1h 15m	04:02	52m	04:55	42m	05:38	15h 26m	21:04	42m	21:46	52m	22:39	1h 13m	23:52	8h 35m	2h 58m				Sa, 29. Jul
So, 30. Jul	MESZ	—:—:—:—	—	Mond stört		20:01	01:57	02:51	1h 13m	04:04	52m	04:57	42m	05:39	15h 23m	21:03	42m	21:45	51m	22:37	1h 11m	23:48	8h 38m	3h 06m				So, 30. Jul
Mo, 31. Jul	MESZ	—:—:—:—	—	Mond stört		20:53	03:03	02:55	1h 11m	04:06	51m	04:58	42m	05:41	15h 20m	21:01	41m	21:43	51m	22:34	1h 10m	23:45	8h 40m	3h 13m				Mo, 31. Jul
Di, 1. Aug	MESZ	—:—:—:—	—	Mond stört	☾	21:30	04:27	02:58	1h 10m	04:09	51m	05:00	41m	05:42	15h 17m	20:59	41m	21:41	51m	22:32	1h 08m	23:41	8h 43m	3h 20m				Di, 1. Aug
Mi, 2. Aug	MESZ	—:—:~:~	—	Mond stört		21:56	06:00	03:02	1h 08m	04:11	51m	05:02	41m	05:43	15h 14m	20:58	41m	21:39	50m	22:30	1h 07m	23:37	8h 46m	3h 27m				Mi, 2. Aug
Do, 3. Aug	MESZ	—:~:~:~	—	Mond stört		22:16	07:34	03:05	1h 07m	04:13	50m	05:03	41m	05:45	15h 11m	20:56	41m	21:37	50m	22:28	1h 06m	23:34	8h 49m	3h 34m				Do, 3. Aug
Fr, 4. Aug	MESZ	—:~:~:~	—	Mond stört		22:32	09:04	03:09	1h 06m	04:15	50m	05:05	41m	05:46	15h 08m	20:55	40m	21:36	49m	22:25	1h 05m	23:30	8h 53m	3h 41m				Fr, 4. Aug
Sa, 5. Aug	MESZ	—:~:~:~	—	Mond stört		22:46	10:31	03:12	1h 05m	04:17	49m	05:07	40m	05:48	15h 05m	20:53	40m	21:34	49m	22:23	1h 03m	23:27	8h 56m	3h 48m				Sa, 5. Aug
So, 6. Aug	MESZ	—:~:~:~	—	Mond stört		23:01	11:55	03:15	1h 03m	04:19	49m	05:08	40m	05:49	15h 02m	20:51	40m	21:32	48m	22:21	1h 02m	23:23	8h 59m	3h 55m				So, 6. Aug
Mo, 7. Aug	MESZ	—:~:~:~	—	Mond stört		23:17	13:17	03:19	1h 02m	04:21	48m	05:10	40m	05:51	14h 58m	20:50	40m	21:30	48m	22:18	1h 01m	23:20	9h 02m	4h 01m				Mo, 7. Aug
Di, 8. Aug	MESZ	23:17 - 23:36	19m	AN <sub>+</sub> bis M <sub>7</sub>	☾	23:36	14:38	03:22	1h 01m	04:23	48m	05:12	40m	05:52	14h 55m	20:48	40m	21:28	47m	22:16	1h 00m	23:17	9h 05m	4h 08m				Di, 8. Aug
Mi, 9. Aug	MESZ	23:13 - 00:01*	47m	AN <sub>+</sub> bis M <sub>7</sub>		—:—	15:56	03:25	1h 00m	04:25	48m	05:14	40m	05:54	14h 52m	20:46	39m	21:26	47m	22:14	59m	23:13	9h 08m	4h 14m				Mi, 9. Aug
Do, 10. Aug	MESZ	23:10 - 00:33*	1h 23m	AN <sub>+</sub> bis M <sub>7</sub>		00:01	17:11	03:28	59m	04:28	47m	05:15	39m	05:55	14h 49m	20:44	39m	21:24	47m	22:11	58m	23:10	9h 12m	4h 20m				Do, 10. Aug
Fr, 11. Aug	MESZ	23:07 - 01:17*	2h 09m	AN <sub>+</sub> bis M <sub>7</sub>		00:33	18:17	03:31	58m	04:30	47m	05:17	39m	05:57	14h 45m	20:43	39m	21:22	46m	22:09	57m	23:07	9h 15m	4h 27m				Fr, 11. Aug
Sa, 12. Aug	MESZ	23:03 - 02:11*	3h 07m	AN <sub>+</sub> bis M <sub>7</sub>		01:17	19:11	03:34	57m	04:32	46m	05:19	39m	05:58	14h 42m	20:41	39m	21:20	46m	22:06	56m	23:03	9h 18m	4h 33m				Sa, 12. Aug
So, 13. Aug	MESZ	23:00 - 03:15*	4h 15m	AN <sub>+</sub> bis M <sub>7</sub>		02:11	19:53	03:37	56m	04:34	46m	05:20	39m	06:00	14h 39m	20:39	39m	21:18	46m	22:04	56m	23:00	9h 22m	4h 39m				So, 13. Aug
Mo, 14. Aug	MESZ	22:57 - 03:43*	4h 45m	AN <sub>+</sub> bis AN <sub>-</sub>		03:15	20:24	03:40	56m	04:36	46m	05:22	39m	06:01	14h 35m	20:37	38m	21:16	45m	22:02	55m	22:57	9h 25m	4h 45m				Mo, 14. Aug
Di, 15. Aug	MESZ	22:54 - 03:45*	4h 51m	AN <sub>+</sub> bis AN <sub>-</sub>		04:25	20:46	03:43	55m	04:38	45m	05:24	38m	06:03	14h 32m	20:35	38m	21:14	45m	21:59	54m	22:54	9h 29m	4h 51m				Di, 15. Aug
Mi, 16. Aug	MESZ	22:51 - 03:48*	4h 57m	AN <sub>+</sub> bis AN <sub>-</sub>	☾	05:36	21:04	03:45	54m	04:40	45m	05:25	38m	06:04	14h 29m	20:33	38m	21:12	45m	21:57	53m	22:51	9h 32m	4h 57m				Mi, 16. Aug
Do, 17. Aug	MESZ	22:48 - 03:51*	5h 03m	AN <sub>+</sub> bis AN <sub>-</sub>		06:47	21:18	03:48	53m	04:42	45m	05:27	38m	06:06	14h 25m	20:31	38m	21:10	44m	21:54	53m	22:48	9h 35m	5h 03m				Do, 17. Aug
Fr, 18. Aug	MESZ	22:44 - 03:53*	5h 09m	AN <sub>+</sub> bis AN <sub>-</sub>		07:56	21:30	03:51	53m	04:44	44m	05:29	38m	06:07	14h 22m	20:29	38m	21:07	44m	21:52	52m	22:44	9h 39m	5h 09m				Fr, 18. Aug
Sa, 19. Aug	MESZ	22:41 - 03:56*	5h 14m	AN <sub>+</sub> bis AN <sub>-</sub>		09:05	21:42	03:53	52m	04:46	44m	05:30	38m	06:09	14h 18m	20:27	37m	21:05	44m	21:49	51m	22:41	9h 42m	5h 14m				Sa, 19. Aug
So, 20. Aug	MESZ	22:38 - 03:59*	5h 20m	AN <sub>+</sub> bis AN <sub>-</sub>		10:14	21:53	03:56	51m	04:48	44m	05:32	38m	06:10	14h 15m	20:25	37m	21:03	43m	21:47	51m	22:38	9h 46m	5h 20m				So, 20. Aug
Mo, 21. Aug	MESZ	22:35 - 04:01*	5h 26m	AN <sub>+</sub> bis AN <sub>-</sub>		11:24	22:05	03:59	51m	04:50	43m	05:34	37m	06:12	14h 11m	20:23	37m	21:01	43m	21:44	50m	22:35	9h 49m	5h 26m				Mo, 21. Aug
Di, 22. Aug	MESZ	22:32 - 04:04*	5h 31m	AN <sub>+</sub> bis AN <sub>-</sub>		12:38	22:20	04:01	50m	04:52	43m	05:36	37m	06:13	14h 08m	20:21	37m	20:59	43m	21:42	50m	22:32	9h 53m	5h 31m				Di, 22. Aug
Mi, 23. Aug	MESZ	22:39 - 04:06*	5h 26m	M <sub>\</sub> bis AN <sub>-</sub>		13:54	22:39	04:04	50m	04:54	43m	05:37	37m	06:15	14h 04m	20:19	37m	20:57	42m	21:40	49m	22:29	9h 56m	5h 37m				Mi, 23. Aug
Do, 24. Aug	MESZ	23:06 - 04:09*	5h 02m	M <sub>\</sub> bis AN <sub>-</sub>	☾	15:14	23:06	04:06	49m	04:56	42m	05:39	37m	06:16	14h 01m	20:17	37m	20:54	42m	21:37	49m	22:26	10h 00m	5h 42m				Do, 24. Aug
Fr, 25. Aug	MESZ	23:44 - 04:11*	4h 27m	M <sub>\</sub> bis AN <sub>-</sub>		16:33	23:44	04:09	49m	04:58	42m	05:41	37m	06:18	13h 57m	20:15	37m	20:52	42m	21:35	48m	22:23	10h 04m	5h 48m				Fr, 25. Aug
Sa, 26. Aug	MESZ	00:39* - 04:14*	3h 34m	M <sub>\</sub> bis AN <sub>-</sub>		17:45	—:—	04:11	48m	05:00	42m	05:42	37m	06:19	13h 53m	20:13	36m	20:50	42m	21:32	48m	22:20	10h 07m	5h 53m				Sa, 26. Aug
So, 27. Aug	MESZ	01:54* - 04:16*	2h 22m	M <sub>\</sub> bis AN <sub>-</sub>		18:43	00:39	04:14	48m	05:02	42m	05:44	36m	06:21	13h 50m	20:11	36m	20:48	41m	21:30	47m	22:17	10h 11m	5h 58m				So, 27. Aug
Mo, 28. Aug	MESZ	03:22* - 04:18*	56m	M <sub>\</sub> bis AN <sub>-</sub>		19:25	01:54	04:16	47m	05:04	41m	05:46	36m	06:22	13h 46m	20:09	36m	20:46	41m	21:27	47m	22:14	10h 14m	6h 04m				Mo, 28. Aug
Di, 29. Aug	MESZ	—:~:~:~	—	Mond stört		19:55	03:22	04:18	47m	05:05	41m	05:47	36m	06:24	13h 43m	20:07	36m	20:43	41m	21:25	46m	22:11	10h 18m	6h 09m				Di, 29. Aug
Mi, 30. Aug	MESZ	—:~:~:~	—	Mond stört		20:18	04:56	04:21	46m	05:07	41m	05:49	36m	06:25	13h 39m	20:05	36m	20:41	41m									

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



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