

Mond- und Dämmerungstabelle 2024

für die visuelle Deep-Sky-Beobachtung

Lüchow (Wendland) 52.9667° N 11.1500° E

Berechnung: pyEphem
Textsatz: L^AT_EX

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°) 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₊ (Einbruch der astronomischen Nacht = Ende der astr. Abenddämmerung), M_v (Monduntergang), AN₋ (Ende der astronomischen Nacht = Beginn der astr. Morgendämmerung), M₇

(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°).

Spalte 10 Dauer der astr. Morgendämmerung.

Spalte 11 Beginn der naut. Morgendämmerung (Sonnenhöhe = -12°).

Spalte 12 Dauer der naut. Morgendämmerung.

Spalte 13 Beginn der bürg. Morgendämmerung (Sonnenhöhe = -6°).

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°).

Spalte 20 Dauer der naut. Abenddämmerung.

Spalte 21 Ende der naut. Abenddämmerung (Sonnenhöhe = -12°).

Spalte 22 Dauer der astr. Abenddämmerung.

Spalte 23 Ende der astr. Abenddämmerung (Sonnenhöhe = -18°).

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°) und kein Mond stört.

Spalte 27 Dauer der in Spalte 26 angegebenen Zeitspanne.

Spalte 28 Ereignisse, die die nutzbare Zeitspanne begrenzen: ND₊ (Beginn der »naut. Dunkelheit« = Ende der naut. Abenddämmerung), M_v (Monduntergang), ND₋ (Ende der »naut. Dunkelheit« = Beginn der naut. Morgendämmerung), M₇ (Mondaufgang), Naut. MD (Nautische Mitternachtsdämmerung).

Spalte 29 Identisch zu Spalte 1.

Table with 29 columns (1-29) and multiple rows. Columns include date, time zone, astronomical data (Astr.), moon phase (Mond), sunrise (Sonne), and sunset (Ende der Abenddämmerung) times. It also includes moon symbols (☾, ☽, ☉, ☿) and specific astronomical events like moon rises and sets.

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

Table with 29 columns (1-29) and multiple rows. Columns include dates (1-29), time zones (2), astronomical darkness (3), moon phases (4-6), dawn (7-14), sunrise (15-17), dusk (18-22), and night (23-25). It lists moon phases like AN+, M, and M7, along with specific times for sunrise and sunset throughout the month of September and October 2024.

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

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