

Mond- und Dämmerungstabelle 2024

für die visuelle Deep-Sky-Beobachtung

Gera 50.8806° N 12.0833° 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), M_l

(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), M_l (Mondaufgang), Naut. MD (Nautische Mitternachtsdämmerung).

Spalte 29 Identisch zu Spalte 1.

Table with 29 columns (1-29) and 63 rows (Fr 19. Jul to Fr 6. Sep). Columns include date, time zone (Zeitzone), astronomical twilight (Astr. dunkel und kein Mond), moon phase (Mond), sunrise (Beginn der Morgendämmerung), sunset (Sonne), and astronomical twilight (Ende der Abenddämmerung). Rows provide specific times for sunrise, moonset, and sunset in MESZ format.

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

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

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