

Mond- und Dämmerungstabelle 2023

für die visuelle Deep-Sky-Beobachtung

Kempten (Allgäu) 47.7333° N 10.3167° 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 48 rows (Mo, 20. Feb to Mo, 10. Apr). Columns include date, time zone, astronomical twilight, moon phase, moon rise/set, dawn, sunrise, sunset, and night. Includes symbols for moon phases and moon status (stört).

Table with 29 columns (1-29) and 53 rows (Do, 20. Jul to Do, 7. Sep). Columns include date, time zone, astronomical twilight, moon phase, dawn/dusk times, and sunrise/sunset times.

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

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

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