

Mond- und Dämmerungstabelle 2023

für die visuelle Deep-Sky-Beobachtung

Waiblingen 48.8303° N 9.3169° 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.

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

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		
Do, 20. Jul	MESZ	00:07* - 02:50*	2h 43m	AN ₊ bis AN ₋		08:00	23:00	02:47	1h 17m	04:04	52m	04:57	42m	05:40	15h 37m	21:17	42m	21:59	52m	22:52	1h 15m	00:07*	8h 24m	2h 43m				Do, 20. Jul
Fr, 21. Jul	MESZ	00:04* - 02:54*	2h 49m	AN ₊ bis AN ₋		09:08	23:15	02:50	1h 15m	04:06	52m	04:59	42m	05:41	15h 34m	21:16	41m	21:58	52m	22:50	1h 14m	00:04*	8h 26m	2h 49m				Fr, 21. Jul
Sa, 22. Jul	MESZ	00:01* - 02:57*	2h 56m	AN ₊ bis AN ₋		10:15	23:29	02:54	1h 14m	04:08	52m	05:00	41m	05:42	15h 32m	21:15	41m	21:56	51m	22:48	1h 12m	00:01*	8h 28m	2h 56m				Sa, 22. Jul
So, 23. Jul	MESZ	23:58 - 03:00*	3h 02m	AN ₊ bis AN ₋		11:23	23:42	02:57	1h 12m	04:10	51m	05:02	41m	05:43	15h 30m	21:13	41m	21:55	51m	22:46	1h 11m	23:58	8h 31m	3h 02m				So, 23. Jul
Mo, 24. Jul	MESZ	23:55 - 03:03*	3h 08m	M _\ bis AN ₋		12:30	23:55	03:00	1h 11m	04:12	51m	05:03	41m	05:45	15h 27m	21:12	41m	21:54	50m	22:45	1h 10m	23:55	8h 33m	3h 08m				Mo, 24. Jul
Di, 25. Jul	MESZ	00:10* - 03:07*	2h 56m	M _\ bis AN ₋		13:41	—:—	03:03	1h 10m	04:13	50m	05:04	41m	05:46	15h 25m	21:11	41m	21:52	50m	22:43	1h 08m	23:52	8h 35m	3h 14m				Di, 25. Jul
Mi, 26. Jul	MESZ	00:29* - 03:10*	2h 40m	M _\ bis AN ₋	☾	14:54	00:10	03:07	1h 08m	04:15	50m	05:06	41m	05:47	15h 22m	21:10	40m	21:51	50m	22:41	1h 07m	23:48	8h 38m	3h 21m				Mi, 26. Jul
Do, 27. Jul	MESZ	00:53* - 03:13*	2h 19m	M _\ bis AN ₋		16:12	00:29	03:10	1h 07m	04:17	50m	05:07	40m	05:48	15h 20m	21:08	40m	21:49	49m	22:39	1h 06m	23:45	8h 41m	3h 27m				Do, 27. Jul
Fr, 28. Jul	MESZ	01:27* - 03:16*	1h 49m	M _\ bis AN ₋		17:32	00:53	03:13	1h 06m	04:19	49m	05:09	40m	05:50	15h 17m	21:07	40m	21:48	49m	22:37	1h 05m	23:42	8h 43m	3h 33m				Fr, 28. Jul
Sa, 29. Jul	MESZ	02:15* - 03:19*	1h 04m	M _\ bis AN ₋		18:50	01:27	03:16	1h 05m	04:21	49m	05:10	40m	05:51	15h 14m	21:06	40m	21:46	48m	22:35	1h 04m	23:39	8h 46m	3h 39m				Sa, 29. Jul
So, 30. Jul	MESZ	03:21* - 03:22*	0m	M _\ bis AN ₋		19:59	02:15	03:19	1h 04m	04:23	48m	05:12	40m	05:52	15h 12m	21:04	40m	21:45	48m	22:33	1h 03m	23:36	8h 49m	3h 45m				So, 30. Jul
Mo, 31. Jul	MESZ	—:—:—:—	—	Mond stört		20:52	03:21	03:22	1h 03m	04:25	48m	05:13	40m	05:53	15h 09m	21:03	39m	21:43	48m	22:31	1h 02m	23:33	8h 51m	3h 51m				Mo, 31. Jul
Di, 1. Aug	MESZ	—:—:—:—	—	Mond stört	☾	21:31	04:43	03:25	1h 02m	04:27	48m	05:15	39m	05:55	15h 06m	21:02	39m	21:41	47m	22:29	1h 01m	23:30	8h 54m	3h 57m				Di, 1. Aug
Mi, 2. Aug	MESZ	—:—:~:~	—	Mond stört		21:59	06:14	03:27	1h 01m	04:29	47m	05:16	39m	05:56	15h 03m	21:00	39m	21:40	47m	22:27	1h 00m	23:27	8h 57m	4h 02m				Mi, 2. Aug
Do, 3. Aug	MESZ	—:~:~:~	—	Mond stört		22:20	07:46	03:30	1h 00m	04:30	47m	05:18	39m	05:57	15h 01m	20:59	39m	21:38	47m	22:25	59m	23:24	9h 00m	4h 08m				Do, 3. Aug
Fr, 4. Aug	MESZ	—:~:~:~	—	Mond stört		22:38	09:15	03:33	59m	04:32	47m	05:19	39m	05:59	14h 58m	20:57	39m	21:36	46m	22:23	58m	23:21	9h 03m	4h 14m				Fr, 4. Aug
Sa, 5. Aug	MESZ	—:~:~:~	—	Mond stört		22:55	10:39	03:36	58m	04:34	46m	05:21	39m	06:00	14h 55m	20:55	38m	21:34	46m	22:21	57m	23:18	9h 06m	4h 20m				Sa, 5. Aug
So, 6. Aug	MESZ	—:~:~:~	—	Mond stört		23:11	12:01	03:39	57m	04:36	46m	05:23	38m	06:02	14h 52m	20:54	38m	21:33	46m	22:19	56m	23:15	9h 09m	4h 25m				So, 6. Aug
Mo, 7. Aug	MESZ	23:13 - 23:29	16m	AN ₊ bis M ₇		23:29	13:21	03:41	56m	04:38	46m	05:24	38m	06:03	14h 49m	20:52	38m	21:31	45m	22:17	56m	23:13	9h 12m	4h 31m				Mo, 7. Aug
Di, 8. Aug	MESZ	23:10 - 23:50	40m	AN ₊ bis M ₇	☾	23:50	14:40	03:44	56m	04:40	45m	05:26	38m	06:04	14h 46m	20:51	38m	21:29	45m	22:14	55m	23:10	9h 15m	4h 36m				Di, 8. Aug
Mi, 9. Aug	MESZ	23:07 - 00:16*	1h 09m	AN ₊ bis M ₇		—:—	15:57	03:47	55m	04:42	45m	05:27	38m	06:06	14h 43m	20:49	38m	21:27	45m	22:12	54m	23:07	9h 18m	4h 42m				Mi, 9. Aug
Do, 10. Aug	MESZ	23:04 - 00:50*	1h 46m	AN ₊ bis M ₇		00:16	17:10	03:49	54m	04:44	45m	05:29	38m	06:07	14h 40m	20:47	38m	21:25	44m	22:10	53m	23:04	9h 21m	4h 48m				Do, 10. Aug
Fr, 11. Aug	MESZ	23:01 - 01:34*	2h 33m	AN ₊ bis M ₇		00:50	18:15	03:52	53m	04:46	44m	05:30	38m	06:08	14h 37m	20:46	37m	21:23	44m	22:08	53m	23:01	9h 24m	4h 53m				Fr, 11. Aug
Sa, 12. Aug	MESZ	22:58 - 02:29*	3h 30m	AN ₊ bis M ₇		01:34	19:09	03:54	53m	04:48	44m	05:32	37m	06:10	14h 33m	20:44	37m	21:22	44m	22:06	52m	22:58	9h 27m	4h 58m				Sa, 12. Aug
So, 13. Aug	MESZ	22:55 - 03:32*	4h 36m	AN ₊ bis M ₇		02:29	19:51	03:57	52m	04:50	44m	05:34	37m	06:11	14h 30m	20:42	37m	21:20	43m	22:03	51m	22:55	9h 30m	5h 04m				So, 13. Aug
Mo, 14. Aug	MESZ	22:52 - 04:02*	5h 09m	AN ₊ bis AN ₋		03:32	20:24	03:59	51m	04:51	43m	05:35	37m	06:13	14h 27m	20:40	37m	21:18	43m	22:01	51m	22:52	9h 33m	5h 09m				Mo, 14. Aug
Di, 15. Aug	MESZ	22:50 - 04:04*	5h 14m	AN ₊ bis AN ₋		04:40	20:48	04:02	51m	04:53	43m	05:37	37m	06:14	14h 24m	20:39	37m	21:16	43m	21:59	50m	22:50	9h 36m	5h 14m				Di, 15. Aug
Mi, 16. Aug	MESZ	22:47 - 04:07*	5h 20m	AN ₊ bis AN ₋	☾	05:50	21:07	04:04	50m	04:55	43m	05:38	37m	06:16	14h 21m	20:37	36m	21:14	42m	21:57	50m	22:47	9h 40m	5h 20m				Mi, 16. Aug
Do, 17. Aug	MESZ	22:44 - 04:09*	5h 25m	AN ₊ bis AN ₋		06:59	21:23	04:07	50m	04:57	42m	05:40	37m	06:17	14h 17m	20:35	36m	21:12	42m	21:54	49m	22:44	9h 43m	5h 25m				Do, 17. Aug
Fr, 18. Aug	MESZ	22:41 - 04:12*	5h 30m	AN ₊ bis AN ₋		08:07	21:36	04:09	49m	04:59	42m	05:41	36m	06:18	14h 14m	20:33	36m	21:10	42m	21:52	49m	22:41	9h 46m	5h 30m				Fr, 18. Aug
Sa, 19. Aug	MESZ	22:38 - 04:14*	5h 35m	AN ₊ bis AN ₋		09:14	21:49	04:12	49m	05:01	42m	05:43	36m	06:20	14h 11m	20:31	36m	21:08	42m	21:50	48m	22:38	9h 49m	5h 35m				Sa, 19. Aug
So, 20. Aug	MESZ	22:35 - 04:16*	5h 40m	AN ₊ bis AN ₋		10:21	22:02	04:14	48m	05:03	42m	05:45	36m	06:21	14h 08m	20:29	36m	21:06	41m	21:47	48m	22:35	9h 53m	5h 40m				So, 20. Aug
Mo, 21. Aug	MESZ	22:33 - 04:19*	5h 45m	AN ₊ bis AN ₋		11:30	22:16	04:16	48m	05:04	41m	05:46	36m	06:23	14h 04m	20:27	36m	21:04	41m	21:45	47m	22:33	9h 56m	5h 45m				Mo, 21. Aug
Di, 22. Aug	MESZ	22:32 - 04:21*	5h 48m	M _\ bis AN ₋		12:41	22:32	04:19	47m	05:06	41m	05:48	36m	06:24	14h 01m	20:25	36m	21:02	41m	21:43	47m	22:30	9h 59m	5h 50m				Di, 22. Aug
Mi, 23. Aug	MESZ	22:53 - 04:23*	5h 29m	M _\ bis AN ₋		13:56	22:53	04:21	47m	05:08	41m	05:49	36m	06:25	13h 58m	20:24	35m	20:59	41m	21:41	46m	22:27	10h 03m	5h 55m				Mi, 23. Aug
Do, 24. Aug	MESZ	23:22 - 04:25*	5h 03m	M _\ bis AN ₋	☾	15:13	23:22	04:23	46m	05:10	41m	05:51	35m	06:27	13h 54m	20:22	35m	20:57	40m	21:38	46m	22:24	10h 06m	6h 00m				Do, 24. Aug
Fr, 25. Aug	MESZ	00:02* - 04:28*	4h 25m	M _\ bis AN ₋		16:31	—:—	04:25	46m	05:12	40m	05:52	35m	06:28	13h 51m	20:20	35m	20:55	40m	21:36	45m	22:22	10h 10m	6h 05m				Fr, 25. Aug
Sa, 26. Aug	MESZ	00:58* - 04:30*	3h 32m	M _\ bis AN ₋		17:42	00:02	04:28	45m	05:13	40m	05:54	35m	06:30	13h 47m	20:18	35m	20:53	40m	21:34	45m	22:19	10h 13m	6h 10m				Sa, 26. Aug
So, 27. Aug	MESZ	02:11* - 04:32*	2h 20m	M _\ bis AN ₋		18:40	00:58	04:30	45m	05:15	40m	05:55	35m	06:31	13h 44m	20:16	35m	20:51	40m	21:31	44m	22:16	10h 16m	6h 15m				So, 27. Aug
Mo, 28. Aug	MESZ	03:38* - 04:34*	56m	M _\ bis AN ₋		19:25	02:11	04:32	45m	05:17	40m	05:57	35m	06:32	13h 41m	20:14	35m	20:49	39m	21:29	44m	22:13	10h 20m	6h 20m				Mo, 28. Aug
Di, 29. Aug	MESZ	—:~:~:~	—	Mond stört		19:57	03:38	04:34	44m	05:19	39m	05:59	35m	06:34	13h 37m	20:12	35m	20:47	39m	21:27	44m	22:11	10h 23m	6h 25m				Di, 29. Aug
Mi, 30. Aug	MESZ	—:~:~:~	—	Mond stört		20:21	05:10	04:36	44m	05:20	39m	06:00	35m	06:35	13h 34m	20:10	35m	20:45	39m									

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29
2023	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		
Fr, 8. Sep	MESZ	21:44–00:21*	2h 37m	AN ₊ bis M ₇		—:—	17:07	04:54	41m	05:36	38m	06:14	34m	06:48	13h 03m	19:51	34m	20:25	37m	21:03	41m	21:44	10h 58m	7h 11m				Fr, 8. Sep
Sa, 9. Sep	MESZ	21:42–01:23*	3h 40m	AN ₊ bis M ₇		00:21	17:53	04:56	41m	05:37	38m	06:15	34m	06:49	12h 59m	19:49	34m	20:23	37m	21:01	40m	21:42	11h 01m	7h 15m				Sa, 9. Sep
So, 10. Sep	MESZ	21:39–02:30*	4h 50m	AN ₊ bis M ₇		01:23	18:28	04:58	40m	05:39	37m	06:17	34m	06:51	12h 55m	19:47	34m	20:21	37m	20:59	40m	21:39	11h 05m	7h 20m				So, 10. Sep
Mo, 11. Sep	MESZ	21:37–03:39*	6h 02m	AN ₊ bis M ₇		02:30	18:54	05:00	40m	05:40	37m	06:18	34m	06:52	12h 52m	19:45	33m	20:19	37m	20:56	40m	21:37	11h 08m	7h 24m				Mo, 11. Sep
Di, 12. Sep	MESZ	21:34–04:49*	7h 14m	AN ₊ bis M ₇		03:39	19:14	05:02	40m	05:42	37m	06:20	34m	06:54	12h 48m	19:43	33m	20:17	37m	20:54	40m	21:34	11h 12m	7h 29m				Di, 12. Sep
Mi, 13. Sep	MESZ	21:32–05:05*	7h 33m	AN ₊ bis AN ₋		04:49	19:30	05:03	40m	05:44	37m	06:21	33m	06:55	12h 45m	19:40	33m	20:14	37m	20:52	40m	21:32	11h 16m	7h 33m				Mi, 13. Sep
Do, 14. Sep	MESZ	21:29–05:07*	7h 37m	AN ₊ bis AN ₋		05:57	19:44	05:05	40m	05:45	37m	06:23	33m	06:56	12h 41m	19:38	33m	20:12	37m	20:49	39m	21:29	11h 19m	7h 37m				Do, 14. Sep
Fr, 15. Sep	MESZ	21:27–05:09*	7h 42m	AN ₊ bis AN ₋	●	07:05	19:57	05:07	39m	05:47	37m	06:24	33m	06:58	12h 38m	19:36	33m	20:10	37m	20:47	39m	21:27	11h 23m	7h 42m				Fr, 15. Sep
Sa, 16. Sep	MESZ	21:24–05:11*	7h 46m	AN ₊ bis AN ₋		08:13	20:10	05:09	39m	05:48	37m	06:26	33m	06:59	12h 34m	19:34	33m	20:08	36m	20:45	39m	21:24	11h 26m	7h 46m				Sa, 16. Sep
So, 17. Sep	MESZ	21:22–05:12*	7h 50m	AN ₊ bis AN ₋		09:21	20:23	05:11	39m	05:50	37m	06:27	33m	07:01	12h 31m	19:32	33m	20:06	36m	20:42	39m	21:22	11h 30m	7h 50m				So, 17. Sep
Mo, 18. Sep	MESZ	21:19–05:14*	7h 54m	AN ₊ bis AN ₋		10:32	20:39	05:12	39m	05:52	36m	06:28	33m	07:02	12h 27m	19:30	33m	20:03	36m	20:40	39m	21:19	11h 33m	7h 54m				Mo, 18. Sep
Di, 19. Sep	MESZ	21:17–05:16*	7h 58m	AN ₊ bis AN ₋		11:46	20:58	05:14	39m	05:53	36m	06:30	33m	07:04	12h 24m	19:28	33m	20:01	36m	20:38	38m	21:17	11h 37m	7h 58m				Di, 19. Sep
Mi, 20. Sep	MESZ	21:23–05:17*	7h 54m	M _\ bis AN ₋		13:02	21:23	05:16	38m	05:55	36m	06:31	33m	07:05	12h 20m	19:26	33m	19:59	36m	20:36	38m	21:14	11h 40m	8h 03m				Mi, 20. Sep
Do, 21. Sep	MESZ	21:57–05:19*	7h 21m	M _\ bis AN ₋		14:18	21:57	05:17	38m	05:56	36m	06:33	33m	07:06	12h 17m	19:23	33m	19:57	36m	20:33	38m	21:12	11h 44m	8h 07m				Do, 21. Sep
Fr, 22. Sep	MESZ	22:46–05:21*	6h 35m	M _\ bis AN ₋	☾	15:30	22:46	05:19	38m	05:58	36m	06:34	33m	07:08	12h 13m	19:21	33m	19:55	36m	20:31	38m	21:10	11h 47m	8h 11m				Fr, 22. Sep
Sa, 23. Sep	MESZ	23:50–05:22*	5h 32m	M _\ bis AN ₋		16:32	23:50	05:21	38m	05:59	36m	06:36	33m	07:09	12h 09m	19:19	33m	19:53	36m	20:29	38m	21:07	11h 51m	8h 15m				Sa, 23. Sep
So, 24. Sep	MESZ	01:09*–05:24*	4h 14m	M _\ bis AN ₋		17:20	—:—	05:22	38m	06:01	36m	06:37	33m	07:11	12h 06m	19:17	33m	19:50	36m	20:27	38m	21:05	11h 55m	8h 19m				So, 24. Sep
Mo, 25. Sep	MESZ	02:37*–05:26*	2h 49m	M _\ bis AN ₋		17:56	01:09	05:24	38m	06:02	36m	06:39	33m	07:12	12h 02m	19:15	33m	19:48	36m	20:25	38m	21:03	11h 58m	8h 23m				Mo, 25. Sep
Di, 26. Sep	MESZ	04:06*–05:27*	1h 21m	M _\ bis AN ₋		18:22	02:37	05:26	38m	06:04	36m	06:40	33m	07:14	11h 59m	19:13	33m	19:46	36m	20:22	37m	21:00	12h 02m	8h 27m				Di, 26. Sep
Mi, 27. Sep	MESZ	—:—:—:—	–	Mond stört		18:43	04:06	05:27	37m	06:05	36m	06:42	33m	07:15	11h 55m	19:11	33m	19:44	36m	20:20	37m	20:58	12h 05m	8h 31m				Mi, 27. Sep
Do, 28. Sep	MESZ	—:—:—:—	–	Mond stört		19:01	05:35	05:29	37m	06:07	36m	06:43	33m	07:16	11h 52m	19:09	33m	19:42	36m	20:18	37m	20:56	12h 09m	8h 34m				Do, 28. Sep
Fr, 29. Sep	MESZ	—:—:—:—	–	Mond stört	☾	19:17	07:02	05:31	37m	06:08	36m	06:44	33m	07:18	11h 48m	19:06	33m	19:40	35m	20:16	37m	20:53	12h 12m	8h 38m				Fr, 29. Sep
Sa, 30. Sep	MESZ	—:—:—:—	–	Mond stört		19:34	08:27	05:32	37m	06:10	36m	06:46	33m	07:19	11h 45m	19:04	33m	19:38	35m	20:14	37m	20:51	12h 16m	8h 42m				Sa, 30. Sep
So, 1. Okt	MESZ	—:—:—:—	–	Mond stört		19:53	09:52	05:34	37m	06:11	36m	06:47	33m	07:21	11h 41m	19:02	33m	19:36	35m	20:12	37m	20:49	12h 19m	8h 46m				So, 1. Okt
Mo, 2. Okt	MESZ	—:—:~:~:~	–	Mond stört		20:16	11:16	05:35	37m	06:13	35m	06:49	33m	07:22	11h 37m	19:00	33m	19:34	35m	20:09	37m	20:47	12h 23m	8h 50m				Mo, 2. Okt
Di, 3. Okt	MESZ	20:44–20:45	0m	AN ₊ bis M ₇		20:45	12:38	05:37	37m	06:14	35m	06:50	33m	07:24	11h 34m	18:58	33m	19:31	35m	20:07	37m	20:44	12h 27m	8h 54m				Di, 3. Okt
Mi, 4. Okt	MESZ	20:42–21:23	40m	AN ₊ bis M ₇		21:23	13:54	05:39	37m	06:16	35m	06:52	33m	07:25	11h 30m	18:56	33m	19:29	35m	20:05	37m	20:42	12h 30m	8h 57m				Mi, 4. Okt
Do, 5. Okt	MESZ	20:40–22:12	1h 31m	AN ₊ bis M ₇		22:12	14:59	05:40	37m	06:17	35m	06:53	33m	07:27	11h 27m	18:54	33m	19:27	35m	20:03	37m	20:40	12h 34m	9h 01m				Do, 5. Okt
Fr, 6. Okt	MESZ	20:38–23:11	2h 32m	AN ₊ bis M ₇	☾	23:11	15:50	05:42	37m	06:19	35m	06:55	33m	07:28	11h 23m	18:52	33m	19:25	35m	20:01	36m	20:38	12h 37m	9h 05m				Fr, 6. Okt
Sa, 7. Okt	MESZ	20:36–00:17*	3h 41m	AN ₊ bis M ₇		—:—	16:29	05:43	37m	06:20	35m	06:56	33m	07:30	11h 20m	18:50	33m	19:23	35m	19:59	36m	20:36	12h 41m	9h 08m				Sa, 7. Okt
So, 8. Okt	MESZ	20:34–01:26*	4h 52m	AN ₊ bis M ₇		00:17	16:58	05:45	36m	06:22	35m	06:58	33m	07:31	11h 16m	18:48	33m	19:21	35m	19:57	36m	20:34	12h 44m	9h 12m				So, 8. Okt
Mo, 9. Okt	MESZ	20:32–02:36*	6h 04m	AN ₊ bis M ₇		01:26	17:20	05:46	36m	06:23	35m	06:59	33m	07:33	11h 13m	18:46	33m	19:19	35m	19:55	36m	20:32	12h 48m	9h 16m				Mo, 9. Okt
Di, 10. Okt	MESZ	20:30–03:45*	7h 15m	AN ₊ bis M ₇		02:36	17:38	05:48	36m	06:25	35m	07:00	33m	07:34	11h 09m	18:44	33m	19:17	35m	19:53	36m	20:30	12h 51m	9h 19m				Di, 10. Okt
Mi, 11. Okt	MESZ	20:28–04:53*	8h 25m	AN ₊ bis M ₇		03:45	17:52	05:49	36m	06:26	35m	07:02	33m	07:36	11h 06m	18:42	33m	19:15	35m	19:51	36m	20:28	12h 55m	9h 23m				Mi, 11. Okt
Do, 12. Okt	MESZ	20:26–05:52*	9h 26m	AN ₊ bis AN ₋		04:53	18:05	05:51	36m	06:28	35m	07:03	33m	07:37	11h 02m	18:40	33m	19:13	35m	19:49	36m	20:26	12h 58m	9h 26m				Do, 12. Okt
Fr, 13. Okt	MESZ	20:24–05:54*	9h 30m	AN ₊ bis AN ₋		06:01	18:18	05:52	36m	06:29	35m	07:05	33m	07:39	10h 59m	18:38	33m	19:11	35m	19:47	36m	20:24	13h 02m	9h 30m				Fr, 13. Okt
Sa, 14. Okt	MESZ	20:22–05:55*	9h 33m	AN ₊ bis AN ₋	●	07:10	18:31	05:54	36m	06:30	35m	07:06	33m	07:40	10h 55m	18:36	33m	19:09	35m	19:45	36m	20:22	13h 05m	9h 33m				Sa, 14. Okt
So, 15. Okt	MESZ	20:20–05:57*	9h 36m	AN ₊ bis AN ₋		08:21	18:46	05:55	36m	06:32	35m	07:08	33m	07:42	10h 52m	18:34	33m	19:07	35m	19:43	36m	20:20	13h 09m	9h 36m				So, 15. Okt
Mo, 16. Okt	MESZ	20:18–05:58*	9h 40m	AN ₊ bis AN ₋		09:35	19:04	05:57	36m	06:33	35m	07:09	33m	07:43	10h 48m	18:32	33m	19:06	35m	19:41	36m	20:18	13h 12m	9h 40m				Mo, 16. Okt
Di, 17. Okt	MESZ	20:16–06:00*	9h 43m	AN ₊ bis AN ₋		10:51	19:27	05:58	36m	06:35	35m	07:11	33m	07:45	10h 45m	18:30	33m	19:04	35m	19:40	36m	20:16	13h 16m	9h 43m				Di, 17. Okt
Mi, 18. Okt	MESZ	20:14–06:01*	9h 47m	AN ₊ bis AN ₋		12:08	19:58	06:00	36m	06:36	35m	07:12	33m	07:46	10h 41m	18:28	33m	19:02	35m	19:38	36m	20:14	13h 19m	9h 47m				Mi, 18. Okt
Do, 19. Okt	MESZ	20:42–06:03*	9h 21m	M _\ bis AN ₋		13:22	20:42	06:01	36m	06:38	35m	07:14	34m	07:48	10h 38m	18:26	33m	19:00	35m	19:36	36m							

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

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