

Mond- und Dämmerungstabelle 2024

für die visuelle Deep-Sky-Beobachtung

Bagnères-de-Bigorre 43.0652° N 0.1506° 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
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.	\nearrow	\searrow	Astr.	Δt	Naut.	Δt	Bürg.	Δt	\nearrow	Δt	\searrow	Δt	Bürg.	Δt	Naut.	Δt	Astr.	Δt	Δt		Δt		
Fr, 19. Jul	MESZ	—:—:—:—	—	Mond stört		20:35	03:52	04:28	50m	05:18	42m	06:01	35m	06:37	14h 56m	21:33	35m	22:09	42m	22:51	50m	23:42	9h 04m	4h 47m				Fr, 19. Jul
Sa, 20. Jul	MESZ	—:—:—:—	—	Mond stört		21:27	04:54	04:29	50m	05:20	42m	06:02	35m	06:38	14h 54m	21:32	35m	22:08	41m	22:50	50m	23:40	9h 06m	4h 50m				Sa, 20. Jul
So, 21. Jul	MESZ	—:—:~:~:~	—	Mond stört	○	22:09	06:07	04:31	50m	05:21	41m	06:03	35m	06:39	14h 52m	21:32	35m	22:07	41m	22:49	49m	23:39	9h 08m	4h 54m				So, 21. Jul
Mo, 22. Jul	MESZ	—:~:~:~:~	—	Mond stört		22:42	07:26	04:33	49m	05:22	41m	06:04	35m	06:40	14h 51m	21:31	35m	22:06	41m	22:48	49m	23:37	9h 09m	4h 57m				Mo, 22. Jul
Di, 23. Jul	MESZ	—:~:~:~:~	—	Mond stört		23:09	08:48	04:34	49m	05:24	41m	06:05	35m	06:41	14h 49m	21:30	35m	22:05	41m	22:46	48m	23:35	9h 11m	5h 00m				Di, 23. Jul
Mi, 24. Jul	MESZ	—:~:~:~:~	—	Mond stört		23:33	10:07	04:36	48m	05:25	41m	06:06	35m	06:42	14h 47m	21:29	35m	22:04	41m	22:45	48m	23:34	9h 13m	5h 04m				Mi, 24. Jul
Do, 25. Jul	MESZ	23:32 – 23:54	22m	AN ₊ bis M ₇		23:54	11:25	04:38	48m	05:26	41m	06:07	35m	06:42	14h 45m	21:28	35m	22:03	40m	22:44	48m	23:32	9h 15m	5h 07m				Do, 25. Jul
Fr, 26. Jul	MESZ	23:30 – 00:16*	46m	AN ₊ bis M ₇		—:—	12:42	04:39	48m	05:27	40m	06:08	35m	06:43	14h 43m	21:27	34m	22:02	40m	22:42	47m	23:30	9h 17m	5h 11m				Fr, 26. Jul
Sa, 27. Jul	MESZ	23:28 – 00:40*	1h 11m	AN ₊ bis M ₇		00:16	13:58	04:41	47m	05:29	40m	06:10	34m	06:44	14h 41m	21:26	34m	22:01	40m	22:41	47m	23:28	9h 19m	5h 14m				Sa, 27. Jul
So, 28. Jul	MESZ	23:27 – 01:07*	1h 40m	AN ₊ bis M ₇	◐	00:40	15:15	04:43	47m	05:30	40m	06:11	34m	06:46	14h 39m	21:25	34m	21:59	40m	22:40	46m	23:27	9h 21m	5h 18m				So, 28. Jul
Mo, 29. Jul	MESZ	23:25 – 01:40*	2h 15m	AN ₊ bis M ₇		01:07	16:32	04:45	46m	05:32	40m	06:12	34m	06:47	14h 37m	21:24	34m	21:58	40m	22:38	46m	23:25	9h 24m	5h 21m				Mo, 29. Jul
Di, 30. Jul	MESZ	23:23 – 02:21*	2h 58m	AN ₊ bis M ₇		01:40	17:46	04:46	46m	05:33	40m	06:13	34m	06:48	14h 34m	21:22	34m	21:57	39m	22:37	46m	23:23	9h 26m	5h 25m				Di, 30. Jul
Mi, 31. Jul	MESZ	23:21 – 03:12*	3h 50m	AN ₊ bis M ₇		02:21	18:54	04:48	46m	05:34	39m	06:14	34m	06:49	14h 32m	21:21	34m	21:56	39m	22:35	45m	23:21	9h 28m	5h 28m				Mi, 31. Jul
Do, 1. Aug	MESZ	23:19 – 04:12*	4h 53m	AN ₊ bis M ₇		03:12	19:52	04:50	45m	05:36	39m	06:15	34m	06:50	14h 30m	21:20	34m	21:54	39m	22:34	45m	23:19	9h 30m	5h 32m				Do, 1. Aug
Fr, 2. Aug	MESZ	23:17 – 04:53*	5h 36m	AN ₊ bis AN ₋		04:12	20:38	04:52	45m	05:37	39m	06:16	34m	06:51	14h 28m	21:19	34m	21:53	39m	22:32	44m	23:17	9h 32m	5h 36m				Fr, 2. Aug
Sa, 3. Aug	MESZ	23:15 – 04:55*	5h 39m	AN ₊ bis AN ₋		05:19	21:15	04:53	44m	05:38	39m	06:18	34m	06:52	14h 25m	21:18	33m	21:52	39m	22:31	44m	23:15	9h 35m	5h 39m				Sa, 3. Aug
So, 4. Aug	MESZ	23:13 – 04:57*	5h 43m	AN ₊ bis AN ₋	●	06:28	21:43	04:55	44m	05:40	39m	06:19	33m	06:53	14h 23m	21:16	33m	21:50	38m	22:29	44m	23:13	9h 37m	5h 43m				So, 4. Aug
Mo, 5. Aug	MESZ	23:11 – 04:59*	5h 47m	AN ₊ bis AN ₋		07:36	22:06	04:57	44m	05:41	38m	06:20	33m	06:54	14h 21m	21:15	33m	21:49	38m	22:27	43m	23:11	9h 39m	5h 47m				Mo, 5. Aug
Di, 6. Aug	MESZ	23:09 – 05:00*	5h 50m	AN ₊ bis AN ₋		08:41	22:26	04:59	43m	05:43	38m	06:21	33m	06:55	14h 18m	21:14	33m	21:47	38m	22:26	43m	23:09	9h 42m	5h 50m				Di, 6. Aug
Mi, 7. Aug	MESZ	23:07 – 05:02*	5h 54m	AN ₊ bis AN ₋		09:45	22:44	05:00	43m	05:44	38m	06:22	33m	06:56	14h 16m	21:12	33m	21:46	38m	22:24	43m	23:07	9h 44m	5h 54m				Mi, 7. Aug
Do, 8. Aug	MESZ	23:05 – 05:04*	5h 58m	AN ₊ bis AN ₋		10:46	23:01	05:02	43m	05:45	38m	06:24	33m	06:57	14h 13m	21:11	33m	21:44	38m	22:23	42m	23:05	9h 47m	5h 58m				Do, 8. Aug
Fr, 9. Aug	MESZ	23:18 – 05:06*	5h 48m	M _\ bis AN ₋		11:48	23:18	05:04	42m	05:47	38m	06:25	33m	06:58	14h 11m	21:10	33m	21:43	37m	22:21	42m	23:03	9h 49m	6h 02m				Fr, 9. Aug
Sa, 10. Aug	MESZ	23:36 – 05:07*	5h 31m	M _\ bis AN ₋		12:50	23:36	05:06	42m	05:48	37m	06:26	33m	06:59	14h 09m	21:08	33m	21:41	37m	22:19	42m	23:01	9h 52m	6h 05m				Sa, 10. Aug
So, 11. Aug	MESZ	23:57 – 05:09*	5h 11m	M _\ bis AN ₋		13:54	23:57	05:07	42m	05:50	37m	06:27	33m	07:00	14h 06m	21:07	33m	21:40	37m	22:17	41m	22:59	9h 54m	6h 09m				So, 11. Aug
Mo, 12. Aug	MESZ	00:23* – 05:11*	4h 47m	M _\ bis AN ₋	◑	15:00	—:—	05:09	41m	05:51	37m	06:28	33m	07:02	14h 03m	21:05	32m	21:38	37m	22:16	41m	22:57	9h 57m	6h 13m				Mo, 12. Aug
Di, 13. Aug	MESZ	00:56* – 05:12*	4h 16m	M _\ bis AN ₋		16:08	00:23	05:11	41m	05:52	37m	06:30	32m	07:03	14h 01m	21:04	32m	21:37	37m	22:14	41m	22:55	9h 59m	6h 17m				Di, 13. Aug
Mi, 14. Aug	MESZ	01:39* – 05:14*	3h 35m	M _\ bis AN ₋		17:16	00:56	05:12	41m	05:54	37m	06:31	32m	07:04	13h 58m	21:03	32m	21:35	36m	22:12	41m	22:53	10h 02m	6h 20m				Mi, 14. Aug
Do, 15. Aug	MESZ	02:34* – 05:16*	2h 42m	M _\ bis AN ₋		18:20	01:39	05:14	41m	05:55	36m	06:32	32m	07:05	13h 56m	21:01	32m	21:34	36m	22:10	40m	22:51	10h 04m	6h 24m				Do, 15. Aug
Fr, 16. Aug	MESZ	03:41* – 05:17*	1h 36m	M _\ bis AN ₋		19:16	02:34	05:16	40m	05:56	36m	06:33	32m	07:06	13h 53m	21:00	32m	21:32	36m	22:09	40m	22:49	10h 07m	6h 28m				Fr, 16. Aug
Sa, 17. Aug	MESZ	04:59* – 05:19*	20m	M _\ bis AN ₋		20:02	03:41	05:17	40m	05:58	36m	06:34	32m	07:07	13h 51m	20:58	32m	21:30	36m	22:07	40m	22:47	10h 10m	6h 31m				Sa, 17. Aug
So, 18. Aug	MESZ	—:~:~:~:~	—	Mond stört		20:39	04:59	05:19	40m	05:59	36m	06:36	32m	07:08	13h 48m	20:56	32m	21:29	36m	22:05	39m	22:45	10h 12m	6h 35m				So, 18. Aug
Mo, 19. Aug	MESZ	—:~:~:~:~	—	Mond stört	○	21:09	06:20	05:21	39m	06:01	36m	06:37	32m	07:09	13h 45m	20:55	32m	21:27	36m	22:03	39m	22:43	10h 15m	6h 39m				Mo, 19. Aug
Di, 20. Aug	MESZ	—:~:~:~:~	—	Mond stört		21:34	07:43	05:22	39m	06:02	36m	06:38	32m	07:10	13h 43m	20:53	32m	21:25	35m	22:01	39m	22:41	10h 18m	6h 43m				Di, 20. Aug
Mi, 21. Aug	MESZ	—:~:~:~:~	—	Mond stört		21:57	09:04	05:24	39m	06:03	35m	06:39	32m	07:11	13h 40m	20:52	31m	21:24	35m	21:59	39m	22:39	10h 20m	6h 46m				Mi, 21. Aug
Do, 22. Aug	MESZ	—:~:~:~:~	—	Mond stört		22:19	10:23	05:25	39m	06:05	35m	06:40	31m	07:12	13h 37m	20:50	31m	21:22	35m	21:58	38m	22:37	10h 23m	6h 50m				Do, 22. Aug
Fr, 23. Aug	MESZ	22:34 – 22:42	8m	AN ₊ bis M ₇		22:42	11:43	05:27	38m	06:06	35m	06:42	31m	07:14	13h 34m	20:48	31m	21:20	35m	21:56	38m	22:34	10h 26m	6h 54m				Fr, 23. Aug
Sa, 24. Aug	MESZ	22:32 – 23:09	36m	AN ₊ bis M ₇		23:09	13:02	05:29	38m	06:07	35m	06:43	31m	07:15	13h 32m	20:47	31m	21:19	35m	21:54	38m	22:32	10h 28m	6h 57m				Sa, 24. Aug
So, 25. Aug	MESZ	22:30 – 23:40	1h 10m	AN ₊ bis M ₇		23:40	14:21	05:30	38m	06:09	35m	06:44	31m	07:16	13h 29m	20:45	31m	21:17	35m	21:52	38m	22:30	10h 31m	7h 01m				So, 25. Aug
Mo, 26. Aug	MESZ	22:28 – 00:19*	1h 50m	AN ₊ bis M ₇	◑	—:—	15:37	05:32	38m	06:10	35m	06:45	31m	07:17	13h 26m	20:44	31m	21:15	35m	21:50	37m	22:28	10h 34m	7h 05m				Mo, 26. Aug
Di, 27. Aug	MESZ	22:26 – 01:07*	2h 41m	AN ₊ bis M ₇		00:19	16:48	05:33	38m	06:11	35m	06:46	31m	07:18	13h 23m	20:42	31m	21:13	34m	21:48	37m	22:26	10h 37m	7h 08m				Di, 27. Aug
Mi, 28. Aug	MESZ	22:24 – 02:05*	3h 40m	AN ₊ bis M ₇		01:07	17:49	05:35	37m	06:13	34m	06:48	31m	07:19	13h 21m	20:40	31m	21:12	34m	21:46	37m	22:24	10h 39m	7h 12m				Mi, 28. Aug
Do, 29. Aug	MESZ	22:22 – 03:09*	4h 47m	AN ₊ bis M ₇		02:05	18:38	05:36	37m	06:14	34m	06:49	31m	07:20	13h 18m	20:38	31m	21:10	34m	21:44	37m	22:22	10h 42m	7h 16m				Do, 29. Aug
Fr, 30. Aug	MESZ	22:20 – 04:17*	5h																									

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

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

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