

Mond- und Dämmerungstabelle 2023

für die visuelle Deep-Sky-Beobachtung

Heinsberg 51.0631° N 6.0964° 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.	\nearrow	\searrow	Astr.	Δt	Naut.	Δt	Bürg.	Δt	\nearrow	Δt	\searrow	Δt	Bürg.	Δt	Naut.	Δt	Astr.	Δt	Δt		Δt		
Do, 20. Jul	MESZ	01:23*–02:00*	37m	AN ₊ bis AN ₋		08:05	23:19	—:—		03:57	59m	04:57	45m	05:43	15h 56m	21:39	45m	22:25	59m	23:24	1h 59m	01:23*	8h 05m	37m				Do, 20. Jul
Fr, 21. Jul	MESZ	01:12*–02:12*	1h 00m	AN ₊ bis AN ₋		09:16	23:32	02:00	1h 59m	03:59	59m	04:59	45m	05:44	15h 53m	21:38	45m	22:23	58m	23:22	1h 49m	01:12*	8h 07m	1h 00m				Fr, 21. Jul
Sa, 22. Jul	MESZ	01:03*–02:21*	1h 17m	AN ₊ bis AN ₋		10:26	23:43	02:12	1h 49m	04:02	58m	05:00	45m	05:46	15h 51m	21:37	45m	22:22	58m	23:20	1h 43m	01:03*	8h 10m	1h 17m				Sa, 22. Jul
So, 23. Jul	MESZ	00:56*–02:28*	1h 31m	AN ₊ bis AN ₋		11:35	23:54	02:21	1h 43m	04:04	58m	05:02	45m	05:47	15h 48m	21:35	44m	22:20	57m	23:18	1h 38m	00:56*	8h 12m	1h 31m				So, 23. Jul
Mo, 24. Jul	MESZ	00:50*–02:34*	1h 44m	AN ₊ bis AN ₋		12:46	—:—	02:28	1h 38m	04:06	57m	05:03	44m	05:48	15h 45m	21:34	44m	22:19	57m	23:16	1h 33m	00:50*	8h 15m	1h 44m				Mo, 24. Jul
Di, 25. Jul	MESZ	00:44*–02:40*	1h 55m	AN ₊ bis AN ₋		13:58	00:05	02:34	1h 33m	04:08	57m	05:05	44m	05:50	15h 43m	21:33	44m	22:17	56m	23:14	1h 30m	00:44*	8h 18m	1h 55m				Di, 25. Jul
Mi, 26. Jul	MESZ	00:39*–02:45*	2h 06m	AN ₊ bis AN ₋	☾	15:15	00:18	02:40	1h 30m	04:10	56m	05:07	44m	05:51	15h 40m	21:31	44m	22:15	55m	23:11	1h 27m	00:39*	8h 21m	2h 06m				Mi, 26. Jul
Do, 27. Jul	MESZ	00:56*–02:50*	1h 54m	M _\ bis AN ₋		16:36	00:34	02:45	1h 27m	04:12	55m	05:08	44m	05:52	15h 37m	21:30	43m	22:14	55m	23:09	1h 24m	00:34*	8h 23m	2h 16m				Do, 27. Jul
Fr, 28. Jul	MESZ	01:27*–02:55*	1h 28m	M _\ bis AN ₋		17:59	00:56	02:50	1h 24m	04:15	55m	05:10	43m	05:54	15h 34m	21:29	43m	22:12	54m	23:07	1h 21m	00:29*	8h 26m	2h 26m				Fr, 28. Jul
Sa, 29. Jul	MESZ	02:13*–02:59*	46m	M _\ bis AN ₋		19:19	01:27	02:55	1h 21m	04:17	54m	05:12	43m	05:55	15h 31m	21:27	43m	22:10	54m	23:05	1h 19m	00:24*	8h 29m	2h 35m				Sa, 29. Jul
So, 30. Jul	MESZ	—:—:—:—	–	Mond stört		20:28	02:13	02:59	1h 19m	04:19	54m	05:13	43m	05:57	15h 28m	21:26	43m	22:09	53m	23:02	1h 17m	00:20*	8h 32m	2h 44m				So, 30. Jul
Mo, 31. Jul	MESZ	—:—:—:—	–	Mond stört		21:19	03:19	03:04	1h 17m	04:21	53m	05:15	43m	05:58	15h 25m	21:24	42m	22:07	53m	23:00	1h 15m	00:16*	8h 35m	2h 52m				Mo, 31. Jul
Di, 1. Aug	MESZ	—:—:—:—	–	Mond stört	☾	21:54	04:44	03:08	1h 15m	04:24	53m	05:17	42m	06:00	15h 22m	21:22	42m	22:05	52m	22:58	1h 13m	00:11*	8h 38m	3h 00m				Di, 1. Aug
Mi, 2. Aug	MESZ	—:—:—:—	–	Mond stört		22:19	06:18	03:12	1h 13m	04:26	52m	05:19	42m	06:01	15h 19m	21:21	42m	22:03	52m	22:55	1h 11m	00:07*	8h 41m	3h 08m				Mi, 2. Aug
Do, 3. Aug	MESZ	—:—:~:~:~	–	Mond stört		22:38	07:53	03:16	1h 12m	04:28	52m	05:20	42m	06:03	15h 16m	21:19	42m	22:01	51m	22:53	1h 10m	00:03*	8h 45m	3h 16m				Do, 3. Aug
Fr, 4. Aug	MESZ	—:~:~:~:~	–	Mond stört		22:53	09:25	03:20	1h 10m	04:30	51m	05:22	42m	06:04	15h 13m	21:17	41m	21:59	51m	22:50	1h 08m	23:59	8h 48m	3h 24m				Fr, 4. Aug
Sa, 5. Aug	MESZ	—:~:~:~:~	–	Mond stört		23:07	10:53	03:24	1h 08m	04:33	51m	05:24	41m	06:06	15h 10m	21:16	41m	21:57	50m	22:48	1h 07m	23:56	8h 51m	3h 31m				Sa, 5. Aug
So, 6. Aug	MESZ	—:~:~:~:~	–	Mond stört		23:20	12:17	03:27	1h 07m	04:35	50m	05:25	41m	06:07	15h 06m	21:14	41m	21:55	50m	22:46	1h 06m	23:52	8h 54m	3h 39m				So, 6. Aug
Mo, 7. Aug	MESZ	—:~:~:~:~	–	Mond stört		23:36	13:40	03:31	1h 06m	04:37	50m	05:27	41m	06:09	15h 03m	21:12	41m	21:53	49m	22:43	1h 04m	23:48	8h 57m	3h 46m				Mo, 7. Aug
Di, 8. Aug	MESZ	23:44–23:54	9m	AN ₊ bis M ₇	☾	23:54	15:02	03:34	1h 04m	04:39	49m	05:29	41m	06:10	15h 00m	21:10	40m	21:51	49m	22:41	1h 03m	23:44	9h 01m	3h 53m				Di, 8. Aug
Mi, 9. Aug	MESZ	23:41–00:18*	37m	AN ₊ bis M ₇		—:—	16:22	03:38	1h 03m	04:41	49m	05:31	40m	06:12	14h 56m	21:09	40m	21:49	48m	22:38	1h 02m	23:41	9h 04m	4h 00m				Mi, 9. Aug
Do, 10. Aug	MESZ	23:37–00:50*	1h 12m	AN ₊ bis M ₇		00:18	17:37	03:41	1h 02m	04:44	48m	05:32	40m	06:13	14h 53m	21:07	40m	21:47	48m	22:36	1h 01m	23:37	9h 07m	4h 06m				Do, 10. Aug
Fr, 11. Aug	MESZ	23:34–01:33*	1h 58m	AN ₊ bis M ₇		00:50	18:43	03:44	1h 01m	04:46	48m	05:34	40m	06:15	14h 50m	21:05	40m	21:45	48m	22:33	1h 00m	23:34	9h 11m	4h 13m				Fr, 11. Aug
Sa, 12. Aug	MESZ	23:30–02:27*	2h 57m	AN ₊ bis M ₇		01:33	19:38	03:47	1h 00m	04:48	48m	05:36	40m	06:16	14h 46m	21:03	40m	21:43	47m	22:31	59m	23:30	9h 14m	4h 20m				Sa, 12. Aug
So, 13. Aug	MESZ	23:27–03:32*	4h 05m	AN ₊ bis M ₇		02:27	20:18	03:51	59m	04:50	47m	05:38	40m	06:18	14h 43m	21:01	39m	21:41	47m	22:28	58m	23:27	9h 18m	4h 26m				So, 13. Aug
Mo, 14. Aug	MESZ	23:23–03:57*	4h 33m	AN ₊ bis AN ₋		03:32	20:48	03:54	58m	04:52	47m	05:40	39m	06:19	14h 39m	20:59	39m	21:39	46m	22:26	57m	23:23	9h 21m	4h 33m				Mo, 14. Aug
Di, 15. Aug	MESZ	23:20–04:00*	4h 39m	AN ₊ bis AN ₋		04:43	21:10	03:57	57m	04:54	46m	05:41	39m	06:21	14h 36m	20:57	39m	21:37	46m	22:23	56m	23:20	9h 25m	4h 39m				Di, 15. Aug
Mi, 16. Aug	MESZ	23:17–04:03*	4h 45m	AN ₊ bis AN ₋	☾	05:55	21:27	04:00	56m	04:56	46m	05:43	39m	06:23	14h 32m	20:55	39m	21:35	46m	22:21	55m	23:17	9h 28m	4h 45m				Mi, 16. Aug
Do, 17. Aug	MESZ	23:13–04:06*	4h 52m	AN ₊ bis AN ₋		07:06	21:40	04:03	55m	04:59	46m	05:45	39m	06:24	14h 29m	20:53	39m	21:32	45m	22:18	55m	23:13	9h 32m	4h 52m				Do, 17. Aug
Fr, 18. Aug	MESZ	23:10–04:08*	4h 58m	AN ₊ bis AN ₋		08:17	21:51	04:06	55m	05:01	45m	05:47	39m	06:26	14h 25m	20:51	38m	21:30	45m	22:16	54m	23:10	9h 35m	4h 58m				Fr, 18. Aug
Sa, 19. Aug	MESZ	23:07–04:11*	5h 04m	AN ₊ bis AN ₋		09:26	22:02	04:08	54m	05:03	45m	05:48	38m	06:27	14h 22m	20:49	38m	21:28	45m	22:13	53m	23:07	9h 39m	5h 04m				Sa, 19. Aug
So, 20. Aug	MESZ	23:04–04:14*	5h 10m	AN ₊ bis AN ₋		10:36	22:13	04:11	53m	05:05	45m	05:50	38m	06:29	14h 18m	20:47	38m	21:26	44m	22:11	53m	23:04	9h 42m	5h 10m				So, 20. Aug
Mo, 21. Aug	MESZ	23:00–04:17*	5h 16m	AN ₊ bis AN ₋		11:47	22:25	04:14	53m	05:07	44m	05:52	38m	06:30	14h 14m	20:45	38m	21:24	44m	22:08	52m	23:00	9h 46m	5h 16m				Mo, 21. Aug
Di, 22. Aug	MESZ	22:57–04:19*	5h 22m	AN ₊ bis AN ₋		13:01	22:39	04:17	52m	05:09	44m	05:54	38m	06:32	14h 11m	20:43	38m	21:21	44m	22:06	51m	22:57	9h 50m	5h 22m				Di, 22. Aug
Mi, 23. Aug	MESZ	22:57–04:22*	5h 24m	M _\ bis AN ₋		14:18	22:57	04:19	51m	05:11	44m	05:55	38m	06:33	14h 07m	20:41	37m	21:19	43m	22:03	51m	22:54	9h 53m	5h 27m				Mi, 23. Aug
Do, 24. Aug	MESZ	23:23–04:25*	5h 01m	M _\ bis AN ₋	☾	15:39	23:23	04:22	51m	05:13	43m	05:57	38m	06:35	14h 04m	20:39	37m	21:17	43m	22:00	50m	22:51	9h 57m	5h 33m				Do, 24. Aug
Fr, 25. Aug	MESZ	00:00*–04:27*	4h 26m	M _\ bis AN ₋		16:59	—:—	04:25	50m	05:15	43m	05:59	37m	06:37	14h 00m	20:37	37m	21:15	43m	21:58	49m	22:48	10h 01m	5h 39m				Fr, 25. Aug
Sa, 26. Aug	MESZ	00:55*–04:30*	3h 34m	M _\ bis AN ₋		18:11	00:00	04:27	50m	05:17	43m	06:00	37m	06:38	13h 56m	20:35	37m	21:12	43m	21:55	49m	22:45	10h 04m	5h 44m				Sa, 26. Aug
So, 27. Aug	MESZ	02:10*–04:32*	2h 21m	M _\ bis AN ₋		19:09	00:55	04:30	49m	05:19	43m	06:02	37m	06:40	13h 52m	20:33	37m	21:10	42m	21:53	48m	22:42	10h 08m	5h 50m				So, 27. Aug
Mo, 28. Aug	MESZ	03:40*–04:35*	54m	M _\ bis AN ₋		19:50	02:10	04:32	48m	05:21	42m	06:04	37m	06:41	13h 49m	20:31	37m	21:08	42m	21:50	48m	22:39	10h 12m	5h 55m				Mo, 28. Aug
Di, 29. Aug	MESZ	—:~:~:~:~	–	Mond stört		20:19	03:40	04:35	48m	05:23	42m	06:06	37m	06:43	13h 45m	20:28	37m	21:05	42m	21:48	47m	22:36	10h 16m	6h 01m				Di, 29. Aug
Mi, 30. Aug	MESZ	—:~:~:~:~	–	Mond stört		20:40	05:15	04:37	47m	05:25	42m	06:07	37m	06:44	13h 41m	20:26	36m	21:03	42m	21:45	47m	22:33	10h 19m					

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