

Mond- und Dämmerungstabelle 2024

für die visuelle Deep-Sky-Beobachtung

Pithiviers 48.1725° N 2.2525° 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		20:55	03:15	03:25	1h 12m	04:37	51m	05:29	41m	06:10	15h 32m	21:43	41m	22:24	51m	23:15	1h 10m	00:26*	8h 28m	3h 02m				Fr, 19. Jul
Sa, 20. Jul	MESZ	—:—:—:—	—	Mond stört		21:44	04:17	03:28	1h 10m	04:39	51m	05:30	41m	06:11	15h 30m	21:42	41m	22:23	50m	23:13	1h 09m	00:23*	8h 30m	3h 07m				Sa, 20. Jul
So, 21. Jul	MESZ	—:—:~:~:~	—	Mond stört	○	22:21	05:33	03:31	1h 09m	04:41	50m	05:32	41m	06:13	15h 27m	21:41	40m	22:21	50m	23:12	1h 08m	00:20*	8h 33m	3h 13m				So, 21. Jul
Mo, 22. Jul	MESZ	—:~:~:~:~	—	Mond stört		22:49	06:58	03:34	1h 08m	04:43	50m	05:33	40m	06:14	15h 25m	21:39	40m	22:20	49m	23:10	1h 07m	00:18*	8h 35m	3h 19m				Mo, 22. Jul
Di, 23. Jul	MESZ	—:~:~:~:~	—	Mond stört		23:10	08:25	03:37	1h 07m	04:44	49m	05:34	40m	06:15	15h 23m	21:38	40m	22:19	49m	23:08	1h 06m	00:15*	8h 37m	3h 24m				Di, 23. Jul
Mi, 24. Jul	MESZ	—:~:~:~:~	—	Mond stört		23:28	09:51	03:40	1h 06m	04:46	49m	05:36	40m	06:16	15h 20m	21:37	40m	22:17	49m	23:07	1h 05m	00:12*	8h 40m	3h 30m				Mi, 24. Jul
Do, 25. Jul	MESZ	—:~:~:~:~	—	Mond stört		23:45	11:14	03:43	1h 05m	04:48	49m	05:37	40m	06:17	15h 18m	21:36	40m	22:16	48m	23:05	1h 04m	00:09*	8h 42m	3h 36m				Do, 25. Jul
Fr, 26. Jul	MESZ	—:~:~:~:~	—	Mond stört		—:—	12:37	03:45	1h 04m	04:50	48m	05:38	40m	06:19	15h 16m	21:35	39m	22:15	48m	23:03	1h 03m	00:06*	8h 45m	3h 41m				Fr, 26. Jul
Sa, 27. Jul	MESZ	00:04*—00:20*	16m	AN ₊ bis M ₇		00:02	13:59	03:48	1h 03m	04:51	48m	05:40	39m	06:20	15h 13m	21:33	39m	22:13	48m	23:01	1h 02m	00:04*	8h 47m	3h 47m				Sa, 27. Jul
So, 28. Jul	MESZ	00:01*—00:42*	40m	AN ₊ bis M ₇	◐	00:20	15:21	03:51	1h 02m	04:53	48m	05:41	39m	06:21	15h 10m	21:32	39m	22:12	47m	22:59	1h 01m	00:01*	8h 50m	3h 52m				So, 28. Jul
Mo, 29. Jul	MESZ	23:58—01:09*	1h 11m	AN ₊ bis M ₇		00:42	16:43	03:54	1h 01m	04:55	47m	05:43	39m	06:22	15h 08m	21:31	39m	22:10	47m	22:58	1h 00m	23:58	8h 52m	3h 58m				Mo, 29. Jul
Di, 30. Jul	MESZ	23:55—01:46*	1h 51m	AN ₊ bis M ₇		01:09	18:02	03:56	1h 00m	04:57	47m	05:44	39m	06:24	15h 05m	21:29	39m	22:09	47m	22:56	59m	23:55	8h 55m	4h 03m				Di, 30. Jul
Mi, 31. Jul	MESZ	23:52—02:35*	2h 42m	AN ₊ bis M ₇		01:46	19:13	03:59	59m	04:59	47m	05:46	39m	06:25	15h 02m	21:28	39m	22:07	46m	22:54	58m	23:52	8h 58m	4h 09m				Mi, 31. Jul
Do, 1. Aug	MESZ	23:50—03:36*	3h 46m	AN ₊ bis M ₇		02:35	20:11	04:02	58m	05:00	46m	05:47	39m	06:26	15h 00m	21:26	38m	22:05	46m	22:52	57m	23:50	9h 01m	4h 14m				Do, 1. Aug
Fr, 2. Aug	MESZ	23:47—04:07*	4h 20m	AN ₊ bis AN ₋		03:36	20:55	04:04	57m	05:02	46m	05:49	38m	06:28	14h 57m	21:25	38m	22:04	46m	22:50	57m	23:47	9h 03m	4h 20m				Fr, 2. Aug
Sa, 3. Aug	MESZ	23:44—04:10*	4h 25m	AN ₊ bis AN ₋		04:46	21:27	04:07	57m	05:04	46m	05:50	38m	06:29	14h 54m	21:24	38m	22:02	45m	22:48	56m	23:44	9h 06m	4h 25m				Sa, 3. Aug
So, 4. Aug	MESZ	23:41—04:12*	4h 30m	AN ₊ bis AN ₋	●	05:59	21:51	04:10	56m	05:06	45m	05:52	38m	06:30	14h 51m	21:22	38m	22:00	45m	22:46	55m	23:41	9h 09m	4h 30m				So, 4. Aug
Mo, 5. Aug	MESZ	23:39—04:15*	4h 36m	AN ₊ bis AN ₋		07:12	22:09	04:12	55m	05:08	45m	05:53	38m	06:32	14h 48m	21:20	38m	21:59	45m	22:44	54m	23:39	9h 12m	4h 36m				Mo, 5. Aug
Di, 6. Aug	MESZ	23:36—04:17*	4h 41m	AN ₊ bis AN ₋		08:23	22:25	04:15	54m	05:10	45m	05:55	38m	06:33	14h 46m	21:19	37m	21:57	44m	22:42	54m	23:36	9h 15m	4h 41m				Di, 6. Aug
Mi, 7. Aug	MESZ	23:33—04:20*	4h 46m	AN ₊ bis AN ₋		09:31	22:38	04:17	54m	05:12	44m	05:56	37m	06:34	14h 43m	21:17	37m	21:55	44m	22:39	53m	23:33	9h 18m	4h 46m				Mi, 7. Aug
Do, 8. Aug	MESZ	23:30—04:22*	4h 52m	AN ₊ bis AN ₋		10:37	22:50	04:20	53m	05:13	44m	05:58	37m	06:36	14h 40m	21:16	37m	21:53	44m	22:37	52m	23:30	9h 21m	4h 52m				Do, 8. Aug
Fr, 9. Aug	MESZ	23:27—04:25*	4h 57m	AN ₊ bis AN ₋		11:43	23:03	04:22	52m	05:15	44m	05:59	37m	06:37	14h 37m	21:14	37m	21:51	43m	22:35	52m	23:27	9h 24m	4h 57m				Fr, 9. Aug
Sa, 10. Aug	MESZ	23:25—04:27*	5h 02m	AN ₊ bis AN ₋		12:50	23:17	04:25	52m	05:17	43m	06:01	37m	06:38	14h 34m	21:12	37m	21:50	43m	22:33	51m	23:25	9h 27m	5h 02m				Sa, 10. Aug
So, 11. Aug	MESZ	23:34—04:30*	4h 55m	M ₇ bis AN ₋		13:58	23:34	04:27	51m	05:19	43m	06:02	37m	06:40	14h 31m	21:11	37m	21:48	43m	22:31	51m	23:22	9h 30m	5h 07m				So, 11. Aug
Mo, 12. Aug	MESZ	23:55—04:32*	4h 36m	M ₇ bis AN ₋	◑	15:09	23:55	04:30	51m	05:21	43m	06:04	37m	06:41	14h 28m	21:09	36m	21:46	42m	22:29	50m	23:19	9h 33m	5h 12m				Mo, 12. Aug
Di, 13. Aug	MESZ	00:23*—04:34*	4h 11m	M ₇ bis AN ₋		16:22	—:—	04:32	50m	05:22	42m	06:05	36m	06:42	14h 24m	21:07	36m	21:44	42m	22:27	49m	23:17	9h 36m	5h 17m				Di, 13. Aug
Mi, 14. Aug	MESZ	01:02*—04:37*	3h 34m	M ₇ bis AN ₋		17:34	00:23	04:34	49m	05:24	42m	06:07	36m	06:44	14h 21m	21:06	36m	21:42	42m	22:24	49m	23:14	9h 39m	5h 22m				Mi, 14. Aug
Do, 15. Aug	MESZ	01:56*—04:39*	2h 42m	M ₇ bis AN ₋		18:40	01:02	04:37	49m	05:26	42m	06:08	36m	06:45	14h 18m	21:04	36m	21:40	42m	22:22	48m	23:11	9h 42m	5h 27m				Do, 15. Aug
Fr, 16. Aug	MESZ	03:06*—04:41*	1h 35m	M ₇ bis AN ₋		19:34	01:56	04:39	48m	05:28	42m	06:10	36m	06:46	14h 15m	21:02	36m	21:38	41m	22:20	48m	23:08	9h 45m	5h 32m				Fr, 16. Aug
Sa, 17. Aug	MESZ	04:27*—04:44*	16m	M ₇ bis AN ₋		20:17	03:06	04:41	48m	05:30	41m	06:12	36m	06:48	14h 12m	21:00	36m	21:36	41m	22:18	47m	23:06	9h 49m	5h 37m				Sa, 17. Aug
So, 18. Aug	MESZ	—:~:~:~:~	—	Mond stört		20:48	04:27	04:44	47m	05:31	41m	06:13	36m	06:49	14h 09m	20:58	35m	21:34	41m	22:16	47m	23:03	9h 52m	5h 42m				So, 18. Aug
Mo, 19. Aug	MESZ	—:~:~:~:~	—	Mond stört	○	21:13	05:55	04:46	47m	05:33	41m	06:15	36m	06:51	14h 05m	20:57	35m	21:32	41m	22:13	46m	23:00	9h 55m	5h 47m				Mo, 19. Aug
Di, 20. Aug	MESZ	—:~:~:~:~	—	Mond stört		21:32	07:24	04:48	46m	05:35	41m	06:16	35m	06:52	14h 02m	20:55	35m	21:30	40m	22:11	46m	22:58	9h 58m	5h 52m				Di, 20. Aug
Mi, 21. Aug	MESZ	—:~:~:~:~	—	Mond stört		21:50	08:51	04:50	46m	05:37	40m	06:18	35m	06:53	13h 59m	20:53	35m	21:28	40m	22:09	46m	22:55	10h 01m	5h 57m				Mi, 21. Aug
Do, 22. Aug	MESZ	—:~:~:~:~	—	Mond stört		22:06	10:16	04:52	46m	05:38	40m	06:19	35m	06:55	13h 56m	20:51	35m	21:26	40m	22:07	45m	22:52	10h 05m	6h 02m				Do, 22. Aug
Fr, 23. Aug	MESZ	—:~:~:~:~	—	Mond stört		22:24	11:41	04:55	45m	05:40	40m	06:21	35m	06:56	13h 52m	20:49	35m	21:24	40m	22:04	45m	22:50	10h 08m	6h 07m				Fr, 23. Aug
Sa, 24. Aug	MESZ	—:~:~:~:~	—	Mond stört		22:45	13:06	04:57	45m	05:42	40m	06:22	35m	06:57	13h 49m	20:47	35m	21:22	39m	22:02	44m	22:47	10h 11m	6h 11m				Sa, 24. Aug
So, 25. Aug	MESZ	22:44—23:11	26m	AN ₊ bis M ₇		23:11	14:31	04:59	44m	05:44	39m	06:24	35m	06:59	13h 46m	20:45	35m	21:20	39m	22:00	44m	22:44	10h 15m	6h 16m				So, 25. Aug
Mo, 26. Aug	MESZ	22:42—23:45	1h 03m	AN ₊ bis M ₇	◒	23:45	15:53	05:01	44m	05:45	39m	06:25	35m	07:00	13h 43m	20:43	34m	21:18	39m	21:58	44m	22:42	10h 18m	6h 21m				Mo, 26. Aug
Di, 27. Aug	MESZ	22:39—00:30*	1h 51m	AN ₊ bis M ₇		—:—	17:07	05:03	44m	05:47	39m	06:27	34m	07:02	13h 39m	20:41	34m	21:16	39m	21:55	43m	22:39	10h 21m	6h 25m				Di, 27. Aug
Mi, 28. Aug	MESZ	22:36—01:28*	2h 51m	AN ₊ bis M ₇		00:30	18:09	05:05	43m	05:49	39m	06:28	34m	07:03	13h 36m	20:39	34m	21:14	39m	21:53	43m	22:36	10h 25m	6h 30m				Mi, 28. Aug
Do, 29. Aug	MESZ	22:34—02:35*	4h 01m	AN ₊ bis M ₇		01:28	18:56	05:07	43m	05:50	39m	06:30	34m	07:04	13h 33m	20:37	34m	21:12	38m	21:51	43m	22:34	10h 28m	6h 35m				Do, 29. Aug
Fr, 30. Aug	MESZ	22:31—03:47*	5h 15m	AN ₊ bis M ₇		02:3																						

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

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

Table with columns for dates (1-29), time zones, astronomical data (Astr. dunkel und kein Mond, Astr., Δt), moon phases (Ph., ↗, ↘), dawn/dusk times (Astr., Δt, Naut., Δt, Bürg., Δt), sun times (Sonne, ↗, Δt, ↘, Δt, Bürg., Δt, Naut., Δt, Astr., Δt), night (Nacht, Δt), astronomical number (Astr. N., Δt), and nautical darkness (Naut. dunkel und kein Mond, Δt). Rows list dates from Mo, 16. Dez to Mo, 3. Feb.