

Mond- und Dämmerungstabelle 2024

für die visuelle Deep-Sky-Beobachtung

Bülach 47.5189° N 8.5422° 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), M_l

(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), M_l (Mondaufgang), Naut. MD (Nautische Mitternachtsdämmerung).

Spalte 29 Identisch zu Spalte 1.

Table with columns 1-29 representing days of the month and various astronomical data points such as moon phases, twilight times, and sunrise/sunset times.

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

Table with 29 columns and 102 rows. Columns include dates from 2024 (1-29) and astronomical data such as time of sunset (Astr. dunkel), moon phase (Mond), dawn (Beginn der Morgendämmerung), sunrise (Sonne), and sunset (Ende der Abenddämmerung). Rows list days from Sep 7 to Oct 26, with corresponding MESZ times and moon phase indicators.

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

Table with 29 columns and 41 rows. Headers include dates (1-29), zones, astronomical and nautical twilight (Δt), moon phase (Ph.), moon rise/set (↑ ↓), and sunrise/sunset (Astr. Δt Bürg. Δt). Data rows provide specific times and moon phases for each day from Dec 16 to Feb 3.