

I slightly modified Thorstensen's code to print out the time between evening twilight and morning twilight. For Okie-Tex site (site code = o) near Kenton OK I used same time zone as for Oklahoma City.

W. Romanishin- August 2013 - email: wromanishin at ou.edu - Here is stuff from John T. intro:

***** 2025 Night-time Astronomical Calendar for OU Norman *****

By John Thorstensen, Dartmouth College

This calendar is designed to provide information useful for the planning of nighttime observations. The format should minimize confusion; each line gives the phenomena for a single (local!) night, and each line is labeled with both evening and morning (local) day and date. Note that all times given are LOCAL CIVIL (zone) times. DAYLIGHT SAVINGS time is used using conventions for the USA; for 2007+, 2nd Sunday in March to first Sunday in November.

The rise/set times printed are the times at which the center of the object is 50 arcminutes below the geometrical horizon. At the given twilight, the center of the sun is 0.0 degrees below the geometrical horizon.

The moon positions (and rise/set times) are generated by an implementation of the Low-Precision formulae in the Astronomical Almanac. The Almanac states that the error seldom exceeds 0.3 degrees. Topocentric corrections are included. Comparisons with tables for Kitt Peak in the NOAO Newsletter indicate that the rise-set times are good to +/- 2 min or so. The moon's RA, Dec, and illuminated fraction are given for local midnight, regardless of whether the moon is actually up at that time. Note that the moonrise and moonset times are not printed if they occur near mid-day.

The LST at evening and morning twilight are tabulated. This gives an accurate idea of the range of RA's accessible during the night.

The JD is given (severely rounded off) for local midnight. Again, this avoids any ambiguity.

Some credits: The sidereal time and Julian date routines were originally coded in PL/I by Steve Maker of Dartmouth College. The algorithms originated in the old American Ephemeris. The routine to convert JD back to calendar date is adapted from Numerical Recipes in C, by Press et al.

CAUTIONS: I believe that the program which generates these tables is reasonably accurate. However, it has not been exhaustively tested, so you should be sure to run 'sanity checks' on the results. Also, in view of the approximations used, the results should not be used when high precision is needed. Extension to dates far from the present (1990) should be done with great caution. The code has not been tested for the eastern or southern hemishpheres. Rise/set times are slightly inaccurate and rather confusing at circumpolar latitudes, where the concept of a 'night' is blurry.

The daylight savings time conventions (if used) are quite specific (to U. S., post-1986) and subject to change. I know that the code has many infelicities; if you should find actual errors, please notify John.Thorstensen@dartmouth.edu

[This output comes from a (hopefully) portable, completely self-contained program in the c language. It is available from the author and may be used freely for scientific or educational purposes. If you use it for profit, please contact the author to arrange a (modest!) fee. Source code is copyright John Thorstensen, 1990.]

MOON PHASES FOR 2025, at OU Norman

Times and dates are given in local time, zone = 6 hr West.
 They are generally better than +- 2 minutes.
 Daylight savings time used.

The end of the previous year and the beginning of the next
 are included for continuity.

NEW	1ST	FULL	LAST
Dec 30 16 28	Jan 06 17 58	Jan 13 16 28	Jan 21 14 32
Jan 29 6 37	Feb 05 2 04	Feb 12 7 54	Feb 20 11 35
Feb 27 18 47	Mar 06 10 34	Mar 14 1 56	Mar 22 6 32
Mar 29 6 00	Apr 04 21 17	Apr 12 19 24	Apr 20 20 38
Apr 27 14 33	May 04 8 53	May 12 11 58	May 20 7 01
May 26 22 04	Jun 02 22 42	Jun 11 2 46	Jun 18 14 21
Jun 25 5 34	Jul 02 14 30	Jul 10 15 39	Jul 17 19 40
Jul 24 14 12	Aug 01 7 41	Aug 09 2 57	Aug 16 0 14
Aug 23 1 07	Aug 31 1 26	Sep 07 13 11	Sep 14 5 35
Sep 21 14 55	Sep 29 18 55	Oct 06 22 49	Oct 13 13 15
Oct 21 7 26	Oct 29 11 22	Nov 05 7 20	Nov 11 23 30
Nov 20 0 48	Nov 28 1 00	Dec 04 17 15	Dec 11 14 53
Dec 19 19 44	Dec 27 13 11	Jan 03 4 04	Jan 10 9 49

Calendar for OU Norman, west longitude (h.m.s) = 6 29 47, latitude (d.m) = 35 12.2
 Rise/set times in Central time (6 hr W), uncorrected for elevation, DAYLIGHT time used, * shows clock reset.
 Moon info is for local midnight, even if moon is down. Program: John Thorstensen, Dartmouth College.

***** 2025 JANUARY *****

Date (eve/morn)			LMST	----- Sun: -----				LST twilight:		----- Moon: -----					Twi-Twi
			midn	set	twi.end	twi.beg	rise	eve	morn	rise	set	%illum	RA	Dec	hours
Wed	Jan 01/Thu	Jan 02	6 19	17 29	19 00	6 08	7 39	1 17	12 28	.....	19 22	6	20 55.6	-21 29	11.1
Thu	Jan 02/Fri	Jan 03	6 23	17 30	19 00	6 08	7 39	1 22	12 32	.....	20 32	12	21 49.1	-16 30	11.1
Fri	Jan 03/Sat	Jan 04	6 27	17 30	19 01	6 08	7 39	1 27	12 36	.....	21 41	20	22 40.4	-10 38	11.1
Sat	Jan 04/Sun	Jan 05	6 31	17 31	19 02	6 09	7 39	1 31	12 40	.....	22 48	30	23 30.1	- 4 12	11.1
Sun	Jan 05/Mon	Jan 06	6 35	17 32	19 02	6 09	7 39	1 36	12 44	.....	23 56	41	0 19.5	2 28	11.1
Mon	Jan 06/Tue	Jan 07	6 38	17 33	19 03	6 09	7 39	1 41	12 48	.....	1 04	52	1 09.8	9 04	11.1
Tue	Jan 07/Wed	Jan 08	6 42	17 34	19 04	6 09	7 39	1 46	12 52	.....	2 14	63	2 02.2	15 15	11.1
Wed	Jan 08/Thu	Jan 09	6 46	17 35	19 05	6 09	7 39	1 50	12 56	.....	3 26	74	2 57.8	20 39	11.1
Thu	Jan 09/Fri	Jan 10	6 50	17 36	19 06	6 09	7 39	1 55	13 00	.....	4 39	83	3 57.0	24 52	11.1
Fri	Jan 10/Sat	Jan 11	6 54	17 37	19 06	6 09	7 39	2 00	13 04	.....	5 49	91	4 59.4	27 30	11.0
Sat	Jan 11/Sun	Jan 12	6 58	17 38	19 07	6 09	7 38	2 05	13 08	.....	6 52	96	6 03.3	28 21	11.0
Sun	Jan 12/Mon	Jan 13	7 02	17 38	19 08	6 09	7 38	2 09	13 12	16 19	7 45	99	7 06.3	27 20	11.0
Mon	Jan 13/Tue	Jan 14	7 06	17 39	19 09	6 09	7 38	2 14	13 16	17 26	8 29	100	8 06.1	24 40	11.0
Tue	Jan 14/Wed	Jan 15	7 10	17 40	19 10	6 08	7 38	2 19	13 19	18 33	.....	98	9 01.6	20 42	11.0
Wed	Jan 15/Thu	Jan 16	7 14	17 41	19 11	6 08	7 37	2 24	13 23	19 39	.....	94	9 52.6	15 48	11.0
Thu	Jan 16/Fri	Jan 17	7 18	17 42	19 11	6 08	7 37	2 28	13 27	20 41	.....	88	10 39.8	10 20	10.9
Fri	Jan 17/Sat	Jan 18	7 22	17 43	19 12	6 08	7 37	2 33	13 31	21 40	.....	81	11 24.2	4 36	10.9
Sat	Jan 18/Sun	Jan 19	7 26	17 44	19 13	6 08	7 36	2 38	13 34	22 38	.....	73	12 07.0	- 1 11	10.9
Sun	Jan 19/Mon	Jan 20	7 30	17 45	19 14	6 07	7 36	2 43	13 38	23 34	.....	64	12 49.2	- 6 51	10.9
Mon	Jan 20/Tue	Jan 21	7 34	17 46	19 15	6 07	7 35	2 48	13 42	0 31	.....	55	13 32.0	-12 14	10.9
Tue	Jan 21/Wed	Jan 22	7 38	17 47	19 16	6 07	7 35	2 53	13 45	1 29	.....	46	14 16.4	-17 10	10.9
Wed	Jan 22/Thu	Jan 23	7 42	17 48	19 17	6 06	7 34	2 57	13 49	2 28	.....	36	15 03.2	-21 31	10.8
Thu	Jan 23/Fri	Jan 24	7 45	17 49	19 17	6 06	7 34	3 02	13 52	3 30	.....	27	15 53.2	-25 01	10.8
Fri	Jan 24/Sat	Jan 25	7 49	17 50	19 18	6 06	7 33	3 07	13 56	4 32	.....	19	16 46.6	-27 29	10.8
Sat	Jan 25/Sun	Jan 26	7 53	17 51	19 19	6 05	7 33	3 12	13 59	5 31	.....	12	17 43.1	-28 38	10.8
Sun	Jan 26/Mon	Jan 27	7 57	17 52	19 20	6 05	7 32	3 17	14 03	6 26	.....	6	18 41.4	-28 17	10.7
Mon	Jan 27/Tue	Jan 28	8 01	17 53	19 21	6 04	7 31	3 21	14 06	7 14	15 55	2	19 40.1	-26 21	10.7
Tue	Jan 28/Wed	Jan 29	8 05	17 54	19 22	6 04	7 31	3 26	14 10	7 55	17 04	0	20 37.5	-22 54	10.7
Wed	Jan 29/Thu	Jan 30	8 09	17 55	19 23	6 03	7 30	3 31	14 13	.....	18 15	1	21 32.8	-18 07	10.7
Thu	Jan 30/Fri	Jan 31	8 13	17 57	19 24	6 02	7 29	3 36	14 16	.....	19 27	4	22 25.8	-12 19	10.6
Fri	Jan 31/Sat	Feb 01	8 17	17 58	19 25	6 02	7 29	3 41	14 20	.....	20 37	9	23 16.9	- 5 50	10.6

***** 2025 FEBRUARY *****

Date (eve/morn)			LMST	----- Sun: -----				LST twilight:		----- Moon: -----					Twi-Twi
			midn	set	twi.end	twi.beg	rise	eve	morn	rise	set	%illum	RA	Dec	hours
Sat	Feb 01/Sun	Feb 02	8 21	17 59	19 25	6 01	7 28	3 46	14 23	.....	21 46	17	0 07.2	0 58	10.6
Sun	Feb 02/Mon	Feb 03	8 25	18 00	19 26	6 00	7 27	3 50	14 26	.....	22 56	26	0 57.8	7 43	10.6
Mon	Feb 03/Tue	Feb 04	8 29	18 01	19 27	6 00	7 26	3 55	14 30	.....	0 06	37	1 49.8	14 03	10.5
Tue	Feb 04/Wed	Feb 05	8 33	18 02	19 28	5 59	7 25	4 00	14 33	.....	1 18	48	2 44.3	19 38	10.5
Wed	Feb 05/Thu	Feb 06	8 37	18 03	19 29	5 58	7 24	4 05	14 36	.....	2 30	60	3 41.9	24 05	10.5
Thu	Feb 06/Fri	Feb 07	8 41	18 04	19 30	5 58	7 24	4 10	14 39	.....	3 39	70	4 42.3	27 04	10.5
Fri	Feb 07/Sat	Feb 08	8 45	18 05	19 31	5 57	7 23	4 15	14 42	.....	4 43	80	5 44.4	28 21	10.4
Sat	Feb 08/Sun	Feb 09	8 49	18 06	19 32	5 56	7 22	4 19	14 45	.....	5 39	88	6 46.3	27 52	10.4
Sun	Feb 09/Mon	Feb 10	8 53	18 07	19 33	5 55	7 21	4 24	14 49	.....	6 25	94	7 46.0	25 43	10.4
Mon	Feb 10/Tue	Feb 11	8 56	18 08	19 33	5 54	7 20	4 29	14 52	16 18	7 03	98	8 42.0	22 11	10.3
Tue	Feb 11/Wed	Feb 12	9 00	18 09	19 34	5 53	7 19	4 34	14 55	17 24	7 34	100	9 34.0	17 34	10.3
Wed	Feb 12/Thu	Feb 13	9 04	18 10	19 35	5 52	7 18	4 39	14 58	18 27	8 01	99	10 22.4	12 16	10.3
Thu	Feb 13/Fri	Feb 14	9 08	18 11	19 36	5 51	7 17	4 44	15 01	19 28	.....	97	11 07.8	6 32	10.3
Fri	Feb 14/Sat	Feb 15	9 12	18 12	19 37	5 50	7 16	4 48	15 04	20 26	.....	93	11 51.4	0 40	10.2
Sat	Feb 15/Sun	Feb 16	9 16	18 13	19 38	5 49	7 14	4 53	15 07	21 23	.....	87	12 34.1	- 5 08	10.2
Sun	Feb 16/Mon	Feb 17	9 20	18 14	19 39	5 48	7 13	4 58	15 09	22 20	.....	80	13 17.0	-10 42	10.2
Mon	Feb 17/Tue	Feb 18	9 24	18 15	19 40	5 47	7 12	5 03	15 12	23 17	.....	72	14 00.9	-15 51	10.1
Tue	Feb 18/Wed	Feb 19	9 28	18 15	19 40	5 46	7 11	5 08	15 15	0 16	.....	63	14 46.9	-20 25	10.1
Wed	Feb 19/Thu	Feb 20	9 32	18 16	19 41	5 45	7 10	5 13	15 18	1 16	.....	54	15 35.6	-24 13	10.1
Thu	Feb 20/Fri	Feb 21	9 36	18 17	19 42	5 44	7 09	5 17	15 21	2 17	.....	44	16 27.4	-27 02	10.0
Fri	Feb 21/Sat	Feb 22	9 40	18 18	19 43	5 43	7 08	5 22	15 24	3 17	.....	35	17 22.3	-28 38	10.0
Sat	Feb 22/Sun	Feb 23	9 44	18 19	19 44	5 42	7 06	5 27	15 27	4 13	.....	26	18 19.3	-28 51	10.0
Sun	Feb 23/Mon	Feb 24	9 48	18 20	19 45	5 41	7 05	5 32	15 29	5 03	.....	17	19 17.4	-27 31	9.9
Mon	Feb 24/Tue	Feb 25	9 52	18 21	19 46	5 40	7 04	5 37	15 32	5 47	.....	10	20 15.1	-24 38	9.9
Tue	Feb 25/Wed	Feb 26	9 56	18 22	19 46	5 38	7 03	5 41	15 35	6 25	.....	4	21 11.3	-20 19	9.9
Wed	Feb 26/Thu	Feb 27	10 00	18 23	19 47	5 37	7 01	5 46	15 38	6 58	17 03	1	22 05.5	-14 48	9.8
Thu	Feb 27/Fri	Feb 28	10 03	18 24	19 48	5 36	7 00	5 51	15 40	7 28	18 16	0	22 58.1	- 8 24	9.8
Fri	Feb 28/Sat	Mar 01	10 07	18 25	19 49	5 35	6 59	5 56	15 43	.....	19 27	2	23 49.8	- 1 29	9.8

Calendar for OU Norman, west longitude (h.m.s) = 6 29 47, latitude (d.m) = 35 12.2
 Rise/set times in Central time (6 hr W), uncorrected for elevation, DAYLIGHT time used, * shows clock reset.
 Moon info is for local midnight, even if moon is down. Program: John Thorstensen, Dartmouth College.

***** 2025 MARCH *****

Date (eve/morn)	LMST midn	----- Sun: -----				LST twilight:		----- Moon: -----				Twilight	
		set	twi.end	twi.beg	rise	eve	morn	rise	set	%illum	RA	Dec	hours
Sat Mar 01/Sun Mar 02	10 11	18 26	19 50	5 33	6 58	6 01	15 46	.....	20 39	7	0 41.5	5 32	9.7
Sun Mar 02/Mon Mar 03	10 15	18 27	19 51	5 32	6 56	6 05	15 48	.....	21 52	14	1 34.5	12 14	9.7
Mon Mar 03/Tue Mar 04	10 19	18 27	19 52	5 31	6 55	6 10	15 51	.....	23 06	23	2 29.5	18 13	9.7
Tue Mar 04/Wed Mar 05	10 23	18 28	19 53	5 29	6 54	6 15	15 54	.....	0 20	33	3 27.3	23 05	9.6
Wed Mar 05/Thu Mar 06	10 27	18 29	19 53	5 28	6 52	6 20	15 56	.....	1 32	44	4 27.7	26 29	9.6
Thu Mar 06/Fri Mar 07	10 31	18 30	19 54	5 27	6 51	6 25	15 59	.....	2 38	56	5 29.6	28 11	9.5
Fri Mar 07/Sat Mar 08	10 35	18 31	19 55	5 25	6 50	6 30	16 01	.....	3 36	66	6 31.2	28 07	9.5
Sat Mar 08/Sun Mar 09*	10 39	18 32	19 56	6 24	7 48	6 34	16 04	.....	5 24	76	7 30.7	26 22	9.5
Sun Mar 09/Mon Mar 10	9 43	19 33	20 57	6 23	7 47	6 39	16 06	.....	6 04	84	8 25.3	23 24	9.4
Mon Mar 10/Tue Mar 11	9 47	19 33	20 58	6 21	7 45	6 44	16 09	.....	6 37	91	9 17.7	19 08	9.4
Tue Mar 11/Wed Mar 12	9 51	19 34	20 59	6 20	7 44	6 49	16 12	17 18	7 05	96	10 06.4	14 04	9.4
Wed Mar 12/Thu Mar 13	9 55	19 35	21 00	6 18	7 43	6 54	16 14	18 19	7 29	99	10 52.3	8 30	9.3
Thu Mar 13/Fri Mar 14	9 59	19 36	21 00	6 17	7 41	6 58	16 17	19 17	.....	100	11 36.1	2 40	9.3
Fri Mar 14/Sat Mar 15	10 02	19 37	21 01	6 16	7 40	7 03	16 19	20 14	.....	99	12 18.9	- 3 11	9.2
Sat Mar 15/Sun Mar 16	10 06	19 38	21 02	6 14	7 39	7 08	16 22	21 11	.....	96	13 01.7	- 8 53	9.2
Sun Mar 16/Mon Mar 17	10 10	19 39	21 03	6 13	7 37	7 13	16 24	22 08	.....	92	13 45.3	-14 13	9.2
Mon Mar 17/Tue Mar 18	10 14	19 39	21 04	6 11	7 36	7 18	16 26	23 06	.....	86	14 30.7	-19 02	9.1
Tue Mar 18/Wed Mar 19	10 18	19 40	21 05	6 10	7 34	7 23	16 29	0 06	.....	79	15 18.3	-23 07	9.1
Wed Mar 19/Thu Mar 20	10 22	19 41	21 06	6 08	7 33	7 28	16 31	1 06	.....	71	16 08.8	-26 17	9.0
Thu Mar 20/Fri Mar 21	10 26	19 42	21 07	6 07	7 32	7 32	16 34	2 06	.....	62	17 02.0	-28 19	9.0
Fri Mar 21/Sat Mar 22	10 30	19 43	21 08	6 05	7 30	7 37	16 36	3 02	.....	52	17 57.4	-29 03	9.0
Sat Mar 22/Sun Mar 23	10 34	19 43	21 09	6 04	7 29	7 42	16 39	3 54	.....	42	18 54.0	-28 20	8.9
Sun Mar 23/Mon Mar 24	10 38	19 44	21 10	6 02	7 27	7 47	16 41	4 39	.....	32	19 50.6	-26 09	8.9
Mon Mar 24/Tue Mar 25	10 42	19 45	21 10	6 01	7 26	7 52	16 43	5 19	.....	23	20 46.2	-22 31	8.8
Tue Mar 25/Wed Mar 26	10 46	19 46	21 11	5 59	7 24	7 57	16 46	5 53	.....	14	21 40.4	-17 37	8.8
Wed Mar 26/Thu Mar 27	10 50	19 47	21 12	5 58	7 23	8 02	16 48	6 24	16 50	7	22 33.1	-11 39	8.8
Thu Mar 27/Fri Mar 28	10 54	19 47	21 13	5 56	7 22	8 07	16 51	6 53	18 01	2	23 25.0	- 4 57	8.7
Fri Mar 28/Sat Mar 29	10 58	19 48	21 14	5 54	7 20	8 11	16 53	.....	19 14	0	0 17.0	2 08	8.7
Sat Mar 29/Sun Mar 30	11 02	19 49	21 15	5 53	7 19	8 16	16 55	.....	20 27	1	1 10.3	9 11	8.6
Sun Mar 30/Mon Mar 31	11 06	19 50	21 16	5 51	7 17	8 21	16 58	.....	21 43	4	2 05.8	15 42	8.6
Mon Mar 31/Tue Apr 01	11 09	19 51	21 17	5 50	7 16	8 26	17 00	.....	23 00	11	3 04.4	21 15	8.5

***** 2025 APRIL *****

Date (eve/morn)	LMST midn	----- Sun: -----				LST twilight:		----- Moon: -----				Twilight	
		set	twi.end	twi.beg	rise	eve	morn	rise	set	%illum	RA	Dec	hours
Tue Apr 01/Wed Apr 02	11 13	19 52	21 18	5 48	7 15	8 31	17 03	.....	0 16	19	4 05.8	25 21	8.5
Wed Apr 02/Thu Apr 03	11 17	19 52	21 19	5 47	7 13	8 36	17 05	.....	1 28	29	5 09.2	27 43	8.5
Thu Apr 03/Fri Apr 04	11 21	19 53	21 20	5 45	7 12	8 41	17 07	.....	2 30	40	6 12.6	28 13	8.4
Fri Apr 04/Sat Apr 05	11 25	19 54	21 21	5 43	7 10	8 46	17 10	.....	3 23	51	7 13.8	26 56	8.4
Sat Apr 05/Sun Apr 06	11 29	19 55	21 22	5 42	7 09	8 51	17 12	.....	4 05	61	8 11.3	24 08	8.3
Sun Apr 06/Mon Apr 07	11 33	19 56	21 23	5 40	7 08	8 56	17 14	.....	4 40	71	9 04.5	20 08	8.3
Mon Apr 07/Tue Apr 08	11 37	19 56	21 24	5 39	7 06	9 01	17 17	.....	5 09	80	9 53.8	15 17	8.2
Tue Apr 08/Wed Apr 09	11 41	19 57	21 25	5 37	7 05	9 06	17 19	.....	5 34	87	10 39.8	9 53	8.2
Wed Apr 09/Thu Apr 10	11 45	19 58	21 26	5 36	7 04	9 11	17 21	17 11	5 57	93	11 23.8	4 09	8.2
Thu Apr 10/Fri Apr 11	11 49	19 59	21 27	5 34	7 02	9 16	17 24	18 08	6 20	97	12 06.5	- 1 40	8.1
Fri Apr 11/Sat Apr 12	11 53	20 00	21 28	5 32	7 01	9 21	17 26	19 04	6 42	99	12 49.1	- 7 24	8.1
Sat Apr 12/Sun Apr 13	11 57	20 00	21 29	5 31	7 00	9 26	17 29	20 01	.....	100	13 32.5	-12 52	8.0
Sun Apr 13/Mon Apr 14	12 01	20 01	21 30	5 29	6 58	9 31	17 31	20 59	.....	98	14 17.5	-17 51	8.0
Mon Apr 14/Tue Apr 15	12 05	20 02	21 31	5 28	6 57	9 36	17 33	21 58	.....	95	15 04.8	-22 11	7.9
Tue Apr 15/Wed Apr 16	12 09	20 03	21 32	5 26	6 56	9 41	17 36	22 58	.....	91	15 54.7	-25 37	7.9
Wed Apr 16/Thu Apr 17	12 13	20 04	21 34	5 25	6 55	9 46	17 38	23 58	.....	84	16 47.3	-27 59	7.9
Thu Apr 17/Fri Apr 18	12 17	20 04	21 35	5 23	6 53	9 51	17 41	0 55	.....	77	17 42.1	-29 04	7.8
Fri Apr 18/Sat Apr 19	12 20	20 05	21 36	5 22	6 52	9 56	17 43	1 48	.....	68	18 38.0	-28 46	7.8
Sat Apr 19/Sun Apr 20	12 24	20 06	21 37	5 20	6 51	10 01	17 45	2 34	.....	58	19 33.8	-27 01	7.7
Sun Apr 20/Mon Apr 21	12 28	20 07	21 38	5 19	6 50	10 06	17 48	3 15	.....	48	20 28.6	-23 54	7.7
Mon Apr 21/Tue Apr 22	12 32	20 08	21 39	5 17	6 48	10 11	17 50	3 50	.....	38	21 21.8	-19 32	7.6
Tue Apr 22/Wed Apr 23	12 36	20 09	21 40	5 16	6 47	10 16	17 53	4 21	.....	27	22 13.5	-14 05	7.6
Wed Apr 23/Thu Apr 24	12 40	20 09	21 41	5 14	6 46	10 21	17 55	4 50	.....	18	23 04.2	- 7 49	7.5
Thu Apr 24/Fri Apr 25	12 44	20 10	21 42	5 13	6 45	10 26	17 58	5 19	.....	10	23 55.1	- 1 01	7.5
Fri Apr 25/Sat Apr 26	12 48	20 11	21 44	5 11	6 44	10 31	18 00	5 48	18 00	4	0 47.1	5 59	7.5
Sat Apr 26/Sun Apr 27	12 52	20 12	21 45	5 10	6 43	10 36	18 03	6 21	19 14	1	1 41.4	12 45	7.4
Sun Apr 27/Mon Apr 28	12 56	20 13	21 46	5 08	6 41	10 41	18 05	.....	20 31	0	2 39.1	18 48	7.4
Mon Apr 28/Tue Apr 29	13 00	20 13	21 47	5 07	6 40	10 47	18 08	.....	21 50	3	3 40.4	23 36	7.3
Tue Apr 29/Wed Apr 30	13 04	20 14	21 48	5 05	6 39	10 52	18 10	.....	23 06	8	4 44.7	26 44	7.3
Wed Apr 30/Thu May 01	13 08	20 15	21 49	5 04	6 38	10 57	18 13	0 16	16	5 50.1	27 57	7.2

Calendar for OU Norman, west longitude (h.m.s) = 6 29 47, latitude (d.m) = 35 12.2
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***** 2025 MAY *****

Date (eve/morn)	LMST midn	----- Sun: -----				LST twilight:		----- Moon: -----				Twilight	
		set	twi.end	twi.beg	rise	eve	morn	rise	set	%illum	RA	Dec	hours
Thu May 01/Fri May 02	13 12	20 16	21 51	5 03	6 37	11 02	18 15	.....	1 15	25	6 53.8	27 13	7.2
Fri May 02/Sat May 03	13 16	20 17	21 52	5 01	6 36	11 07	18 18	.....	2 02	35	7 53.9	24 48	7.2
Sat May 03/Sun May 04	13 20	20 18	21 53	5 00	6 35	11 12	18 20	.....	2 40	46	8 49.3	21 04	7.1
Sun May 04/Mon May 05	13 24	20 18	21 54	4 59	6 34	11 17	18 23	.....	3 12	56	9 40.2	16 23	7.1
Mon May 05/Tue May 06	13 27	20 19	21 55	4 57	6 33	11 22	18 26	.....	3 38	66	10 27.2	11 06	7.0
Tue May 06/Wed May 07	13 31	20 20	21 56	4 56	6 32	11 27	18 28	.....	4 02	75	11 11.7	5 27	7.0
Wed May 07/Thu May 08	13 35	20 21	21 58	4 55	6 31	11 33	18 31	.....	4 25	83	11 54.5	- 0 19	7.0
Thu May 08/Fri May 09	13 39	20 22	21 59	4 53	6 30	11 38	18 33	.....	4 47	89	12 37.0	- 6 03	6.9
Fri May 09/Sat May 10	13 43	20 22	22 00	4 52	6 30	11 43	18 36	17 55	5 11	94	13 20.0	-11 34	6.9
Sat May 10/Sun May 11	13 47	20 23	22 01	4 51	6 29	11 48	18 39	18 52	5 36	98	14 04.5	-16 41	6.8
Sun May 11/Mon May 12	13 51	20 24	22 02	4 50	6 28	11 53	18 42	19 51	6 06	100	14 51.3	-21 12	6.8
Mon May 12/Tue May 13	13 55	20 25	22 03	4 49	6 27	11 58	18 44	20 51	.....	100	15 40.9	-24 53	6.8
Tue May 13/Wed May 14	13 59	20 26	22 05	4 47	6 26	12 03	18 47	21 51	.....	98	16 33.3	-27 33	6.7
Wed May 14/Thu May 15	14 03	20 26	22 06	4 46	6 26	12 08	18 50	22 49	.....	94	17 28.1	-28 57	6.7
Thu May 15/Fri May 16	14 07	20 27	22 07	4 45	6 25	12 13	18 53	23 44	.....	88	18 24.1	-28 58	6.6
Fri May 16/Sat May 17	14 11	20 28	22 08	4 44	6 24	12 19	18 56	0 32	.....	81	19 20.1	-27 34	6.6
Sat May 17/Sun May 18	14 15	20 29	22 09	4 43	6 23	12 24	18 59	1 13	.....	73	20 14.9	-24 46	6.6
Sun May 18/Mon May 19	14 19	20 30	22 10	4 42	6 23	12 29	19 02	1 49	.....	63	21 07.8	-20 45	6.5
Mon May 19/Tue May 20	14 23	20 30	22 11	4 41	6 22	12 34	19 04	2 21	.....	53	21 58.8	-15 41	6.5
Tue May 20/Wed May 21	14 27	20 31	22 12	4 40	6 21	12 39	19 07	2 50	.....	42	22 48.4	- 9 49	6.5
Wed May 21/Thu May 22	14 31	20 32	22 14	4 39	6 21	12 44	19 10	3 17	.....	31	23 37.7	- 3 22	6.4
Thu May 22/Fri May 23	14 34	20 33	22 15	4 38	6 20	12 49	19 13	3 45	.....	21	0 27.6	3 23	6.4
Fri May 23/Sat May 24	14 38	20 33	22 16	4 37	6 20	12 54	19 17	4 16	.....	12	1 19.6	10 04	6.4
Sat May 24/Sun May 25	14 42	20 34	22 17	4 37	6 19	12 59	19 20	4 50	18 03	6	2 14.8	16 18	6.3
Sun May 25/Mon May 26	14 46	20 35	22 18	4 36	6 19	13 04	19 23	5 31	19 20	1	3 14.0	21 34	6.3
Mon May 26/Tue May 27	14 50	20 35	22 19	4 35	6 18	13 09	19 26	6 22	20 39	0	4 17.2	25 25	6.3
Tue May 27/Wed May 28	14 54	20 36	22 20	4 34	6 18	13 14	19 29	.....	21 53	2	5 22.9	27 25	6.2
Wed May 28/Thu May 29	14 58	20 37	22 21	4 34	6 17	13 19	19 32	.....	22 59	6	6 28.5	27 25	6.2
Thu May 29/Fri May 30	15 02	20 37	22 22	4 33	6 17	13 23	19 36	.....	23 53	13	7 31.4	25 34	6.2
Fri May 30/Sat May 31	15 06	20 38	22 23	4 32	6 17	13 28	19 39	.....	0 36	21	8 29.8	22 10	6.2
Sat May 31/Sun Jun 01	15 10	20 39	22 23	4 32	6 16	13 33	19 42	.....	1 11	30	9 23.2	17 40	6.1

***** 2025 JUNE *****

Date (eve/morn)	LMST midn	----- Sun: -----				LST twilight:		----- Moon: -----				Twilight	
		set	twi.end	twi.beg	rise	eve	morn	rise	set	%illum	RA	Dec	hours
Sun Jun 01/Mon Jun 02	15 14	20 39	22 24	4 31	6 16	13 38	19 46	.....	1 40	40	10 12.2	12 28	6.1
Mon Jun 02/Tue Jun 03	15 18	20 40	22 25	4 31	6 16	13 43	19 49	.....	2 05	50	10 57.9	6 51	6.1
Tue Jun 03/Wed Jun 04	15 22	20 40	22 26	4 30	6 16	13 48	19 53	.....	2 28	60	11 41.4	1 04	6.1
Wed Jun 04/Thu Jun 05	15 26	20 41	22 27	4 30	6 15	13 52	19 56	.....	2 51	69	12 24.0	- 4 42	6.0
Thu Jun 05/Fri Jun 06	15 30	20 42	22 28	4 29	6 15	13 57	20 00	.....	3 14	78	13 06.8	-10 15	6.0
Fri Jun 06/Sat Jun 07	15 34	20 42	22 28	4 29	6 15	14 02	20 03	.....	3 39	85	13 50.9	-15 28	6.0
Sat Jun 07/Sun Jun 08	15 38	20 43	22 29	4 29	6 15	14 06	20 07	17 43	4 07	91	14 37.0	-20 08	6.0
Sun Jun 08/Mon Jun 09	15 42	20 43	22 30	4 28	6 15	14 11	20 11	18 43	4 40	96	15 25.9	-24 04	6.0
Mon Jun 09/Tue Jun 10	15 45	20 44	22 30	4 28	6 15	14 16	20 14	19 43	5 19	99	16 17.9	-27 01	6.0
Tue Jun 10/Wed Jun 11	15 49	20 44	22 31	4 28	6 15	14 20	20 18	20 43	6 06	100	17 12.7	-28 46	5.9
Wed Jun 11/Thu Jun 12	15 53	20 45	22 32	4 28	6 15	14 25	20 22	21 39	.....	99	18 09.1	-29 08	5.9
Thu Jun 12/Fri Jun 13	15 57	20 45	22 32	4 28	6 15	14 29	20 26	22 29	.....	96	19 06.0	-28 02	5.9
Fri Jun 13/Sat Jun 14	16 01	20 45	22 33	4 27	6 15	14 34	20 29	23 13	.....	91	20 01.8	-25 30	5.9
Sat Jun 14/Sun Jun 15	16 05	20 46	22 33	4 27	6 15	14 38	20 33	23 51	.....	85	20 55.5	-21 42	5.9
Sun Jun 15/Mon Jun 16	16 09	20 46	22 34	4 27	6 15	14 42	20 37	0 23	.....	76	21 47.0	-16 49	5.9
Mon Jun 16/Tue Jun 17	16 13	20 46	22 34	4 27	6 15	14 47	20 41	0 52	.....	67	22 36.6	-11 08	5.9
Tue Jun 17/Wed Jun 18	16 17	20 47	22 34	4 28	6 15	14 51	20 45	1 20	.....	56	23 25.1	- 4 52	5.9
Wed Jun 18/Thu Jun 19	16 21	20 47	22 35	4 28	6 15	14 55	20 49	1 46	.....	45	0 13.8	1 41	5.9
Thu Jun 19/Fri Jun 20	16 25	20 47	22 35	4 28	6 16	15 00	20 53	2 15	.....	34	1 03.8	8 13	5.9
Fri Jun 20/Sat Jun 21	16 29	20 47	22 35	4 28	6 16	15 04	20 58	2 46	.....	24	1 56.3	14 26	5.9
Sat Jun 21/Sun Jun 22	16 33	20 48	22 35	4 28	6 16	15 08	21 02	3 23	.....	14	2 52.6	19 53	5.9
Sun Jun 22/Mon Jun 23	16 37	20 48	22 35	4 29	6 16	15 12	21 06	4 08	18 14	7	3 53.0	24 09	5.9
Mon Jun 23/Tue Jun 24	16 41	20 48	22 36	4 29	6 17	15 16	21 10	5 03	19 29	2	4 56.9	26 47	5.9
Tue Jun 24/Wed Jun 25	16 45	20 48	22 36	4 29	6 17	15 20	21 15	6 07	20 39	0	6 02.3	27 31	5.9
Wed Jun 25/Thu Jun 26	16 49	20 48	22 36	4 30	6 17	15 24	21 19	.....	21 39	1	7 06.4	26 20	5.9
Thu Jun 26/Fri Jun 27	16 52	20 48	22 36	4 30	6 18	15 28	21 23	.....	22 27	4	8 07.1	23 26	5.9
Fri Jun 27/Sat Jun 28	16 56	20 48	22 36	4 31	6 18	15 32	21 28	.....	23 07	9	9 03.0	19 14	5.9
Sat Jun 28/Sun Jun 29	17 00	20 48	22 36	4 31	6 18	15 36	21 32	.....	23 39	17	9 54.3	14 08	5.9
Sun Jun 29/Mon Jun 30	17 04	20 48	22 35	4 32	6 19	15 39	21 37	.....	0 06	25	10 41.7	8 32	5.9
Mon Jun 30/Tue Jul 01	17 08	20 48	22 35	4 32	6 19	15 43	21 41	.....	0 30	34	11 26.4	2 43	6.0

Calendar for OU Norman, west longitude (h.m.s) = 6 29 47, latitude (d.m) = 35 12.2
 Rise/set times in Central time (6 hr W), uncorrected for elevation, DAYLIGHT time used, * shows clock reset.
 Moon info is for local midnight, even if moon is down. Program: John Thorstensen, Dartmouth College.

***** 2025 JULY *****

Date (eve/morn)		LMST	----- Sun: -----				LST twilight:		----- Moon: -----				Twi-Twi	
		midn	set	twi.end	twi.beg	rise	eve	morn	rise	set	%illum	RA	Dec	hours
Tue Jul 01/Wed Jul 02		17 12	20 48	22 35	4 33	6 20	15 47	21 46	.....	0 53	44	12 09.6	- 3 07	6.0
Wed Jul 02/Thu Jul 03		17 16	20 48	22 35	4 34	6 20	15 51	21 50	.....	1 17	53	12 52.5	- 8 47	6.0
Thu Jul 03/Fri Jul 04		17 20	20 48	22 34	4 34	6 21	15 54	21 55	.....	1 41	63	13 36.1	-14 07	6.0
Fri Jul 04/Sat Jul 05		17 24	20 48	22 34	4 35	6 21	15 58	22 00	.....	2 08	72	14 21.5	-18 57	6.0
Sat Jul 05/Sun Jul 06		17 28	20 48	22 34	4 36	6 22	16 01	22 04	.....	2 39	80	15 09.4	-23 06	6.0
Sun Jul 06/Mon Jul 07		17 32	20 48	22 33	4 36	6 22	16 05	22 09	17 34	3 16	87	16 00.4	-26 21	6.1
Mon Jul 07/Tue Jul 08		17 36	20 47	22 33	4 37	6 23	16 08	22 14	18 34	4 00	93	16 54.5	-28 28	6.1
Tue Jul 08/Wed Jul 09		17 40	20 47	22 32	4 38	6 23	16 12	22 19	19 31	4 51	97	17 51.0	-29 15	6.1
Wed Jul 09/Thu Jul 10		17 44	20 47	22 32	4 39	6 24	16 15	22 23	20 24	5 50	99	18 48.5	-28 34	6.1
Thu Jul 10/Fri Jul 11		17 48	20 46	22 31	4 40	6 24	16 19	22 28	21 11	.....	100	19 45.6	-26 22	6.1
Fri Jul 11/Sat Jul 12		17 52	20 46	22 31	4 41	6 25	16 22	22 33	21 51	.....	98	20 40.9	-22 48	6.2
Sat Jul 12/Sun Jul 13		17 56	20 46	22 30	4 41	6 26	16 25	22 38	22 25	.....	94	21 33.9	-18 03	6.2
Sun Jul 13/Mon Jul 14		18 00	20 45	22 29	4 42	6 26	16 28	22 43	22 56	.....	87	22 24.7	-12 25	6.2
Mon Jul 14/Tue Jul 15		18 03	20 45	22 28	4 43	6 27	16 32	22 48	23 23	.....	79	23 14.0	- 6 09	6.2
Tue Jul 15/Wed Jul 16		18 07	20 44	22 28	4 44	6 28	16 35	22 52	23 50	.....	70	0 02.7	0 24	6.3
Wed Jul 16/Thu Jul 17		18 11	20 44	22 27	4 45	6 28	16 38	22 57	0 17	.....	59	0 52.1	6 58	6.3
Thu Jul 17/Fri Jul 18		18 15	20 43	22 26	4 46	6 29	16 41	23 02	0 47	.....	47	1 43.4	13 12	6.3
Fri Jul 18/Sat Jul 19		18 19	20 43	22 25	4 47	6 30	16 44	23 07	1 21	.....	36	2 37.6	18 46	6.4
Sat Jul 19/Sun Jul 20		18 23	20 42	22 24	4 48	6 30	16 47	23 12	2 01	.....	26	3 35.6	23 15	6.4
Sun Jul 20/Mon Jul 21		18 27	20 42	22 23	4 49	6 31	16 50	23 17	2 51	.....	16	4 37.0	26 18	6.4
Mon Jul 21/Tue Jul 22		18 31	20 41	22 22	4 50	6 32	16 53	23 22	3 50	18 23	9	5 40.7	27 34	6.5
Tue Jul 22/Wed Jul 23		18 35	20 40	22 21	4 51	6 32	16 56	23 27	4 56	19 26	3	6 44.3	26 59	6.5
Wed Jul 23/Thu Jul 24		18 39	20 40	22 20	4 53	6 33	16 59	23 32	6 07	20 18	1	7 45.5	24 38	6.5
Thu Jul 24/Fri Jul 25		18 43	20 39	22 19	4 54	6 34	17 02	23 37	.....	21 01	0	8 42.7	20 51	6.6
Fri Jul 25/Sat Jul 26		18 47	20 38	22 18	4 55	6 35	17 05	23 42	.....	21 36	2	9 35.5	16 00	6.6
Sat Jul 26/Sun Jul 27		18 51	20 38	22 17	4 56	6 35	17 08	23 47	.....	22 05	7	10 24.4	10 30	6.6
Sun Jul 27/Mon Jul 28		18 55	20 37	22 16	4 57	6 36	17 10	23 52	.....	22 31	12	11 10.3	4 40	6.7
Mon Jul 28/Tue Jul 29		18 59	20 36	22 15	4 58	6 37	17 13	23 57	.....	22 55	20	11 54.2	- 1 15	6.7
Tue Jul 29/Wed Jul 30		19 03	20 35	22 14	4 59	6 38	17 16	0 03	.....	23 18	28	12 37.4	- 7 02	6.8
Wed Jul 30/Thu Jul 31		19 07	20 34	22 12	5 00	6 38	17 19	0 08	.....	23 42	37	13 20.8	-12 31	6.8
Thu Jul 31/Fri Aug 01		19 10	20 33	22 11	5 01	6 39	17 21	0 13	.....	0 08	47	14 05.5	-17 32	6.8

***** 2025 AUGUST *****

Date (eve/morn)		LMST	----- Sun: -----				LST twilight:		----- Moon: -----				Twi-Twi	
		midn	set	twi.end	twi.beg	rise	eve	morn	rise	set	%illum	RA	Dec	hours
Fri Aug 01/Sat Aug 02		19 14	20 33	22 10	5 02	6 40	17 24	0 18	.....	0 37	56	14 52.3	-21 55	6.9
Sat Aug 02/Sun Aug 03		19 18	20 32	22 09	5 04	6 41	17 27	0 23	.....	1 11	65	15 41.9	-25 28	6.9
Sun Aug 03/Mon Aug 04		19 22	20 31	22 07	5 05	6 41	17 29	0 28	.....	1 52	74	16 34.6	-27 58	7.0
Mon Aug 04/Tue Aug 05		19 26	20 30	22 06	5 06	6 42	17 32	0 33	.....	2 41	82	17 30.0	-29 14	7.0
Tue Aug 05/Wed Aug 06		19 30	20 29	22 05	5 07	6 43	17 35	0 38	18 16	3 37	89	18 27.3	-29 03	7.0
Wed Aug 06/Thu Aug 07		19 34	20 28	22 03	5 08	6 44	17 37	0 43	19 05	4 40	95	19 24.9	-27 22	7.1
Thu Aug 07/Fri Aug 08		19 38	20 27	22 02	5 09	6 44	17 40	0 48	19 48	5 47	98	20 21.5	-24 12	7.1
Fri Aug 08/Sat Aug 09		19 42	20 26	22 01	5 10	6 45	17 42	0 53	20 25	.....	100	21 16.2	-19 43	7.2
Sat Aug 09/Sun Aug 10		19 46	20 25	21 59	5 11	6 46	17 45	0 58	20 57	.....	99	22 08.7	-14 10	7.2
Sun Aug 10/Mon Aug 11		19 50	20 24	21 58	5 12	6 47	17 47	1 03	21 26	.....	96	22 59.6	- 7 53	7.2
Mon Aug 11/Tue Aug 12		19 54	20 23	21 56	5 14	6 48	17 50	1 08	21 53	.....	90	23 49.6	- 1 11	7.3
Tue Aug 12/Wed Aug 13		19 58	20 21	21 55	5 15	6 48	17 52	1 13	22 21	.....	82	0 39.8	5 36	7.3
Wed Aug 13/Thu Aug 14		20 02	20 20	21 54	5 16	6 49	17 55	1 18	22 49	.....	72	1 31.4	12 04	7.4
Thu Aug 14/Fri Aug 15		20 06	20 19	21 52	5 17	6 50	17 57	1 23	23 22	.....	61	2 25.5	17 52	7.4
Fri Aug 15/Sat Aug 16		20 10	20 18	21 51	5 18	6 51	18 00	1 28	0 00	.....	50	3 22.6	22 37	7.5
Sat Aug 16/Sun Aug 17		20 14	20 17	21 49	5 19	6 51	18 02	1 33	0 46	.....	38	4 22.8	25 58	7.5
Sun Aug 17/Mon Aug 18		20 17	20 16	21 48	5 20	6 52	18 05	1 38	1 40	.....	28	5 25.2	27 38	7.5
Mon Aug 18/Tue Aug 19		20 21	20 14	21 46	5 21	6 53	18 07	1 43	2 43	17 17	18	6 27.8	27 29	7.6
Tue Aug 19/Wed Aug 20		20 25	20 13	21 45	5 22	6 54	18 10	1 48	3 52	18 12	10	7 28.6	25 37	7.6
Wed Aug 20/Thu Aug 21		20 29	20 12	21 43	5 23	6 54	18 12	1 53	5 01	18 58	5	8 25.9	22 14	7.7
Thu Aug 21/Fri Aug 22		20 33	20 11	21 41	5 24	6 55	18 14	1 58	6 09	19 34	1	9 19.2	17 44	7.7
Fri Aug 22/Sat Aug 23		20 37	20 09	21 40	5 25	6 56	18 17	2 03	.....	20 05	0	10 08.7	12 26	7.8
Sat Aug 23/Sun Aug 24		20 41	20 08	21 38	5 26	6 57	18 19	2 08	.....	20 32	1	10 55.2	6 41	7.8
Sun Aug 24/Mon Aug 25		20 45	20 07	21 37	5 27	6 57	18 21	2 13	.....	20 57	4	11 39.5	0 45	7.8
Mon Aug 25/Tue Aug 26		20 49	20 06	21 35	5 28	6 58	18 24	2 18	.....	21 20	9	12 22.8	- 5 07	7.9
Tue Aug 26/Wed Aug 27		20 53	20 04	21 34	5 29	6 59	18 26	2 23	.....	21 44	15	13 06.1	-10 44	7.9
Wed Aug 27/Thu Aug 28		20 57	20 03	21 32	5 30	7 00	18 29	2 28	.....	22 09	22	13 50.2	-15 56	8.0
Thu Aug 28/Fri Aug 29		21 01	20 02	21 30	5 31	7 00	18 31	2 33	.....	22 37	31	14 36.1	-20 32	8.0
Fri Aug 29/Sat Aug 30		21 05	20 00	21 29	5 32	7 01	18 33	2 38	.....	23 08	40	15 24.4	-24 21	8.1
Sat Aug 30/Sun Aug 31		21 09	19 59	21 27	5 33	7 02	18 36	2 43	.....	23 46	49	16 15.5	-27 13	8.1
Sun Aug 31/Mon Sep 01		21 13	19 57	21 26	5 34	7 03	18 38	2 48	.....	0 31	58	17 09.2	-28 55	8.1

Calendar for OU Norman, west longitude (h.m.s) = 6 29 47, latitude (d.m) = 35 12.2
 Rise/set times in Central time (6 hr W), uncorrected for elevation, DAYLIGHT time used, * shows clock reset.
 Moon info is for local midnight, even if moon is down. Program: John Thorstensen, Dartmouth College.

***** 2025 SEPTEMBER *****

Date (eve/morn)	LMST midn	----- Sun: -----					LST twilight:		----- Moon: -----					RA	Dec	Twi-Twi hours
		set	twi.end	twi.beg	rise	rise	eve	morn	rise	set	%illum					
Mon Sep 01/Tue Sep 02	21 17	19 56	21 24	5 35	7 03	18 40	2 53	.....	1 23	68	18 05.0	-29 16	8.2		
Tue Sep 02/Wed Sep 03	21 21	19 55	21 22	5 36	7 04	18 43	2 58	16 56	2 23	77	19 01.9	-28 11	8.2			
Wed Sep 03/Thu Sep 04	21 25	19 53	21 21	5 37	7 05	18 45	3 03	17 41	3 28	85	19 58.4	-25 36	8.3			
Thu Sep 04/Fri Sep 05	21 28	19 52	21 19	5 38	7 06	18 47	3 08	18 21	4 35	92	20 53.7	-21 38	8.3			
Fri Sep 05/Sat Sep 06	21 32	19 50	21 18	5 39	7 06	18 50	3 12	18 55	5 44	97	21 47.4	-16 27	8.4			
Sat Sep 06/Sun Sep 07	21 36	19 49	21 16	5 40	7 07	18 52	3 17	19 25	6 53	100	22 39.6	-10 19	8.4			
Sun Sep 07/Mon Sep 08	21 40	19 48	21 14	5 41	7 08	18 54	3 22	19 54	.....	100	23 31.0	- 3 33	8.4		
Mon Sep 08/Tue Sep 09	21 44	19 46	21 13	5 42	7 08	18 57	3 27	20 22	.....	97	0 22.5	3 27	8.5		
Tue Sep 09/Wed Sep 10	21 48	19 45	21 11	5 43	7 09	18 59	3 32	20 51	.....	92	1 15.3	10 18	8.5		
Wed Sep 10/Thu Sep 11	21 52	19 43	21 10	5 44	7 10	19 01	3 37	21 23	.....	84	2 10.3	16 32	8.6		
Thu Sep 11/Fri Sep 12	21 56	19 42	21 08	5 45	7 11	19 04	3 42	21 59	.....	74	3 08.2	21 45	8.6		
Fri Sep 12/Sat Sep 13	22 00	19 40	21 06	5 45	7 11	19 06	3 46	22 43	.....	63	4 09.1	25 32	8.7		
Sat Sep 13/Sun Sep 14	22 04	19 39	21 05	5 46	7 12	19 08	3 51	23 36	.....	52	5 12.0	27 36	8.7		
Sun Sep 14/Mon Sep 15	22 08	19 38	21 03	5 47	7 13	19 11	3 56	0 36	.....	41	6 14.9	27 51	8.7		
Mon Sep 15/Tue Sep 16	22 12	19 36	21 02	5 48	7 14	19 13	4 01	1 42	.....	30	7 15.9	26 19	8.8		
Tue Sep 16/Wed Sep 17	22 16	19 35	21 00	5 49	7 14	19 15	4 06	2 51	16 57	21	8 13.4	23 17	8.8			
Wed Sep 17/Thu Sep 18	22 20	19 33	20 58	5 50	7 15	19 18	4 10	3 58	17 35	13	9 06.8	19 04	8.9			
Thu Sep 18/Fri Sep 19	22 24	19 32	20 57	5 51	7 16	19 20	4 15	5 03	18 08	7	9 56.4	14 01	8.9			
Fri Sep 19/Sat Sep 20	22 28	19 30	20 55	5 51	7 17	19 22	4 20	6 05	18 35	3	10 42.8	8 26	8.9			
Sat Sep 20/Sun Sep 21	22 32	19 29	20 54	5 52	7 17	19 25	4 25	7 05	19 00	0	11 27.2	2 36	9.0			
Sun Sep 21/Mon Sep 22	22 35	19 27	20 52	5 53	7 18	19 27	4 30	.....	19 23	0	12 10.3	- 3 16	9.0		
Mon Sep 22/Tue Sep 23	22 39	19 26	20 51	5 54	7 19	19 30	4 34	.....	19 47	2	12 53.3	- 8 57	9.1		
Tue Sep 23/Wed Sep 24	22 43	19 25	20 49	5 55	7 20	19 32	4 39	.....	20 11	5	13 37.0	-14 16	9.1		
Wed Sep 24/Thu Sep 25	22 47	19 23	20 48	5 56	7 20	19 34	4 44	.....	20 38	10	14 22.1	-19 03	9.1		
Thu Sep 25/Fri Sep 26	22 51	19 22	20 46	5 56	7 21	19 37	4 49	.....	21 08	17	15 09.4	-23 07	9.2		
Fri Sep 26/Sat Sep 27	22 55	19 20	20 45	5 57	7 22	19 39	4 53	.....	21 43	24	15 59.1	-26 15	9.2		
Sat Sep 27/Sun Sep 28	22 59	19 19	20 43	5 58	7 23	19 42	4 58	.....	22 25	33	16 51.3	-28 19	9.2		
Sun Sep 28/Mon Sep 29	23 03	19 17	20 42	5 59	7 23	19 44	5 03	.....	23 13	42	17 45.4	-29 07	9.3		
Mon Sep 29/Tue Sep 30	23 07	19 16	20 40	6 00	7 24	19 47	5 08	.....	0 09	51	18 40.7	-28 34	9.3		
Tue Sep 30/Wed Oct 01	23 11	19 15	20 39	6 01	7 25	19 49	5 12	.....	1 10	61	19 36.0	-26 36	9.4		

***** 2025 OCTOBER *****

Date (eve/morn)	LMST midn	----- Sun: -----					LST twilight:		----- Moon: -----					RA	Dec	Twi-Twi hours
		set	twi.end	twi.beg	rise	rise	eve	morn	rise	set	%illum					
Wed Oct 01/Thu Oct 02	23 15	19 13	20 37	6 01	7 26	19 52	5 17	.....	2 15	71	20 30.6	-23 16	9.4		
Thu Oct 02/Fri Oct 03	23 19	19 12	20 36	6 02	7 26	19 54	5 22	16 50	3 22	80	21 23.8	-18 40	9.4			
Fri Oct 03/Sat Oct 04	23 23	19 10	20 34	6 03	7 27	19 57	5 27	17 22	4 30	88	22 15.9	-13 00	9.5			
Sat Oct 04/Sun Oct 05	23 27	19 09	20 33	6 04	7 28	19 59	5 31	17 51	5 39	95	23 07.4	- 6 31	9.5			
Sun Oct 05/Mon Oct 06	23 31	19 08	20 32	6 05	7 29	20 02	5 36	18 19	6 49	99	23 59.1	0 28	9.5			
Mon Oct 06/Tue Oct 07	23 35	19 06	20 30	6 05	7 30	20 04	5 41	18 48	.....	100	0 52.3	7 34	9.6		
Tue Oct 07/Wed Oct 08	23 39	19 05	20 29	6 06	7 30	20 07	5 46	19 20	.....	98	1 47.9	14 17	9.6		
Wed Oct 08/Thu Oct 09	23 43	19 03	20 28	6 07	7 31	20 09	5 50	19 55	.....	94	2 46.9	20 08	9.7		
Thu Oct 09/Fri Oct 10	23 46	19 02	20 26	6 08	7 32	20 12	5 55	20 38	.....	86	3 49.3	24 36	9.7		
Fri Oct 10/Sat Oct 11	23 50	19 01	20 25	6 09	7 33	20 15	6 00	21 29	.....	77	4 54.1	27 18	9.7		
Sat Oct 11/Sun Oct 12	23 54	18 59	20 24	6 09	7 34	20 17	6 05	22 28	.....	66	5 59.3	28 02	9.8		
Sun Oct 12/Mon Oct 13	23 58	18 58	20 22	6 10	7 35	20 20	6 09	23 34	.....	55	7 02.4	26 53	9.8		
Mon Oct 13/Tue Oct 14	0 02	18 57	20 21	6 11	7 35	20 23	6 14	0 43	.....	44	8 01.6	24 07	9.8		
Tue Oct 14/Wed Oct 15	0 06	18 55	20 20	6 12	7 36	20 25	6 19	1 51	.....	34	8 56.2	20 07	9.9		
Wed Oct 15/Thu Oct 16	0 10	18 54	20 19	6 13	7 37	20 28	6 24	2 56	16 11	25	9 46.4	15 14	9.9			
Thu Oct 16/Fri Oct 17	0 14	18 53	20 17	6 13	7 38	20 31	6 28	3 58	16 39	16	10 33.1	9 47	9.9			
Fri Oct 17/Sat Oct 18	0 18	18 52	20 16	6 14	7 39	20 33	6 33	4 58	17 04	10	11 17.4	4 04	10.0			
Sat Oct 18/Sun Oct 19	0 22	18 50	20 15	6 15	7 40	20 36	6 38	5 56	17 28	5	12 00.3	- 1 44	10.0			
Sun Oct 19/Mon Oct 20	0 26	18 49	20 14	6 16	7 41	20 39	6 43	6 53	17 51	2	12 42.9	- 7 24	10.0			
Mon Oct 20/Tue Oct 21	0 30	18 48	20 13	6 17	7 41	20 42	6 47	7 51	18 15	0	13 26.0	-12 47	10.1			
Tue Oct 21/Wed Oct 22	0 34	18 47	20 12	6 17	7 42	20 45	6 52	.....	18 41	1	14 10.5	-17 40	10.1		
Wed Oct 22/Thu Oct 23	0 38	18 46	20 10	6 18	7 43	20 48	6 57	.....	19 10	3	14 57.0	-21 53	10.1		
Thu Oct 23/Fri Oct 24	0 42	18 44	20 09	6 19	7 44	20 50	7 02	.....	19 43	6	15 45.8	-25 16	10.2		
Fri Oct 24/Sat Oct 25	0 46	18 43	20 08	6 20	7 45	20 53	7 06	.....	20 22	12	16 37.0	-27 35	10.2		
Sat Oct 25/Sun Oct 26	0 50	18 42	20 07	6 21	7 46	20 56	7 11	.....	21 08	18	17 30.0	-28 44	10.2		
Sun Oct 26/Mon Oct 27	0 53	18 41	20 06	6 21	7 47	20 59	7 16	.....	22 00	26	18 24.1	-28 34	10.3		
Mon Oct 27/Tue Oct 28	0 57	18 40	20 05	6 22	7 48	21 02	7 21	.....	22 59	35	19 18.2	-27 03	10.3		
Tue Oct 28/Wed Oct 29	1 01	18 39	20 04	6 23	7 49	21 05	7 25	.....	0 01	45	20 11.4	-24 15	10.3		
Wed Oct 29/Thu Oct 30	1 05	18 38	20 03	6 24	7 50	21 08	7 30	.....	1 05	55	21 03.4	-20 14	10.3		
Thu Oct 30/Fri Oct 31	1 09	18 37	20 02	6 25	7 51	21 11	7 35	.....	2 10	65	21 54.1	-15 09	10.4		
Fri Oct 31/Sat Nov 01	1 13	18 36	20 02	6 26	7 51	21 14	7 40	.....	3 17	75	22 44.1	- 9 11	10.4		

Calendar for OU Norman, west longitude (h.m.s) = 6 29 47, latitude (d.m) = 35 12.2
 Rise/set times in Central time (6 hr W), uncorrected for elevation, DAYLIGHT time used, * shows clock reset.
 Moon info is for local midnight, even if moon is down. Program: John Thorstensen, Dartmouth College.

***** 2025 NOVEMBER *****

Date (eve/morn)	LMST midn	----- Sun: -----				LST twilight:		----- Moon: -----				RA	Dec	Twi-Twi hours
		set	twi.end	twi.beg	rise	eve	morn	rise	set	%illum				
Sat Nov 01/Sun Nov 02*	1 17	18 35	20 01	5 26	6 52	21 17	7 45	16 16	3 24	84	23 34.4	- 2 35	10.4	
Sun Nov 02/Mon Nov 03	2 21	17 34	19 00	5 27	6 53	21 20	7 49	.....	4 34	92	0 27.3	4 40	10.5
Mon Nov 03/Tue Nov 04	2 25	17 33	18 59	5 28	6 54	21 23	7 54	16 14	5 48	97	1 21.6	11 33	10.5	
Tue Nov 04/Wed Nov 05	2 29	17 32	18 58	5 29	6 55	21 27	7 59	16 47	7 05	100	2 19.8	17 53	10.5	
Wed Nov 05/Thu Nov 06	2 33	17 31	18 57	5 30	6 56	21 30	8 04	17 27	.....	99	3 22.4	23 06	10.5
Thu Nov 06/Fri Nov 07	2 37	17 30	18 57	5 31	6 57	21 33	8 08	18 15	.....	95	4 28.9	26 37	10.6
Fri Nov 07/Sat Nov 08	2 41	17 29	18 56	5 31	6 58	21 36	8 13	19 13	.....	89	5 37.2	28 06	10.6
Sat Nov 08/Sun Nov 09	2 45	17 29	18 55	5 32	6 59	21 39	8 18	20 20	.....	80	6 44.1	27 29	10.6
Sun Nov 09/Mon Nov 10	2 49	17 28	18 55	5 33	7 00	21 43	8 23	21 30	.....	70	7 47.1	25 00	10.6
Mon Nov 10/Tue Nov 11	2 53	17 27	18 54	5 34	7 01	21 46	8 28	22 41	.....	60	8 44.8	21 06	10.7
Tue Nov 11/Wed Nov 12	2 57	17 26	18 53	5 35	7 02	21 49	8 32	23 48	.....	49	9 37.2	16 14	10.7
Wed Nov 12/Thu Nov 13	3 01	17 26	18 53	5 36	7 03	21 53	8 37	0 52	.....	39	10 25.4	10 47	10.7
Thu Nov 13/Fri Nov 14	3 05	17 25	18 52	5 36	7 04	21 56	8 42	1 52	.....	29	11 10.4	5 03	10.7
Fri Nov 14/Sat Nov 15	3 09	17 24	18 52	5 37	7 05	22 00	8 47	2 50	.....	21	11 53.6	- 0 44	10.8
Sat Nov 15/Sun Nov 16	3 12	17 24	18 51	5 38	7 06	22 03	8 51	3 48	.....	14	12 36.2	- 6 24	10.8
Sun Nov 16/Mon Nov 17	3 16	17 23	18 51	5 39	7 07	22 06	8 56	4 45	.....	8	13 19.0	-11 47	10.8
Mon Nov 17/Tue Nov 18	3 20	17 22	18 50	5 40	7 08	22 10	9 01	5 43	15 44	4	14 03.1	-16 42	10.8	
Tue Nov 18/Wed Nov 19	3 24	17 22	18 50	5 41	7 09	22 13	9 06	6 43	16 12	1	14 49.1	-21 00	10.8	
Wed Nov 19/Thu Nov 20	3 28	17 21	18 50	5 41	7 10	22 17	9 11	7 42	16 44	0	15 37.3	-24 29	10.9	
Thu Nov 20/Fri Nov 21	3 32	17 21	18 49	5 42	7 11	22 21	9 15	.....	17 21	1	16 28.0	-26 57	10.9
Fri Nov 21/Sat Nov 22	3 36	17 20	18 49	5 43	7 12	22 24	9 20	.....	18 05	4	17 20.5	-28 16	10.9
Sat Nov 22/Sun Nov 23	3 40	17 20	18 49	5 44	7 13	22 28	9 25	.....	18 56	8	18 14.0	-28 19	10.9
Sun Nov 23/Mon Nov 24	3 44	17 20	18 48	5 45	7 14	22 32	9 30	.....	19 52	13	19 07.4	-27 03	10.9
Mon Nov 24/Tue Nov 25	3 48	17 19	18 48	5 46	7 15	22 35	9 34	.....	20 53	21	19 59.9	-24 31	11.0
Tue Nov 25/Wed Nov 26	3 52	17 19	18 48	5 46	7 16	22 39	9 39	.....	21 55	29	20 50.7	-20 50	11.0
Wed Nov 26/Thu Nov 27	3 56	17 19	18 48	5 47	7 17	22 43	9 44	.....	22 59	39	21 40.0	-16 10	11.0
Thu Nov 27/Fri Nov 28	4 00	17 18	18 48	5 48	7 17	22 47	9 49	.....	0 02	49	22 28.2	-10 39	11.0
Fri Nov 28/Sat Nov 29	4 04	17 18	18 48	5 49	7 18	22 50	9 53	.....	1 07	59	23 16.2	- 4 31	11.0
Sat Nov 29/Sun Nov 30	4 08	17 18	18 47	5 50	7 19	22 54	9 58	.....	2 13	70	0 05.1	2 03	11.0
Sun Nov 30/Mon Dec 01	4 12	17 18	18 47	5 50	7 20	22 58	10 03	.....	3 22	80	0 56.2	8 44	11.0

***** 2025 DECEMBER *****

Date (eve/morn)	LMST midn	----- Sun: -----				LST twilight:		----- Moon: -----				RA	Dec	Twi-Twi hours
		set	twi.end	twi.beg	rise	eve	morn	rise	set	%illum				
Mon Dec 01/Tue Dec 02	4 16	17 18	18 47	5 51	7 21	23 02	10 08	.....	4 35	89	1 50.9	15 09	11.1
Tue Dec 02/Wed Dec 03	4 20	17 17	18 47	5 52	7 22	23 06	10 12	.....	5 53	95	2 50.4	20 50	11.1
Wed Dec 03/Thu Dec 04	4 23	17 17	18 47	5 53	7 23	23 10	10 17	15 59	7 11	99	3 55.0	25 11	11.1	
Thu Dec 04/Fri Dec 05	4 27	17 17	18 48	5 53	7 24	23 14	10 22	16 52	8 26	100	5 03.6	27 40	11.1	
Fri Dec 05/Sat Dec 06	4 31	17 17	18 48	5 54	7 24	23 18	10 26	17 56	.....	97	6 13.3	27 58	11.1
Sat Dec 06/Sun Dec 07	4 35	17 17	18 48	5 55	7 25	23 22	10 31	19 07	.....	92	7 20.5	26 10	11.1
Sun Dec 07/Mon Dec 08	4 39	17 17	18 48	5 56	7 26	23 26	10 36	20 21	.....	85	8 22.7	22 37	11.1
Mon Dec 08/Tue Dec 09	4 43	17 18	18 48	5 56	7 27	23 30	10 40	21 33	.....	76	9 19.2	17 51	11.1
Tue Dec 09/Wed Dec 10	4 47	17 18	18 48	5 57	7 28	23 35	10 45	22 40	.....	66	10 10.5	12 21	11.1
Wed Dec 10/Thu Dec 11	4 51	17 18	18 48	5 58	7 28	23 39	10 50	23 43	.....	55	10 57.7	6 30	11.2
Thu Dec 11/Fri Dec 12	4 55	17 18	18 49	5 58	7 29	23 43	10 54	0 43	.....	45	11 42.3	0 35	11.2
Fri Dec 12/Sat Dec 13	4 59	17 18	18 49	5 59	7 30	23 47	10 59	1 41	.....	36	12 25.6	- 5 12	11.2
Sat Dec 13/Sun Dec 14	5 03	17 18	18 49	6 00	7 30	23 51	11 03	2 39	.....	27	13 08.7	-10 41	11.2
Sun Dec 14/Mon Dec 15	5 07	17 19	18 50	6 00	7 31	23 56	11 08	3 37	.....	19	13 52.6	-15 43	11.2
Mon Dec 15/Tue Dec 16	5 11	17 19	18 50	6 01	7 32	24 00	11 13	4 36	.....	12	14 38.2	-20 08	11.2
Tue Dec 16/Wed Dec 17	5 15	17 19	18 50	6 01	7 32	0 04	11 17	5 35	.....	7	15 26.0	-23 47	11.2
Wed Dec 17/Thu Dec 18	5 19	17 20	18 51	6 02	7 33	0 09	11 22	6 34	.....	3	16 16.2	-26 27	11.2
Thu Dec 18/Fri Dec 19	5 23	17 20	18 51	6 02	7 34	0 13	11 26	7 30	16 03	1	17 08.5	-28 00	11.2	
Fri Dec 19/Sat Dec 20	5 27	17 21	18 52	6 03	7 34	0 17	11 31	8 22	16 51	0	18 02.0	-28 17	11.2	
Sat Dec 20/Sun Dec 21	5 30	17 21	18 52	6 04	7 35	0 22	11 35	.....	17 47	1	18 55.8	-27 15	11.2
Sun Dec 21/Mon Dec 22	5 34	17 22	18 53	6 04	7 35	0 26	11 39	.....	18 47	4	19 48.5	-24 57	11.2
Mon Dec 22/Tue Dec 23	5 38	17 22	18 53	6 04	7 36	0 31	11 44	.....	19 49	9	20 39.6	-21 28	11.2
Tue Dec 23/Wed Dec 24	5 42	17 23	18 54	6 05	7 36	0 35	11 48	.....	20 52	16	21 28.8	-17 00	11.2
Wed Dec 24/Thu Dec 25	5 46	17 23	18 54	6 05	7 36	0 40	11 53	.....	21 55	24	22 16.5	-11 44	11.2
Thu Dec 25/Fri Dec 26	5 50	17 24	18 55	6 06	7 37	0 44	11 57	.....	22 58	33	23 03.2	- 5 51	11.2
Fri Dec 26/Sat Dec 27	5 54	17 24	18 55	6 06	7 37	0 49	12 01	.....	0 01	43	23 50.2	0 24	11.2
Sat Dec 27/Sun Dec 28	5 58	17 25	18 56	6 07	7 37	0 53	12 06	.....	1 07	54	0 38.6	6 49	11.2
Sun Dec 28/Mon Dec 29	6 02	17 26	18 57	6 07	7 38	0 58	12 10	.....	2 16	65	1 29.8	13 05	11.2
Mon Dec 29/Tue Dec 30	6 06	17 26	18 57	6 07	7 38	1 02	12 14	.....	3 28	76	2 25.0	18 50	11.2
Tue Dec 30/Wed Dec 31	6 10	17 27	18 58	6 07	7 38	1 07	12 18	.....	4 44	85	3 25.3	23 36	11.2
Wed Dec 31/Thu Jan 01	6 14	17 28	18 59	6 08	7 38	1 12	12 23	.....	5 59	93	4 30.6	26 50	11.2