

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:

***** 2016 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 -0.1 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 hemispheres. 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
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[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 2016, 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 11	4 30	Dec 18	9 15	Dec 25	5 12	Jan 01	23 32
Jan 09	19 31	Jan 16	17 27	Jan 23	19 46	Jan 31	21 29
Feb 08	8 40	Feb 15	1 48	Feb 22	12 21	Mar 01	17 13
Mar 08	19 56	Mar 15	12 04	Mar 23	7 02	Mar 31	10 19
Apr 07	6 25	Apr 13	23 01	Apr 22	0 25	Apr 29	22 30
May 06	14 31	May 13	12 03	May 21	16 17	May 29	7 14
Jun 04	22 02	Jun 12	3 11	Jun 20	6 05	Jun 27	13 21
Jul 04	6 03	Jul 11	19 53	Jul 19	18 00	Jul 26	18 03
Aug 02	15 47	Aug 10	13 22	Aug 18	4 30	Aug 24	22 44
Sep 01	4 05	Sep 09	6 51	Sep 16	14 08	Sep 23	4 59
Sep 30	19 13	Oct 08	23 35	Oct 15	23 25	Oct 22	14 16
Oct 30	12 40	Nov 07	13 53	Nov 14	7 54	Nov 21	2 35
Nov 29	6 20	Dec 07	3 04	Dec 13	18 07	Dec 20	19 57
Dec 29	0 54	Jan 05	13 48	Jan 12	5 35	Jan 19	16 14

