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 VATT *****

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.

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 -1.0 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 incaccurate 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

MOON PHASES FOR 2016, at VATT

Times and dates are given in local time, zone = 7 hr West.
They are generally better than +- 2 minutes.

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

NEW	1ST	FULL	LAST
Dec 11 3 30	Dec 18 8 15	Dec 25 4 12	Jan 01 22 32
Jan 09 18 31	Jan 16 16 27	Jan 23 18 46	Jan 31 20 29
Feb 08 7 40	Feb 15 0 48	Feb 22 11 21	Mar 01 16 13
Mar 08 18 56	Mar 15 10 04	Mar 23 5 02	Mar 31 8 19
Apr 07 4 25	Apr 13 21 01	Apr 21 22 25	Apr 29 20 30
May 06 12 31	May 13 10 03	May 21 14 17	May 29 5 14
Jun 04 20 02	Jun 12 1 11	Jun 20 4 05	Jun 27 11 21
Jul 04 4 03	Jul 11 17 53	Jul 19 16 00	Jul 26 16 03
Aug 02 13 47	Aug 10 11 22	Aug 18 2 30	Aug 24 20 44
Sep 01 2 05	Sep 09 4 51	Sep 16 12 08	Sep 23 2 59
Sep 30 17 13	Oct 08 21 35	Oct 15 21 25	Oct 22 12 16
Oct 30 10 40	Nov 07 12 53	Nov 14 6 54	Nov 21 1 35
Nov 29 5 20	Dec 07 2 04	Dec 13 17 07	Dec 20 18 57
Dec 28 23 54	Jan 05 12 48	Jan 12 4 35	Jan 19 15 14

Calendar for VATT, west longitude (h.m.s) = 7 19 34, latitude (d.m) = 32 42.1
Rise/set times in Mountain time (7 hr W), uncorrected for elevation, in standard time all year.
Moon info is for local midnight, even if moon is down. Program: John Thorstensen, Dartmouth College.

***** 2016 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
Fri Jan 01/Sat Jan 02	6 26	17 24	18 52	5 54	7 22	1 17	12 21	0 31	.....	49	12 49.4	- 3 50	11.0
Sat Jan 02/Sun Jan 03	6 30	17 25	18 53	5 54	7 22	1 22	12 25	1 23	.....	39	13 34.6	- 7 24	11.0
Sun Jan 03/Mon Jan 04	6 34	17 26	18 54	5 55	7 22	1 27	12 29	2 16	.....	30	14 20.7	-10 42	11.0
Mon Jan 04/Tue Jan 05	6 38	17 27	18 54	5 55	7 22	1 31	12 34	3 10	.....	22	15 08.2	-13 36	11.0
Tue Jan 05/Wed Jan 06	6 42	17 27	18 55	5 55	7 23	1 36	12 38	4 05	.....	15	15 57.6	-15 59	11.0
Wed Jan 06/Thu Jan 07	6 46	17 28	18 56	5 55	7 23	1 41	12 42	5 00	.....	8	16 49.0	-17 41	11.0
Thu Jan 07/Fri Jan 08	6 50	17 29	18 57	5 55	7 23	1 45	12 46	5 54	15 45	4	17 42.3	-18 34	11.0
Fri Jan 08/Sat Jan 09	6 53	17 30	18 57	5 55	7 23	1 50	12 50	6 47	16 38	1	18 37.2	-18 30	11.0
Sat Jan 09/Sun Jan 10	6 57	17 31	18 58	5 55	7 23	1 55	12 54	7 38	17 34	0	19 33.0	-17 27	11.0
Sun Jan 10/Mon Jan 11	7 01	17 32	18 59	5 55	7 23	1 59	12 58	8 25	18 35	2	20 28.9	-15 25	10.9
Mon Jan 11/Tue Jan 12	7 05	17 32	19 00	5 56	7 22	2 04	13 02	.....	19 38	6	21 24.5	-12 29	10.9
Tue Jan 12/Wed Jan 13	7 09	17 33	19 00	5 56	7 22	2 09	13 06	.....	20 42	12	22 19.3	- 8 50	10.9
Wed Jan 13/Thu Jan 14	7 13	17 34	19 01	5 55	7 22	2 13	13 10	.....	21 46	21	23 13.4	- 4 41	10.9
Thu Jan 14/Fri Jan 15	7 17	17 35	19 02	5 55	7 22	2 18	13 14	.....	22 50	30	0 07.2	- 0 17	10.9
Fri Jan 15/Sat Jan 16	7 21	17 36	19 03	5 55	7 22	2 23	13 17	.....	23 54	41	1 01.0	4 08	10.9
Sat Jan 16/Sun Jan 17	7 25	17 37	19 03	5 55	7 22	2 28	13 21	.....	0 58	53	1 55.4	8 19	10.9
Sun Jan 17/Mon Jan 18	7 29	17 38	19 04	5 55	7 21	2 32	13 25	.....	2 02	64	2 50.8	11 59	10.8
Mon Jan 18/Tue Jan 19	7 33	17 39	19 05	5 55	7 21	2 37	13 29	.....	3 05	74	3 47.3	14 57	10.8
Tue Jan 19/Wed Jan 20	7 37	17 40	19 06	5 55	7 21	2 42	13 33	.....	4 06	84	4 44.9	17 00	10.8
Wed Jan 20/Thu Jan 21	7 41	17 41	19 07	5 54	7 20	2 47	13 36	.....	5 04	91	5 42.9	18 01	10.8
Thu Jan 21/Fri Jan 22	7 45	17 42	19 07	5 54	7 20	2 51	13 40	15 50	5 57	96	6 40.6	17 57	10.8
Fri Jan 22/Sat Jan 23	7 49	17 43	19 08	5 54	7 20	2 56	13 44	16 47	6 46	99	7 37.0	16 50	10.8
Sat Jan 23/Sun Jan 24	7 53	17 43	19 09	5 54	7 19	3 01	13 47	17 45	7 31	100	8 31.5	14 48	10.7
Sun Jan 24/Mon Jan 25	7 57	17 44	19 10	5 53	7 19	3 06	13 51	18 42	8 11	98	9 23.8	12 03	10.7
Mon Jan 25/Tue Jan 26	8 01	17 45	19 11	5 53	7 18	3 10	13 54	19 39	.....	95	10 13.8	8 46	10.7
Tue Jan 26/Wed Jan 27	8 04	17 46	19 12	5 53	7 18	3 15	13 58	20 34	.....	89	11 01.9	5 10	10.7
Wed Jan 27/Thu Jan 28	8 08	17 47	19 12	5 52	7 17	3 20	14 01	21 28	.....	83	11 48.4	1 24	10.7
Thu Jan 28/Fri Jan 29	8 12	17 48	19 13	5 52	7 16	3 25	14 05	22 21	.....	75	12 34.1	- 2 23	10.6
Fri Jan 29/Sat Jan 30	8 16	17 49	19 14	5 51	7 16	3 29	14 08	23 13	.....	66	13 19.5	- 6 01	10.6
Sat Jan 30/Sun Jan 31	8 20	17 50	19 15	5 51	7 15	3 34	14 12	0 06	.....	57	14 05.3	- 9 26	10.6
Sun Jan 31/Mon Feb 01	8 24	17 51	19 16	5 50	7 15	3 39	14 15	0 59	.....	48	14 52.0	-12 29	10.6

***** 2016 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
Mon Feb 01/Tue Feb 02	8 28	17 52	19 16	5 50	7 14	3 44	14 19	1 52	.....	38	15 40.3	-15 03	10.6
Tue Feb 02/Wed Feb 03	8 32	17 53	19 17	5 49	7 13	3 48	14 22	2 46	.....	29	16 30.3	-17 01	10.5
Wed Feb 03/Thu Feb 04	8 36	17 54	19 18	5 48	7 12	3 53	14 25	3 40	.....	21	17 22.4	-18 14	10.5
Thu Feb 04/Fri Feb 05	8 40	17 55	19 19	5 48	7 12	3 58	14 29	4 34	.....	13	18 16.4	-18 35	10.5
Fri Feb 05/Sat Feb 06	8 44	17 56	19 20	5 47	7 11	4 03	14 32	5 26	.....	7	19 11.8	-17 57	10.5
Sat Feb 06/Sun Feb 07	8 48	17 57	19 20	5 47	7 10	4 08	14 35	6 15	16 18	2	20 08.1	-16 19	10.4
Sun Feb 07/Mon Feb 08	8 52	17 58	19 21	5 46	7 09	4 12	14 39	7 02	17 20	0	21 04.7	-13 43	10.4
Mon Feb 08/Tue Feb 09	8 56	17 59	19 22	5 45	7 08	4 17	14 42	7 46	18 25	1	22 01.0	-10 16	10.4
Tue Feb 09/Wed Feb 10	9 00	17 59	19 23	5 44	7 08	4 22	14 45	.....	19 31	4	22 56.8	- 6 11	10.4
Wed Feb 10/Thu Feb 11	9 04	18 00	19 24	5 44	7 07	4 26	14 48	.....	20 38	9	23 52.2	- 1 45	10.3
Thu Feb 11/Fri Feb 12	9 08	18 01	19 24	5 43	7 06	4 31	14 51	.....	21 44	17	0 47.3	2 47	10.3
Fri Feb 12/Sat Feb 13	9 11	18 02	19 25	5 42	7 05	4 36	14 54	.....	22 50	27	1 42.5	7 06	10.3
Sat Feb 13/Sun Feb 14	9 15	18 03	19 26	5 41	7 04	4 41	14 57	.....	23 55	38	2 38.1	10 57	10.3
Sun Feb 14/Mon Feb 15	9 19	18 04	19 27	5 40	7 03	4 45	15 01	.....	0 59	49	3 34.3	14 06	10.2
Mon Feb 15/Tue Feb 16	9 23	18 05	19 28	5 39	7 02	4 50	15 04	.....	2 00	60	4 31.1	16 22	10.2
Tue Feb 16/Wed Feb 17	9 27	18 06	19 28	5 38	7 01	4 55	15 07	.....	2 58	70	5 28.0	17 39	10.2
Wed Feb 17/Thu Feb 18	9 31	18 07	19 29	5 38	7 00	5 00	15 10	.....	3 52	80	6 24.6	17 53	10.1
Thu Feb 18/Fri Feb 19	9 35	18 07	19 30	5 37	6 59	5 04	15 13	.....	4 42	88	7 20.2	17 07	10.1
Fri Feb 19/Sat Feb 20	9 39	18 08	19 31	5 36	6 58	5 09	15 16	.....	5 27	94	8 14.2	15 25	10.1
Sat Feb 20/Sun Feb 21	9 43	18 09	19 32	5 35	6 57	5 14	15 19	16 33	6 08	98	9 06.5	12 57	10.1
Sun Feb 21/Mon Feb 22	9 47	18 10	19 32	5 34	6 56	5 19	15 21	17 29	6 46	100	9 56.8	9 53	10.0
Mon Feb 22/Tue Feb 23	9 51	18 11	19 33	5 33	6 55	5 23	15 24	18 24	7 21	100	10 45.3	6 24	10.0
Tue Feb 23/Wed Feb 24	9 55	18 12	19 34	5 32	6 54	5 28	15 27	19 19	.....	98	11 32.5	2 42	10.0
Wed Feb 24/Thu Feb 25	9 59	18 12	19 35	5 30	6 52	5 33	15 30	20 12	.....	94	12 18.7	- 1 06	9.9
Thu Feb 25/Fri Feb 26	10 03	18 13	19 35	5 29	6 51	5 37	15 33	21 05	.....	89	13 04.5	- 4 49	9.9
Fri Feb 26/Sat Feb 27	10 07	18 14	19 36	5 28	6 50	5 42	15 36	21 57	.....	82	13 50.4	- 8 20	9.9
Sat Feb 27/Sun Feb 28	10 11	18 15	19 37	5 27	6 49	5 47	15 39	22 50	.....	74	14 36.8	-11 30	9.8
Sun Feb 28/Mon Feb 29	10 15	18 16	19 38	5 26	6 48	5 52	15 41	23 43	.....	65	15 24.4	-14 14	9.8
Mon Feb 29/Tue Mar 01	10 19	18 17	19 38	5 25	6 47	5 56	15 44	0 36	.....	56	16 13.4	-16 24	9.8

Calendar for VATT, west longitude (h.m.s) = 7 19 34, latitude (d.m) = 32 42.1
Rise/set times in Mountain time (7 hr W), uncorrected for elevation, in standard time all year.
Moon info is for local midnight, even if moon is down. Program: John Thorstensen, Dartmouth College.

***** 2016 MARCH *****

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 Mar 01/Wed Mar 02	10 22	18 17	19 39	5 24	6 45	6 01	15 47	1 29	.....	46	17 04.0	-17 53	9.7
Wed Mar 02/Thu Mar 03	10 26	18 18	19 40	5 23	6 44	6 06	15 50	2 21	.....	36	17 56.3	-18 33	9.7
Thu Mar 03/Fri Mar 04	10 30	18 19	19 41	5 21	6 43	6 10	15 53	3 12	.....	27	18 50.2	-18 19	9.7
Fri Mar 04/Sat Mar 05	10 34	18 20	19 41	5 20	6 42	6 15	15 55	4 02	.....	18	19 45.4	-17 08	9.6
Sat Mar 05/Sun Mar 06	10 38	18 20	19 42	5 19	6 41	6 20	15 58	4 50	.....	10	20 41.3	-14 57	9.6
Sun Mar 06/Mon Mar 07	10 42	18 21	19 43	5 18	6 39	6 24	16 01	5 35	.....	4	21 37.6	-11 52	9.6
Mon Mar 07/Tue Mar 08	10 46	18 22	19 44	5 16	6 38	6 29	16 03	6 19	17 09	1	22 34.0	- 8 02	9.5
Tue Mar 08/Wed Mar 09	10 50	18 23	19 45	5 15	6 37	6 34	16 06	7 02	18 16	0	23 30.4	- 3 39	9.5
Wed Mar 09/Thu Mar 10	10 54	18 24	19 45	5 14	6 36	6 39	16 09	.....	19 25	2	0 26.9	0 58	9.5
Thu Mar 10/Fri Mar 11	10 58	18 24	19 46	5 13	6 34	6 43	16 11	.....	20 33	7	1 23.7	5 30	9.4
Fri Mar 11/Sat Mar 12	11 02	18 25	19 47	5 11	6 33	6 48	16 14	.....	21 41	14	2 20.9	9 39	9.4
Sat Mar 12/Sun Mar 13	11 06	18 26	19 48	5 10	6 32	6 53	16 17	.....	22 48	23	3 18.5	13 07	9.4
Sun Mar 13/Mon Mar 14	11 10	18 26	19 48	5 09	6 30	6 57	16 19	.....	23 52	34	4 16.3	15 42	9.3
Mon Mar 14/Tue Mar 15	11 14	18 27	19 49	5 07	6 29	7 02	16 22	.....	0 53	45	5 14.0	17 16	9.3
Tue Mar 15/Wed Mar 16	11 18	18 28	19 50	5 06	6 28	7 07	16 24	.....	1 49	56	6 10.9	17 46	9.3
Wed Mar 16/Thu Mar 17	11 22	18 29	19 51	5 05	6 26	7 12	16 27	.....	2 40	66	7 06.6	17 15	9.2
Thu Mar 17/Fri Mar 18	11 26	18 29	19 52	5 03	6 25	7 16	16 30	.....	3 26	76	8 00.5	15 48	9.2
Fri Mar 18/Sat Mar 19	11 29	18 30	19 52	5 02	6 24	7 21	16 32	.....	4 08	84	8 52.5	13 33	9.2
Sat Mar 19/Sun Mar 20	11 33	18 31	19 53	5 00	6 23	7 26	16 35	.....	4 46	91	9 42.6	10 41	9.1
Sun Mar 20/Mon Mar 21	11 37	18 32	19 54	4 59	6 21	7 31	16 37	.....	5 22	96	10 31.1	7 21	9.1
Mon Mar 21/Tue Mar 22	11 41	18 32	19 55	4 58	6 20	7 35	16 40	17 12	5 56	99	11 18.2	3 43	9.0
Tue Mar 22/Wed Mar 23	11 45	18 33	19 56	4 56	6 19	7 40	16 42	18 06	6 28	100	12 04.5	- 0 03	9.0
Wed Mar 23/Thu Mar 24	11 49	18 34	19 56	4 55	6 17	7 45	16 45	18 59	7 01	99	12 50.4	- 3 48	9.0
Thu Mar 24/Fri Mar 25	11 53	18 34	19 57	4 53	6 16	7 50	16 47	19 51	.....	97	13 36.4	- 7 24	8.9
Fri Mar 25/Sat Mar 26	11 57	18 35	19 58	4 52	6 15	7 54	16 50	20 44	.....	93	14 22.8	-10 43	8.9
Sat Mar 26/Sun Mar 27	12 01	18 36	19 59	4 51	6 13	7 59	16 52	21 36	.....	87	15 10.2	-13 37	8.9
Sun Mar 27/Mon Mar 28	12 05	18 37	20 00	4 49	6 12	8 04	16 55	22 29	.....	80	15 58.8	-15 58	8.8
Mon Mar 28/Tue Mar 29	12 09	18 37	20 00	4 48	6 11	8 09	16 57	23 21	.....	72	16 48.6	-17 39	8.8
Tue Mar 29/Wed Mar 30	12 13	18 38	20 01	4 46	6 09	8 13	17 00	0 13	.....	63	17 39.9	-18 34	8.7
Wed Mar 30/Thu Mar 31	12 17	18 39	20 02	4 45	6 08	8 18	17 02	1 04	.....	53	18 32.5	-18 39	8.7
Thu Mar 31/Fri Apr 01	12 21	18 39	20 03	4 43	6 07	8 23	17 05	1 53	.....	43	19 26.0	-17 48	8.7

***** 2016 APRIL *****

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 Apr 01/Sat Apr 02	12 25	18 40	20 04	4 42	6 06	8 28	17 07	2 40	.....	32	20 20.3	-16 01	8.6
Sat Apr 02/Sun Apr 03	12 29	18 41	20 05	4 40	6 04	8 33	17 10	3 25	.....	23	21 15.2	-13 21	8.6
Sun Apr 03/Mon Apr 04	12 33	18 41	20 06	4 39	6 03	8 37	17 12	4 08	.....	14	22 10.4	- 9 51	8.6
Mon Apr 04/Tue Apr 05	12 36	18 42	20 06	4 38	6 02	8 42	17 15	4 51	.....	7	23 06.1	- 5 43	8.5
Tue Apr 05/Wed Apr 06	12 40	18 43	20 07	4 36	6 00	8 47	17 17	5 33	17 00	2	0 02.3	- 1 11	8.5
Wed Apr 06/Thu Apr 07	12 44	18 44	20 08	4 35	5 59	8 52	17 20	6 17	18 09	0	0 59.3	3 29	8.4
Thu Apr 07/Fri Apr 08	12 48	18 44	20 09	4 33	5 58	8 57	17 22	7 02	19 18	1	1 57.3	7 55	8.4
Fri Apr 08/Sat Apr 09	12 52	18 45	20 10	4 32	5 57	9 02	17 25	.....	20 28	5	2 56.1	11 47	8.4
Sat Apr 09/Sun Apr 10	12 56	18 46	20 11	4 30	5 55	9 07	17 27	.....	21 36	11	3 55.6	14 50	8.3
Sun Apr 10/Mon Apr 11	13 00	18 46	20 12	4 29	5 54	9 11	17 30	.....	22 40	20	4 55.2	16 49	8.3
Mon Apr 11/Tue Apr 12	13 04	18 47	20 13	4 27	5 53	9 16	17 32	.....	23 41	30	5 54.0	17 41	8.2
Tue Apr 12/Wed Apr 13	13 08	18 48	20 14	4 26	5 52	9 21	17 35	.....	0 35	40	6 51.3	17 27	8.2
Wed Apr 13/Thu Apr 14	13 12	18 49	20 15	4 25	5 51	9 26	17 37	.....	1 24	51	7 46.5	16 14	8.2
Thu Apr 14/Fri Apr 15	13 16	18 49	20 16	4 23	5 49	9 31	17 40	.....	2 08	61	8 39.3	14 10	8.1
Fri Apr 15/Sat Apr 16	13 20	18 50	20 17	4 22	5 48	9 36	17 42	.....	2 47	71	9 29.9	11 26	8.1
Sat Apr 16/Sun Apr 17	13 24	18 51	20 17	4 20	5 47	9 41	17 45	.....	3 24	79	10 18.5	8 13	8.0
Sun Apr 17/Mon Apr 18	13 28	18 51	20 18	4 19	5 46	9 46	17 47	.....	3 58	87	11 05.6	4 40	8.0
Mon Apr 18/Tue Apr 19	13 32	18 52	20 19	4 17	5 45	9 50	17 50	.....	4 30	92	11 51.7	0 55	8.0
Tue Apr 19/Wed Apr 20	13 36	18 53	20 20	4 16	5 44	9 55	17 52	.....	5 03	97	12 37.3	- 2 51	7.9
Wed Apr 20/Thu Apr 21	13 40	18 54	20 21	4 15	5 42	10 00	17 55	17 46	5 36	99	13 23.1	- 6 32	7.9
Thu Apr 21/Fri Apr 22	13 44	18 54	20 22	4 13	5 41	10 05	17 58	18 39	6 10	100	14 09.5	- 9 58	7.9
Fri Apr 22/Sat Apr 23	13 47	18 55	20 23	4 12	5 40	10 10	18 00	19 32	6 46	99	14 56.8	-13 02	7.8
Sat Apr 23/Sun Apr 24	13 51	18 56	20 24	4 11	5 39	10 15	18 03	20 25	.....	96	15 45.3	-15 35	7.8
Sun Apr 24/Mon Apr 25	13 55	18 57	20 25	4 09	5 38	10 20	18 05	21 17	.....	91	16 35.1	-17 29	7.7
Mon Apr 25/Tue Apr 26	13 59	18 57	20 26	4 08	5 37	10 25	18 08	22 09	.....	85	17 26.2	-18 39	7.7
Tue Apr 26/Wed Apr 27	14 03	18 58	20 27	4 07	5 36	10 30	18 11	23 00	.....	77	18 18.4	-18 58	7.7
Wed Apr 27/Thu Apr 28	14 07	18 59	20 28	4 05	5 35	10 35	18 13	23 49	.....	68	19 11.3	-18 23	7.6
Thu Apr 28/Fri Apr 29	14 11	18 59	20 29	4 04	5 34	10 40	18 16	0 35	.....	58	20 04.6	-16 54	7.6
Fri Apr 29/Sat Apr 30	14 15	19 00	20 30	4 03	5 33	10 45	18 18	1 20	.....	48	20 58.1	-14 32	7.5
Sat Apr 30/Sun May 01	14 19	19 01	20 31	4 01	5 32	10 50	18 21	2 02	.....	37	21 51.8	-11 22	7.5

Calendar for VATT, west longitude (h.m.s) = 7 19 34, latitude (d.m) = 32 42.1
Rise/set times in Mountain time (7 hr W), uncorrected for elevation, in standard time all year.
Moon info is for local midnight, even if moon is down. Program: John Thorstensen, Dartmouth College.

***** 2016 MAY *****

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
Sun May 01/Mon May 02	14 23	19 02	20 32	4 00	5 31	10 55	18 24	2 44	.....	27	22 45.8	- 7 32	7.5
Mon May 02/Tue May 03	14 27	19 02	20 34	3 59	5 30	11 00	18 27	3 25	.....	17	23 40.2	- 3 13	7.4
Tue May 03/Wed May 04	14 31	19 03	20 35	3 58	5 29	11 05	18 29	4 06	.....	9	0 35.7	1 22	7.4
Wed May 04/Thu May 05	14 35	19 04	20 36	3 57	5 28	11 10	18 32	4 49	.....	4	1 32.4	5 55	7.3
Thu May 05/Fri May 06	14 39	19 05	20 37	3 55	5 27	11 15	18 35	5 35	18 03	1	2 30.6	10 07	7.3
Fri May 06/Sat May 07	14 43	19 05	20 38	3 54	5 27	11 20	18 38	6 25	19 12	1	3 30.3	13 36	7.3
Sat May 07/Sun May 08	14 47	19 06	20 39	3 53	5 26	11 25	18 40	.....	20 20	3	4 30.9	16 08	7.2
Sun May 08/Mon May 09	14 51	19 07	20 40	3 52	5 25	11 30	18 43	.....	21 25	9	5 31.5	17 31	7.2
Mon May 09/Tue May 10	14 54	19 08	20 41	3 51	5 24	11 35	18 46	.....	22 24	16	6 31.0	17 43	7.2
Tue May 10/Wed May 11	14 58	19 08	20 42	3 50	5 23	11 40	18 49	.....	23 18	25	7 28.5	16 49	7.1
Wed May 11/Thu May 12	15 02	19 09	20 43	3 49	5 23	11 45	18 52	.....	0 05	35	8 23.4	14 58	7.1
Thu May 12/Fri May 13	15 06	19 10	20 44	3 48	5 22	11 50	18 55	.....	0 47	45	9 15.5	12 23	7.1
Fri May 13/Sat May 14	15 10	19 10	20 45	3 47	5 21	11 55	18 58	.....	1 25	55	10 05.1	9 15	7.0
Sat May 14/Sun May 15	15 14	19 11	20 46	3 46	5 20	12 00	19 00	.....	2 00	65	10 52.8	5 44	7.0
Sun May 15/Mon May 16	15 18	19 12	20 47	3 45	5 20	12 05	19 03	.....	2 33	74	11 39.1	2 01	7.0
Mon May 16/Tue May 17	15 22	19 13	20 48	3 44	5 19	12 10	19 06	.....	3 05	82	12 24.6	- 1 46	6.9
Tue May 17/Wed May 18	15 26	19 13	20 49	3 43	5 19	12 14	19 09	.....	3 37	89	13 10.1	- 5 30	6.9
Wed May 18/Thu May 19	15 30	19 14	20 50	3 42	5 18	12 19	19 12	.....	4 11	94	13 56.1	- 9 03	6.9
Thu May 19/Fri May 20	15 34	19 15	20 51	3 41	5 17	12 24	19 16	.....	4 46	98	14 43.0	-12 16	6.8
Fri May 20/Sat May 21	15 38	19 15	20 52	3 40	5 17	12 29	19 19	18 20	5 24	100	15 31.4	-15 02	6.8
Sat May 21/Sun May 22	15 42	19 16	20 53	3 39	5 16	12 34	19 22	19 13	6 05	100	16 21.2	-17 12	6.8
Sun May 22/Mon May 23	15 46	19 17	20 54	3 39	5 16	12 39	19 25	20 06	.....	98	17 12.5	-18 37	6.7
Mon May 23/Tue May 24	15 50	19 17	20 55	3 38	5 15	12 44	19 28	20 57	.....	94	18 05.0	-19 12	6.7
Tue May 24/Wed May 25	15 54	19 18	20 56	3 37	5 15	12 49	19 31	21 47	.....	89	18 58.2	-18 53	6.7
Wed May 25/Thu May 26	15 58	19 19	20 57	3 36	5 14	12 54	19 35	22 35	.....	81	19 51.7	-17 38	6.7
Thu May 26/Fri May 27	16 02	19 19	20 58	3 36	5 14	12 59	19 38	23 19	.....	73	20 45.2	-15 30	6.6
Fri May 27/Sat May 28	16 05	19 20	20 58	3 35	5 14	13 03	19 41	0 02	.....	63	21 38.3	-12 34	6.6
Sat May 28/Sun May 29	16 09	19 20	20 59	3 35	5 13	13 08	19 45	0 42	.....	52	22 31.2	- 8 57	6.6
Sun May 29/Mon May 30	16 13	19 21	21 00	3 34	5 13	13 13	19 48	1 22	.....	41	23 24.2	- 4 49	6.6
Mon May 30/Tue May 31	16 17	19 22	21 01	3 33	5 13	13 18	19 51	2 01	.....	30	0 17.8	- 0 23	6.5
Tue May 31/Wed Jun 01	16 21	19 22	21 02	3 33	5 12	13 22	19 55	2 42	.....	20	1 12.3	4 07	6.5

***** 2016 JUNE *****

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 Jun 01/Thu Jun 02	16 25	19 23	21 03	3 33	5 12	13 27	19 58	3 25	.....	11	2 08.5	8 25	6.5
Thu Jun 02/Fri Jun 03	16 29	19 23	21 03	3 32	5 12	13 32	20 02	4 11	.....	5	3 06.4	12 12	6.5
Fri Jun 03/Sat Jun 04	16 33	19 24	21 04	3 32	5 12	13 37	20 05	5 02	17 58	1	4 06.0	15 10	6.5
Sat Jun 04/Sun Jun 05	16 37	19 24	21 05	3 31	5 12	13 41	20 09	5 57	19 04	0	5 06.6	17 05	6.4
Sun Jun 05/Mon Jun 06	16 41	19 25	21 05	3 31	5 11	13 46	20 13	.....	20 07	2	6 07.1	17 50	6.4
Mon Jun 06/Tue Jun 07	16 45	19 25	21 06	3 31	5 11	13 51	20 16	.....	21 05	6	7 06.4	17 23	6.4
Tue Jun 07/Wed Jun 08	16 49	19 26	21 07	3 30	5 11	13 55	20 20	.....	21 56	13	8 03.4	15 53	6.4
Wed Jun 08/Thu Jun 09	16 53	19 26	21 07	3 30	5 11	14 00	20 24	.....	22 42	21	8 57.7	13 31	6.4
Thu Jun 09/Fri Jun 10	16 57	19 27	21 08	3 30	5 11	14 04	20 27	.....	23 23	30	9 49.1	10 31	6.4
Fri Jun 10/Sat Jun 11	17 01	19 27	21 09	3 30	5 11	14 09	20 31	.....	24 00	39	10 38.1	7 04	6.4
Sat Jun 11/Sun Jun 12	17 05	19 28	21 09	3 30	5 11	14 13	20 35	.....	0 34	49	11 25.2	3 21	6.3
Sun Jun 12/Mon Jun 13	17 09	19 28	21 10	3 30	5 11	14 18	20 39	.....	1 07	59	12 11.1	- 0 27	6.3
Mon Jun 13/Tue Jun 14	17 12	19 28	21 10	3 30	5 11	14 22	20 43	.....	1 39	68	12 56.5	- 4 14	6.3
Tue Jun 14/Wed Jun 15	17 16	19 29	21 10	3 30	5 11	14 26	20 47	.....	2 12	76	13 42.1	- 7 52	6.3
Wed Jun 15/Thu Jun 16	17 20	19 29	21 11	3 30	5 11	14 31	20 51	.....	2 46	84	14 28.5	-11 14	6.3
Thu Jun 16/Fri Jun 17	17 24	19 29	21 11	3 30	5 12	14 35	20 55	.....	3 23	90	15 16.2	-14 11	6.3
Fri Jun 17/Sat Jun 18	17 28	19 30	21 12	3 30	5 12	14 39	20 59	.....	4 03	95	16 05.6	-16 36	6.3
Sat Jun 18/Sun Jun 19	17 32	19 30	21 12	3 30	5 12	14 44	21 03	18 00	4 46	98	16 56.7	-18 19	6.3
Sun Jun 19/Mon Jun 20	17 36	19 30	21 12	3 30	5 12	14 48	21 07	18 52	5 34	100	17 49.4	-19 14	6.3
Mon Jun 20/Tue Jun 21	17 40	19 31	21 12	3 31	5 12	14 52	21 11	19 44	6 26	99	18 43.2	-19 13	6.3
Tue Jun 21/Wed Jun 22	17 44	19 31	21 13	3 31	5 13	14 56	21 15	20 33	.....	96	19 37.7	-18 15	6.3
Wed Jun 22/Thu Jun 23	17 48	19 31	21 13	3 31	5 13	15 00	21 20	21 19	.....	91	20 32.1	-16 20	6.3
Thu Jun 23/Fri Jun 24	17 52	19 31	21 13	3 31	5 13	15 04	21 24	22 03	.....	85	21 26.0	-13 35	6.3
Fri Jun 24/Sat Jun 25	17 56	19 31	21 13	3 32	5 13	15 08	21 28	22 44	.....	76	22 19.4	-10 06	6.3
Sat Jun 25/Sun Jun 26	18 00	19 31	21 13	3 32	5 14	15 12	21 32	23 23	.....	66	23 12.3	- 6 05	6.3
Sun Jun 26/Mon Jun 27	18 04	19 31	21 13	3 33	5 14	15 16	21 37	0 02	.....	55	0 05.1	- 1 44	6.3
Mon Jun 27/Tue Jun 28	18 08	19 31	21 13	3 33	5 14	15 20	21 41	0 41	.....	44	0 58.4	2 43	6.3
Tue Jun 28/Wed Jun 29	18 12	19 31	21 13	3 33	5 15	15 24	21 46	1 21	.....	32	1 52.7	7 01	6.3
Wed Jun 29/Thu Jun 30	18 16	19 31	21 13	3 34	5 15	15 28	21 50	2 05	.....	22	2 48.6	10 55	6.4
Thu Jun 30/Fri Jul 01	18 19	19 31	21 13	3 35	5 16	15 32	21 55	2 52	.....	13	3 46.1	14 09	6.4

Calendar for VATT, west longitude (h.m.s) = 7 19 34, latitude (d.m) = 32 42.1
Rise/set times in Mountain time (7 hr W), uncorrected for elevation, in standard time all year.
Moon info is for local midnight, even if moon is down. Program: John Thorstensen, Dartmouth College.

***** 2016 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
Fri Jul 01/Sat Jul 02	18 23	19 31	21 12	3 35	5 16	15 35	21 59	3 43	.....	6	4 45.0	16 27	6.4
Sat Jul 02/Sun Jul 03	18 27	19 31	21 12	3 36	5 17	15 39	22 04	4 39	17 50	2	5 44.7	17 40	6.4
Sun Jul 03/Mon Jul 04	18 31	19 31	21 12	3 36	5 17	15 43	22 08	5 38	18 50	0	6 44.1	17 43	6.4
Mon Jul 04/Tue Jul 05	18 35	19 31	21 12	3 37	5 17	15 46	22 13	.....	19 45	1	7 42.0	16 39	6.4
Tue Jul 05/Wed Jul 06	18 39	19 31	21 11	3 38	5 18	15 50	22 17	.....	20 34	4	8 37.8	14 38	6.4
Wed Jul 06/Thu Jul 07	18 43	19 31	21 11	3 38	5 18	15 54	22 22	.....	21 17	9	9 30.8	11 50	6.5
Thu Jul 07/Fri Jul 08	18 47	19 31	21 11	3 39	5 19	15 57	22 27	.....	21 57	16	10 21.3	8 30	6.5
Fri Jul 08/Sat Jul 09	18 51	19 30	21 10	3 40	5 19	16 01	22 31	.....	22 33	24	11 09.6	4 51	6.5
Sat Jul 09/Sun Jul 10	18 55	19 30	21 10	3 40	5 20	16 04	22 36	.....	23 07	33	11 56.3	1 02	6.5
Sun Jul 10/Mon Jul 11	18 59	19 30	21 09	3 41	5 21	16 08	22 41	.....	23 39	42	12 42.0	- 2 47	6.5
Mon Jul 11/Tue Jul 12	19 03	19 30	21 09	3 42	5 21	16 11	22 46	.....	0 12	52	13 27.4	- 6 30	6.6
Tue Jul 12/Wed Jul 13	19 07	19 29	21 08	3 43	5 22	16 14	22 50	.....	0 46	61	14 13.3	- 9 57	6.6
Wed Jul 13/Thu Jul 14	19 11	19 29	21 07	3 44	5 22	16 18	22 55	.....	1 21	70	15 00.2	-13 04	6.6
Thu Jul 14/Fri Jul 15	19 15	19 28	21 07	3 45	5 23	16 21	23 00	.....	1 59	79	15 48.6	-15 41	6.6
Fri Jul 15/Sat Jul 16	19 19	19 28	21 06	3 45	5 24	16 24	23 05	.....	2 41	86	16 38.8	-17 41	6.7
Sat Jul 16/Sun Jul 17	19 23	19 28	21 05	3 46	5 24	16 28	23 10	.....	3 27	92	17 30.9	-18 56	6.7
Sun Jul 17/Mon Jul 18	19 27	19 27	21 05	3 47	5 25	16 31	23 14	17 36	4 18	97	18 24.6	-19 17	6.7
Mon Jul 18/Tue Jul 19	19 30	19 27	21 04	3 48	5 25	16 34	23 19	18 27	5 12	99	19 19.5	-18 41	6.7
Tue Jul 19/Wed Jul 20	19 34	19 26	21 03	3 49	5 26	16 37	23 24	19 15	6 10	100	20 14.9	-17 06	6.8
Wed Jul 20/Thu Jul 21	19 38	19 26	21 02	3 50	5 27	16 40	23 29	20 01	.....	98	21 10.2	-14 34	6.8
Thu Jul 21/Fri Jul 22	19 42	19 25	21 01	3 51	5 27	16 43	23 34	20 44	.....	94	22 05.0	-11 14	6.8
Fri Jul 22/Sat Jul 23	19 46	19 24	21 01	3 52	5 28	16 46	23 39	21 24	.....	87	22 59.2	- 7 17	6.9
Sat Jul 23/Sun Jul 24	19 50	19 24	21 00	3 53	5 29	16 49	23 44	22 04	.....	78	23 52.9	- 2 56	6.9
Sun Jul 24/Mon Jul 25	19 54	19 23	20 59	3 54	5 29	16 52	23 48	22 43	.....	68	0 46.6	1 33	6.9
Mon Jul 25/Tue Jul 26	19 58	19 23	20 58	3 55	5 30	16 55	23 53	23 22	.....	57	1 40.7	5 55	6.9
Tue Jul 26/Wed Jul 27	20 02	19 22	20 57	3 56	5 31	16 58	23 58	0 04	.....	46	2 35.7	9 55	7.0
Wed Jul 27/Thu Jul 28	20 06	19 21	20 56	3 57	5 31	17 01	0 03	0 49	.....	34	3 31.9	13 18	7.0
Thu Jul 28/Fri Jul 29	20 10	19 20	20 55	3 58	5 32	17 04	0 08	1 37	.....	24	4 29.3	15 50	7.0
Fri Jul 29/Sat Jul 30	20 14	19 20	20 54	3 59	5 33	17 07	0 13	2 29	.....	15	5 27.5	17 22	7.1
Sat Jul 30/Sun Jul 31	20 18	19 19	20 53	4 00	5 33	17 10	0 18	3 25	.....	8	6 25.8	17 48	7.1
Sun Jul 31/Mon Aug 01	20 22	19 18	20 52	4 01	5 34	17 13	0 23	4 24	17 34	3	7 23.3	17 08	7.2

***** 2016 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
Mon Aug 01/Tue Aug 02	20 26	19 17	20 50	4 02	5 35	17 16	0 28	5 24	18 25	0	8 19.2	15 28	7.2
Tue Aug 02/Wed Aug 03	20 30	19 16	20 49	4 03	5 35	17 18	0 33	6 24	19 11	0	9 12.9	12 58	7.2
Wed Aug 03/Thu Aug 04	20 34	19 16	20 48	4 04	5 36	17 21	0 38	.....	19 52	2	10 04.3	9 50	7.3
Thu Aug 04/Fri Aug 05	20 37	19 15	20 47	4 05	5 37	17 24	0 43	.....	20 30	6	10 53.4	6 17	7.3
Fri Aug 05/Sat Aug 06	20 41	19 14	20 46	4 06	5 37	17 27	0 48	.....	21 05	12	11 40.9	2 30	7.3
Sat Aug 06/Sun Aug 07	20 45	19 13	20 44	4 06	5 38	17 29	0 53	.....	21 38	19	12 27.1	- 1 20	7.4
Sun Aug 07/Mon Aug 08	20 49	19 12	20 43	4 07	5 39	17 32	0 57	.....	22 11	27	13 12.6	- 5 05	7.4
Mon Aug 08/Tue Aug 09	20 53	19 11	20 42	4 08	5 39	17 35	1 02	.....	22 45	36	13 58.2	- 8 38	7.4
Tue Aug 09/Wed Aug 10	20 57	19 10	20 41	4 09	5 40	17 37	1 07	.....	23 19	45	14 44.4	-11 51	7.5
Wed Aug 10/Thu Aug 11	21 01	19 09	20 39	4 10	5 41	17 40	1 12	.....	23 56	54	15 31.7	-14 38	7.5
Thu Aug 11/Fri Aug 12	21 05	19 08	20 38	4 11	5 41	17 43	1 17	.....	0 36	64	16 20.6	-16 51	7.6
Fri Aug 12/Sat Aug 13	21 09	19 07	20 37	4 12	5 42	17 45	1 22	.....	1 19	73	17 11.2	-18 23	7.6
Sat Aug 13/Sun Aug 14	21 13	19 06	20 35	4 13	5 43	17 48	1 27	.....	2 08	81	18 03.8	-19 06	7.6
Sun Aug 14/Mon Aug 15	21 17	19 05	20 34	4 14	5 44	17 50	1 32	.....	3 00	89	18 57.9	-18 54	7.7
Mon Aug 15/Tue Aug 16	21 21	19 04	20 33	4 15	5 44	17 53	1 37	.....	3 57	94	19 53.1	-17 44	7.7
Tue Aug 16/Wed Aug 17	21 25	19 03	20 31	4 16	5 45	17 56	1 42	17 53	4 57	98	20 49.0	-15 34	7.7
Wed Aug 17/Thu Aug 18	21 29	19 02	20 30	4 17	5 46	17 58	1 47	18 38	6 00	100	21 45.0	-12 30	7.8
Thu Aug 18/Fri Aug 19	21 33	19 00	20 29	4 18	5 46	18 01	1 51	19 21	.....	99	22 40.7	- 8 41	7.8
Fri Aug 19/Sat Aug 20	21 37	18 59	20 27	4 19	5 47	18 03	1 56	20 02	.....	95	23 36.1	- 4 20	7.9
Sat Aug 20/Sun Aug 21	21 41	18 58	20 26	4 20	5 48	18 06	2 01	20 42	.....	89	0 31.4	0 15	7.9
Sun Aug 21/Mon Aug 22	21 45	18 57	20 24	4 21	5 48	18 08	2 06	21 22	.....	81	1 26.9	4 47	7.9
Mon Aug 22/Tue Aug 23	21 48	18 56	20 23	4 22	5 49	18 11	2 11	22 04	.....	70	2 22.8	8 59	8.0
Tue Aug 23/Wed Aug 24	21 52	18 55	20 22	4 23	5 50	18 13	2 16	22 48	.....	59	3 19.5	12 35	8.0
Wed Aug 24/Thu Aug 25	21 56	18 53	20 20	4 23	5 50	18 16	2 21	23 35	.....	48	4 16.8	15 21	8.1
Thu Aug 25/Fri Aug 26	22 00	18 52	20 19	4 24	5 51	18 18	2 25	0 25	.....	37	5 14.7	17 07	8.1
Fri Aug 26/Sat Aug 27	22 04	18 51	20 17	4 25	5 51	18 21	2 30	1 19	.....	26	6 12.3	17 49	8.1
Sat Aug 27/Sun Aug 28	22 08	18 50	20 16	4 26	5 52	18 23	2 35	2 16	.....	17	7 09.2	17 26	8.2
Sun Aug 28/Mon Aug 29	22 12	18 49	20 14	4 27	5 53	18 26	2 40	3 14	.....	10	8 04.6	16 03	8.2
Mon Aug 29/Tue Aug 30	22 16	18 47	20 13	4 28	5 53	18 28	2 45	4 13	17 06	5	8 58.1	13 49	8.3
Tue Aug 30/Wed Aug 31	22 20	18 46	20 11	4 29	5 54	18 31	2 49	5 11	17 49	1	9 49.5	10 54	8.3
Wed Aug 31/Thu Sep 01	22 24	18 45	20 10	4 30	5 55	18 33	2 54	6 09	18 27	0	10 38.9	7 29	8.3

Calendar for VATT, west longitude (h.m.s) = 7 19 34, latitude (d.m) = 32 42.1
Rise/set times in Mountain time (7 hr W), uncorrected for elevation, in standard time all year.
Moon info is for local midnight, even if moon is down. Program: John Thorstensen, Dartmouth College.

***** 2016 SEPTEMBER *****

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
Thu Sep 01/Fri Sep 02	22 28	18 43	20 08	4 30	5 55	18 36	2 59	7 04	19 03	1	11 26.5	3 47	8.4
Fri Sep 02/Sat Sep 03	22 32	18 42	20 07	4 31	5 56	18 38	3 04	.....	19 37	4	12 13.0	- 0 02	8.4
Sat Sep 03/Sun Sep 04	22 36	18 41	20 05	4 32	5 57	18 41	3 09	.....	20 11	8	12 58.7	- 3 49	8.4
Sun Sep 04/Mon Sep 05	22 40	18 40	20 04	4 33	5 57	18 43	3 13	.....	20 44	14	13 44.1	- 7 25	8.5
Mon Sep 05/Tue Sep 06	22 44	18 38	20 02	4 34	5 58	18 45	3 18	.....	21 18	21	14 29.9	-10 44	8.5
Tue Sep 06/Wed Sep 07	22 48	18 37	20 01	4 34	5 59	18 48	3 23	.....	21 53	29	15 16.4	-13 39	8.6
Wed Sep 07/Thu Sep 08	22 52	18 36	19 59	4 35	5 59	18 50	3 28	.....	22 32	38	16 04.1	-16 02	8.6
Thu Sep 08/Fri Sep 09	22 55	18 34	19 58	4 36	6 00	18 53	3 32	.....	23 13	47	16 53.3	-17 47	8.6
Fri Sep 09/Sat Sep 10	22 59	18 33	19 56	4 37	6 00	18 55	3 37	.....	23 58	57	17 44.1	-18 48	8.7
Sat Sep 10/Sun Sep 11	23 03	18 32	19 55	4 38	6 01	18 58	3 42	.....	0 48	67	18 36.4	-18 58	8.7
Sun Sep 11/Mon Sep 12	23 07	18 30	19 54	4 38	6 02	19 00	3 46	.....	1 42	76	19 30.2	-18 13	8.7
Mon Sep 12/Tue Sep 13	23 11	18 29	19 52	4 39	6 02	19 03	3 51	.....	2 40	84	20 25.0	-16 29	8.8
Tue Sep 13/Wed Sep 14	23 15	18 28	19 51	4 40	6 03	19 05	3 56	.....	3 41	92	21 20.5	-13 50	8.8
Wed Sep 14/Thu Sep 15	23 19	18 26	19 49	4 41	6 04	19 08	4 01	17 12	4 45	97	22 16.4	-10 19	8.9
Thu Sep 15/Fri Sep 16	23 23	18 25	19 48	4 41	6 04	19 10	4 05	17 54	5 50	100	23 12.7	- 6 07	8.9
Fri Sep 16/Sat Sep 17	23 27	18 24	19 46	4 42	6 05	19 12	4 10	18 36	6 57	100	0 09.3	- 1 29	8.9
Sat Sep 17/Sun Sep 18	23 31	18 22	19 45	4 43	6 06	19 15	4 15	19 17	.....	97	1 06.3	3 15	9.0
Sun Sep 18/Mon Sep 19	23 35	18 21	19 43	4 44	6 06	19 17	4 19	20 00	.....	91	2 04.1	7 45	9.0
Mon Sep 19/Tue Sep 20	23 39	18 19	19 42	4 44	6 07	19 20	4 24	20 44	.....	83	3 02.6	11 42	9.0
Tue Sep 20/Wed Sep 21	23 43	18 18	19 40	4 45	6 07	19 22	4 29	21 31	.....	73	4 01.7	14 49	9.1
Wed Sep 21/Thu Sep 22	23 47	18 17	19 39	4 46	6 08	19 25	4 33	22 22	.....	62	5 00.9	16 55	9.1
Thu Sep 22/Fri Sep 23	23 51	18 15	19 38	4 47	6 09	19 27	4 38	23 15	.....	51	5 59.7	17 53	9.2
Fri Sep 23/Sat Sep 24	23 55	18 14	19 36	4 47	6 09	19 30	4 43	0 11	.....	40	6 57.3	17 44	9.2
Sat Sep 24/Sun Sep 25	23 59	18 13	19 35	4 48	6 10	19 33	4 47	1 09	.....	29	7 53.0	16 33	9.2
Sun Sep 25/Mon Sep 26	0 03	18 11	19 33	4 49	6 11	19 35	4 52	2 07	.....	20	8 46.6	14 30	9.3
Mon Sep 26/Tue Sep 27	0 06	18 10	19 32	4 49	6 11	19 38	4 57	3 05	.....	13	9 37.9	11 44	9.3
Tue Sep 27/Wed Sep 28	0 10	18 09	19 31	4 50	6 12	19 40	5 01	4 01	.....	7	10 27.2	8 28	9.3
Wed Sep 28/Thu Sep 29	0 14	18 07	19 29	4 51	6 13	19 43	5 06	4 57	17 03	3	11 14.7	4 51	9.4
Thu Sep 29/Fri Sep 30	0 18	18 06	19 28	4 52	6 13	19 45	5 11	5 52	17 37	0	12 01.0	1 04	9.4
Fri Sep 30/Sat Oct 01	0 22	18 05	19 26	4 52	6 14	19 48	5 15	6 45	18 11	0	12 46.6	- 2 44	9.4

***** 2016 OCTOBER *****

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 Oct 01/Sun Oct 02	0 26	18 03	19 25	4 53	6 15	19 51	5 20	.....	18 44	2	13 31.9	- 6 24	9.5
Sun Oct 02/Mon Oct 03	0 30	18 02	19 24	4 54	6 15	19 53	5 25	.....	19 17	5	14 17.4	- 9 49	9.5
Mon Oct 03/Tue Oct 04	0 34	18 01	19 22	4 54	6 16	19 56	5 29	.....	19 52	9	15 03.5	-12 50	9.5
Tue Oct 04/Wed Oct 05	0 38	17 59	19 21	4 55	6 17	19 58	5 34	.....	20 29	16	15 50.5	-15 23	9.6
Wed Oct 05/Thu Oct 06	0 42	17 58	19 20	4 56	6 18	20 01	5 38	.....	21 09	23	16 38.7	-17 19	9.6
Thu Oct 06/Fri Oct 07	0 46	17 57	19 19	4 56	6 18	20 04	5 43	.....	21 52	31	17 28.1	-18 32	9.6
Fri Oct 07/Sat Oct 08	0 50	17 56	19 17	4 57	6 19	20 06	5 48	.....	22 39	41	18 18.8	-18 59	9.7
Sat Oct 08/Sun Oct 09	0 54	17 54	19 16	4 58	6 20	20 09	5 52	.....	23 30	50	19 10.7	-18 34	9.7
Sun Oct 09/Mon Oct 10	0 58	17 53	19 15	4 59	6 20	20 12	5 57	.....	0 25	60	20 03.5	-17 15	9.7
Mon Oct 10/Tue Oct 11	1 02	17 52	19 14	4 59	6 21	20 15	6 02	.....	1 23	70	20 57.1	-15 01	9.8
Tue Oct 11/Wed Oct 12	1 06	17 51	19 12	5 00	6 22	20 17	6 06	.....	2 24	80	21 51.4	-11 55	9.8
Wed Oct 12/Thu Oct 13	1 10	17 49	19 11	5 01	6 23	20 20	6 11	.....	3 28	88	22 46.4	- 8 04	9.8
Thu Oct 13/Fri Oct 14	1 13	17 48	19 10	5 01	6 23	20 23	6 16	16 26	4 34	95	23 42.3	- 3 37	9.9
Fri Oct 14/Sat Oct 15	1 17	17 47	19 09	5 02	6 24	20 26	6 20	17 07	5 41	99	0 39.3	1 09	9.9
Sat Oct 15/Sun Oct 16	1 21	17 46	19 08	5 03	6 25	20 28	6 25	17 50	6 50	100	1 37.6	5 55	9.9
Sun Oct 16/Mon Oct 17	1 25	17 45	19 07	5 03	6 26	20 31	6 30	18 34	.....	98	2 37.5	10 18	9.9
Mon Oct 17/Tue Oct 18	1 29	17 44	19 06	5 04	6 26	20 34	6 34	19 21	.....	93	3 38.6	13 56	10.0
Tue Oct 18/Wed Oct 19	1 33	17 42	19 05	5 05	6 27	20 37	6 39	20 12	.....	85	4 40.3	16 33	10.0
Wed Oct 19/Thu Oct 20	1 37	17 41	19 03	5 06	6 28	20 40	6 44	21 07	.....	76	5 41.8	17 57	10.0
Thu Oct 20/Fri Oct 21	1 41	17 40	19 02	5 06	6 29	20 43	6 48	22 04	.....	66	6 41.9	18 08	10.1
Fri Oct 21/Sat Oct 22	1 45	17 39	19 01	5 07	6 29	20 46	6 53	23 03	.....	55	7 39.8	17 11	10.1
Sat Oct 22/Sun Oct 23	1 49	17 38	19 00	5 08	6 30	20 49	6 57	0 02	.....	44	8 35.0	15 16	10.1
Sun Oct 23/Mon Oct 24	1 53	17 37	18 59	5 08	6 31	20 51	7 02	1 00	.....	34	9 27.3	12 37	10.1
Mon Oct 24/Tue Oct 25	1 57	17 36	18 58	5 09	6 32	20 54	7 07	1 57	.....	25	10 17.1	9 24	10.2
Tue Oct 25/Wed Oct 26	2 01	17 35	18 58	5 10	6 33	20 57	7 11	2 52	.....	17	11 04.9	5 50	10.2
Wed Oct 26/Thu Oct 27	2 05	17 34	18 57	5 11	6 34	21 00	7 16	3 47	.....	10	11 51.1	2 04	10.2
Thu Oct 27/Fri Oct 28	2 09	17 33	18 56	5 11	6 34	21 04	7 21	4 40	16 13	5	12 36.5	- 1 44	10.3
Fri Oct 28/Sat Oct 29	2 13	17 32	18 55	5 12	6 35	21 07	7 26	5 33	16 45	2	13 21.5	- 5 28	10.3
Sat Oct 29/Sun Oct 30	2 17	17 31	18 54	5 13	6 36	21 10	7 30	6 26	17 18	0	14 06.7	- 8 58	10.3
Sun Oct 30/Mon Oct 31	2 20	17 30	18 53	5 14	6 37	21 13	7 35	7 19	17 53	0	14 52.5	-12 08	10.3
Mon Oct 31/Tue Nov 01	2 24	17 29	18 52	5 14	6 38	21 16	7 40	.....	18 29	2	15 39.2	-14 49	10.4

Calendar for VATT, west longitude (h.m.s) = 7 19 34, latitude (d.m) = 32 42.1
Rise/set times in Mountain time (7 hr W), uncorrected for elevation, in standard time all year.
Moon info is for local midnight, even if moon is down. Program: John Thorstensen, Dartmouth College.

***** 2016 NOVEMBER *****

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 Nov 01/Wed Nov 02	2 28	17 28	18 52	5 15	6 39	21 19	7 44	.....	19 08	6	16 27.0	-16 56	10.4
Wed Nov 02/Thu Nov 03	2 32	17 27	18 51	5 16	6 39	21 22	7 49	.....	19 49	11	17 15.8	-18 22	10.4
Thu Nov 03/Fri Nov 04	2 36	17 26	18 50	5 17	6 40	21 26	7 54	.....	20 35	17	18 05.7	-19 01	10.4
Fri Nov 04/Sat Nov 05	2 40	17 26	18 49	5 17	6 41	21 29	7 58	.....	21 24	25	18 56.4	-18 51	10.5
Sat Nov 05/Sun Nov 06	2 44	17 25	18 49	5 18	6 42	21 32	8 03	.....	22 16	34	19 47.7	-17 50	10.5
Sun Nov 06/Mon Nov 07	2 48	17 24	18 48	5 19	6 43	21 35	8 08	.....	23 11	44	20 39.5	-15 57	10.5
Mon Nov 07/Tue Nov 08	2 52	17 23	18 47	5 20	6 44	21 39	8 12	.....	0 09	54	21 31.6	-13 14	10.5
Tue Nov 08/Wed Nov 09	2 56	17 23	18 47	5 20	6 45	21 42	8 17	.....	1 10	65	22 24.3	- 9 46	10.6
Wed Nov 09/Thu Nov 10	3 00	17 22	18 46	5 21	6 46	21 45	8 22	.....	2 12	75	23 17.8	- 5 40	10.6
Thu Nov 10/Fri Nov 11	3 04	17 21	18 46	5 22	6 47	21 49	8 27	.....	3 17	84	0 12.5	- 1 06	10.6
Fri Nov 11/Sat Nov 12	3 08	17 20	18 45	5 23	6 47	21 52	8 31	.....	4 25	92	1 08.9	3 39	10.6
Sat Nov 12/Sun Nov 13	3 12	17 20	18 45	5 23	6 48	21 56	8 36	16 21	5 34	97	2 07.4	8 17	10.6
Sun Nov 13/Mon Nov 14	3 16	17 19	18 44	5 24	6 49	21 59	8 41	17 07	6 44	100	3 08.3	12 25	10.7
Mon Nov 14/Tue Nov 15	3 20	17 19	18 44	5 25	6 50	22 03	8 45	17 57	7 54	99	4 11.0	15 40	10.7
Tue Nov 15/Wed Nov 16	3 24	17 18	18 43	5 26	6 51	22 06	8 50	18 51	.....	95	5 14.8	17 44	10.7
Wed Nov 16/Thu Nov 17	3 28	17 18	18 43	5 26	6 52	22 10	8 55	19 49	.....	89	6 18.1	18 30	10.7
Thu Nov 17/Fri Nov 18	3 31	17 17	18 43	5 27	6 53	22 13	9 00	20 49	.....	80	7 19.6	17 57	10.7
Fri Nov 18/Sat Nov 19	3 35	17 17	18 42	5 28	6 54	22 17	9 04	21 50	.....	71	8 18.1	16 18	10.8
Sat Nov 19/Sun Nov 20	3 39	17 16	18 42	5 29	6 55	22 20	9 09	22 51	.....	60	9 13.2	13 45	10.8
Sun Nov 20/Mon Nov 21	3 43	17 16	18 42	5 30	6 56	22 24	9 14	23 50	.....	50	10 05.1	10 35	10.8
Mon Nov 21/Tue Nov 22	3 47	17 15	18 41	5 30	6 56	22 28	9 18	0 47	.....	40	10 54.2	7 00	10.8
Tue Nov 22/Wed Nov 23	3 51	17 15	18 41	5 31	6 57	22 31	9 23	1 42	.....	30	11 41.2	3 12	10.8
Wed Nov 23/Thu Nov 24	3 55	17 15	18 41	5 32	6 58	22 35	9 28	2 36	.....	22	12 26.8	- 0 40	10.8
Thu Nov 24/Fri Nov 25	3 59	17 14	18 41	5 33	6 59	22 39	9 33	3 29	.....	15	13 11.9	- 4 27	10.9
Fri Nov 25/Sat Nov 26	4 03	17 14	18 41	5 33	7 00	22 43	9 37	4 22	.....	9	13 56.8	- 8 03	10.9
Sat Nov 26/Sun Nov 27	4 07	17 14	18 41	5 34	7 01	22 47	9 42	5 14	15 54	4	14 42.3	-11 20	10.9
Sun Nov 27/Mon Nov 28	4 11	17 14	18 40	5 35	7 02	22 50	9 47	6 07	16 29	1	15 28.7	-14 11	10.9
Mon Nov 28/Tue Nov 29	4 15	17 14	18 40	5 36	7 03	22 54	9 51	7 00	17 07	0	16 16.3	-16 30	10.9
Tue Nov 29/Wed Nov 30	4 19	17 13	18 40	5 36	7 03	22 58	9 56	7 51	17 48	1	17 05.0	-18 08	10.9
Wed Nov 30/Thu Dec 01	4 23	17 13	18 40	5 37	7 04	23 02	10 01	.....	18 32	3	17 54.8	-19 01	10.9

***** 2016 DECEMBER *****

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
Thu Dec 01/Fri Dec 02	4 27	17 13	18 40	5 38	7 05	23 06	10 05	.....	19 20	7	18 45.3	-19 04	11.0
Fri Dec 02/Sat Dec 03	4 31	17 13	18 40	5 39	7 06	23 10	10 10	.....	20 11	12	19 36.3	-18 17	11.0
Sat Dec 03/Sun Dec 04	4 35	17 13	18 41	5 39	7 07	23 14	10 15	.....	21 06	20	20 27.4	-16 38	11.0
Sun Dec 04/Mon Dec 05	4 38	17 13	18 41	5 40	7 08	23 18	10 19	.....	22 02	28	21 18.5	-14 11	11.0
Mon Dec 05/Tue Dec 06	4 42	17 13	18 41	5 41	7 08	23 22	10 24	.....	23 00	38	22 09.6	-11 00	11.0
Tue Dec 06/Wed Dec 07	4 46	17 13	18 41	5 41	7 09	23 26	10 29	.....	24 00	48	23 00.8	- 7 12	11.0
Wed Dec 07/Thu Dec 08	4 50	17 13	18 41	5 42	7 10	23 31	10 33	.....	1 01	59	23 52.8	- 2 56	11.0
Thu Dec 08/Fri Dec 09	4 54	17 14	18 41	5 43	7 11	23 35	10 38	.....	2 05	70	0 46.2	1 36	11.0
Fri Dec 09/Sat Dec 10	4 58	17 14	18 42	5 43	7 11	23 39	10 43	.....	3 11	80	1 41.5	6 11	11.0
Sat Dec 10/Sun Dec 11	5 02	17 14	18 42	5 44	7 12	23 43	10 47	.....	4 18	89	2 39.3	10 30	11.0
Sun Dec 11/Mon Dec 12	5 06	17 14	18 42	5 45	7 13	23 47	10 52	15 41	5 27	95	3 39.8	14 13	11.0
Mon Dec 12/Tue Dec 13	5 10	17 14	18 42	5 45	7 13	23 52	10 56	16 32	6 36	99	4 42.7	16 57	11.0
Tue Dec 13/Wed Dec 14	5 14	17 15	18 43	5 46	7 14	23 56	11 01	17 28	7 41	100	5 47.0	18 27	11.1
Wed Dec 14/Thu Dec 15	5 18	17 15	18 43	5 47	7 15	0 00	11 05	18 28	.....	97	6 50.8	18 34	11.1
Thu Dec 15/Fri Dec 16	5 22	17 15	18 43	5 47	7 15	0 04	11 10	19 31	.....	92	7 52.8	17 25	11.1
Fri Dec 16/Sat Dec 17	5 26	17 16	18 44	5 48	7 16	0 09	11 14	20 34	.....	85	8 51.6	15 09	11.1
Sat Dec 17/Sun Dec 18	5 30	17 16	18 44	5 48	7 16	0 13	11 19	21 36	.....	76	9 46.8	12 06	11.1
Sun Dec 18/Mon Dec 19	5 34	17 17	18 45	5 49	7 17	0 18	11 23	22 36	.....	67	10 38.7	8 31	11.1
Mon Dec 19/Tue Dec 20	5 38	17 17	18 45	5 49	7 18	0 22	11 28	23 33	.....	57	11 27.8	4 39	11.1
Tue Dec 20/Wed Dec 21	5 42	17 17	18 46	5 50	7 18	0 26	11 32	0 29	.....	47	12 14.8	0 41	11.1
Wed Dec 21/Thu Dec 22	5 46	17 18	18 46	5 50	7 19	0 31	11 37	1 23	.....	38	13 00.6	- 3 13	11.1
Thu Dec 22/Fri Dec 23	5 49	17 18	18 47	5 51	7 19	0 35	11 41	2 16	.....	29	13 45.8	- 6 56	11.1
Fri Dec 23/Sat Dec 24	5 53	17 19	18 47	5 51	7 19	0 40	11 46	3 08	.....	21	14 31.3	-10 21	11.1
Sat Dec 24/Sun Dec 25	5 57	17 20	18 48	5 52	7 20	0 44	11 50	4 01	.....	14	15 17.4	-13 22	11.1
Sun Dec 25/Mon Dec 26	6 01	17 20	18 48	5 52	7 20	0 49	11 54	4 54	.....	8	16 04.7	-15 52	11.1
Mon Dec 26/Tue Dec 27	6 05	17 21	18 49	5 52	7 21	0 53	11 59	5 46	15 46	4	16 53.2	-17 44	11.1
Tue Dec 27/Wed Dec 28	6 09	17 21	18 50	5 53	7 21	0 58	12 03	6 37	16 29	1	17 42.9	-18 51	11.1
Wed Dec 28/Thu Dec 29	6 13	17 22	18 50	5 53	7 21	1 02	12 07	7 27	17 16	0	18 33.7	-19 10	11.1
Thu Dec 29/Fri Dec 30	6 17	17 23	18 51	5 54	7 21	1 07	12 12	8 14	18 07	1	19 25.0	-18 36	11.0
Fri Dec 30/Sat Dec 31	6 21	17 23	18 51	5 54	7 22	1 12	12 16	.....	19 01	4	20 16.6	-17 10	11.0
Sat Dec 31/Sun Jan 01	6 25	17 24	18 52	5 54	7 22	1 16	12 20	.....	19 57	9	21 07.9	-14 55	11.0