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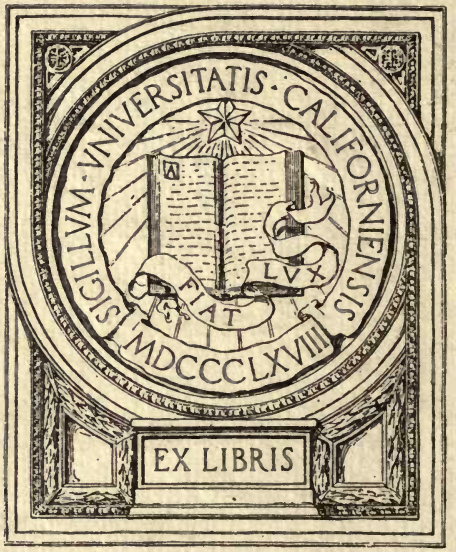
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TABLES

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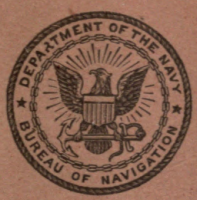

WASHINGTON
GOVERNMENT PRINTING OFFICE
1917

TABLES

GIVING

THE TIMES OF RISING AND SETTING OF THE SUN AND MOON

1917 AND 1918

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1917

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U. S. NAVAL OBSERVATORY.

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November, 1916.

PREFACE.

It having been decided to include in future volumes of the *American Ephemeris and Nautical Almanac* and of the *American Nautical Almanac*, beginning with the editions for 1919, tables giving the times of rising and setting of the Sun and Moon in the form contained in the following pages, this supplement containing the corresponding tables for 1917 and 1918 is issued that information on this subject might be available for immediate use.

J. A. HOOGEWERFF,
Captain, U. S. N.,
Superintendent Naval Observatory.

WASHINGTON, *November, 1916.*

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J. A. HOOGEWERFF,
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WASHINGTON, November, 1916.

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1917.

TABLE I.

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, subtract 12 hours, mark the result A. M., and add one to the day.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunrise in southern latitudes see page 24.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Jan. 0	18 0	18 17	18 35	18 56	19 8	19 22	19 39	19 59	20 8	20 19	20 32	20 46	21 3
1	18 0	18 17	18 35	18 56	19 8	19 22	19 39	19 59	20 8	20 19	20 31	20 46	21 2
2	18 1	18 18	18 36	18 56	19 8	19 22	19 39	19 59	20 8	20 19	20 31	20 45	21 2
3	18 1	18 18	18 36	18 57	19 9	19 22	19 38	19 58	20 8	20 19	20 31	20 45	21 1
4	18 2	18 18	18 36	18 57	19 9	19 22	19 38	19 58	20 8	20 18	20 30	20 44	21 0
5	18 2	18 19	18 36	18 57	19 9	19 22	19 38	19 58	20 8	20 18	20 30	20 44	21 0
6	18 2	18 19	18 37	18 57	19 9	19 22	19 38	19 58	20 7	20 17	20 29	20 43	20 59
7	18 3	18 19	18 37	18 57	19 9	19 22	19 38	19 57	20 6	20 17	20 28	20 42	20 58
8	18 3	18 20	18 37	18 57	19 9	19 22	19 38	19 57	20 6	20 16	20 28	20 41	20 57
9	18 4	18 20	18 37	18 57	19 9	19 22	19 37	19 56	20 6	20 16	20 27	20 40	20 56
10	18 4	18 20	18 38	18 57	19 9	19 22	19 37	19 56	20 5	20 15	20 26	20 39	20 54
11	18 5	18 21	18 38	18 57	19 9	19 22	19 37	19 55	20 4	20 14	20 25	20 38	20 53
12	18 5	18 21	18 38	18 57	19 8	19 21	19 36	19 55	20 4	20 13	20 24	20 37	20 52
13	18 5	18 21	18 38	18 57	19 8	19 21	19 36	19 54	20 3	20 12	20 23	20 36	20 50
14	18 6	18 21	18 38	18 57	19 8	19 20	19 35	19 53	20 2	20 11	20 22	20 34	20 49
15	18 6	18 22	18 38	18 57	19 8	19 20	19 35	19 53	20 1	20 10	20 21	20 33	20 47
16	18 6	18 22	18 38	18 57	19 8	19 20	19 34	19 52	20 0	20 9	20 20	20 32	20 46
17	18 7	18 22	18 38	18 56	19 7	19 19	19 34	19 51	19 59	20 8	20 19	20 30	20 44
18	18 7	18 22	18 38	18 56	19 7	19 19	19 33	19 50	19 58	20 7	20 17	20 29	20 42
19	18 7	18 22	18 38	18 56	19 6	19 18	19 32	19 49	19 57	20 6	20 16	20 27	20 41
20	18 8	18 22	18 38	18 56	19 6	19 18	19 31	19 48	19 56	20 5	20 15	20 26	20 39
21	18 8	18 22	18 38	18 55	19 6	19 17	19 31	19 47	19 55	20 3	20 13	20 24	20 37
22	18 8	18 23	18 38	18 55	19 5	19 16	19 30	19 46	19 54	20 2	20 12	20 22	20 35
23	18 8	18 23	18 38	18 55	19 4	19 16	19 29	19 45	19 52	20 1	20 10	20 21	20 33
24	18 9	18 23	18 37	18 54	19 4	19 15	19 28	19 44	19 51	19 59	20 8	20 19	20 31
25	18 9	18 23	18 37	18 54	19 4	19 14	19 27	19 43	19 50	19 58	20 7	20 17	20 29
26	18 9	18 23	18 37	18 53	19 3	19 14	19 26	19 41	19 48	19 56	20 5	20 15	20 27
27	18 9	18 23	18 37	18 53	19 2	19 13	19 25	19 40	19 47	19 55	20 4	20 13	20 25
28	18 10	18 23	18 37	18 52	19 2	19 12	19 24	19 39	19 46	19 53	20 2	20 11	20 22
29	18 10	18 23	18 36	18 52	19 1	19 11	19 23	19 37	19 44	19 52	20 0	20 9	20 20
30	18 10	18 23	18 36	18 51	19 0	19 10	19 22	19 36	19 43	19 50	19 58	20 7	20 18
31	18 10	18 23	18 36	18 51	19 0	19 9	19 21	19 35	19 41	19 48	19 56	20 5	20 16
Feb. 1	18 10	18 22	18 36	18 50	18 59	19 8	19 20	19 33	19 40	19 46	19 54	20 3	20 13
2	18 10	18 22	18 35	18 50	18 58	19 7	19 18	19 32	19 38	19 45	19 52	20 1	20 11
3	18 10	18 22	18 35	18 49	18 57	19 6	19 17	19 30	19 36	19 43	19 50	19 59	20 8
4	18 10	18 22	18 34	18 48	18 56	19 5	19 16	19 29	19 35	19 41	19 48	19 57	20 6
5	18 10	18 22	18 34	18 48	18 55	19 4	19 15	19 27	19 33	19 39	19 46	19 54	20 3
6	18 11	18 22	18 34	18 47	18 55	19 3	19 13	19 26	19 31	19 37	19 44	19 52	20 1
7	18 11	18 22	18 33	18 46	18 54	19 2	19 12	19 24	19 30	19 36	19 42	19 50	19 58
8	18 11	18 21	18 33	18 46	18 53	19 1	19 11	19 22	19 28	19 34	19 40	19 48	19 56
9	18 11	18 21	18 32	18 45	18 52	19 0	19 9	19 21	19 26	19 32	19 38	19 45	19 53
10	18 11	18 21	18 32	18 44	18 51	18 59	19 8	19 19	19 24	19 30	19 36	19 43	19 51
11	18 11	18 21	18 31	18 43	18 50	18 58	19 6	19 17	19 22	19 28	19 34	19 40	19 48
12	18 11	18 20	18 31	18 42	18 49	18 56	19 5	19 16	19 20	19 26	19 31	19 38	19 45
13	18 11	18 20	18 30	18 42	18 48	18 55	19 4	19 14	19 18	19 24	19 29	19 36	19 43
14	18 11	18 20	18 30	18 41	18 47	18 54	19 2	19 12	19 16	19 21	19 27	19 33	19 40
15	18 11	18 20	18 29	18 40	18 46	18 53	19 1	19 10	19 14	19 19	19 25	19 31	19 37

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, write P. M. after the astronomical time.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunset in southern latitudes see page 24.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Jan. 1	6 7	5 50	5 32	5 11	4 59	4 45	4 29	4 8	3 59	3 48	3 36	3 22	3 5
2	6 8	5 51	5 33	5 12	5 0	4 46	4 30	4 10	4 0	3 49	3 37	3 23	3 6
3	6 8	5 51	5 33	5 13	5 1	4 47	4 31	4 11	4 1	3 50	3 38	3 24	3 8
4	6 9	5 52	5 34	5 13	5 1	4 48	4 32	4 12	4 2	3 52	3 40	3 25	3 9
5	6 9	5 52	5 35	5 14	5 2	4 49	4 33	4 13	4 4	3 53	3 41	3 27	3 11
6	6 10	5 53	5 35	5 15	5 3	4 50	4 34	4 14	4 5	3 54	3 42	3 29	3 13
7	6 10	5 54	5 36	5 16	5 4	4 50	4 35	4 15	4 6	3 56	3 44	3 30	3 14
8	6 10	5 54	5 36	5 16	5 5	4 51	4 36	4 16	4 7	3 57	3 45	3 32	3 16
9	6 11	5 55	5 37	5 17	5 6	4 52	4 37	4 18	4 9	3 59	3 47	3 34	3 18
10	6 11	5 55	5 38	5 18	5 7	4 54	4 38	4 19	4 10	4 0	3 49	3 36	3 20
11	6 12	5 56	5 38	5 19	5 8	4 55	4 39	4 20	4 12	4 2	3 50	3 37	3 22
12	6 12	5 56	5 39	5 20	5 8	4 56	4 40	4 22	4 13	4 3	3 52	3 39	3 24
13	6 12	5 57	5 40	5 20	5 9	4 57	4 42	4 23	4 14	4 5	3 54	3 41	3 26
14	6 13	5 57	5 40	5 21	5 10	4 58	4 43	4 25	4 16	4 6	3 56	3 43	3 29
15	6 13	5 58	5 41	5 22	5 11	4 59	4 44	4 26	4 18	4 8	3 57	3 45	3 31
16	6 14	5 58	5 42	5 23	5 12	5 0	4 45	4 28	4 19	4 10	3 59	3 47	3 33
17	6 14	5 58	5 42	5 24	5 13	5 1	4 46	4 29	4 21	4 12	4 1	3 49	3 35
18	6 14	5 59	5 43	5 25	5 14	5 2	4 48	4 31	4 22	4 13	4 3	3 51	3 38
19	6 14	6 0	5 44	5 26	5 15	5 3	4 49	4 32	4 24	4 15	4 5	3 53	3 40
20	6 15	6 0	5 44	5 26	5 16	5 4	4 50	4 34	4 26	4 17	4 7	3 56	3 42
21	6 15	6 0	5 45	5 27	5 17	5 6	4 52	4 35	4 27	4 19	4 9	3 58	3 45
22	6 15	6 1	5 46	5 28	5 18	5 7	4 53	4 37	4 29	4 21	4 11	4 0	3 47
23	6 16	6 1	5 46	5 29	5 19	5 8	4 55	4 38	4 31	4 22	4 13	4 2	3 50
24	6 16	6 2	5 47	5 30	5 20	5 9	4 56	4 40	4 33	4 24	4 15	4 5	3 52
25	6 16	6 2	5 48	5 31	5 21	5 10	4 57	4 42	4 34	4 26	4 17	4 7	3 55
26	6 16	6 3	5 48	5 32	5 22	5 12	4 59	4 43	4 36	4 28	4 19	4 9	3 58
27	6 16	6 3	5 49	5 33	5 23	5 13	5 0	4 45	4 38	4 30	4 21	4 11	4 0
28	6 17	6 4	5 49	5 34	5 24	5 14	5 2	4 47	4 40	4 32	4 24	4 14	4 3
29	6 17	6 4	5 50	5 34	5 25	5 15	5 3	4 48	4 42	4 34	4 26	4 16	4 5
30	6 17	6 4	5 51	5 35	5 26	5 16	5 4	4 50	4 43	4 36	4 28	4 18	4 8
31	6 17	6 4	5 51	5 36	5 27	5 17	5 6	4 52	4 45	4 38	4 30	4 21	4 10
Feb. 1	6 18	6 5	5 52	5 37	5 28	5 19	5 7	4 53	4 47	4 40	4 32	4 23	4 13
2	6 18	6 5	5 52	5 38	5 29	5 20	5 9	4 55	4 49	4 42	4 34	4 26	4 16
3	6 18	6 6	5 53	5 38	5 30	5 21	5 10	4 57	4 51	4 44	4 36	4 28	4 18
4	6 18	6 6	5 54	5 39	5 31	5 22	5 12	4 59	4 53	4 46	4 39	4 30	4 20
5	6 18	6 6	5 54	5 40	5 32	5 23	5 13	5 0	4 54	4 48	4 41	4 33	4 24
6	6 18	6 7	5 55	5 41	5 33	5 25	5 14	5 2	4 56	4 50	4 43	4 35	4 26
7	6 18	6 7	5 55	5 42	5 34	5 26	5 16	5 4	4 58	4 52	4 45	4 38	4 29
8	6 18	6 7	5 56	5 43	5 35	5 27	5 17	5 5	5 0	4 54	4 47	4 40	4 31
9	6 18	6 7	5 56	5 44	5 36	5 28	5 19	5 7	5 2	4 56	4 50	4 42	4 34
10	6 18	6 8	5 57	5 44	5 37	5 29	5 20	5 9	5 4	4 58	4 52	4 45	4 37
11	6 18	6 8	5 57	5 45	5 38	5 31	5 22	5 11	5 6	5 0	4 54	4 47	4 39
12	6 18	6 8	5 58	5 46	5 39	5 32	5 23	5 12	5 8	5 2	4 56	4 50	4 42
13	6 18	6 8	5 58	5 47	5 40	5 33	5 24	5 14	5 9	5 4	4 58	4 52	4 45
14	6 18	6 8	5 59	5 48	5 41	5 34	5 26	5 16	5 11	5 6	5 0	4 54	4 47
15	6 18	6 9	5 59	5 48	5 42	5 35	5 27	5 18	5 13	5 8	5 3	4 57	4 50
16	6 18	6 9	6 0	5 49	5 43	5 36	5 29	5 19	5 15	5 10	5 5	4 59	4 52

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, subtract 12 hours, mark the result A. M., and add one to the day.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunrise in southern latitudes see page 24.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Feb. 15	18 11	18 20	18 29	18 40	18 46	18 53	19 1	19 10	19 14	19 19	19 25	19 31	19 37
16	18 11	18 19	18 28	18 39	18 45	18 51	18 59	19 8	19 12	19 17	19 22	19 28	19 34
17	18 11	18 19	18 28	18 38	18 44	18 50	18 57	19 6	19 10	19 15	19 20	19 26	19 32
18	18 11	18 19	18 27	18 37	18 42	18 49	18 56	19 4	19 8	19 13	19 18	19 23	19 29
19	18 10	18 18	18 27	18 36	18 41	18 47	18 54	19 3	19 6	19 11	19 15	19 20	19 26
20	18 10	18 18	18 26	18 35	18 40	18 46	18 53	19 1	19 4	19 8	19 13	19 18	19 23
21	18 10	18 18	18 25	18 34	18 39	18 44	18 51	18 59	19 2	19 6	19 10	19 15	19 20
22	18 10	18 17	18 25	18 33	18 38	18 43	18 49	18 57	19 0	19 4	19 8	19 13	19 18
23	18 10	18 17	18 24	18 32	18 37	18 42	18 48	18 55	18 58	19 2	19 6	19 10	19 15
24	18 10	18 16	18 23	18 31	18 35	18 40	18 46	18 53	18 56	18 59	19 3	19 7	19 12
25	18 10	18 16	18 22	18 30	18 34	18 39	18 44	18 51	18 54	18 57	19 1	19 5	19 9
26	18 10	18 16	18 22	18 29	18 33	18 37	18 43	18 49	18 52	18 55	18 58	19 2	19 6
27	18 9	18 15	18 21	18 28	18 32	18 36	18 41	18 47	18 50	18 52	18 56	18 59	19 3
28	18 9	18 15	18 20	18 27	18 30	18 34	18 39	18 45	18 47	18 50	18 53	18 57	19 0
Mar. 1	18 9	18 14	18 20	18 26	18 29	18 33	18 37	18 43	18 45	18 48	18 51	18 54	18 58
2	18 9	18 14	18 19	18 25	18 28	18 32	18 36	18 41	18 43	18 45	18 48	18 51	18 55
3	18 9	18 13	18 18	18 23	18 27	18 30	18 34	18 39	18 41	18 43	18 46	18 48	18 52
4	18 8	18 13	18 17	18 22	18 25	18 28	18 32	18 37	18 38	18 41	18 43	18 46	18 49
5	18 8	18 12	18 16	18 21	18 24	18 27	18 30	18 34	18 36	18 38	18 40	18 43	18 46
6	18 8	18 12	18 16	18 20	18 22	18 25	18 28	18 32	18 34	18 36	18 38	18 40	18 43
7	18 8	18 11	18 15	18 19	18 21	18 24	18 27	18 30	18 32	18 33	18 35	18 37	18 40
8	18 7	18 11	18 14	18 18	18 20	18 22	18 25	18 28	18 29	18 31	18 33	18 35	18 37
9	18 7	18 10	18 13	18 17	18 19	18 21	18 23	18 26	18 27	18 29	18 30	18 32	18 34
10	18 7	18 10	18 12	18 16	18 17	18 19	18 21	18 24	18 25	18 26	18 28	18 29	18 31
11	18 7	18 9	18 12	18 14	18 16	18 18	18 19	18 22	18 23	18 24	18 25	18 26	18 28
12	18 6	18 9	18 11	18 13	18 14	18 16	18 18	18 20	18 20	18 21	18 22	18 24	18 25
13	18 6	18 8	18 10	18 12	18 13	18 14	18 16	18 17	18 18	18 19	18 20	18 21	18 22
14	18 6	18 7	18 9	18 11	18 12	18 13	18 14	18 15	18 16	18 16	18 17	18 18	18 19
15	18 6	18 7	18 8	18 10	18 10	18 11	18 12	18 13	18 13	18 14	18 14	18 15	18 16
16	18 5	18 6	18 7	18 8	18 9	18 10	18 10	18 11	18 11	18 12	18 12	18 12	18 13
17	18 5	18 6	18 6	18 7	18 8	18 8	18 8	18 9	18 9	18 9	18 9	18 10	18 10
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20	18 4	18 4	18 4	18 4	18 3	18 3	18 3	18 2	18 2	18 2	18 1	18 1	18 1
21	18 4	18 3	18 3	18 2	18 2	18 1	18 1	18 0	18 0	17 59	17 59	17 58	17 58
22	18 4	18 3	18 2	18 1	18 0	18 0	17 59	17 58	17 58	17 57	17 56	17 55	17 54
23	18 3	18 2	18 1	18 0	17 59	17 58	17 57	17 56	17 55	17 54	17 53	17 53	17 52
24	18 3	18 2	18 0	17 59	17 58	17 57	17 55	17 53	17 53	17 52	17 51	17 50	17 48
25	18 2	18 1	17 59	17 57	17 56	17 55	17 53	17 51	17 50	17 49	17 48	17 47	17 46
26	18 2	18 0	17 58	17 56	17 55	17 53	17 51	17 49	17 48	17 47	17 45	17 44	17 42
27	18 2	18 0	17 58	17 55	17 54	17 52	17 50	17 47	17 46	17 44	17 43	17 41	17 39
28	18 2	17 59	17 57	17 54	17 52	17 50	17 48	17 45	17 43	17 42	17 40	17 38	17 36
29	18 1	17 59	17 56	17 53	17 51	17 48	17 46	17 42	17 41	17 39	17 38	17 36	17 33
30	18 1	17 58	17 55	17 51	17 49	17 47	17 44	17 40	17 39	17 37	17 35	17 33	17 30
31	18 1	17 58	17 54	17 50	17 48	17 45	17 42	17 38	17 36	17 34	17 32	17 30	17 27
Apr. 1	18 0	17 57	17 53	17 49	17 46	17 44	17 40	17 36	17 34	17 32	17 30	17 27	17 24
2	18 0	17 57	17 52	17 48	17 45	17 42	17 38	17 34	17 32	17 30	17 27	17 24	17 21

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, write P. M. after the astronomical time.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunset in southern latitudes see page 24.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Feb. 16	6 18	6 9	6 0	5 49	5 43	5 36	5 29	5 19	5 15	5 10	5 5	4 59	4 52
17	6 18	6 9	6 0	5 50	5 44	5 38	5 30	5 21	5 17	5 12	5 7	5 1	4 55
18	6 18	6 9	6 0	5 51	5 45	5 39	5 31	5 23	5 19	5 14	5 9	5 4	4 58
19	6 17	6 9	6 1	5 51	5 46	5 40	5 33	5 24	5 20	5 16	5 11	5 6	5 0
20	6 17	6 10	6 1	5 52	5 47	5 41	5 34	5 26	5 22	5 18	5 14	5 8	5 3
21	6 17	6 10	6 2	5 53	5 48	5 42	5 36	5 28	5 24	5 20	5 16	5 11	5 6
22	6 17	6 10	6 2	5 54	5 49	5 43	5 37	5 30	5 26	5 22	5 18	5 13	5 8
23	6 17	6 10	6 3	5 54	5 50	5 45	5 38	5 31	5 28	5 24	5 20	5 16	5 11
24	6 17	6 10	6 3	5 55	5 51	5 46	5 40	5 33	5 30	5 26	5 22	5 18	5 13
25	6 17	6 10	6 4	5 56	5 52	5 47	5 41	5 35	5 32	5 28	5 24	5 20	5 16
26	6 16	6 10	6 4	5 57	5 53	5 48	5 43	5 36	5 33	5 30	5 27	5 23	5 18
27	6 16	6 10	6 4	5 57	5 53	5 49	5 44	5 38	5 35	5 32	5 29	5 25	5 21
28	6 16	6 10	6 5	5 58	5 54	5 50	5 45	5 40	5 37	5 34	5 31	5 27	5 23
Mar. 1	6 16	6 10	6 5	5 59	5 55	5 51	5 47	5 41	5 39	5 36	5 33	5 30	5 26
2	6 16	6 11	6 5	6 0	5 56	5 52	5 48	5 43	5 41	5 38	5 35	5 32	5 28
3	6 15	6 11	6 6	6 0	5 57	5 53	5 49	5 44	5 42	5 40	5 37	5 34	5 31
4	6 15	6 11	6 6	6 1	5 58	5 55	5 51	5 46	5 44	5 42	5 39	5 37	5 34
5	6 15	6 11	6 6	6 2	5 59	5 56	5 52	5 48	5 46	5 44	5 42	5 39	5 36
6	6 15	6 11	6 7	6 2	6 0	5 57	5 53	5 49	5 48	5 46	5 44	5 41	5 38
7	6 15	6 11	6 7	6 3	6 0	5 58	5 55	5 51	5 50	5 48	5 46	5 44	5 41
8	6 14	6 11	6 7	6 4	6 1	5 59	5 56	5 53	5 51	5 50	5 48	5 46	5 44
9	6 14	6 11	6 8	6 4	6 2	6 0	5 57	5 54	5 53	5 52	5 50	5 48	5 46
10	6 14	6 11	6 8	6 5	6 3	6 1	5 59	5 56	5 55	5 53	5 52	5 50	5 48
11	6 14	6 11	6 8	6 5	6 4	6 2	6 0	5 58	5 56	5 55	5 54	5 52	5 51
12	6 13	6 11	6 9	6 6	6 5	6 3	6 1	5 59	5 58	5 57	5 56	5 55	5 53
13	6 13	6 11	6 9	6 7	6 5	6 4	6 3	6 1	6 0	5 59	5 58	5 57	5 56
14	6 13	6 11	6 9	6 7	6 6	6 5	6 4	6 2	6 2	6 1	6 0	5 59	5 58
15	6 12	6 11	6 10	6 8	6 7	6 6	6 5	6 4	6 4	6 3	6 2	6 2	6 1
16	6 12	6 11	6 10	6 9	6 8	6 7	6 6	6 6	6 5	6 5	6 4	6 4	6 3
17	6 12	6 11	6 10	6 9	6 9	6 8	6 8	6 7	6 7	6 7	6 6	6 6	6 6
18	6 12	6 11	6 10	6 10	6 10	6 9	6 9	6 9	6 9	6 9	6 8	6 8	6 8
19	6 11	6 11	6 11	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 11	6 11
20	6 11	6 11	6 11	6 11	6 11	6 11	6 12	6 12	6 12	6 12	6 12	6 13	6 13
21	6 11	6 11	6 11	6 12	6 12	6 12	6 13	6 14	6 14	6 14	6 14	6 15	6 15
22	6 10	6 11	6 12	6 13	6 13	6 13	6 14	6 15	6 16	6 16	6 17	6 17	6 18
23	6 10	6 11	6 12	6 13	6 14	6 14	6 16	6 17	6 17	6 18	6 19	6 20	6 20
24	6 10	6 11	6 12	6 14	6 14	6 16	6 17	6 18	6 19	6 20	6 21	6 22	6 23
25	6 9	6 11	6 12	6 14	6 15	6 16	6 18	6 20	6 21	6 22	6 23	6 24	6 25
26	6 9	6 11	6 13	6 15	6 16	6 18	6 19	6 22	6 22	6 24	6 25	6 26	6 28
27	6 9	6 11	6 13	6 15	6 17	6 18	6 21	6 23	6 24	6 26	6 27	6 28	6 30
28	6 8	6 11	6 13	6 16	6 18	6 20	6 22	6 25	6 26	6 27	6 29	6 31	6 32
29	6 8	6 11	6 13	6 17	6 18	6 20	6 23	6 26	6 28	6 29	6 30	6 33	6 35
30	6 8	6 11	6 14	6 17	6 19	6 22	6 24	6 28	6 29	6 31	6 33	6 35	6 37
31	6 8	6 11	6 14	6 18	6 20	6 22	6 26	6 29	6 31	6 33	6 35	6 37	6 40
Apr. 1	6 7	6 11	6 14	6 18	6 21	6 24	6 27	6 31	6 33	6 35	6 37	6 40	6 42
2	6 7	6 10	6 14	6 19	6 22	6 24	6 28	6 32	6 34	6 37	6 39	6 42	6 45
3	6 7	6 10	6 15	6 20	6 22	6 26	6 29	6 34	6 36	6 38	6 41	6 44	6 47

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, subtract 12 hours, mark the result A. M., and add one to the day.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunrise in southern latitudes see page 24.

Date. \ Lat.		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
		h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Apr.	1	18 0	17 57	17 53	17 49	17 46	17 44	17 40	17 36	17 34	17 32	17 30	17 27	17 24
	2	18 0	17 57	17 52	17 48	17 45	17 42	17 38	17 34	17 32	17 30	17 27	17 24	17 21
	3	18 0	17 56	17 52	17 47	17 44	17 40	17 36	17 32	17 30	17 27	17 24	17 21	17 18
	4	18 0	17 55	17 51	17 45	17 42	17 39	17 34	17 30	17 27	17 25	17 22	17 19	17 15
	5	17 59	17 55	17 50	17 44	17 41	17 37	17 33	17 27	17 25	17 22	17 19	17 16	17 12
	6	17 59	17 54	17 49	17 43	17 40	17 36	17 31	17 25	17 23	17 20	17 16	17 13	17 9
	7	17 59	17 54	17 48	17 42	17 38	17 34	17 29	17 23	17 20	17 17	17 14	17 10	17 6
	8	17 58	17 53	17 48	17 41	17 37	17 32	17 27	17 21	17 18	17 15	17 11	17 8	17 3
	9	17 58	17 52	17 47	17 40	17 36	17 31	17 25	17 19	17 16	17 12	17 9	17 5	17 0
	10	17 58	17 52	17 46	17 38	17 34	17 29	17 24	17 17	17 14	17 10	17 6	17 2	16 57
	11	17 58	17 52	17 45	17 37	17 33	17 28	17 22	17 15	17 11	17 8	17 4	16 59	16 54
	12	17 57	17 51	17 44	17 36	17 32	17 26	17 20	17 13	17 9	17 5	17 1	16 56	16 51
	13	17 57	17 50	17 43	17 35	17 30	17 25	17 18	17 11	17 7	17 3	16 59	16 54	16 48
	14	17 57	17 50	17 42	17 34	17 29	17 23	17 16	17 8	17 5	17 1	16 56	16 51	16 45
	15	17 57	17 50	17 42	17 33	17 28	17 22	17 15	17 6	17 2	16 58	16 54	16 48	16 42
	16	17 56	17 49	17 41	17 32	17 26	17 20	17 13	17 4	17 0	16 56	16 51	16 46	16 39
	17	17 56	17 48	17 40	17 31	17 25	17 19	17 11	17 2	16 58	16 54	16 48	16 43	16 36
	18	17 56	17 48	17 39	17 30	17 24	17 17	17 10	17 0	16 56	16 51	16 46	16 40	16 33
	19	17 56	17 47	17 39	17 29	17 23	17 16	17 8	16 58	16 54	16 49	16 44	16 38	16 30
	20	17 55	17 47	17 38	17 28	17 21	17 14	17 6	16 56	16 52	16 47	16 41	16 35	16 28
	21	17 55	17 46	17 37	17 26	17 20	17 13	17 4	16 54	16 50	16 44	16 39	16 32	16 25
	22	17 55	17 46	17 36	17 25	17 19	17 12	17 3	16 52	16 48	16 42	16 36	16 29	16 22
	23	17 55	17 46	17 36	17 24	17 18	17 10	17 1	16 50	16 46	16 40	16 34	16 27	16 19
	24	17 55	17 45	17 35	17 24	17 17	17 9	17 0	16 49	16 43	16 38	16 31	16 24	16 16
	25	17 54	17 45	17 34	17 22	17 15	17 7	16 58	16 47	16 41	16 35	16 29	16 22	16 13
	26	17 54	17 44	17 34	17 21	17 14	17 6	16 56	16 45	16 39	16 33	16 26	16 19	16 10
	27	17 54	17 44	17 33	17 20	17 13	17 5	16 55	16 43	16 37	16 31	16 24	16 17	16 8
	28	17 54	17 44	17 32	17 20	17 12	17 3	16 53	16 41	16 35	16 29	16 22	16 14	16 5
	29	17 54	17 43	17 32	17 19	17 11	17 2	16 52	16 39	16 33	16 27	16 20	16 12	16 2
	30	17 54	17 43	17 31	17 18	17 10	17 1	16 50	16 38	16 31	16 25	16 17	16 9	15 59
May	1	17 54	17 42	17 31	17 17	17 9	17 0	16 49	16 36	16 30	16 23	16 15	16 6	15 57
	2	17 53	17 42	17 30	17 16	17 8	16 58	16 47	16 34	16 28	16 21	16 13	16 4	15 54
	3	17 53	17 42	17 29	17 15	17 7	16 57	16 46	16 32	16 26	16 18	16 11	16 2	15 51
	4	17 53	17 42	17 29	17 14	17 6	16 56	16 44	16 30	16 24	16 17	16 8	15 59	15 49
	5	17 53	17 41	17 28	17 13	17 5	16 55	16 43	16 29	16 22	16 15	16 6	15 57	15 46
	6	17 53	17 41	17 28	17 12	17 4	16 54	16 42	16 27	16 20	16 13	16 4	15 54	15 43
	7	17 53	17 40	17 27	17 12	17 3	16 52	16 40	16 25	16 18	16 11	16 2	15 52	15 41
	8	17 53	17 40	17 27	17 11	17 2	16 51	16 39	16 24	16 17	16 9	16 0	15 50	15 38
	9	17 53	17 40	17 26	17 10	17 1	16 50	16 38	16 22	16 15	16 7	15 58	15 48	15 36
	10	17 53	17 40	17 26	17 10	17 0	16 49	16 36	16 21	16 13	16 5	15 56	15 45	15 33
	11	17 53	17 40	17 25	17 9	16 59	16 48	16 35	16 19	16 12	16 3	15 54	15 43	15 31
	12	17 53	17 39	17 25	17 8	16 58	16 47	16 34	16 18	16 10	16 2	15 52	15 41	15 28
	13	17 53	17 39	17 24	17 8	16 58	16 46	16 33	16 16	16 8	16 0	15 50	15 39	15 26
	14	17 53	17 39	17 24	17 7	16 57	16 45	16 32	16 15	16 7	15 58	15 48	15 37	15 24
	15	17 53	17 39	17 24	17 6	16 56	16 44	16 30	16 13	16 5	15 56	15 46	15 35	15 21
	16	17 53	17 39	17 23	17 6	16 55	16 44	16 29	16 12	16 4	15 55	15 44	15 33	15 19
	17	17 53	17 38	17 23	17 5	16 54	16 42	16 28	16 11	16 2	15 53	15 43	15 30	15 17

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1917.

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For sunset in southern latitudes see page 24.

Date. \ Lat.		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
		h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Apr.	2	6 7	6 10	6 14	6 19	6 22	6 24	6 28	6 32	6 34	6 37	6 39	6 42	6 45
	3	6 7	6 10	6 15	6 20	6 22	6 26	6 29	6 34	6 36	6 38	6 41	6 44	6 47
	4	6 6	6 10	6 15	6 20	6 23	6 26	6 31	6 36	6 38	6 40	6 43	6 46	6 50
	5	6 6	6 10	6 15	6 21	6 24	6 28	6 32	6 37	6 40	6 42	6 45	6 48	6 52
	6	6 6	6 10	6 16	6 21	6 25	6 29	6 33	6 39	6 41	6 44	6 47	6 51	6 54
	7	6 6	6 10	6 16	6 22	6 25	6 30	6 34	6 40	6 43	6 46	6 49	6 53	6 57
	8	6 5	6 10	6 16	6 23	6 26	6 31	6 36	6 42	6 45	6 48	6 51	6 55	6 59
	9	6 5	6 10	6 16	6 23	6 27	6 32	6 37	6 43	6 46	6 50	6 53	6 57	7 2
	10	6 5	6 10	6 17	6 24	6 28	6 33	6 38	6 45	6 48	6 51	6 55	6 59	7 4
	11	6 5	6 10	6 17	6 24	6 29	6 34	6 40	6 46	6 50	6 53	6 57	7 2	7 7
	12	6 4	6 10	6 17	6 25	6 29	6 35	6 41	6 48	6 51	6 55	6 59	7 4	7 9
	13	6 4	6 10	6 17	6 26	6 30	6 36	6 42	6 50	6 53	6 57	7 1	7 6	7 12
	14	6 4	6 10	6 18	6 26	6 31	6 37	6 43	6 51	6 55	6 59	7 3	7 8	7 14
	15	6 4	6 10	6 18	6 27	6 32	6 38	6 45	6 53	6 57	7 1	7 5	7 10	7 16
	16	6 3	6 10	6 18	6 27	6 33	6 39	6 46	6 54	6 58	7 3	7 7	7 13	7 19
	17	6 3	6 10	6 19	6 28	6 33	6 40	6 47	6 56	7 0	7 4	7 9	7 15	7 21
	18	6 3	6 10	6 19	6 29	6 34	6 41	6 48	6 57	7 2	7 6	7 12	7 17	7 24
	19	6 3	6 11	6 19	6 29	6 35	6 42	6 50	6 59	7 3	7 8	7 14	7 20	7 26
	20	6 2	6 11	6 20	6 30	6 36	6 43	6 51	7 0	7 5	7 10	7 16	7 22	7 29
	21	6 2	6 11	6 20	6 30	6 37	6 44	6 52	7 2	7 7	7 12	7 18	7 24	7 31
	22	6 2	6 11	6 20	6 31	6 38	6 45	6 53	7 4	7 8	7 14	7 20	7 26	7 34
	23	6 2	6 11	6 20	6 32	6 38	6 46	6 55	7 5	7 10	7 16	7 22	7 28	7 36
	24	6 2	6 11	6 21	6 32	6 39	6 47	6 56	7 7	7 12	7 18	7 24	7 31	7 39
	25	6 2	6 11	6 21	6 33	6 40	6 48	6 57	7 8	7 14	7 19	7 26	7 33	7 41
	26	6 1	6 11	6 22	6 34	6 41	6 49	6 58	7 10	7 15	7 21	7 28	7 35	7 44
	27	6 1	6 11	6 22	6 34	6 42	6 50	7 0	7 11	7 17	7 23	7 30	7 38	7 46
	28	6 1	6 11	6 22	6 35	6 42	6 51	7 1	7 13	7 19	7 25	7 32	7 40	7 49
	29	6 1	6 11	6 22	6 36	6 43	6 52	7 2	7 14	7 20	7 27	7 34	7 42	7 51
	30	6 1	6 11	6 23	6 36	6 44	6 53	7 3	7 16	7 22	7 29	7 36	7 44	7 54
May	1	6 0	6 11	6 23	6 37	6 45	6 54	7 5	7 18	7 24	7 30	7 38	7 46	7 56
	2	6 0	6 12	6 24	6 38	6 46	6 55	7 6	7 19	7 25	7 32	7 40	7 49	7 58
	3	6 0	6 12	6 24	6 38	6 46	6 56	7 7	7 21	7 27	7 34	7 42	7 51	8 1
	4	6 0	6 12	6 24	6 39	6 47	6 57	7 8	7 22	7 29	7 36	7 44	7 53	8 4
	5	6 0	6 12	6 25	6 40	6 48	6 58	7 10	7 24	7 30	7 38	7 46	7 55	8 6
	6	6 0	6 12	6 25	6 40	6 49	6 59	7 11	7 25	7 32	7 40	7 48	7 57	8 8
	7	6 0	6 12	6 26	6 41	6 50	7 0	7 12	7 27	7 34	7 41	7 50	8 0	8 11
	8	6 0	6 12	6 26	6 41	6 50	7 1	7 13	7 28	7 35	7 43	7 52	8 2	8 13
	9	6 0	6 13	6 26	6 42	6 51	7 2	7 14	7 30	7 37	7 45	7 54	8 4	8 16
	10	6 0	6 13	6 27	6 43	6 52	7 3	7 16	7 31	7 38	7 47	7 56	8 6	8 18
	11	6 0	6 13	6 27	6 43	6 53	7 4	7 17	7 33	7 40	7 48	7 58	8 8	8 21
	12	6 0	6 13	6 28	6 44	6 54	7 5	7 18	7 34	7 42	7 50	8 0	8 10	8 23
	13	6 0	6 13	6 28	6 45	6 54	7 6	7 19	7 36	7 43	7 52	8 2	8 13	8 25
	14	6 0	6 13	6 28	6 45	6 55	7 7	7 20	7 37	7 45	7 54	8 3	8 15	8 28
	15	6 0	6 14	6 29	6 46	6 56	7 8	7 22	7 38	7 46	7 55	8 5	8 17	8 30
	16	6 0	6 14	6 29	6 46	6 57	7 9	7 23	7 40	7 48	7 57	8 7	8 19	8 32
	17	6 0	6 14	6 29	6 47	6 58	7 10	7 24	7 41	7 49	7 58	8 9	8 21	8 35
	18	6 0	6 14	6 30	6 48	6 58	7 10	7 25	7 42	7 51	8 0	8 11	8 23	8 37

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1917.

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For sunrise in southern latitudes see page 24.

Date. \ Lat.		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
		h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
May	17	17 53	17 38	17 23	17 5	16 54	16 42	16 28	16 11	16 2	15 53	15 43	15 30	15 17
	18	17 53	17 38	17 23	17 4	16 54	16 42	16 27	16 10	16 1	15 52	15 41	15 29	15 14
	19	17 53	17 38	17 22	17 4	16 53	16 41	16 26	16 8	16 0	15 50	15 39	15 27	15 12
	20	17 53	17 38	17 22	17 4	16 53	16 40	16 25	16 7	15 58	15 49	15 38	15 25	15 10
	21	17 53	17 38	17 22	17 3	16 52	16 39	16 24	16 6	15 57	15 47	15 36	15 23	15 8
	22	17 53	17 38	17 21	17 2	16 51	16 38	16 23	16 5	15 56	15 46	15 34	15 21	15 6
	23	17 53	17 38	17 21	17 2	16 51	16 38	16 23	16 4	15 54	15 44	15 33	15 20	15 4
	24	17 53	17 38	17 21	17 2	16 50	16 37	16 22	16 2	15 53	15 43	15 31	15 18	15 2
	25	17 53	17 38	17 21	17 1	16 50	16 37	16 21	16 1	15 52	15 42	15 30	15 16	15 0
	26	17 53	17 38	17 21	17 1	16 49	16 36	16 20	16 0	15 51	15 41	15 28	15 15	14 58
	27	17 54	17 38	17 20	17 0	16 49	16 35	16 19	16 0	15 50	15 40	15 27	15 13	14 56
	28	17 54	17 37	17 20	17 0	16 48	16 35	16 19	15 59	15 49	15 38	15 26	15 12	14 55
	29	17 54	17 37	17 20	17 0	16 48	16 34	16 18	15 57	15 48	15 37	15 25	15 10	14 53
	30	17 54	17 38	17 20	17 0	16 48	16 34	16 17	15 57	15 47	15 36	15 24	15 9	14 51
	31	17 54	17 38	17 20	16 59	16 47	16 33	16 17	15 56	15 46	15 35	15 22	15 8	14 50
June	1	17 54	17 38	17 20	16 59	16 47	16 33	16 16	15 55	15 45	15 34	15 21	15 6	14 48
	2	17 54	17 38	17 20	16 59	16 47	16 32	16 16	15 55	15 45	15 33	15 20	15 5	14 47
	3	17 54	17 38	17 20	16 59	16 46	16 32	16 15	15 54	15 44	15 32	15 19	15 4	14 46
	4	17 55	17 38	17 20	16 58	16 46	16 32	16 15	15 53	15 43	15 32	15 18	15 3	14 44
	5	17 55	17 38	17 20	16 58	16 46	16 32	16 14	15 53	15 42	15 31	15 18	15 2	14 43
	6	17 55	17 38	17 20	16 58	16 46	16 31	16 14	15 52	15 42	15 30	15 17	15 1	14 42
	7	17 55	17 38	17 20	16 58	16 46	16 31	16 14	15 52	15 41	15 30	15 16	15 0	14 41
	8	17 55	17 38	17 20	16 58	16 46	16 31	16 13	15 52	15 41	15 29	15 15	14 59	14 40
	9	17 56	17 38	17 20	16 58	16 45	16 31	16 13	15 51	15 40	15 29	15 15	14 59	14 39
	10	17 56	17 38	17 20	16 58	16 45	16 30	16 13	15 51	15 40	15 28	15 14	14 58	14 38
	11	17 56	17 38	17 20	16 58	16 45	16 30	16 13	15 50	15 40	15 28	15 14	14 57	14 38
	12	17 56	17 39	17 20	16 58	16 45	16 30	16 12	15 50	15 40	15 27	15 13	14 57	14 37
	13	17 56	17 39	17 20	16 58	16 45	16 30	16 12	15 50	15 39	15 27	15 13	14 56	14 36
	14	17 56	17 39	17 20	16 58	16 45	16 30	16 12	15 50	15 39	15 27	15 13	14 56	14 36
	15	17 57	17 39	17 20	16 58	16 45	16 30	16 12	15 50	15 39	15 27	15 13	14 56	14 36
	16	17 57	17 39	17 20	16 58	16 45	16 30	16 12	15 50	15 39	15 27	15 12	14 56	14 35
	17	17 57	17 40	17 20	16 59	16 45	16 30	16 12	15 50	15 39	15 27	15 12	14 56	14 35
	18	17 57	17 40	17 21	16 59	16 46	16 30	16 12	15 50	15 39	15 27	15 12	14 56	14 35
	19	17 58	17 40	17 21	16 59	16 46	16 31	16 13	15 50	15 39	15 27	15 12	14 56	14 35
	20	17 58	17 40	17 21	16 59	16 46	16 31	16 13	15 50	15 39	15 27	15 13	14 56	14 35
	21	17 58	17 40	17 21	16 59	16 46	16 31	16 13	15 50	15 40	15 27	15 13	14 56	14 36
	22	17 58	17 41	17 22	17 0	16 46	16 31	16 13	15 51	15 40	15 27	15 13	14 56	14 36
	23	17 58	17 41	17 22	17 0	16 47	16 32	16 14	15 51	15 40	15 28	15 14	14 57	14 36
	24	17 59	17 41	17 22	17 0	16 47	16 32	16 14	15 51	15 40	15 28	15 14	14 57	14 37
	25	17 59	17 41	17 22	17 0	16 47	16 32	16 14	15 52	15 41	15 29	15 14	14 58	14 37
	26	17 59	17 41	17 22	17 0	16 48	16 33	16 15	15 52	15 41	15 29	15 15	14 58	14 38
	27	17 59	17 42	17 23	17 1	16 48	16 33	16 15	15 53	15 42	15 30	15 15	14 59	14 38
	28	17 59	17 42	17 23	17 1	16 48	16 33	16 16	15 53	15 42	15 30	15 16	15 0	14 39
	29	18 0	17 42	17 23	17 2	16 49	16 34	16 16	15 54	15 43	15 31	15 17	15 0	14 40
	30	18 0	17 42	17 24	17 2	16 49	16 34	16 16	15 54	15 44	15 32	15 18	15 1	14 41
July	1	18 0	17 43	17 24	17 2	16 50	16 35	16 17	15 55	15 44	15 32	15 18	15 2	14 42
	2	18 0	17 43	17 24	17 3	16 50	16 35	16 18	15 56	15 45	15 33	15 19	15 3	14 43

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1917.

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To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunset in southern latitudes see page 24.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
May 18	6 0	6 14	6 30	6 48	6 58	7 10	7 25	7 42	7 51	8 0	8 11	8 23	8 37
19	6 0	6 14	6 30	6 48	6 59	7 11	7 26	7 44	7 52	8 2	8 13	8 25	8 39
20	6 0	6 15	6 31	6 49	7 0	7 12	7 27	7 45	7 54	8 3	8 14	8 27	8 42
21	6 0	6 15	6 31	6 50	7 1	7 13	7 28	7 46	7 55	8 5	8 16	8 29	8 44
22	6 0	6 15	6 31	6 50	7 1	7 14	7 29	7 48	7 57	8 6	8 18	8 31	8 46
23	6 0	6 15	6 32	6 51	7 2	7 15	7 30	7 49	7 58	8 8	8 20	8 33	8 48
24	6 0	6 16	6 32	6 52	7 3	7 16	7 31	7 50	7 59	8 10	8 21	8 35	8 50
25	6 0	6 16	6 33	6 52	7 4	7 17	7 32	7 52	8 1	8 11	8 23	8 36	8 52
26	6 0	6 16	6 33	6 53	7 4	7 17	7 33	7 53	8 2	8 12	8 24	8 38	8 55
27	6 0	6 16	6 34	6 53	7 5	7 18	7 34	7 54	8 3	8 14	8 26	8 40	8 57
28	6 1	6 17	6 34	6 54	7 6	7 19	7 35	7 55	8 5	8 15	8 28	8 42	8 59
29	6 1	6 17	6 34	6 54	7 6	7 20	7 36	7 56	8 6	8 17	8 29	8 44	9 1
30	6 1	6 17	6 35	6 55	7 7	7 21	7 37	7 57	8 7	8 18	8 31	8 45	9 3
31	6 1	6 17	6 35	6 56	7 8	7 21	7 38	7 58	8 8	8 19	8 32	8 47	9 4
June 1	6 1	6 18	6 35	6 56	7 8	7 22	7 39	8 0	8 9	8 20	8 34	8 48	9 6
2	6 1	6 18	6 36	6 57	7 9	7 23	7 40	8 0	8 10	8 22	8 35	8 50	9 8
3	6 2	6 18	6 36	6 57	7 9	7 24	7 40	8 2	8 12	8 23	8 36	8 51	9 10
4	6 2	6 18	6 37	6 58	7 10	7 24	7 41	8 2	8 13	8 24	8 37	8 53	9 11
5	6 2	6 19	6 37	6 58	7 10	7 25	7 42	8 3	8 14	8 25	8 39	8 54	9 13
6	6 2	6 19	6 37	6 59	7 11	7 26	7 43	8 4	8 15	8 26	8 40	8 55	9 14
7	6 2	6 19	6 38	6 59	7 12	7 26	7 43	8 5	8 16	8 27	8 41	8 56	9 16
8	6 2	6 20	6 38	7 0	7 12	7 27	7 44	8 6	8 16	8 28	8 42	8 58	9 17
9	6 3	6 20	6 38	7 0	7 13	7 27	7 45	8 7	8 17	8 29	8 43	8 59	9 18
10	6 3	6 20	6 39	7 0	7 13	7 28	7 45	8 7	8 18	8 30	8 44	9 0	9 20
11	6 3	6 20	6 39	7 1	7 14	7 28	7 46	8 8	8 19	8 31	8 45	9 1	9 21
12	6 3	6 21	6 39	7 1	7 14	7 29	7 46	8 9	8 19	8 32	8 46	9 2	9 22
13	6 4	6 21	6 40	7 2	7 14	7 29	7 47	8 9	8 20	8 32	8 46	9 3	9 23
14	6 4	6 21	6 40	7 2	7 15	7 30	7 48	8 10	8 21	8 33	8 47	9 4	9 24
15	6 4	6 21	6 40	7 2	7 15	7 30	7 48	8 10	8 21	8 34	8 48	9 4	9 25
16	6 4	6 22	6 41	7 2	7 16	7 31	7 48	8 11	8 22	8 34	8 48	9 5	9 25
17	6 4	6 22	6 41	7 3	7 16	7 31	7 49	8 11	8 22	8 34	8 49	9 6	9 26
18	6 4	6 22	6 41	7 3	7 16	7 31	7 49	8 12	8 23	8 35	8 49	9 6	9 26
19	6 5	6 22	6 41	7 4	7 16	7 32	7 50	8 12	8 23	8 35	8 50	9 6	9 27
20	6 5	6 22	6 42	7 4	7 17	7 32	7 50	8 12	8 23	8 36	8 50	9 7	9 27
21	6 5	6 23	6 42	7 4	7 17	7 32	7 50	8 13	8 24	8 36	8 50	9 7	9 28
22	6 5	6 23	6 42	7 4	7 17	7 32	7 50	8 13	8 24	8 36	8 50	9 7	9 28
23	6 6	6 23	6 42	7 4	7 17	7 32	7 50	8 13	8 24	8 36	8 51	9 7	9 28
24	6 6	6 23	6 42	7 4	7 18	7 33	7 50	8 13	8 24	8 36	8 51	9 8	9 28
25	6 6	6 24	6 42	7 5	7 18	7 33	7 51	8 13	8 24	8 36	8 51	9 8	9 28
26	6 6	6 24	6 43	7 5	7 18	7 33	7 51	8 13	8 24	8 36	8 51	9 7	9 28
27	6 6	6 24	6 43	7 5	7 18	7 33	7 51	8 13	8 24	8 36	8 50	9 7	9 27
28	6 7	6 24	6 43	7 5	7 18	7 33	7 51	8 13	8 24	8 36	8 50	9 7	9 27
29	6 7	6 24	6 43	7 5	7 18	7 33	7 50	8 13	8 24	8 36	8 50	9 7	9 27
30	6 7	6 24	6 43	7 5	7 18	7 33	7 50	8 13	8 24	8 36	8 50	9 6	9 26
July 1	6 7	6 25	6 43	7 5	7 18	7 33	7 50	8 13	8 23	8 35	8 49	9 6	9 26
2	6 8	6 25	6 43	7 5	7 18	7 33	7 50	8 12	8 23	8 35	8 49	9 5	9 25
3	6 8	6 25	6 43	7 5	7 18	7 32	7 50	8 12	8 22	8 34	8 48	9 4	9 24

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, subtract 12 hours, mark the result A. M., and add one to the day.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunrise in southern latitudes see page 24.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
July 1	18 0	17 43	17 24	17 2	16 50	16 35	16 17	15 55	15 44	15 32	15 18	15 2	14 42
2	18 0	17 43	17 24	17 3	16 50	16 35	16 18	15 56	15 45	15 33	15 19	15 3	14 43
3	18 0	17 43	17 25	17 3	16 50	16 36	16 18	15 56	15 46	15 34	15 20	15 4	14 44
4	18 1	17 44	17 25	17 4	16 51	16 36	16 19	15 57	15 47	15 35	15 21	15 5	14 46
5	18 1	17 44	17 25	17 4	16 51	16 37	16 20	15 58	15 47	15 36	15 22	15 6	14 47
6	18 1	17 44	17 26	17 4	16 52	16 38	16 20	15 59	15 48	15 37	15 23	15 8	14 49
7	18 1	17 44	17 26	17 5	16 52	16 38	16 21	16 0	15 49	15 38	15 24	15 9	14 50
8	18 1	17 44	17 26	17 5	16 53	16 39	16 22	16 0	15 50	15 39	15 26	15 10	14 52
9	18 2	17 45	17 27	17 6	16 54	16 40	16 22	16 1	15 51	15 40	15 27	15 12	14 53
10	18 2	17 45	17 27	17 6	16 54	16 40	16 23	16 2	15 52	15 41	15 28	15 13	14 55
11	18 2	17 45	17 28	17 7	16 55	16 41	16 24	16 3	15 53	15 42	15 30	15 14	14 57
12	18 2	17 46	17 28	17 8	16 55	16 42	16 25	16 4	15 55	15 44	15 31	15 16	14 58
13	18 2	17 46	17 28	17 8	16 56	16 42	16 26	16 6	15 56	15 45	15 32	15 18	15 0
14	18 2	17 46	17 29	17 8	16 57	16 43	16 27	16 6	15 57	15 46	15 34	15 19	15 2
15	18 2	17 46	17 29	17 9	16 57	16 44	16 28	16 8	15 58	15 47	15 35	15 21	15 4
16	18 2	17 46	17 29	17 10	16 58	16 44	16 28	16 9	15 59	15 49	15 37	15 23	15 6
17	18 2	17 47	17 30	17 10	16 59	16 45	16 29	16 10	16 0	15 50	15 38	15 24	15 8
18	18 2	17 47	17 30	17 11	16 59	16 46	16 30	16 11	16 2	15 52	15 40	15 26	15 10
19	18 3	17 47	17 30	17 11	17 0	16 47	16 31	16 12	16 3	15 53	15 41	15 28	15 12
20	18 3	17 47	17 31	17 12	17 1	16 48	16 32	16 14	16 4	15 54	15 43	15 30	15 14
21	18 3	17 48	17 31	17 12	17 1	16 49	16 33	16 15	16 6	15 56	15 45	15 32	15 16
22	18 3	17 48	17 32	17 13	17 2	16 49	16 34	16 16	16 7	15 58	15 46	15 34	15 18
23	18 3	17 48	17 32	17 14	17 3	16 50	16 36	16 17	16 9	15 59	15 48	15 36	15 21
24	18 3	17 48	17 32	17 14	17 4	16 51	16 37	16 19	16 10	16 1	15 50	15 38	15 23
25	18 3	17 48	17 33	17 15	17 4	16 52	16 38	16 20	16 12	16 2	15 52	15 39	15 25
26	18 3	17 48	17 33	17 15	17 5	16 53	16 39	16 21	16 13	16 4	15 53	15 41	15 27
27	18 3	17 49	17 34	17 16	17 6	16 54	16 40	16 22	16 14	16 5	15 55	15 43	15 30
28	18 3	17 49	17 34	17 17	17 6	16 55	16 41	16 24	16 16	16 7	15 57	15 45	15 32
29	18 3	17 49	17 34	17 17	17 7	16 56	16 42	16 25	16 17	16 9	15 58	15 47	15 34
30	18 3	17 49	17 35	17 18	17 8	16 56	16 43	16 27	16 19	16 10	16 0	15 50	15 37
31	18 3	17 49	17 35	17 18	17 9	16 57	16 44	16 28	16 20	16 12	16 2	15 52	15 39
Aug. 1	18 3	17 50	17 35	17 19	17 9	16 58	16 46	16 30	16 22	16 14	16 4	15 54	15 41
2	18 3	17 50	17 36	17 20	17 10	16 59	16 47	16 31	16 24	16 15	16 6	15 56	15 44
3	18 2	17 50	17 36	17 20	17 11	17 0	16 48	16 32	16 25	16 17	16 8	15 58	15 46
4	18 2	17 50	17 36	17 21	17 12	17 1	16 49	16 34	16 27	16 19	16 10	16 0	15 48
5	18 2	17 50	17 37	17 21	17 12	17 2	16 50	16 35	16 28	16 20	16 12	16 2	15 51
6	18 2	17 50	17 37	17 22	17 13	17 3	16 51	16 37	16 30	16 22	16 14	16 4	15 53
7	18 2	17 50	17 37	17 23	17 14	17 4	16 52	16 38	16 31	16 24	16 16	16 6	15 56
8	18 2	17 50	17 38	17 23	17 15	17 5	16 54	16 40	16 33	16 26	16 18	16 9	15 58
9	18 2	17 50	17 38	17 24	17 16	17 6	16 55	16 41	16 35	16 28	16 20	16 11	16 0
10	18 2	17 50	17 38	17 24	17 16	17 7	16 56	16 42	16 36	16 29	16 22	16 13	16 3
11	18 2	17 51	17 39	17 25	17 17	17 8	16 57	16 44	16 38	16 31	16 24	16 15	16 5
12	18 2	17 51	17 39	17 26	17 18	17 9	16 58	16 45	16 40	16 33	16 26	16 17	16 8
13	18 1	17 51	17 39	17 26	17 18	17 10	17 0	16 47	16 41	16 35	16 27	16 19	16 10
14	18 1	17 51	17 40	17 27	17 19	17 11	17 1	16 48	16 43	16 36	16 29	16 21	16 12
15	18 1	17 51	17 40	17 27	17 20	17 12	17 2	16 50	16 44	16 38	16 31	16 24	16 15
16	18 1	17 51	17 40	17 28	17 21	17 12	17 3	16 51	16 46	16 40	16 33	16 26	16 17

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1917.

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For sunset in southern latitudes see page 24.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
July 2	6 8	6 25	6 43	7 5	7 18	7 33	7 50	8 12	8 23	8 35	8 49	9 5	9 25
3	6 8	6 25	6 43	7 5	7 18	7 32	7 50	8 12	8 22	8 34	8 48	9 4	9 24
4	6 8	6 25	6 43	7 5	7 18	7 32	7 50	8 12	8 22	8 34	8 48	9 4	9 23
5	6 8	6 25	6 43	7 5	7 18	7 32	7 49	8 11	8 22	8 33	8 47	9 3	9 22
6	6 8	6 25	6 43	7 5	7 17	7 32	7 49	8 11	8 21	8 33	8 46	9 2	9 21
7	6 8	6 25	6 43	7 5	7 17	7 32	7 49	8 10	8 20	8 32	8 46	9 1	9 20
8	6 8	6 25	6 43	7 4	7 17	7 31	7 48	8 10	8 20	8 31	8 45	9 0	9 19
9	6 8	6 25	6 43	7 4	7 16	7 31	7 48	8 9	8 19	8 30	8 44	8 59	9 18
10	6 9	6 25	6 43	7 4	7 16	7 30	7 47	8 8	8 18	8 30	8 43	8 58	9 16
11	6 9	6 25	6 43	7 4	7 16	7 30	7 47	8 8	8 18	8 29	8 42	8 57	9 15
12	6 9	6 25	6 43	7 4	7 16	7 30	7 46	8 7	8 17	8 28	8 41	8 56	9 13
13	6 9	6 25	6 43	7 3	7 15	7 29	7 46	8 6	8 16	8 27	8 39	8 54	9 12
14	6 9	6 25	6 43	7 3	7 15	7 29	7 45	8 5	8 15	8 26	8 38	8 53	9 10
15	6 9	6 25	6 43	7 3	7 15	7 28	7 44	8 4	8 14	8 25	8 37	8 51	9 8
16	6 9	6 25	6 42	7 2	7 14	7 28	7 44	8 3	8 13	8 24	8 36	8 50	9 7
17	6 9	6 25	6 42	7 2	7 14	7 27	7 43	8 2	8 12	8 22	8 34	8 48	9 5
18	6 10	6 25	6 42	7 2	7 13	7 26	7 42	8 1	8 11	8 21	8 33	8 47	9 3
19	6 10	6 25	6 42	7 1	7 12	7 26	7 41	8 0	8 10	8 20	8 32	8 45	9 1
20	6 10	6 25	6 42	7 1	7 12	7 25	7 40	7 59	8 8	8 18	8 30	8 43	8 59
21	6 10	6 25	6 41	7 0	7 11	7 24	7 39	7 58	8 7	8 17	8 28	8 42	8 57
22	6 10	6 25	6 41	7 0	7 11	7 23	7 38	7 57	8 6	8 16	8 27	8 40	8 55
23	6 10	6 25	6 41	6 59	7 10	7 23	7 38	7 56	8 5	8 14	8 25	8 38	8 53
24	6 10	6 24	6 40	6 59	7 10	7 22	7 36	7 55	8 3	8 13	8 24	8 36	8 51
25	6 10	6 24	6 40	6 58	7 9	7 21	7 36	7 53	8 2	8 11	8 22	8 34	8 49
26	6 10	6 24	6 40	6 58	7 8	7 20	7 34	7 52	8 0	8 10	8 20	8 32	8 46
27	6 10	6 24	6 39	6 57	7 7	7 19	7 33	7 51	7 59	8 8	8 18	8 30	8 44
28	6 10	6 24	6 39	6 56	7 7	7 18	7 32	7 49	7 57	8 6	8 17	8 28	8 42
29	6 10	6 24	6 38	6 56	7 6	7 17	7 31	7 48	7 56	8 5	8 15	8 26	8 39
30	6 10	6 23	6 38	6 55	7 5	7 16	7 30	7 46	7 54	8 3	8 13	8 24	8 37
31	6 10	6 23	6 37	6 54	7 4	7 15	7 29	7 45	7 53	8 1	8 11	8 22	8 35
Aug. 1	6 10	6 23	6 37	6 54	7 3	7 14	7 27	7 44	7 51	7 59	8 9	8 20	8 32
2	6 9	6 22	6 37	6 53	7 2	7 13	7 26	7 42	7 49	7 58	8 7	8 17	8 30
3	6 9	6 22	6 36	6 52	7 2	7 12	7 25	7 40	7 48	7 56	8 5	8 15	8 27
4	6 9	6 22	6 36	6 51	7 1	7 11	7 24	7 39	7 46	7 54	8 3	8 13	8 25
5	6 9	6 22	6 35	6 50	7 0	7 10	7 22	7 37	7 44	7 52	8 1	8 11	8 22
6	6 9	6 21	6 35	6 50	6 59	7 9	7 21	7 36	7 42	7 50	7 59	8 8	8 19
7	6 9	6 21	6 34	6 49	6 58	7 8	7 19	7 34	7 40	7 48	7 56	8 6	8 17
8	6 9	6 21	6 33	6 48	6 57	7 6	7 18	7 32	7 39	7 46	7 54	8 3	8 14
9	6 9	6 20	6 33	6 47	6 56	7 5	7 16	7 30	7 37	7 44	7 52	8 1	8 11
10	6 8	6 20	6 32	6 46	6 54	7 4	7 15	7 28	7 35	7 42	7 50	7 59	8 9
11	6 8	6 20	6 32	6 45	6 54	7 3	7 14	7 27	7 33	7 40	7 48	7 56	8 6
12	6 8	6 19	6 31	6 44	6 52	7 2	7 12	7 25	7 31	7 38	7 45	7 54	8 3
13	6 8	6 19	6 30	6 44	6 51	7 0	7 10	7 23	7 29	7 36	7 43	7 51	8 0
14	6 8	6 18	6 30	6 43	6 50	6 59	7 9	7 21	7 27	7 34	7 41	7 48	7 58
15	6 8	6 18	6 29	6 42	6 49	6 58	7 7	7 20	7 25	7 31	7 38	7 46	7 55
16	6 8	6 18	6 28	6 41	6 48	6 56	7 6	7 18	7 23	7 29	7 36	7 44	7 52
17	6 7	6 17	6 27	6 40	6 47	6 55	7 4	7 16	7 21	7 27	7 34	7 41	7 49

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1917.

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For sunrise in southern latitudes see page 24.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Aug. 16	18 1	17 51	17 40	17 28	17 21	17 12	17 3	16 51	16 46	16 40	16 33	16 26	16 17
17	18 0	17 51	17 41	17 28	17 22	17 14	17 4	16 53	16 48	16 42	16 35	16 28	16 20
18	18 0	17 51	17 41	17 29	17 22	17 14	17 6	16 54	16 49	16 44	16 37	16 30	16 22
19	18 0	17 51	17 41	17 30	17 23	17 15	17 7	16 56	16 51	16 45	16 39	16 32	16 25
20	18 0	17 51	17 41	17 30	17 24	17 16	17 8	16 57	16 52	16 47	16 41	16 34	16 27
21	18 0	17 51	17 42	17 31	17 24	17 17	17 9	16 59	16 54	16 49	16 43	16 37	16 29
22	17 59	17 51	17 42	17 31	17 25	17 18	17 10	17 0	16 56	16 51	16 45	16 39	16 32
23	17 59	17 51	17 42	17 32	17 26	17 19	17 11	17 2	16 57	16 52	16 47	16 41	16 34
24	17 59	17 51	17 42	17 33	17 27	17 20	17 13	17 3	16 59	16 54	16 49	16 43	16 36
25	17 58	17 51	17 43	17 33	17 28	17 21	17 14	17 5	17 1	16 56	16 51	16 45	16 39
26	17 58	17 51	17 43	17 34	17 28	17 22	17 15	17 6	17 2	16 58	16 53	16 47	16 41
27	17 58	17 51	17 43	17 34	17 29	17 23	17 16	17 8	17 4	17 0	16 55	16 50	16 44
28	17 58	17 51	17 43	17 35	17 30	17 24	17 17	17 9	17 6	17 1	16 57	16 52	16 46
29	17 57	17 51	17 44	17 35	17 30	17 25	17 18	17 11	17 7	17 3	16 59	16 54	16 48
30	17 57	17 51	17 44	17 36	17 31	17 26	17 20	17 12	17 9	17 5	17 1	16 56	16 51
31	17 57	17 51	17 44	17 36	17 32	17 27	17 21	17 14	17 10	17 7	17 3	16 58	16 53
Sept. 1	17 56	17 51	17 44	17 37	17 33	17 28	17 22	17 15	17 12	17 8	17 5	17 0	16 56
2	17 56	17 51	17 45	17 38	17 33	17 29	17 23	17 17	17 14	17 10	17 7	17 2	16 58
3	17 56	17 50	17 45	17 38	17 34	17 30	17 24	17 18	17 15	17 12	17 9	17 5	17 0
4	17 56	17 50	17 45	17 39	17 35	17 31	17 26	17 20	17 17	17 14	17 10	17 7	17 3
5	17 55	17 50	17 45	17 39	17 36	17 32	17 27	17 21	17 19	17 16	17 12	17 9	17 5
6	17 55	17 50	17 46	17 40	17 36	17 32	17 28	17 23	17 20	17 18	17 14	17 11	17 7
7	17 54	17 50	17 46	17 40	17 37	17 34	17 29	17 24	17 22	17 19	17 16	17 13	17 10
8	17 54	17 50	17 46	17 41	17 38	17 34	17 30	17 26	17 24	17 21	17 18	17 15	17 12
9	17 54	17 50	17 46	17 41	17 39	17 35	17 32	17 27	17 25	17 23	17 20	17 18	17 14
10	17 54	17 50	17 46	17 42	17 39	17 36	17 33	17 29	17 27	17 25	17 22	17 20	17 17
11	17 53	17 50	17 47	17 42	17 40	17 37	17 34	17 30	17 28	17 26	17 24	17 22	17 19
12	17 53	17 50	17 47	17 43	17 41	17 38	17 35	17 32	17 30	17 28	17 26	17 24	17 22
13	17 53	17 50	17 47	17 44	17 42	17 39	17 36	17 33	17 32	17 30	17 28	17 26	17 24
14	17 52	17 50	17 47	17 44	17 42	17 40	17 38	17 35	17 33	17 32	17 30	17 28	17 26
15	17 52	17 50	17 47	17 45	17 43	17 41	17 39	17 36	17 35	17 34	17 32	17 30	17 28
16	17 51	17 50	17 48	17 45	17 44	17 42	17 40	17 38	17 37	17 35	17 34	17 32	17 31
17	17 51	17 50	17 48	17 46	17 44	17 43	17 41	17 39	17 38	17 37	17 36	17 35	17 33
18	17 51	17 49	17 48	17 46	17 45	17 44	17 42	17 41	17 40	17 39	17 38	17 37	17 36
19	17 50	17 49	17 48	17 47	17 46	17 45	17 44	17 42	17 42	17 41	17 40	17 39	17 38
20	17 50	17 49	17 48	17 47	17 47	17 46	17 45	17 44	17 43	17 42	17 42	17 41	17 40
21	17 50	17 49	17 49	17 48	17 47	17 47	17 46	17 45	17 45	17 44	17 44	17 43	17 43
22	17 49	17 49	17 49	17 48	17 48	17 48	17 47	17 47	17 46	17 46	17 46	17 45	17 45
23	17 49	17 49	17 49	17 49	17 49	17 49	17 48	17 48	17 48	17 48	17 48	17 47	17 47
24	17 48	17 49	17 49	17 50	17 50	17 50	17 50	17 50	17 50	17 50	17 50	17 50	17 50
25	17 48	17 49	17 50	17 50	17 50	17 51	17 51	17 51	17 51	17 52	17 52	17 52	17 52
26	17 48	17 49	17 50	17 51	17 51	17 52	17 52	17 53	17 53	17 53	17 54	17 54	17 54
27	17 48	17 49	17 50	17 51	17 52	17 53	17 53	17 54	17 55	17 55	17 56	17 56	17 57
28	17 47	17 49	17 50	17 52	17 53	17 54	17 55	17 56	17 56	17 57	17 58	17 58	17 59
29	17 47	17 49	17 50	17 52	17 53	17 55	17 56	17 57	17 58	17 59	18 0	18 0	18 2
30	17 47	17 49	17 51	17 53	17 54	17 56	17 57	17 59	18 0	18 1	18 2	18 2	18 4
Oct. 1	17 46	17 49	17 51	17 53	17 55	17 56	17 58	18 0	18 1	18 2	18 4	18 5	18 6

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, write P. M. after the astronomical time.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunset in southern latitudes see page 24.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Aug. 17	6 7	6 17	6 27	6 40	6 47	6 55	7 4	7 16	7 21	7 27	7 34	7 41	7 49
18	6 7	6 16	6 27	6 39	6 46	6 53	7 3	7 14	7 19	7 25	7 31	7 38	7 46
19	6 7	6 16	6 26	6 38	6 44	6 52	7 1	7 12	7 17	7 23	7 29	7 36	7 44
20	6 7	6 16	6 25	6 37	6 43	6 51	6 59	7 10	7 15	7 20	7 26	7 33	7 41
21	6 6	6 15	6 25	6 36	6 42	6 49	6 58	7 8	7 13	7 18	7 24	7 31	7 38
22	6 6	6 15	6 24	6 34	6 41	6 48	6 56	7 6	7 11	7 16	7 22	7 28	7 35
23	6 6	6 14	6 23	6 33	6 39	6 46	6 54	7 4	7 8	7 14	7 19	7 25	7 32
24	6 6	6 14	6 23	6 32	6 38	6 45	6 52	7 2	7 6	7 11	7 16	7 22	7 29
25	6 5	6 13	6 22	6 31	6 37	6 43	6 51	7 0	7 4	7 9	7 14	7 20	7 26
26	6 5	6 13	6 21	6 30	6 36	6 42	6 49	6 58	7 2	7 6	7 12	7 17	7 23
27	6 5	6 12	6 20	6 29	6 34	6 40	6 47	6 56	7 0	7 4	7 9	7 14	7 20
28	6 4	6 12	6 19	6 28	6 33	6 39	6 46	6 54	6 58	7 2	7 6	7 12	7 18
29	6 4	6 11	6 18	6 27	6 32	6 37	6 44	6 52	6 55	6 59	7 4	7 9	7 14
30	6 4	6 10	6 17	6 25	6 30	6 36	6 42	6 50	6 53	6 57	7 1	7 6	7 12
31	6 4	6 10	6 16	6 24	6 29	6 34	6 40	6 48	6 51	6 55	6 59	7 3	7 8
Sept. 1	6 3	6 9	6 16	6 23	6 28	6 33	6 38	6 45	6 49	6 52	6 56	7 1	7 6
2	6 3	6 9	6 15	6 22	6 26	6 31	6 36	6 43	6 46	6 50	6 54	6 58	7 2
3	6 3	6 8	6 14	6 21	6 25	6 29	6 35	6 41	6 44	6 47	6 51	6 55	7 0
4	6 2	6 8	6 13	6 20	6 24	6 28	6 33	6 39	6 42	6 45	6 48	6 52	6 56
5	6 2	6 7	6 12	6 18	6 22	6 26	6 31	6 37	6 40	6 43	6 46	6 50	6 54
6	6 2	6 6	6 11	6 17	6 21	6 24	6 29	6 35	6 37	6 40	6 43	6 47	6 50
7	6 1	6 6	6 10	6 16	6 19	6 23	6 27	6 32	6 35	6 38	6 41	6 44	6 48
8	6 1	6 5	6 10	6 15	6 18	6 21	6 25	6 30	6 33	6 35	6 38	6 41	6 44
9	6 0	6 4	6 9	6 14	6 16	6 20	6 24	6 28	6 30	6 33	6 35	6 38	6 41
10	6 0	6 4	6 8	6 12	6 15	6 18	6 22	6 26	6 28	6 30	6 33	6 35	6 38
11	6 0	6 3	6 7	6 11	6 14	6 16	6 20	6 24	6 26	6 28	6 30	6 33	6 35
12	6 0	6 3	6 6	6 10	6 12	6 15	6 18	6 22	6 23	6 25	6 27	6 30	6 32
13	5 59	6 2	6 5	6 9	6 11	6 13	6 16	6 20	6 21	6 23	6 25	6 27	6 29
14	5 59	6 1	6 4	6 7	6 9	6 12	6 14	6 17	6 19	6 20	6 22	6 24	6 26
15	5 58	6 1	6 3	6 6	6 8	6 10	6 12	6 15	6 16	6 18	6 19	6 21	6 23
16	5 58	6 0	6 2	6 5	6 6	6 8	6 10	6 13	6 14	6 15	6 17	6 18	6 20
17	5 58	6 0	6 1	6 4	6 5	6 7	6 8	6 11	6 12	6 13	6 14	6 16	6 17
18	5 58	5 59	6 0	6 2	6 4	6 5	6 6	6 8	6 9	6 10	6 11	6 13	6 14
19	5 57	5 58	6 0	6 1	6 2	6 3	6 5	6 6	6 7	6 8	6 9	6 10	6 11
20	5 57	5 58	5 59	6 0	6 1	6 2	6 3	6 3	6 5	6 5	6 6	6 7	6 8
21	5 56	5 57	5 58	5 59	5 59	6 0	6 1	6 2	6 2	6 3	6 3	6 4	6 5
22	5 56	5 56	5 57	5 57	5 58	5 59	5 59	6 0	6 0	6 0	6 1	6 1	6 2
23	5 56	5 56	5 56	5 56	5 56	5 57	5 57	5 57	5 58	5 58	5 58	5 58	5 59
24	5 55	5 55	5 55	5 55	5 55	5 55	5 55	5 55	5 55	5 55	5 55	5 56	5 56
25	5 55	5 54	5 54	5 54	5 53	5 53	5 53	5 53	5 53	5 53	5 53	5 53	5 53
26	5 55	5 54	5 53	5 52	5 52	5 52	5 51	5 51	5 51	5 50	5 50	5 50	5 50
27	5 54	5 53	5 52	5 51	5 50	5 50	5 49	5 48	5 48	5 48	5 47	5 47	5 46
28	5 54	5 53	5 51	5 50	5 49	5 48	5 47	5 46	5 46	5 45	5 45	5 44	5 44
29	5 54	5 52	5 50	5 49	5 48	5 47	5 46	5 44	5 44	5 43	5 42	5 41	5 40
30	5 53	5 51	5 50	5 47	5 46	5 45	5 44	5 42	5 41	5 40	5 40	5 38	5 37
Oct. 1	5 53	5 51	5 49	5 46	5 45	5 44	5 42	5 40	5 39	5 38	5 37	5 36	5 34
2	5 53	5 50	5 48	5 45	5 44	5 42	5 40	5 38	5 37	5 36	5 34	5 33	5 31

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, subtract 12 hours, mark the result A. M., and add one to the day.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunrise in southern latitudes see page 24.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Oct. 1	17 46	17 49	17 51	17 53	17 55	17 56	17 58	18 0	18 1	18 2	18 4	18 5	18 6
2	17 46	17 49	17 51	17 54	17 56	17 58	18 0	18 2	18 3	18 4	18 6	18 7	18 9
3	17 46	17 48	17 52	17 55	17 56	17 58	18 1	18 4	18 5	18 6	18 8	18 9	18 11
4	17 45	17 48	17 52	17 55	17 57	18 0	18 2	18 5	18 6	18 8	18 10	18 11	18 13
5	17 45	17 48	17 52	17 56	17 58	18 0	18 3	18 7	18 8	18 10	18 12	18 14	18 16
6	17 45	17 48	17 52	17 56	17 59	18 2	18 5	18 8	18 10	18 12	18 14	18 16	18 18
7	17 44	17 48	17 52	17 57	18 0	18 2	18 6	18 10	18 12	18 14	18 16	18 18	18 20
8	17 44	17 48	17 53	17 58	18 0	18 4	18 7	18 11	18 13	18 15	18 18	18 20	18 23
9	17 44	17 48	17 53	17 58	18 1	18 5	18 8	18 13	18 15	18 17	18 20	18 22	18 25
10	17 44	17 48	17 53	17 59	18 2	18 6	18 10	18 14	18 17	18 19	18 22	18 25	18 28
11	17 43	17 48	17 54	18 0	18 3	18 7	18 11	18 16	18 18	18 21	18 24	18 27	18 30
12	17 43	17 48	17 54	18 0	18 4	18 8	18 12	18 18	18 20	18 23	18 26	18 29	18 33
13	17 43	17 48	17 54	18 1	18 4	18 9	18 14	18 19	18 22	18 25	18 28	18 31	18 35
14	17 43	17 48	17 55	18 1	18 5	18 10	18 15	18 21	18 24	18 27	18 30	18 34	18 38
15	17 42	17 48	17 55	18 2	18 6	18 11	18 16	18 22	18 26	18 28	18 32	18 36	18 40
16	17 42	17 49	17 55	18 3	18 7	18 12	18 18	18 24	18 27	18 30	18 34	18 38	18 43
17	17 42	17 49	17 56	18 4	18 8	18 13	18 19	18 26	18 29	18 32	18 36	18 40	18 45
18	17 42	17 49	17 56	18 4	18 9	18 14	18 20	18 27	18 31	18 34	18 38	18 43	18 48
19	17 42	17 49	17 56	18 5	18 10	18 15	18 21	18 29	18 32	18 36	18 40	18 45	18 50
20	17 42	17 49	17 57	18 6	18 10	18 16	18 23	18 30	18 34	18 38	18 42	18 47	18 53
21	17 41	17 49	17 57	18 6	18 11	18 17	18 24	18 32	18 36	18 40	18 44	18 50	18 55
22	17 41	17 49	17 58	18 7	18 12	18 18	18 26	18 34	18 38	18 42	18 47	18 52	18 58
23	17 41	17 49	17 58	18 8	18 13	18 19	18 27	18 35	18 39	18 44	18 49	18 54	19 0
24	17 41	17 50	17 58	18 8	18 14	18 21	18 28	18 37	18 41	18 46	18 51	18 56	19 3
25	17 41	17 50	17 59	18 9	18 15	18 22	18 29	18 39	18 43	18 48	18 53	18 59	19 5
26	17 41	17 50	17 59	18 10	18 16	18 23	18 31	18 40	18 45	18 50	18 55	19 1	19 8
27	17 41	17 50	18 0	18 11	18 17	18 24	18 32	18 42	18 47	18 52	18 57	19 3	19 10
28	17 40	17 50	18 0	18 11	18 18	18 25	18 34	18 44	18 48	18 54	18 59	19 6	19 13
29	17 40	17 50	18 0	18 12	18 19	18 26	18 35	18 45	18 50	18 56	19 1	19 8	19 16
30	17 40	17 50	18 1	18 13	18 20	18 27	18 36	18 47	18 52	18 58	19 4	19 10	19 18
31	17 40	17 51	18 1	18 14	18 20	18 28	18 38	18 49	18 54	18 59	19 6	19 13	19 21
Nov. 1	17 40	17 51	18 2	18 14	18 21	18 30	18 39	18 50	18 56	19 1	19 8	19 15	19 23
2	17 40	17 51	18 2	18 15	18 22	18 31	18 40	18 52	18 57	19 3	19 10	19 17	19 26
3	17 40	17 51	18 3	18 16	18 23	18 32	18 42	18 54	18 59	19 5	19 12	19 20	19 28
4	17 40	17 52	18 3	18 17	18 24	18 33	18 43	18 55	19 1	19 7	19 14	19 22	19 31
5	17 40	17 52	18 4	18 17	18 25	18 34	18 44	18 57	19 3	19 9	19 16	19 24	19 33
6	17 40	17 52	18 4	18 18	18 26	18 35	18 46	18 59	19 5	19 11	19 18	19 27	19 36
7	17 40	17 52	18 5	18 19	18 27	18 36	18 47	19 0	19 6	19 13	19 20	19 29	19 39
8	17 40	17 52	18 5	18 20	18 28	18 38	18 49	19 2	19 8	19 15	19 23	19 31	19 41
9	17 41	17 53	18 6	18 21	18 29	18 39	18 50	19 4	19 10	19 17	19 25	19 34	19 44
10	17 41	17 53	18 6	18 22	18 30	18 40	18 51	19 5	19 12	19 19	19 27	19 36	19 46
11	17 41	17 54	18 7	18 22	18 31	18 41	18 53	19 7	19 14	19 21	19 29	19 38	19 49
12	17 41	17 54	18 8	18 23	18 32	18 42	18 54	19 9	19 15	19 23	19 31	19 41	19 51
13	17 41	17 54	18 8	18 24	18 33	18 43	18 56	19 10	19 17	19 25	19 33	19 43	19 54
14	17 41	17 54	18 9	18 25	18 34	18 44	18 57	19 12	19 19	19 26	19 35	19 45	19 56
15	17 41	17 55	18 9	18 26	18 35	18 46	18 58	19 14	19 21	19 28	19 37	19 47	19 59
16	17 42	17 55	18 10	18 26	18 36	18 47	19 0	19 15	19 22	19 30	19 39	19 50	20 1

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1917.

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For sunset in southern latitudes see page 24.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Oct. 2	5 53	5 50	5 48	5 45	5 44	5 42	5 40	5 38	5 37	5 36	5 34	5 33	5 31
3	5 52	5 50	5 47	5 44	5 42	5 40	5 38	5 35	5 34	5 33	5 32	5 30	5 28
4	5 52	5 49	5 46	5 43	5 41	5 39	5 36	5 33	5 32	5 31	5 29	5 27	5 26
5	5 52	5 48	5 45	5 41	5 39	5 37	5 34	5 31	5 30	5 28	5 26	5 24	5 22
6	5 52	5 48	5 44	5 40	5 38	5 35	5 32	5 29	5 28	5 26	5 24	5 22	5 20
7	5 51	5 47	5 43	5 39	5 36	5 34	5 31	5 27	5 25	5 23	5 21	5 19	5 16
8	5 51	5 47	5 43	5 38	5 35	5 32	5 29	5 25	5 23	5 21	5 19	5 16	5 14
9	5 51	5 46	5 42	5 37	5 34	5 31	5 27	5 23	5 21	5 18	5 16	5 14	5 10
10	5 50	5 46	5 41	5 36	5 33	5 29	5 25	5 20	5 18	5 16	5 14	5 11	5 8
11	5 50	5 45	5 40	5 34	5 31	5 28	5 23	5 18	5 16	5 14	5 11	5 8	5 5
12	5 50	5 45	5 39	5 33	5 30	5 26	5 22	5 16	5 14	5 11	5 8	5 5	5 2
13	5 50	5 44	5 38	5 32	5 29	5 24	5 20	5 14	5 12	5 9	5 6	5 2	4 59
14	5 49	5 44	5 38	5 31	5 27	5 23	5 18	5 12	5 10	5 7	5 3	5 0	4 56
15	5 49	5 43	5 37	5 30	5 26	5 22	5 16	5 10	5 7	5 4	5 1	4 57	4 53
16	5 49	5 43	5 36	5 29	5 25	5 20	5 15	5 8	5 5	5 2	4 58	4 54	4 50
17	5 49	5 42	5 35	5 28	5 23	5 18	5 13	5 6	5 3	5 0	4 56	4 52	4 47
18	5 49	5 42	5 35	5 27	5 22	5 17	5 11	5 4	5 1	4 57	4 53	4 49	4 44
19	5 48	5 41	5 34	5 26	5 21	5 16	5 9	5 2	4 59	4 55	4 51	4 46	4 41
20	5 48	5 41	5 33	5 25	5 20	5 14	5 8	5 0	4 57	4 53	4 48	4 44	4 38
21	5 48	5 40	5 33	5 24	5 19	5 13	5 6	4 58	4 54	4 50	4 46	4 41	4 36
22	5 48	5 40	5 32	5 23	5 17	5 11	5 4	4 56	4 52	4 48	4 44	4 38	4 32
23	5 48	5 40	5 31	5 22	5 16	5 10	5 3	4 54	4 50	4 46	4 41	4 36	4 30
24	5 48	5 39	5 31	5 21	5 15	5 9	5 1	4 52	4 48	4 44	4 39	4 33	4 27
25	5 48	5 39	5 30	5 20	5 14	5 7	5 0	4 50	4 46	4 42	4 37	4 31	4 24
26	5 47	5 39	5 29	5 19	5 13	5 6	4 58	4 49	4 44	4 40	4 34	4 28	4 22
27	5 47	5 38	5 29	5 18	5 12	5 5	4 57	4 47	4 42	4 37	4 32	4 26	4 19
28	5 47	5 38	5 28	5 17	5 11	5 3	4 55	4 45	4 40	4 35	4 30	4 23	4 16
29	5 47	5 38	5 28	5 16	5 10	5 2	4 54	4 43	4 38	4 33	4 27	4 21	4 14
30	5 47	5 37	5 27	5 15	5 8	5 1	4 52	4 41	4 37	4 31	4 25	4 18	4 11
31	5 47	5 37	5 26	5 14	5 8	5 0	4 51	4 40	4 35	4 29	4 23	4 16	4 8
Nov. 1	5 47	5 37	5 26	5 14	5 6	4 58	4 49	4 38	4 33	4 27	4 21	4 14	4 6
2	5 47	5 36	5 25	5 13	5 6	4 57	4 48	4 36	4 31	4 25	4 18	4 11	4 3
3	5 47	5 36	5 25	5 12	5 4	4 56	4 46	4 34	4 29	4 23	4 16	4 9	4 0
4	5 47	5 36	5 24	5 11	5 4	4 55	4 45	4 33	4 27	4 21	4 14	4 7	3 58
5	5 47	5 36	5 24	5 10	5 3	4 54	4 44	4 31	4 26	4 19	4 12	4 4	3 55
6	5 47	5 36	5 24	5 10	5 2	4 53	4 42	4 30	4 24	4 17	4 10	4 2	3 53
7	5 47	5 36	5 23	5 9	5 1	4 52	4 41	4 28	4 22	4 16	4 8	4 0	3 50
8	5 47	5 35	5 23	5 8	5 0	4 51	4 40	4 27	4 20	4 14	4 6	3 58	3 48
9	5 47	5 35	5 22	5 8	4 59	4 50	4 39	4 25	4 19	4 12	4 4	3 55	3 46
10	5 48	5 35	5 22	5 7	4 58	4 49	4 37	4 24	4 17	4 10	4 2	3 53	3 43
11	5 48	5 35	5 22	5 6	4 58	4 48	4 36	4 22	4 16	4 8	4 0	3 51	3 41
12	5 48	5 35	5 21	5 6	4 57	4 47	4 35	4 21	4 14	4 7	3 58	3 49	3 38
13	5 48	5 35	5 21	5 5	4 56	4 46	4 34	4 19	4 13	4 5	3 57	3 47	3 36
14	5 48	5 35	5 21	5 5	4 56	4 45	4 33	4 18	4 11	4 4	3 55	3 45	3 34
15	5 48	5 35	5 20	5 4	4 55	4 44	4 32	4 17	4 10	4 2	3 53	3 43	3 32
16	5 48	5 35	5 20	5 4	4 54	4 44	4 31	4 16	4 8	4 0	3 52	3 41	3 30
17	5 48	5 35	5 20	5 3	4 54	4 43	4 30	4 14	4 7	3 59	3 50	3 39	3 27

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, subtract 12 hours, mark the result A. M., and add one to the day.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunrise in southern latitudes see page 24.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Nov. 16	17 42	17 55	18 10	18 26	18 36	18 47	19 0	19 15	19 22	19 30	19 39	19 50	20 1
17	17 42	17 56	18 10	18 27	18 37	18 48	19 1	19 17	19 24	19 32	19 42	19 52	20 4
18	17 42	17 56	18 11	18 28	18 38	18 49	19 2	19 18	19 26	19 34	19 44	19 54	20 6
19	17 42	17 57	18 12	18 29	18 39	18 50	19 4	19 20	19 28	19 36	19 46	19 56	20 9
20	17 42	17 57	18 12	18 30	18 40	18 51	19 5	19 22	19 29	19 38	19 48	19 58	20 11
21	17 42	17 57	18 13	18 31	18 41	18 52	19 6	19 23	19 31	19 40	19 49	20 1	20 14
22	17 43	17 58	18 14	18 31	18 42	18 54	19 8	19 24	19 33	19 41	19 51	20 3	20 16
23	17 43	17 58	18 14	18 32	18 43	18 55	19 9	19 26	19 34	19 43	19 53	20 5	20 18
24	17 43	17 59	18 15	18 33	18 44	18 56	19 10	19 28	19 36	19 45	19 55	20 7	20 21
25	17 44	17 59	18 15	18 34	18 45	18 57	19 11	19 29	19 37	19 47	19 57	20 9	20 23
26	17 44	18 0	18 16	18 35	18 46	18 58	19 13	19 30	19 39	19 48	19 59	20 11	20 25
27	17 44	18 0	18 17	18 36	18 47	18 59	19 14	19 32	19 40	19 50	20 1	20 13	20 28
28	17 44	18 1	18 17	18 36	18 48	19 0	19 15	19 33	19 42	19 52	20 2	20 15	20 30
29	17 45	18 1	18 18	18 37	18 48	19 1	19 16	19 35	19 43	19 53	20 4	20 17	20 32
30	17 45	18 2	18 19	18 38	18 49	19 2	19 17	19 36	19 45	19 55	20 6	20 19	20 34
Dec. 1	17 46	18 2	18 19	18 39	18 50	19 3	19 19	19 37	19 46	19 56	20 8	20 21	20 36
2	17 46	18 2	18 20	18 40	18 51	19 4	19 20	19 39	19 48	19 58	20 9	20 22	20 38
3	17 47	18 3	18 20	18 40	18 52	19 5	19 21	19 40	19 49	19 59	20 11	20 24	20 40
4	17 47	18 4	18 21	18 41	18 53	19 6	19 22	19 41	19 50	20 1	20 12	20 26	20 42
5	17 47	18 4	18 22	18 42	18 54	19 7	19 23	19 42	19 52	20 2	20 14	20 27	20 44
6	17 48	18 4	18 22	18 43	18 54	19 8	19 24	19 44	19 53	20 3	20 15	20 29	20 45
7	17 48	18 5	18 23	18 43	18 55	19 9	19 25	19 45	19 54	20 5	20 17	20 30	20 47
8	17 49	18 6	18 24	18 44	18 56	19 10	19 26	19 46	19 55	20 6	20 18	20 32	20 49
9	17 49	18 6	18 24	18 45	18 57	19 10	19 27	19 47	19 56	20 7	20 19	20 33	20 50
10	17 50	18 7	18 25	18 46	18 58	19 11	19 28	19 48	19 58	20 8	20 20	20 35	20 52
11	17 50	18 7	18 25	18 46	18 58	19 12	19 29	19 49	19 59	20 9	20 22	20 36	20 53
12	17 50	18 8	18 26	18 47	18 59	19 13	19 30	19 50	20 0	20 10	20 23	20 37	20 54
13	17 51	18 8	18 26	18 48	19 0	19 14	19 30	19 51	20 0	20 11	20 24	20 38	20 56
14	17 51	18 9	18 27	18 48	19 0	19 14	19 31	19 52	20 1	20 12	20 25	20 40	20 57
15	17 52	18 9	18 28	18 49	19 1	19 15	19 32	19 52	20 2	20 13	20 26	20 40	20 58
16	17 52	18 10	18 28	18 50	19 2	19 16	19 33	19 53	20 3	20 14	20 27	20 42	20 59
17	17 53	18 10	18 29	18 50	19 2	19 16	19 33	19 54	20 4	20 15	20 28	20 42	21 0
18	17 53	18 11	18 29	18 51	19 3	19 17	19 34	19 55	20 5	20 16	20 28	20 43	21 1
19	17 54	18 11	18 30	18 51	19 3	19 18	19 34	19 55	20 5	20 16	20 29	20 44	21 1
20	17 54	18 12	18 30	18 52	19 4	19 18	19 35	19 56	20 6	20 17	20 30	20 44	21 2
21	17 55	18 12	18 31	18 52	19 4	19 19	19 36	19 56	20 6	20 18	20 30	20 45	21 3
22	17 55	18 13	18 31	18 53	19 5	19 19	19 36	19 57	20 7	20 18	20 31	20 46	21 3
23	17 56	18 13	18 32	18 53	19 5	19 20	19 36	19 57	20 7	20 18	20 31	20 46	21 3
24	17 56	18 14	18 32	18 54	19 6	19 20	19 37	19 58	20 8	20 19	20 31	20 46	21 4
25	17 57	18 14	18 33	18 54	19 6	19 20	19 37	19 58	20 8	20 19	20 32	20 46	21 4
26	17 57	18 15	18 33	18 54	19 7	19 21	19 38	19 58	20 8	20 19	20 32	20 47	21 4
27	17 58	18 15	18 34	18 55	19 7	19 21	19 38	19 58	20 8	20 19	20 32	20 47	21 4
28	17 58	18 16	18 34	18 55	19 7	19 21	19 38	19 59	20 8	20 19	20 32	20 47	21 4
29	17 59	18 16	18 34	18 55	19 7	19 22	19 38	19 59	20 8	20 19	20 32	20 46	21 4
30	17 59	18 16	18 35	18 56	19 8	19 22	19 38	19 59	20 8	20 19	20 32	20 46	21 4
31	18 0	18 17	18 35	18 56	19 8	19 22	19 38	19 59	20 8	20 19	20 32	20 46	21 3

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, write P. M. after the astronomical time.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunset in southern latitudes see page 24.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Nov. 17	5 48	5 35	5 20	5 3	4 54	4 43	4 30	4 14	4 7	3 59	3 50	3 39	3 27
18	5 49	5 35	5 20	5 3	4 53	4 42	4 29	4 13	4 6	3 57	3 48	3 38	3 25
19	5 49	5 35	5 20	5 2	4 53	4 41	4 28	4 12	4 4	3 56	3 47	3 36	3 23
20	5 49	5 35	5 20	5 2	4 52	4 41	4 27	4 11	4 3	3 55	3 45	3 34	3 21
21	5 50	5 35	5 19	5 2	4 52	4 40	4 26	4 10	4 2	3 53	3 44	3 32	3 20
22	5 50	5 35	5 19	5 2	4 51	4 39	4 26	4 9	4 1	3 52	3 42	3 31	3 18
23	5 50	5 35	5 19	5 1	4 51	4 39	4 25	4 8	4 0	3 51	3 41	3 29	3 16
24	5 50	5 35	5 19	5 1	4 50	4 38	4 24	4 7	3 59	3 50	3 39	3 28	3 14
25	5 51	5 35	5 19	5 1	4 50	4 38	4 23	4 6	3 58	3 48	3 38	3 26	3 12
26	5 51	5 36	5 19	5 1	4 50	4 37	4 23	4 5	3 57	3 47	3 37	3 25	3 11
27	5 51	5 36	5 19	5 0	4 49	4 37	4 22	4 4	3 56	3 46	3 36	3 23	3 9
28	5 52	5 36	5 19	5 0	4 49	4 37	4 22	4 4	3 55	3 45	3 34	3 22	3 8
29	5 52	5 36	5 19	5 0	4 49	4 36	4 21	4 3	3 54	3 44	3 34	3 21	3 6
30	5 52	5 36	5 19	5 0	4 49	4 36	4 21	4 2	3 53	3 44	3 32	3 20	3 5
Dec. 1	5 53	5 36	5 19	5 0	4 48	4 36	4 20	4 2	3 53	3 43	3 32	3 18	3 3
2	5 53	5 37	5 20	5 0	4 48	4 35	4 20	4 1	3 52	3 42	3 31	3 18	3 2
3	5 53	5 37	5 20	5 0	4 48	4 35	4 20	4 0	3 51	3 41	3 30	3 16	3 1
4	5 54	5 37	5 20	5 0	4 48	4 35	4 19	4 0	3 51	3 41	3 29	3 16	3 0
5	5 54	5 38	5 20	5 0	4 48	4 35	4 19	4 0	3 51	3 40	3 28	3 15	2 59
6	5 55	5 38	5 20	5 0	4 48	4 35	4 19	3 59	3 50	3 40	3 28	3 14	2 58
7	5 55	5 38	5 20	5 0	4 48	4 35	4 19	3 59	3 50	3 39	3 27	3 13	2 57
8	5 56	5 39	5 21	5 0	4 48	4 35	4 18	3 59	3 49	3 39	3 27	3 13	2 56
9	5 56	5 39	5 21	5 0	4 48	4 35	4 18	3 58	3 49	3 38	3 26	3 12	2 56
10	5 56	5 39	5 21	5 1	4 49	4 35	4 18	3 58	3 49	3 38	3 26	3 12	2 55
11	5 57	5 40	5 22	5 1	4 49	4 35	4 18	3 58	3 48	3 38	3 26	3 11	2 54
12	5 57	5 40	5 22	5 1	4 49	4 35	4 18	3 58	3 48	3 38	3 25	3 11	2 54
13	5 58	5 41	5 22	5 1	4 49	4 35	4 19	3 58	3 48	3 38	3 25	3 11	2 54
14	5 58	5 41	5 23	5 2	4 50	4 35	4 19	3 58	3 48	3 38	3 25	3 10	2 53
15	5 59	5 41	5 23	5 2	4 50	4 36	4 19	3 58	3 48	3 38	3 25	3 10	2 53
16	5 59	5 42	5 23	5 2	4 50	4 36	4 19	3 58	3 49	3 38	3 25	3 10	2 53
17	6 0	5 42	5 24	5 3	4 50	4 36	4 20	3 59	3 49	3 38	3 25	3 10	2 53
18	6 0	5 43	5 24	5 3	4 51	4 37	4 20	3 59	3 49	3 38	3 25	3 11	2 53
19	6 1	5 43	5 25	5 4	4 51	4 37	4 20	3 59	3 49	3 38	3 26	3 11	2 53
20	6 1	5 44	5 25	5 4	4 52	4 37	4 20	4 0	3 50	3 38	3 26	3 11	2 54
21	6 2	5 44	5 26	5 4	4 52	4 38	4 21	4 0	3 50	3 39	3 26	3 12	2 54
22	6 2	5 45	5 26	5 5	4 53	4 38	4 22	4 1	3 51	3 40	3 27	3 12	2 54
23	6 3	5 45	5 27	5 5	4 53	4 39	4 22	4 1	3 51	3 40	3 27	3 13	2 55
24	6 3	5 46	5 27	5 6	4 54	4 40	4 23	4 2	3 52	3 41	3 28	3 13	2 56
25	6 4	5 46	5 28	5 6	4 54	4 40	4 23	4 3	3 52	3 42	3 29	3 14	2 56
26	6 4	5 47	5 28	5 7	4 55	4 41	4 24	4 3	3 53	3 42	3 30	3 15	2 57
27	6 5	5 47	5 29	5 8	4 55	4 41	4 24	4 4	3 54	3 43	3 30	3 16	2 58
28	6 5	5 48	5 30	5 8	4 56	4 42	4 25	4 5	3 55	3 44	3 31	3 17	2 59
29	6 6	5 48	5 30	5 9	4 57	4 43	4 26	4 6	3 56	3 45	3 32	3 18	3 0
30	6 6	5 49	5 31	5 10	4 57	4 43	4 27	4 6	3 57	3 46	3 33	3 19	3 2
31	6 7	5 50	5 31	5 10	4 58	4 44	4 28	4 7	3 58	3 47	3 34	3 20	3 3
32	6 7	5 50	5 32	5 11	4 59	4 45	4 28	4 8	3 59	3 48	3 36	3 21	3 4

TABLE II.

SUNRISE AND SUNSET FOR SOUTHERN LATITUDES, 1917.

In the case of a southern latitude the time of sunrise or sunset is taken from Table I, with the corresponding northern latitude, not for the given date but for a date about six months earlier or later, which is to be found in the following table. The time taken from Table I, whether of sunrise or sunset, must be corrected by the quantity given in Table II on the same line with the given date.

Example.—May 10, 1917, civil date, in latitude −38°, required the time of sunrise and sunset. The astronomical date is May 9 for sunrise and May 10 for sunset; Table II gives November 11 and 12 as the corresponding dates, northern latitude, while the correction is +12^m in each case.

		Sunrise. d h m		Sunset. d h m	
Table I, Lat. +38°	Nov.	11 18 37		Nov. 12 4 51	
Table II	May	9 + 12		May 10 + 12	
Local astronomical mean time .	May	9 18 49		May 10 5 3	
Civil time	May	10 6 49	A.M.	May 10 5 3	P.M.

Given Date.	Corresponding Date, Northern Latitude.	Correction.	Given Date.	Corresponding Date, Northern Latitude.	Correction.	Given Date.	Corresponding Date, Northern Latitude.	Correction.	Given Date.	Corresponding Date, Northern Latitude.	Correction.
		m			m			m			m
Jan. 0	July 2	0	Feb. 5	Aug. 9	+ 9	Mar. 13	Sept. 15	+14	Apr. 18	Oct. 21	+15
1	3	0	6	10	9	14	16	15	19	22	15
2	4	0	7	11	9	15	17	15	20	23	14
3	5	0	8	12	9	16	18	15	21	24	14
4	6	+1	9	13	10	17	19	15	22	25	14
5	7	+1	10	14	+10	18	20	+15	23	26	+14
6	8	1	11	15	10	19	21	15	24	27	14
7	9	2	12	16	10	20	22	15	25	28	14
8	10	2	13	17	10	21	23	15	26	29	14
9	11	2	14	18	11	22	24	15	27	30	14
10	12	+2	15	19	+11	23	25	+15	28	31	+14
11	13	3	16	20	11	24	26	15	29	Nov. 1	14
12	14	3	17	21	11	25	27	15	30	2	14
13	15	3	18	23	12	26	28	15	May 1	3	13
14	16	3	19	24	12	27	29	15	2	4	13
15	18	+4	20	25	+12	28	Oct. 1	+15	3	5	+13
16	19	4	21	26	12	29	2	15	4	6	13
17	20	4	22	27	12	30	3	16	5	7	13
18	21	4	23	28	12	31	4	16	6	8	13
19	22	5	24	29	13	Apr. 1	5	16	7	9	13
20	23	+5	25	30	+13	2	6	+16	8	10	+12
21	24	5	26	31	13	3	7	15	9	11	12
22	25	5	27	Sept. 1	13	4	8	15	10	12	12
23	26	6	28	2	13	5	9	15	11	13	12
24	27	6	Mar. 1	3	13	6	10	15	12	14	12
25	28	+6	2	4	+13	7	10	+15	13	15	+11
26	29	6	3	5	13	8	11	15	14	16	11
27	30	7	4	6	14	9	12	15	15	16	11
28	31	7	5	7	14	10	13	15	16	17	11
29	Aug. 1	7	6	8	14	11	14	15	17	18	11
30	3	+7	7	9	+14	12	15	+15	18	19	+11
31	4	8	8	10	14	13	16	15	19	20	11
Feb. 1	5	8	9	11	14	14	17	15	20	21	10
2	6	8	10	12	14	15	18	15	21	22	10
3	7	8	11	13	14	16	19	15	22	23	10
4	8	+9	12	14	+14	17	20	+15	23	24	+10

SUNRISE AND SUNSET FOR SOUTHERN LATITUDES, 1917.

Given Date.	Corresponding Date, Northern Latitude.	Correction.	Given Date.	Corresponding Date, Northern Latitude.	Correction.	Given Date.	Corresponding Date, Northern Latitude.	Correction.	Given Date.	Corresponding Date, Northern Latitude.	Correction.
		m			m			m			m
May 24	Nov. 25	+10	July 19	Jan. 16	− 4	Sept. 13	Mar. 11	−14	Nov. 8	May 6	−13
25	26	9	20	17	4	14	12	14	9	7	13
26	27	9	21	18	4	15	13	14	10	8	12
27	28	9	22	19	5	16	14	15	11	9	12
28	29	9	23	20	5	17	15	15	12	10	12
29	30	+ 8	24	21	− 5	18	16	−15	13	11	−12
30	Dec. 1	8	25	22	5	19	17	15	14	12	12
31	2	8	26	23	6	20	18	15	15	13	11
June 1	3	8	27	24	6	21	19	15	16	15	11
2	4	7	28	25	6	22	20	15	17	16	11
3	4	+ 7	29	26	− 6	23	21	−15	18	17	−11
4	5	7	30	27	7	24	22	15	19	18	11
5	6	7	31	28	7	25	23	15	20	19	11
6	7	7	Aug. 1	29	7	26	24	15	21	20	10
7	8	7	2	30	7	27	25	15	22	21	10
8	9	+ 6	3	30	− 7	28	26	−15	23	22	−10
9	10	6	4	31	8	29	27	15	24	23	10
10	11	6	5	Feb. 1	8	30	28	15	25	24	10
11	12	6	6	2	8	Oct. 1	28	15	26	25	9
12	13	5	7	3	8	2	29	15	27	26	9
13	14	+ 5	8	4	− 9	3	30	−16	28	27	− 9
14	15	5	9	5	9	4	31	16	29	28	9
15	16	4	10	6	9	5	Apr. 1	16	30	29	8
16	17	4	11	7	9	6	2	16	Dec. 1	30	8
17	18	4	12	8	9	7	3	15	2	31	8
18	19	+ 4	13	9	−10	8	4	−15	3	June 1	− 8
19	20	4	14	10	10	9	5	15	4	2	7
20	20	4	15	11	10	10	7	15	5	4	7
21	21	3	16	12	10	11	8	15	6	5	7
22	22	3	17	13	10	12	9	15	7	6	7
23	23	+ 3	18	14	−11	13	10	−15	8	7	− 7
24	24	2	19	15	11	14	11	15	9	8	6
25	25	2	20	16	11	15	12	15	10	9	6
26	26	2	21	17	11	16	13	15	11	10	6
27	27	2	22	18	11	17	14	15	12	11	6
28	28	+ 1	23	18	−12	18	15	−15	13	12	− 5
29	29	1	24	19	12	19	16	15	14	13	5
30	30	1	25	20	12	20	17	15	15	14	5
July 1	Dec. 31	+ 1	26	21	12	21	18	15	16	15	4
2	Jan. 0	0	27	22	12	22	19	15	17	16	4
3	1	0	28	23	−12	23	20	−14	18	17	− 4
4	2	0	29	24	13	24	21	14	19	18	4
5	3	0	30	25	13	25	22	14	20	19	4
6	4	− 1	31	26	13	26	23	14	21	21	3
7	5	1	Sept. 1	27	13	27	24	14	22	22	3
8	6	− 1	2	28	−13	28	25	−14	23	23	− 3
9	7	2	3	Mar. 1	13	29	26	14	24	24	2
10	8	2	4	2	13	30	27	14	25	25	2
11	9	2	5	3	13	31	28	14	26	26	2
12	10	2	6	4	14	Nov. 1	29	14	27	27	2
13	11	− 3	7	5	−14	2	30	−14	28	28	− 1
14	12	3	8	6	14	3	May 1	13	29	29	1
15	13	3	9	7	14	4	2	13	30	30	1
16	14	3	10	8	14	5	3	13	31	July 1	− 1
17	14	3	11	9	14	6	4	13	32	2	0
18	15	− 4	12	10	−14	7	5	−13			

LOCAL ASTRONOMICAL MEAN TIME OF MOONRISE, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

To obtain standard time, see directions on page 8.

For other longitudes and for southern latitudes see page 42.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Jan. 0	....	....	....	....	23 55	23 47	23 38	23 26	23 21	23 15	23 9	23 2	22 54
1	0 36	0 26	0 15	0 2	....	....	....	23 48	23 41	23 33	23 24	23 14	23 2
2	1 24	1 10	0 56	0 39	0 29	0 18	0 4	....	....	23 56	23 44	23 30	23 14
3	2 14	1 57	1 39	1 18	1 6	0 52	0 36	0 16	0 6	....	....	23 54	23 34
4	3 6	2 47	2 26	2 3	1 49	1 33	1 14	0 50	0 39	0 26	0 12	....	....
5	3 57	3 37	3 16	2 51	2 36	2 19	1 59	1 34	1 21	1 7	0 50	0 31	0 7
6	4 49	4 29	4 8	3 43	3 29	3 12	2 52	2 26	2 14	2 0	1 44	1 24	1 0
7	5 39	5 21	5 1	4 38	4 24	4 9	3 50	3 27	3 16	3 3	2 48	2 31	2 10
8	6 28	6 11	5 54	5 34	5 22	5 8	4 52	4 33	4 23	4 12	4 0	3 47	3 30
9	7 13	7 0	6 46	6 29	6 20	6 9	5 56	5 40	5 33	5 25	5 15	5 5	4 52
10	7 56	7 46	7 36	7 24	7 17	7 9	6 59	6 48	6 42	6 37	6 30	6 23	6 15
11	8 38	8 32	8 25	8 17	8 13	8 8	8 2	7 55	7 52	7 48	7 44	7 40	7 35
12	9 18	9 16	9 14	9 10	9 9	9 7	9 5	9 2	9 1	8 59	8 58	8 56	8 54
13	9 59	10 1	10 2	10 4	10 5	10 6	10 7	10 9	10 10	10 10	10 11	10 12	10 14
14	10 40	10 46	10 52	10 58	11 2	11 6	11 12	11 18	11 20	11 24	11 27	11 31	11 35
15	11 24	11 33	11 43	11 55	12 1	12 9	12 18	12 28	12 33	12 39	12 45	12 52	13 0
16	12 11	12 24	12 38	12 54	13 3	13 14	13 27	13 42	13 50	13 58	14 7	14 17	14 29
17	13 2	13 19	13 36	13 57	14 8	14 22	14 39	14 59	15 8	15 19	15 32	15 46	16 3
18	13 58	14 17	14 38	15 2	15 15	15 31	15 51	16 15	16 27	16 40	16 56	17 14	17 36
19	14 59	15 19	15 41	16 6	16 21	16 38	16 59	17 26	17 38	17 53	18 10	18 30	18 56
20	16 2	16 22	16 43	17 8	17 23	17 40	18 0	18 25	18 37	18 51	19 7	19 26	19 50
21	17 6	17 24	17 43	18 5	18 18	18 32	18 50	19 11	19 21	19 33	19 46	20 0	20 18
22	18 8	18 22	18 37	18 54	19 4	19 16	19 30	19 46	19 53	20 2	20 11	20 22	20 34
23	19 6	19 16	19 26	19 38	19 45	19 53	20 2	20 12	20 18	20 23	20 29	20 36	20 44
24	20 0	20 5	20 10	20 17	20 20	20 24	20 29	20 34	20 37	20 39	20 42	20 46	20 50
25	20 52	20 52	20 52	20 52	20 53	20 53	20 53	20 54	20 54	20 54	20 54	20 54	20 54
26	21 42	21 37	21 32	21 27	21 24	21 21	21 17	21 12	21 10	21 8	21 5	21 2	20 59
27	22 31	22 22	22 12	22 2	21 56	21 49	21 41	21 32	21 27	21 22	21 17	21 11	21 4
28	23 20	23 7	22 54	22 38	22 30	22 19	22 8	21 53	21 47	21 40	21 31	21 22	21 12
29	....	23 54	23 38	23 18	23 6	22 54	22 38	22 19	22 11	22 1	21 50	21 37	21 22
30	0 11	....	....	....	23 48	23 32	23 14	22 51	22 41	22 29	22 15	21 58	21 39
31	1 2	0 44	0 24	0 1	....	....	23 57	23 32	23 20	23 6	22 50	22 31	22 8
Feb. 1	1 54	1 34	1 12	0 48	0 34	0 17	....	....	....	23 55	23 38	23 18	22 54
2	2 45	2 25	2 4	1 39	1 24	1 7	0 47	0 21	0 9	....	....	....	23 58
3	3 36	3 17	2 56	2 32	2 19	2 3	1 43	1 19	1 8	0 54	0 39	0 21	....
4	4 24	4 7	3 49	3 28	3 15	3 1	2 44	2 23	2 13	2 2	1 49	1 34	1 16
5	5 11	4 56	4 41	4 23	4 13	4 1	3 47	3 30	3 22	3 13	3 3	2 51	2 37
6	5 55	5 44	5 32	5 18	5 10	5 1	4 51	4 38	4 32	4 25	4 18	4 9	4 0
7	6 37	6 30	6 21	6 12	6 7	6 1	5 54	5 46	5 42	5 37	5 32	5 27	5 21
8	7 18	7 14	7 10	7 6	7 3	7 0	6 57	6 53	6 51	6 48	6 46	6 44	6 41
9	7 58	7 59	7 59	7 59	7 59	7 59	7 59	7 59	8 0	8 0	8 0	8 0	8 0
10	8 39	8 44	8 48	8 53	8 56	8 59	9 3	9 7	9 10	9 12	9 14	9 17	9 21
11	9 22	9 30	9 38	9 48	9 54	10 0	10 8	10 17	10 21	10 26	10 31	10 37	10 43
12	10 7	10 19	10 31	10 45	10 54	11 3	11 15	11 28	11 35	11 42	11 50	11 59	12 9
13	10 55	11 10	11 27	11 45	11 56	12 9	12 24	12 42	12 51	13 1	13 12	13 24	13 40
14	11 48	12 6	12 25	12 47	13 0	13 15	13 34	13 56	14 7	14 19	14 34	14 50	15 10
15	12 44	13 4	13 26	13 50	14 4	14 21	14 42	15 7	15 20	15 34	15 50	16 10	16 35
16	13 44	14 4	14 26	14 51	15 6	15 23	15 44	16 9	16 22	16 36	16 53	17 13	17 38
17	14 46	15 5	15 25	15 48	16 2	16 18	16 37	17 0	17 12	17 24	17 39	17 56	18 17

LOCAL ASTRONOMICAL MEAN TIME OF MOONSET, MERIDIAN OF GREENWICH, 1917.

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Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Jan. 0	12 11	12 19	12 28	12 39	12 44	12 51	12 59	13 8	13 13	13 18	13 23	13 29	13 36
1	12 59	13 11	13 25	13 40	13 48	13 58	14 10	14 24	14 31	14 39	14 47	14 57	15 8
2	13 48	14 4	14 21	14 40	14 51	15 4	15 20	15 39	15 48	15 58	16 9	16 22	16 38
3	14 39	14 57	15 17	15 39	15 53	16 8	16 26	16 49	17 0	17 12	17 27	17 44	18 4
4	15 31	15 51	16 12	16 36	16 51	17 7	17 28	17 53	18 5	18 19	18 35	18 55	19 20
5	16 23	16 43	17 4	17 29	17 44	18 1	18 22	18 47	19 0	19 14	19 30	19 50	20 15
6	17 14	17 33	17 54	18 18	18 32	18 48	19 7	19 31	19 42	19 56	20 11	20 28	20 50
7	18 3	18 21	18 39	19 0	19 13	19 27	19 44	20 5	20 15	20 26	20 39	20 53	21 10
8	18 50	19 5	19 21	19 38	19 49	20 1	20 15	20 32	20 40	20 49	20 59	21 10	21 23
9	19 35	19 46	19 58	20 12	20 21	20 30	20 40	20 53	20 59	21 6	21 13	21 21	21 30
10	20 17	20 25	20 34	20 43	20 49	20 55	21 2	21 11	21 15	21 20	21 24	21 30	21 36
11	20 58	21 2	21 7	21 12	21 15	21 18	21 22	21 27	21 29	21 31	21 34	21 36	21 40
12	21 38	21 39	21 39	21 40	21 40	21 40	21 41	21 41	21 42	21 42	21 42	21 42	21 43
13	22 19	22 16	22 12	22 8	22 6	22 3	22 0	21 56	21 55	21 53	21 51	21 49	21 46
14	23 1	22 54	22 46	22 38	22 32	22 27	22 20	22 12	22 9	22 5	22 0	21 56	21 50
15	23 46	23 35	23 23	23 10	23 2	22 53	22 43	22 31	22 25	22 19	22 12	22 4	21 55
16	....	....	....	23 47	23 36	23 24	23 10	22 54	22 46	22 37	22 27	22 16	22 3
17	0 35	0 20	0 5	....	....	....	23 45	23 24	23 14	23 2	22 50	22 34	22 17
18	1 28	1 11	0 52	0 30	0 17	0 3	....	....	23 53	23 40	23 24	23 5	22 42
19	2 27	2 7	1 46	1 22	1 7	0 50	0 30	0 6	....	....	....	23 57	23 31
20	3 29	3 9	2 47	2 22	2 6	1 49	1 28	1 2	0 49	0 35	0 18	....	....
21	4 33	4 14	3 53	3 29	3 15	2 59	2 40	2 15	2 4	1 50	1 34	1 16	0 53
22	5 36	5 19	5 2	4 42	4 30	4 16	4 0	3 40	3 30	3 20	3 7	2 53	2 36
23	6 36	6 23	6 10	5 55	5 46	5 36	5 24	5 10	5 3	4 55	4 47	4 37	4 26
24	7 32	7 24	7 16	7 7	7 2	6 55	6 48	6 40	6 35	6 31	6 26	6 21	6 14
25	8 25	8 22	8 19	8 16	8 14	8 12	8 9	8 6	8 5	8 3	8 2	8 0	7 58
26	9 15	9 18	9 20	9 22	9 24	9 26	9 28	9 30	9 31	9 32	9 34	9 35	9 36
27	10 5	10 12	10 19	10 27	10 32	10 37	10 44	10 51	10 54	10 58	11 3	11 8	11 13
28	10 54	11 5	11 17	11 30	11 38	11 47	11 57	12 10	12 16	12 23	12 30	12 38	12 48
29	11 44	11 59	12 15	12 33	12 43	12 55	13 9	13 27	13 35	13 44	13 55	14 7	14 21
30	12 35	12 53	13 12	13 33	13 46	14 0	14 18	14 40	14 50	15 2	15 15	15 31	15 50
31	13 27	13 46	14 7	14 31	14 46	15 2	15 22	15 46	15 58	16 12	16 28	16 46	17 10
Feb. 1	14 19	14 39	15 0	15 26	15 40	15 57	16 18	16 44	16 56	17 10	17 27	17 47	18 12
2	15 10	15 30	15 51	16 15	16 30	16 46	17 6	17 30	17 42	17 56	18 12	18 30	18 53
3	16 0	16 18	16 39	17 0	17 13	17 28	17 45	18 7	18 18	18 30	18 43	18 59	19 17
4	16 47	17 3	17 20	17 39	17 50	18 3	18 18	18 36	18 45	18 54	19 5	19 18	19 32
5	17 32	17 45	17 59	18 14	18 23	18 33	18 45	18 59	19 6	19 13	19 21	19 31	19 41
6	18 16	18 25	18 35	18 46	18 52	19 0	19 8	19 18	19 23	19 28	19 33	19 40	19 47
7	18 57	19 3	19 9	19 16	19 19	19 24	19 29	19 35	19 37	19 40	19 44	19 47	19 51
8	19 38	19 40	19 42	19 44	19 45	19 46	19 48	19 50	19 51	19 52	19 52	19 54	19 55
9	20 18	20 16	20 14	20 12	20 10	20 9	20 7	20 5	20 4	20 2	20 1	20 0	19 58
10	21 0	20 54	20 48	20 40	20 36	20 32	20 26	20 20	20 17	20 14	20 10	20 6	20 2
11	21 43	21 34	21 23	21 12	21 5	20 57	20 48	20 38	20 32	20 27	20 21	20 14	20 7
12	22 30	22 17	22 2	21 46	21 37	21 26	21 13	20 58	20 51	20 43	20 34	20 25	20 14
13	23 20	23 4	22 46	22 26	22 14	22 0	21 44	21 25	21 15	21 5	20 53	20 40	20 24
14	....	23 56	23 35	23 12	22 58	22 42	22 23	22 0	21 49	21 36	21 21	21 4	20 43
15	0 14	....	....	....	23 51	23 34	23 14	22 48	22 35	22 21	22 4	21 44	21 19
16	1 13	0 52	0 31	0 6	....	....	....	23 50	23 38	23 24	23 7	22 47	22 23
17	2 14	1 54	1 32	1 8	0 53	0 36	0 16	....	....	....	....	....	23 54

LOCAL ASTRONOMICAL MEAN TIME OF MOONRISE, MERIDIAN OF GREENWICH, 1917.

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Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Feb. 16	13 44	14 4	14 26	14 51	15 6	15 23	15 44	16 9	16 22	16 36	16 53	17 13	17 38
17	14 46	15 5	15 25	15 48	16 2	16 18	16 37	17 0	17 12	17 24	17 39	17 56	18 17
18	15 47	16 3	16 20	16 40	16 52	17 5	17 21	17 40	17 48	17 58	18 10	18 22	18 38
19	16 46	16 58	17 11	17 26	17 35	17 45	17 56	18 10	18 16	18 23	18 31	18 40	18 50
20	17 42	17 50	17 58	18 7	18 13	18 19	18 26	18 34	18 38	18 42	18 47	18 52	18 58
21	18 36	18 39	18 42	18 45	18 47	18 50	18 52	18 55	18 57	18 58	19 0	19 2	19 4
22	19 28	19 26	19 24	19 22	19 20	19 19	19 17	19 15	19 14	19 13	19 12	19 11	19 9
23	20 19	20 12	20 5	19 57	19 53	19 48	19 42	19 35	19 31	19 28	19 24	19 20	19 15
24	21 10	20 59	20 48	20 34	20 27	20 18	20 8	19 56	19 50	19 44	19 38	19 30	19 21
25	22 2	21 47	21 32	21 14	21 4	20 52	20 38	20 21	20 14	20 5	19 55	19 44	19 32
26	22 55	22 37	22 18	21 57	21 44	21 30	21 13	20 52	20 42	20 31	20 18	20 4	19 46
27	23 48	23 28	23 8	22 44	22 30	22 13	21 54	21 30	21 18	21 5	20 50	20 32	20 10
28	....	....	23 59	23 34	23 19	23 2	22 42	22 17	22 4	21 50	21 34	21 14	20 50
Mar. 1	0 40	0 20	....	....	....	23 57	23 37	23 12	23 0	22 47	22 31	22 12	21 49
2	1 31	1 12	0 51	0 27	0 13	....	....	....	....	23 52	23 38	23 22	23 3
3	2 21	2 3	1 44	1 22	1 9	0 54	0 36	0 14	0 4	....	....	....	....
4	3 8	2 52	2 36	2 17	2 6	1 54	1 39	1 20	1 12	1 2	0 51	0 38	0 23
5	3 52	3 40	3 27	3 12	3 4	2 54	2 42	2 28	2 21	2 14	2 5	1 56	1 45
6	4 35	4 27	4 17	4 6	4 0	3 53	3 45	3 35	3 31	3 25	3 20	3 13	3 6
7	5 17	5 12	5 6	5 0	4 57	4 53	4 48	4 42	4 40	4 37	4 34	4 30	4 26
8	5 58	5 56	5 55	5 54	5 53	5 52	5 51	5 50	5 49	5 48	5 48	5 47	5 46
9	6 39	6 42	6 45	6 48	6 50	6 52	6 54	6 58	6 59	7 0	7 2	7 4	7 7
10	7 21	7 28	7 35	7 43	7 48	7 53	7 59	8 7	8 10	8 14	8 18	8 23	8 29
11	8 6	8 16	8 27	8 40	8 48	8 56	9 6	9 18	9 24	9 30	9 37	9 45	9 54
12	8 53	9 7	9 22	9 39	9 49	10 1	10 14	10 31	10 39	10 48	10 58	11 9	11 23
13	9 44	10 1	10 19	10 40	10 52	11 7	11 24	11 45	11 55	12 6	12 19	12 34	12 52
14	10 38	10 57	11 18	11 41	11 56	12 12	12 31	12 56	13 8	13 21	13 37	13 55	14 18
15	11 36	11 56	12 17	12 42	12 56	13 13	13 34	13 59	14 12	14 26	14 43	15 2	15 27
16	12 35	12 54	13 15	13 39	13 53	14 9	14 29	14 53	15 5	15 18	15 33	15 52	16 14
17	13 34	13 51	14 9	14 31	14 43	14 58	15 14	15 35	15 45	15 56	16 9	16 23	16 40
18	14 31	14 45	15 0	15 17	15 27	15 39	15 52	16 8	16 15	16 24	16 33	16 44	16 56
19	15 27	15 37	15 47	15 59	16 6	16 14	16 23	16 34	16 39	16 45	16 51	16 58	17 5
20	16 20	16 26	16 31	16 38	16 41	16 46	16 51	16 56	16 59	17 2	17 5	17 9	17 12
21	17 12	17 13	17 14	17 14	17 15	17 15	17 16	17 16	17 17	17 17	17 18	17 18	17 18
22	18 4	18 0	17 55	17 50	17 48	17 44	17 41	17 36	17 34	17 32	17 30	17 27	17 24
23	18 56	18 47	18 38	18 27	18 21	18 14	18 6	17 57	17 53	17 48	17 43	17 37	17 31
24	19 48	19 36	19 22	19 7	18 58	18 47	18 35	18 21	18 15	18 7	17 59	17 50	17 39
25	20 42	20 26	20 9	19 49	19 38	19 24	19 9	18 50	18 41	18 32	18 20	18 8	17 53
26	21 36	21 18	20 58	20 35	20 22	20 7	19 49	19 26	19 15	19 3	18 49	18 33	18 14
27	22 31	22 11	21 50	21 26	21 11	20 55	20 35	20 10	19 58	19 45	19 29	19 10	18 48
28	23 24	23 4	22 43	22 19	22 5	21 48	21 28	21 4	20 52	20 38	20 22	20 4	19 40
29	....	23 56	23 37	23 14	23 1	22 45	22 27	22 4	21 53	21 41	21 26	21 9	20 49
30	0 15	....	....	....	23 58	23 45	23 29	23 9	23 0	22 49	22 38	22 24	22 8
31	1 3	0 47	0 29	0 10	....	....	....	....	....	....	23 52	23 41	23 29
Apr. 1	1 48	1 35	1 21	1 5	0 55	0 45	0 32	0 16	0 9	0 1	....	....	....
2	2 32	2 22	2 11	1 59	1 52	1 44	1 35	1 23	1 18	1 12	1 6	0 58	0 50
3	3 14	3 7	3 1	2 53	2 48	2 43	2 38	2 30	2 27	2 24	2 20	2 15	2 10

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	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Feb. 16	1 13	0 52	0 31	0 6	....	....	....	23 50	23 38	23 24	23 7	22 47	22 23
17	2 14	1 54	1 32	1 8	0 53	0 36	0 16	....	....	....	....	....	23 54
18	3 15	2 57	2 38	2 16	2 3	1 48	1 30	1 7	0 56	0 44	0 30	0 14	....
19	4 15	4 1	3 45	3 27	3 17	3 5	2 50	2 33	2 24	2 15	2 4	1 52	1 38
20	5 13	5 3	4 52	4 39	4 32	4 24	4 14	4 2	3 56	3 50	3 43	3 35	3 27
21	6 8	6 2	5 57	5 50	5 46	5 42	5 37	5 31	5 28	5 24	5 21	5 17	5 13
22	7 0	7 0	7 0	6 59	6 59	6 58	6 58	6 57	6 57	6 57	6 56	6 56	6 56
23	7 52	7 57	8 1	8 7	8 10	8 13	8 18	8 22	8 24	8 27	8 30	8 33	8 36
24	8 43	8 52	9 2	9 13	9 19	9 26	9 35	9 45	9 50	9 55	10 1	10 7	10 15
25	9 35	9 48	10 2	10 18	10 27	10 38	10 50	11 6	11 13	11 21	11 30	11 41	11 52
26	10 27	10 44	11 1	11 21	11 33	11 47	12 3	12 23	12 32	12 43	12 56	13 10	13 26
27	11 20	11 39	11 59	12 22	12 36	12 52	13 10	13 34	13 45	13 58	14 13	14 31	14 52
28	12 13	12 33	12 54	13 19	13 34	13 50	14 10	14 36	14 48	15 2	15 19	15 38	16 2
Mar. 1	13 5	13 25	13 46	14 11	14 25	14 42	15 2	15 27	15 39	15 53	16 9	16 28	16 51
2	13 56	14 14	14 34	14 57	15 11	15 26	15 45	16 8	16 18	16 31	16 45	17 2	17 22
3	14 44	15 1	15 18	15 38	15 50	16 4	16 20	16 39	16 48	16 58	17 10	17 23	17 39
4	15 30	15 44	15 58	16 15	16 24	16 36	16 48	17 4	17 11	17 19	17 28	17 38	17 50
5	16 14	16 24	16 35	16 48	16 55	17 3	17 13	17 24	17 30	17 35	17 42	17 49	17 57
6	16 56	17 2	17 10	17 18	17 23	17 28	17 34	17 42	17 45	17 49	17 53	17 58	18 3
7	17 37	17 40	17 43	17 47	17 49	17 52	17 54	17 58	17 59	18 0	18 2	18 4	18 7
8	18 18	18 17	18 16	18 15	18 15	18 14	18 13	18 12	18 12	18 12	18 11	18 11	18 10
9	18 59	18 55	18 50	18 44	18 41	18 37	18 33	18 28	18 26	18 23	18 20	18 18	18 14
10	19 42	19 34	19 25	19 15	19 9	19 2	18 54	18 45	18 41	18 36	18 31	18 25	18 19
11	20 28	20 16	20 3	19 48	19 40	19 30	19 19	19 5	18 59	18 52	18 44	18 35	18 25
12	21 17	21 1	20 45	20 26	20 15	20 2	19 47	19 30	19 21	19 12	19 1	18 49	18 35
13	22 9	21 51	21 32	21 10	20 57	20 42	20 24	20 2	19 51	19 39	19 26	19 10	18 52
14	23 5	22 46	22 24	22 0	21 46	21 29	21 10	20 45	20 32	20 19	20 3	19 44	19 21
15	....	23 44	23 22	22 58	22 43	22 26	22 6	21 40	21 28	21 14	20 57	20 37	20 12
16	0 4	....	....	....	23 47	23 32	23 13	22 49	22 38	22 25	22 10	21 52	21 30
17	1 3	0 44	0 24	0 1	....	....	....	....	23 59	23 48	23 36	23 23	23 6
18	2 1	1 45	1 28	1 8	0 57	0 44	0 28	0 8	....	....	....	....	....
19	2 58	2 46	2 33	2 18	2 9	1 59	1 47	1 32	1 26	1 18	1 10	1 0	0 49
20	3 52	3 45	3 36	3 27	3 21	3 15	3 8	2 58	2 54	2 50	2 44	2 39	2 32
21	4 45	4 42	4 39	4 35	4 33	4 30	4 28	4 24	4 23	4 21	4 19	4 17	4 14
22	5 37	5 39	5 41	5 43	5 44	5 45	5 47	5 49	5 50	5 51	5 52	5 53	5 55
23	6 28	6 35	6 42	6 50	6 54	7 0	7 6	7 13	7 16	7 20	7 25	7 29	7 34
24	7 20	7 32	7 43	7 57	8 4	8 13	8 24	8 36	8 42	8 49	8 56	9 4	9 14
25	8 14	8 29	8 44	9 2	9 13	9 25	9 40	9 57	10 5	10 15	10 25	10 37	10 51
26	9 8	9 26	9 45	10 6	10 19	10 34	10 51	11 13	11 24	11 36	11 49	12 5	12 24
27	10 3	10 22	10 43	11 7	11 21	11 37	11 57	12 21	12 33	12 46	13 2	13 20	13 43
28	10 56	11 16	11 38	12 2	12 16	12 33	12 53	13 18	13 30	13 44	14 0	14 19	14 42
29	11 49	12 8	12 28	12 52	13 5	13 21	13 40	14 4	14 15	14 28	14 42	15 0	15 21
30	12 38	12 55	13 14	13 35	13 48	14 2	14 18	14 39	14 49	15 0	15 12	15 26	15 43
31	13 25	13 40	13 56	14 13	14 24	14 36	14 50	15 6	15 14	15 23	15 33	15 44	15 57
Apr. 1	14 10	14 22	14 34	14 48	14 56	15 5	15 16	15 29	15 34	15 41	15 48	15 56	16 6
2	14 53	15 1	15 9	15 19	15 25	15 31	15 38	15 47	15 51	15 55	16 0	16 6	16 12
3	15 34	15 38	15 43	15 48	15 51	15 55	15 59	16 4	16 6	16 8	16 10	16 13	16 16

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Date. \ Lat.		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
		h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Apr.	1	1 48	1 35	1 21	1 5	0 55	0 45	0 32	0 16	0 9	0 1	....	....	....
	2	2 32	2 22	2 11	1 59	1 52	1 44	1 35	1 23	1 18	1 12	1 6	0 58	0 50
	3	3 14	3 7	3 1	2 53	2 48	2 43	2 38	2 30	2 27	2 24	2 20	2 15	2 10
	4	3 55	3 52	3 50	3 46	3 45	3 43	3 40	3 38	3 36	3 35	3 33	3 31	3 30
	5	4 36	4 37	4 39	4 40	4 41	4 42	4 44	4 45	4 46	4 47	4 48	4 49	4 50
	6	5 18	5 24	5 29	5 36	5 39	5 44	5 48	5 54	5 57	6 0	6 3	6 7	6 12
	7	6 3	6 12	6 22	6 33	6 39	6 46	6 55	7 6	7 10	7 16	7 22	7 29	7 36
	8	6 50	7 2	7 16	7 32	7 41	7 51	8 4	8 19	8 26	8 34	8 43	8 53	9 5
	9	7 40	7 56	8 13	8 33	8 44	8 58	9 14	9 33	9 43	9 53	10 5	10 19	10 35
	10	8 34	8 52	9 12	9 35	9 48	10 4	10 23	10 46	10 57	11 10	11 25	11 42	12 3
	11	9 31	9 50	10 12	10 36	10 50	11 7	11 27	11 52	12 4	12 18	12 34	12 54	13 18
	12	10 29	10 49	11 10	11 34	11 48	12 4	12 24	12 49	13 1	13 14	13 30	13 48	14 10
	13	11 28	11 45	12 4	12 26	12 40	12 54	13 12	13 34	13 44	13 56	14 9	14 24	14 42
	14	12 24	12 39	12 55	13 14	13 24	13 37	13 51	14 9	14 17	14 26	14 36	14 48	15 1
	15	13 19	13 30	13 42	13 56	14 4	14 13	14 24	14 36	14 42	14 48	14 56	15 4	15 12
	16	14 11	14 18	14 26	14 34	14 39	14 45	14 51	14 59	15 2	15 6	15 10	15 15	15 20
	17	15 2	15 5	15 7	15 10	15 12	15 14	15 17	15 19	15 20	15 22	15 23	15 25	15 27
	18	15 52	15 50	15 48	15 46	15 44	15 43	15 41	15 39	15 38	15 37	15 35	15 34	15 33
	19	16 43	16 36	16 29	16 21	16 17	16 12	16 6	15 59	15 55	15 52	15 48	15 44	15 39
	20	17 34	17 24	17 12	16 59	16 52	16 43	16 33	16 21	16 16	16 10	16 3	15 55	15 47
	21	18 28	18 13	17 58	17 40	17 30	17 18	17 4	16 48	16 40	16 32	16 22	16 11	15 58
	22	19 22	19 5	18 47	18 25	18 13	17 58	17 42	17 21	17 11	17 0	16 48	16 33	16 16
	23	20 18	19 59	19 38	19 15	19 1	18 45	18 26	18 2	17 51	17 38	17 23	17 6	16 45
	24	21 12	20 53	20 32	20 8	19 53	19 37	19 17	18 53	18 41	18 27	18 11	17 53	17 30
	25	22 5	21 46	21 26	21 3	20 49	20 34	20 15	19 51	19 40	19 27	19 12	18 55	18 33
	26	22 55	22 38	22 20	21 59	21 47	21 33	21 16	20 56	20 46	20 35	20 22	20 8	19 50
	27	23 42	23 28	23 13	22 55	22 45	22 34	22 20	22 3	21 55	21 46	21 36	21 24	21 11
	28	....	....	....	23 50	23 42	23 33	23 23	23 10	23 4	22 57	22 50	22 42	22 32
	29	0 27	0 16	0 4	....	....	....	....	....	....	....	....	23 58	23 52
	30	1 9	1 2	0 53	0 44	0 39	0 33	0 25	0 17	0 13	0 8	0 4	....	....
May	1	1 50	1 46	1 42	1 37	1 34	1 32	1 28	1 24	1 22	1 19	1 17	1 14	1 11
	2	2 31	2 31	2 31	2 31	2 31	2 31	2 30	2 30	2 30	2 30	2 30	2 30	2 30
	3	3 13	3 17	3 21	3 25	3 28	3 31	3 34	3 38	3 41	3 43	3 45	3 48	3 51
	4	3 56	4 4	4 12	4 22	4 27	4 33	4 40	4 49	4 53	4 57	5 2	5 8	5 14
	5	4 43	4 54	5 6	5 20	5 28	5 37	5 49	6 2	6 8	6 15	6 23	6 32	6 41
	6	5 32	5 47	6 3	6 21	6 32	6 44	6 59	7 17	7 25	7 35	7 46	7 58	8 12
	7	6 26	6 44	7 3	7 24	7 37	7 52	8 10	8 32	8 42	8 54	9 8	9 24	9 43
	8	7 23	7 43	8 3	8 27	8 41	8 58	9 17	9 42	9 54	10 7	10 23	10 42	11 4
	9	8 23	8 42	9 3	9 28	9 42	9 58	10 18	10 43	10 55	11 9	11 24	11 43	12 6
	10	9 22	9 40	10 0	10 23	10 36	10 52	11 10	11 32	11 43	11 55	12 9	12 25	12 44
	11	10 20	10 36	10 52	11 12	11 23	11 36	11 52	12 10	12 19	12 28	12 39	12 52	13 6
	12	11 15	11 28	11 41	11 56	12 4	12 14	12 26	12 39	12 46	12 53	13 1	13 10	13 20
	13	12 8	12 16	12 25	12 35	12 40	12 47	12 55	13 4	13 8	13 12	13 17	13 23	13 29
	14	12 58	13 2	13 6	13 11	13 13	13 16	13 20	13 24	13 26	13 28	13 30	13 33	13 36
	15	13 47	13 46	13 46	13 45	13 45	13 44	13 44	13 43	13 43	13 43	13 42	13 42	13 42
	16	14 36	14 31	14 26	14 20	14 16	14 12	14 8	14 2	14 0	13 58	13 54	13 51	13 48
	17	15 26	15 17	15 7	14 56	14 49	14 42	14 34	14 24	14 19	14 14	14 9	14 2	13 55

LOCAL ASTRONOMICAL MEAN TIME OF MOONSET, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

To obtain standard time, see directions on page 8.

For other longitudes and for southern latitudes see page 42.

Date.	Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
		h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Apr.	1	14 10	14 22	14 34	14 48	14 56	15 5	15 16	15 29	15 34	15 41	15 48	15 56	16 6
	2	14 53	15 1	15 9	15 19	15 25	15 31	15 38	15 47	15 51	15 55	16 0	16 6	16 12
	3	15 34	15 38	15 43	15 48	15 51	15 55	15 59	16 4	16 6	16 8	16 10	16 13	16 16
	4	16 15	16 16	16 16	16 17	16 17	16 18	16 18	16 19	16 19	16 20	16 20	16 20	16 21
	5	16 56	16 53	16 50	16 46	16 44	16 41	16 38	16 35	16 33	16 32	16 29	16 27	16 25
	6	17 40	17 32	17 25	17 16	17 11	17 6	16 59	16 52	16 48	16 44	16 40	16 35	16 30
	7	18 25	18 14	18 3	17 49	17 42	17 33	17 23	17 11	17 6	16 59	16 52	16 45	16 36
	8	19 13	18 59	18 44	18 26	18 16	18 5	17 51	17 35	17 27	17 18	17 9	16 58	16 46
	9	20 6	19 48	19 30	19 9	18 56	18 42	18 26	18 5	17 55	17 44	17 32	17 17	17 0
	10	21 1	20 42	20 21	19 58	19 44	19 28	19 9	18 45	18 33	18 20	18 5	17 48	17 26
	11	21 59	21 39	21 18	20 53	20 39	20 22	20 2	19 36	19 24	19 10	18 54	18 34	18 10
	12	22 57	22 38	22 18	21 54	21 41	21 24	21 5	20 41	20 29	20 16	20 1	19 43	19 20
	13	23 55	23 38	23 20	23 0	22 48	22 34	22 17	21 56	21 46	21 35	21 22	21 8	20 50
	14	....	....	....	....	23 57	23 46	23 33	23 16	23 9	23 1	22 51	22 40	22 28
	15	0 51	0 37	0 23	0 6	....	....	....	....	....	....	....	....	....
	16	1 44	1 35	1 25	1 13	1 7	0 59	0 50	0 39	0 34	0 29	0 22	0 15	0 7
	17	2 36	2 31	2 25	2 20	2 16	2 12	2 7	2 2	1 59	1 56	1 53	1 50	1 46
	18	3 26	3 26	3 25	3 25	3 25	3 25	3 25	3 24	3 24	3 24	3 24	3 23	3 23
	19	4 16	4 21	4 25	4 31	4 34	4 37	4 42	4 46	4 48	4 51	4 54	4 57	5 0
	20	5 7	5 16	5 26	5 36	5 43	5 50	5 58	6 8	6 13	6 18	6 24	6 30	6 38
	21	6 0	6 13	6 26	6 42	6 52	7 2	7 14	7 30	7 37	7 45	7 54	8 4	8 15
	22	6 54	7 10	7 28	7 48	7 59	8 13	8 29	8 48	8 58	9 8	9 21	9 34	9 51
	23	7 49	8 8	8 28	8 50	9 4	9 19	9 38	10 1	10 12	10 25	10 40	10 57	11 18
	24	8 44	9 4	9 25	9 49	10 3	10 20	10 40	11 4	11 16	11 30	11 46	12 4	12 28
	25	9 38	9 57	10 18	10 42	10 56	11 12	11 31	11 56	12 7	12 20	12 36	12 53	13 15
	26	10 30	10 48	11 7	11 29	11 42	11 56	12 14	12 36	12 46	12 57	13 10	13 26	13 44
	27	11 18	11 34	11 51	12 10	12 21	12 33	12 48	13 6	13 15	13 24	13 35	13 47	14 1
	28	12 4	12 17	12 30	12 46	12 55	13 5	13 16	13 31	13 37	13 44	13 53	14 2	14 12
	29	12 48	12 57	13 7	13 18	13 25	13 32	13 41	13 51	13 55	14 1	14 6	14 13	14 20
	30	13 29	13 35	13 41	13 48	13 52	13 57	14 2	14 8	14 11	14 14	14 17	14 21	14 25
May	1	14 10	14 12	14 15	14 17	14 18	14 20	14 22	14 24	14 25	14 26	14 27	14 28	14 30
	2	14 52	14 50	14 48	14 46	14 44	14 43	14 42	14 40	14 39	14 38	14 37	14 36	14 34
	3	15 34	15 28	15 22	15 16	15 12	15 7	15 2	14 56	14 53	14 50	14 47	14 43	14 39
	4	16 18	16 9	15 59	15 48	15 41	15 34	15 25	15 14	15 10	15 4	14 59	14 52	14 45
	5	17 6	16 53	16 39	16 24	16 14	16 4	15 52	15 37	15 30	15 22	15 14	15 4	14 54
	6	17 58	17 42	17 24	17 5	16 53	16 40	16 24	16 5	15 56	15 46	15 35	15 22	15 6
	7	18 53	18 35	18 15	17 52	17 39	17 23	17 5	16 42	16 31	16 19	16 6	15 49	15 29
	8	19 52	19 32	19 11	18 47	18 32	18 16	17 56	17 31	17 19	17 6	16 50	16 31	16 8
	9	20 51	20 32	20 11	19 48	19 33	19 17	18 58	18 33	18 22	18 8	17 52	17 34	17 11
	10	21 50	21 33	21 14	20 53	20 40	20 26	20 8	19 46	19 36	19 24	19 11	18 55	18 37
	11	22 47	22 32	22 17	22 0	21 49	21 37	21 23	21 6	20 58	20 49	20 38	20 27	20 13
	12	23 41	23 30	23 19	23 6	22 59	22 50	22 40	22 28	22 22	22 16	22 9	22 1	21 52
	13	....	....	....	....	....	....	23 56	23 49	23 46	23 42	23 38	23 34	23 29
	14	0 32	0 26	0 19	0 12	0 7	0 2	....	....	....	....	....	....	....
	15	1 22	1 20	1 18	1 16	1 15	1 13	1 12	1 10	1 9	1 8	1 7	1 6	1 4
	16	2 10	2 13	2 16	2 20	2 22	2 24	2 26	2 30	2 31	2 33	2 35	2 36	2 39
	17	3 0	3 7	3 15	3 24	3 29	3 34	3 41	3 49	3 53	3 57	4 2	4 7	4 13

TABLE III.

LOCAL ASTRONOMICAL MEAN TIME OF MOONRISE, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

To obtain standard time, see directions on page 8.

For other longitudes and for southern latitudes see page 42.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
May 17	15 26	15 17	15 7	14 56	14 49	14 42	14 34	14 24	14 19	14 14	14 9	14 2	13 55
18	16 17	16 4	15 50	15 34	15 25	15 15	15 2	14 48	14 41	14 34	14 25	14 15	14 5
19	17 11	16 54	16 37	16 17	16 6	15 52	15 37	15 18	15 9	14 59	14 48	14 35	14 20
20	18 5	17 47	17 27	17 4	16 51	16 36	16 18	15 55	15 44	15 32	15 18	15 2	14 43
21	19 0	18 41	18 20	17 56	17 42	17 26	17 6	16 42	16 30	16 17	16 2	15 44	15 21
22	19 54	19 35	19 15	18 51	18 37	18 21	18 2	17 38	17 26	17 13	16 58	16 40	16 18
23	20 46	20 28	20 10	19 48	19 35	19 20	19 3	18 41	18 30	18 19	18 5	17 49	17 30
24	21 35	21 20	21 3	20 44	20 34	20 21	20 6	19 47	19 39	19 29	19 18	19 5	18 50
25	22 21	22 8	21 55	21 40	21 32	21 22	21 10	20 55	20 49	20 41	20 33	20 23	20 13
26	23 4	22 55	22 46	22 35	22 28	22 21	22 13	22 3	21 58	21 53	21 47	21 41	21 33
27	23 46	23 40	23 34	23 28	23 24	23 20	23 15	23 9	23 6	23 3	23 0	22 56	22 52
28	....	....	....	....	....	....	....	....	....	....	....	....	....
29	0 26	0 25	0 23	0 21	0 20	0 18	0 17	0 15	0 15	0 14	0 13	0 12	0 10
30	1 7	1 9	1 12	1 14	1 16	1 18	1 20	1 22	1 23	1 24	1 26	1 27	1 29
31	1 49	1 55	2 2	2 9	2 13	2 18	2 24	2 30	2 34	2 37	2 41	2 45	2 50
June 1	2 34	2 44	2 54	3 6	3 13	3 21	3 30	3 42	3 47	3 53	3 59	4 6	4 15
2	3 22	3 35	3 50	4 6	4 16	4 26	4 40	4 55	5 3	5 11	5 21	5 31	5 44
3	4 14	4 30	4 48	5 8	5 20	5 34	5 50	6 11	6 21	6 31	6 44	6 58	7 15
4	5 10	5 29	5 49	6 12	6 26	6 42	7 1	7 24	7 36	7 49	8 4	8 22	8 43
5	6 10	6 29	6 51	7 15	7 29	7 46	8 6	8 31	8 43	8 57	9 13	9 32	9 55
6	7 11	7 30	7 50	8 14	8 28	8 44	9 3	9 26	9 37	9 50	10 5	10 22	10 43
7	8 12	8 28	8 46	9 7	9 19	9 33	9 49	10 9	10 18	10 29	10 41	10 55	11 11
8	9 9	9 23	9 37	9 54	10 3	10 14	10 27	10 42	10 49	10 57	11 6	11 16	11 27
9	10 4	10 13	10 23	10 35	10 41	10 49	10 58	11 8	11 13	11 18	11 24	11 30	11 38
10	10 55	11 0	11 6	11 12	11 16	11 20	11 25	11 30	11 32	11 35	11 38	11 42	11 46
11	11 45	11 46	11 46	11 47	11 48	11 48	11 49	11 50	11 50	11 50	11 51	11 51	11 52
12	12 34	12 30	12 26	12 21	12 19	12 16	12 13	12 8	12 7	12 5	12 3	12 0	11 58
13	13 22	13 14	13 6	12 56	12 51	12 44	12 37	12 29	12 25	12 20	12 16	12 10	12 4
14	14 12	14 1	13 48	13 33	13 25	13 16	13 4	12 51	12 45	12 38	12 31	12 22	12 13
15	15 4	14 49	14 33	14 14	14 3	13 51	13 36	13 18	13 10	13 1	12 51	12 39	12 26
16	15 57	15 40	15 21	14 59	14 46	14 31	14 14	13 52	13 42	13 31	13 18	13 3	12 45
17	16 52	16 32	16 12	15 48	15 34	15 18	14 59	14 35	14 23	14 10	13 55	13 38	13 16
18	17 46	17 26	17 6	16 42	16 28	16 11	15 52	15 27	15 15	15 2	14 46	14 28	14 5
19	18 38	18 20	18 0	17 38	17 24	17 9	16 51	16 28	16 17	16 4	15 50	15 33	15 13
20	19 28	19 12	18 54	18 34	18 23	18 9	17 53	17 33	17 24	17 13	17 1	16 47	16 31
21	20 15	20 2	19 47	19 31	19 21	19 10	18 57	18 41	18 34	18 25	18 16	18 5	17 53
22	21 0	20 49	20 38	20 26	20 18	20 10	20 1	19 49	19 43	19 37	19 31	19 23	19 14
23	21 42	21 35	21 28	21 20	21 15	21 10	21 3	20 56	20 52	20 48	20 44	20 39	20 34
24	22 22	22 19	22 16	22 12	22 10	22 8	22 5	22 2	22 0	21 58	21 56	21 54	21 52
25	23 3	23 3	23 4	23 5	23 5	23 6	23 7	23 8	23 8	23 8	23 9	23 9	23 10
26	23 44	23 48	23 53	23 58	....	....	....	....	....	....	....	....	....
27	....	....	....	....	0 1	0 5	0 9	0 14	0 16	0 19	0 22	0 25	0 29
28	0 26	0 34	0 43	0 53	0 59	1 6	1 14	1 23	1 27	1 32	1 38	1 44	1 50
29	1 12	1 23	1 36	1 50	1 59	2 9	2 20	2 34	2 41	2 48	2 56	3 5	3 16
30	2 1	2 16	2 32	2 51	3 2	3 14	3 29	3 48	3 56	4 6	4 17	4 30	4 45
July 1	2 55	3 13	3 32	3 54	4 7	4 22	4 39	5 2	5 12	5 25	5 39	5 55	6 15
2	3 53	4 12	4 33	4 57	5 11	5 28	5 47	6 12	6 24	6 38	6 54	7 12	7 36

LOCAL ASTRONOMICAL MEAN TIME OF MOONSET, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

To obtain standard time, see directions on page 8.

For other longitudes and for southern latitudes see page 42.

Date.	Lat. 0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
May 17	3 0	3 7	3 15	3 24	3 29	3 34	3 41	3 49	3 53	3 57	4 2	4 7	4 13
18	3 50	4 2	4 14	4 28	4 36	4 45	4 56	5 9	5 15	5 22	5 29	5 38	5 48
19	4 43	4 58	5 14	5 32	5 43	5 55	6 9	6 27	6 36	6 45	6 56	7 8	7 22
20	5 37	5 54	6 14	6 35	6 48	7 3	7 20	7 42	7 53	8 4	8 18	8 34	8 53
21	6 32	6 51	7 12	7 36	7 50	8 6	8 25	8 49	9 1	9 14	9 30	9 48	10 10
22	7 27	7 46	8 7	8 31	8 45	9 2	9 21	9 46	9 57	10 10	10 26	10 44	11 6
23	8 20	8 38	8 58	9 21	9 34	9 50	10 8	10 30	10 41	10 53	11 7	11 24	11 43
24	9 10	9 27	9 44	10 4	10 16	10 30	10 46	11 5	11 14	11 24	11 36	11 49	12 5
25	9 58	10 12	10 26	10 43	10 52	11 4	11 17	11 32	11 40	11 48	11 57	12 7	12 19
26	10 42	10 53	11 4	11 17	11 24	11 33	11 42	11 54	11 59	12 5	12 12	12 19	12 27
27	11 24	11 32	11 39	11 48	11 52	11 58	12 5	12 12	12 16	12 20	12 24	12 28	12 34
28	12 6	12 9	12 13	12 17	12 19	12 22	12 25	12 28	12 30	12 32	12 34	12 36	12 39
29	12 46	12 46	12 46	12 45	12 45	12 45	12 44	12 44	12 44	12 44	12 44	12 44	12 43
30	13 27	13 23	13 19	13 14	13 11	13 8	13 5	13 0	12 58	12 56	12 54	12 51	12 48
31	14 10	14 3	13 54	13 45	13 39	13 33	13 26	13 18	13 14	13 9	13 4	12 59	12 53
June 1	14 56	14 45	14 33	14 19	14 11	14 2	13 51	13 38	13 32	13 25	13 18	13 10	13 0
2	15 46	15 32	15 16	14 57	14 47	14 34	14 20	14 3	13 55	13 46	13 36	13 24	13 11
3	16 40	16 23	16 4	15 42	15 30	15 15	14 58	14 36	14 26	14 15	14 2	13 47	13 29
4	17 38	17 19	16 58	16 35	16 20	16 4	15 45	15 21	15 9	14 56	14 40	14 22	14 0
5	18 39	18 20	17 59	17 34	17 20	17 4	16 44	16 19	16 7	15 53	15 37	15 18	14 55
6	19 40	19 22	19 2	18 40	18 27	18 11	17 53	17 30	17 19	17 7	16 52	16 36	16 15
7	20 39	20 24	20 7	19 48	19 37	19 24	19 9	18 50	18 42	18 31	18 20	18 7	17 52
8	21 36	21 24	21 11	20 57	20 49	20 39	20 28	20 14	20 8	20 1	19 52	19 43	19 33
9	22 29	22 21	22 13	22 4	21 59	21 53	21 46	21 37	21 34	21 29	21 24	21 19	21 13
10	23 19	23 16	23 13	23 10	23 8	23 5	23 2	22 59	22 57	22 56	22 54	22 52	22 49
11	....	....	....	....	....	....	....	....	....	....	....	....	....
12	0 8	0 10	0 12	0 13	0 15	0 16	0 17	0 19	0 20	0 21	0 22	0 23	0 24
13	0 57	1 3	1 9	1 16	1 21	1 26	1 31	1 38	1 41	1 44	1 48	1 52	1 57
14	1 46	1 56	2 7	2 20	2 27	2 35	2 44	2 56	3 2	3 8	3 14	3 22	3 31
15	2 37	2 51	3 6	3 23	3 32	3 44	3 57	4 14	4 21	4 30	4 40	4 51	5 4
16	3 30	3 46	4 4	4 25	4 37	4 51	5 8	5 28	5 38	5 49	6 2	6 16	6 34
17	4 24	4 42	5 2	5 26	5 39	5 55	6 14	6 37	6 48	7 1	7 16	7 34	7 55
18	5 18	5 37	5 58	6 22	6 36	6 53	7 12	7 37	7 49	8 2	8 18	8 36	8 59
19	6 11	6 30	6 51	7 14	7 28	7 44	8 3	8 26	8 37	8 50	9 5	9 22	9 43
20	7 3	7 20	7 39	8 0	8 12	8 27	8 43	9 4	9 14	9 25	9 38	9 52	10 9
21	7 51	8 6	8 22	8 40	8 51	9 3	9 17	9 34	9 42	9 51	10 1	10 12	10 26
22	8 37	8 49	9 2	9 16	9 24	9 34	9 44	9 58	10 4	10 10	10 18	10 26	10 36
23	9 20	9 29	9 38	9 48	9 54	10 0	10 8	10 17	10 21	10 26	10 31	10 36	10 43
24	10 2	10 6	10 12	10 17	10 21	10 25	10 29	10 34	10 36	10 39	10 42	10 45	10 49
25	10 42	10 43	10 44	10 46	10 47	10 48	10 48	10 50	10 50	10 51	10 52	10 52	10 53
26	11 22	11 20	11 17	11 14	11 12	11 10	11 8	11 5	11 4	11 2	11 1	10 59	10 57
27	12 4	11 58	11 51	11 43	11 39	11 34	11 28	11 22	11 19	11 15	11 11	11 7	11 2
28	12 48	12 38	12 27	12 15	12 8	12 0	11 51	11 40	11 35	11 29	11 23	11 16	11 9
29	13 35	13 22	13 7	12 51	12 41	12 30	12 18	12 2	11 55	11 47	11 38	11 28	11 17
30	14 26	14 10	13 52	13 32	13 20	13 7	12 51	12 31	12 22	12 12	12 0	11 47	11 31
July 1	15 22	15 3	14 43	14 20	14 7	13 51	13 32	13 9	12 58	12 46	12 31	12 15	11 54
2	16 21	16 2	15 41	15 16	15 2	14 45	14 26	14 0	13 48	13 35	13 19	13 0	12 36

TABLE III.

LOCAL ASTRONOMICAL MEAN TIME OF MOONRISE, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

To obtain standard time, see directions on page 8.

For other longitudes and for southern latitudes see page 42.

Date. \ Lat.		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
		h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
July	1	2 55	3 13	3 32	3 54	4 7	4 22	4 39	5 2	5 12	5 25	5 39	5 55	6 15
	2	3 53	4 12	4 33	4 57	5 11	5 28	5 47	6 12	6 24	6 38	6 54	7 12	7 36
	3	4 54	5 13	5 34	5 58	6 12	6 29	6 48	7 13	7 25	7 39	7 54	8 13	8 35
	4	5 56	6 14	6 33	6 55	7 8	7 23	7 41	8 2	8 13	8 25	8 38	8 54	9 12
	5	6 56	7 11	7 27	7 46	7 56	8 9	8 23	8 41	8 48	8 58	9 8	9 19	9 33
	6	7 54	8 5	8 17	8 31	8 39	8 47	8 58	9 10	9 16	9 22	9 29	9 37	9 46
	7	8 48	8 55	9 2	9 11	9 15	9 21	9 27	9 34	9 38	9 41	9 46	9 50	9 55
	8	9 40	9 42	9 45	9 48	9 49	9 51	9 53	9 55	9 56	9 57	9 58	10 0	10 2
	9	10 30	10 28	10 26	10 23	10 21	10 19	10 17	10 15	10 14	10 12	10 11	10 10	10 8
	10	11 20	11 13	11 6	10 58	10 53	10 48	10 42	10 35	10 31	10 28	10 24	10 19	10 14
	11	12 10	11 59	11 48	11 35	11 27	11 18	11 8	10 57	10 51	10 45	10 38	10 31	10 22
	12	13 1	12 47	12 31	12 14	12 4	11 52	11 39	11 22	11 14	11 6	10 56	10 46	10 33
	13	13 53	13 36	13 18	12 57	12 45	12 31	12 14	11 51	11 44	11 33	11 21	11 7	10 50
	14	14 47	14 28	14 8	13 44	13 31	13 15	12 56	12 33	12 22	12 9	11 54	11 38	11 17
	15	15 40	15 20	15 0	14 36	14 22	14 5	13 46	13 21	13 9	12 56	12 41	12 22	11 59
	16	16 33	16 14	15 54	15 30	15 17	15 1	14 42	14 18	14 7	13 54	13 39	13 22	13 0
	17	17 23	17 6	16 48	16 27	16 14	16 0	15 43	15 22	15 12	15 1	14 48	14 33	14 15
	18	18 11	17 56	17 41	17 23	17 13	17 1	16 47	16 29	16 21	16 12	16 1	15 50	15 36
	19	18 56	18 45	18 32	18 18	18 10	18 1	17 50	17 37	17 30	17 24	17 16	17 7	16 57
	20	19 39	19 31	19 22	19 13	19 7	19 1	18 53	18 44	18 40	18 35	18 30	18 25	18 18
	21	20 20	20 16	20 11	20 6	20 3	19 59	19 55	19 50	19 48	19 46	19 43	19 40	19 36
	22	21 0	21 0	20 59	20 58	20 58	20 57	20 56	20 56	20 55	20 55	20 55	20 54	20 54
	23	21 41	21 44	21 47	21 51	21 53	21 55	21 58	22 2	22 3	22 5	22 7	22 9	22 12
	24	22 22	22 29	22 37	22 45	22 50	22 55	23 2	23 9	23 13	23 17	23 21	23 26	23 32
	25	23 5	23 16	23 27	23 40	23 47	23 55	....	....	....	....	....	....	....
	26	23 52	....	....	....	....	....	0 5	0 17	0 23	0 29	0 36	0 44	0 53
	27	....	0 6	0 20	0 37	0 47	0 58	1 12	1 28	1 36	1 45	1 55	2 6	2 18
	28	0 42	0 59	1 17	1 37	1 49	2 3	2 20	2 40	2 50	3 1	3 14	3 28	3 46
	29	1 37	1 55	2 16	2 39	2 52	3 8	3 27	3 51	4 2	4 15	4 30	4 48	5 10
	30	2 35	2 55	3 16	3 40	3 54	4 11	4 31	4 56	5 8	5 22	5 38	5 57	6 20
	31	3 36	3 55	4 15	4 38	4 52	5 8	5 27	5 50	6 2	6 14	6 29	6 46	7 7
Aug.	1	4 37	4 54	5 12	5 32	5 44	5 58	6 14	6 34	6 43	6 54	7 6	7 19	7 35
	2	5 37	5 50	6 4	6 20	6 30	6 40	6 53	7 8	7 15	7 23	7 32	7 41	7 52
	3	6 34	6 43	6 53	7 4	7 10	7 17	7 26	7 35	7 40	7 45	7 50	7 56	8 3
	4	7 29	7 33	7 38	7 43	7 46	7 50	7 53	7 58	8 0	8 3	8 5	8 8	8 11
	5	8 22	8 21	8 21	8 20	8 20	8 20	8 20	8 19	8 19	8 19	8 18	8 18	8 18
	6	9 13	9 8	9 3	8 57	8 53	8 49	8 45	8 39	8 37	8 34	8 32	8 28	8 25
	7	10 4	9 55	9 45	9 34	9 27	9 20	9 12	9 1	8 57	8 52	8 46	8 39	8 32
	8	10 56	10 43	10 29	10 13	10 4	9 54	9 41	9 26	9 19	9 12	9 3	8 54	8 43
	9	11 49	11 33	11 16	10 56	10 44	10 31	10 15	9 56	9 47	9 37	9 26	9 11	8 58
	10	12 43	12 25	12 5	11 42	11 29	11 14	10 56	10 33	10 22	10 10	9 56	9 40	9 21
	11	13 37	13 17	12 57	12 33	12 19	12 2	11 43	11 19	11 7	10 54	10 38	10 20	9 57
	12	14 29	14 10	13 50	13 26	13 12	12 56	12 37	12 13	12 2	11 48	11 33	11 15	10 53
	13	15 20	15 2	14 43	14 22	14 9	13 54	13 36	13 14	13 4	12 52	12 38	12 22	12 3
	14	16 8	15 53	15 36	15 18	15 6	14 54	14 39	14 20	14 11	14 1	13 50	13 37	13 22
	15	16 54	16 42	16 28	16 13	16 4	15 54	15 42	15 27	15 20	15 13	15 4	14 54	14 43
	16	17 38	17 28	17 19	17 7	17 1	16 54	16 45	16 34	16 30	16 24	16 18	16 11	16 3

LOCAL ASTRONOMICAL MEAN TIME OF MOONSET, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

To obtain standard time, see directions on page 8.

For other longitudes and for southern latitudes see page 42.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
July 1	15 22	15 3	14 43	14 20	14 7	13 51	13 32	13 9	12 58	12 46	12 31	12 15	11 54
2	16 21	16 2	15 41	15 16	15 2	14 45	14 26	14 0	13 48	13 35	13 19	13 0	12 36
3	17 23	17 4	16 44	16 20	16 6	15 50	15 31	15 7	14 55	14 42	14 26	14 8	13 46
4	18 25	18 8	17 50	17 29	17 17	17 3	16 46	16 25	16 15	16 4	15 51	15 36	15 18
5	19 24	19 10	18 56	18 40	18 30	18 19	18 6	17 50	17 42	17 34	17 24	17 13	17 1
6	20 20	20 11	20 1	19 50	19 44	19 36	19 27	19 17	19 12	19 6	19 0	18 53	18 46
7	21 13	21 9	21 4	20 58	20 55	20 51	20 47	20 42	20 39	20 36	20 34	20 30	20 27
8	22 4	22 4	22 4	22 4	22 4	22 4	22 5	22 5	22 5	22 5	22 5	22 5	22 4
9	22 54	22 59	23 4	23 9	23 12	23 16	23 21	23 26	23 28	23 31	23 34	23 37	23 40
10	23 44	23 53	....	....	....	....	....	....	....	....	....	....	....
11	....	....	0 2	0 13	0 19	0 26	0 35	0 45	0 50	0 55	1 1	1 8	1 15
12	0 34	0 47	1 2	1 16	1 25	1 36	1 48	2 3	2 10	2 18	2 27	2 37	2 48
13	1 26	1 42	1 59	2 19	2 30	2 44	2 59	3 18	3 28	3 38	3 50	4 3	4 19
14	2 19	2 37	2 57	3 20	3 33	3 48	4 6	4 29	4 40	4 52	5 7	5 24	5 44
15	3 13	3 32	3 53	4 17	4 31	4 48	5 7	5 32	5 43	5 57	6 12	6 31	6 54
16	4 6	4 25	4 46	5 10	5 24	5 40	5 59	6 23	6 35	6 48	7 3	7 21	7 43
17	4 58	5 16	5 35	5 57	6 10	6 25	6 43	7 4	7 15	7 27	7 40	7 56	8 14
18	5 47	6 3	6 20	6 39	6 50	7 3	7 18	7 37	7 45	7 55	8 6	8 19	8 33
19	6 34	6 46	7 0	7 16	7 25	7 36	7 48	8 2	8 9	8 16	8 25	8 34	8 45
20	7 17	7 27	7 37	7 49	7 56	8 4	8 12	8 23	8 28	8 33	8 39	8 46	8 53
21	7 59	8 5	8 12	8 20	8 24	8 28	8 34	8 41	8 44	8 47	8 50	8 55	8 59
22	8 40	8 42	8 45	8 48	8 50	8 52	8 54	8 57	8 58	8 59	9 1	9 2	9 4
23	9 20	9 19	9 18	9 16	9 16	9 14	9 14	9 12	9 12	9 11	9 10	9 10	9 9
24	10 1	9 56	9 51	9 45	9 41	9 37	9 33	9 28	9 25	9 23	9 20	9 16	9 13
25	10 43	10 34	10 25	10 15	10 9	10 2	9 54	9 45	9 41	9 36	9 31	9 25	9 19
26	11 27	11 16	11 3	10 48	10 40	10 30	10 19	10 5	9 59	9 52	9 44	9 36	9 26
27	12 16	12 0	11 44	11 26	11 15	11 2	10 48	10 30	10 22	10 13	10 2	9 51	9 37
28	13 8	12 50	12 31	12 9	11 56	11 42	11 24	11 3	10 53	10 41	10 28	10 13	9 55
29	14 4	13 45	13 24	13 0	12 46	12 30	12 11	11 46	11 34	11 21	11 6	10 47	10 25
30	15 4	14 44	14 24	13 59	13 45	13 28	13 9	12 44	12 32	12 18	12 2	11 43	11 20
31	16 5	15 47	15 27	15 5	14 52	14 36	14 18	13 55	13 44	13 32	13 18	13 1	12 41
Aug. 1	17 6	16 50	16 34	16 15	16 4	15 51	15 36	15 18	15 9	14 59	14 48	14 35	14 21
2	18 4	17 53	17 41	17 27	17 19	17 10	16 58	16 45	16 39	16 32	16 24	16 15	16 6
3	19 0	18 54	18 46	18 38	18 33	18 28	18 21	18 13	18 10	18 6	18 1	17 56	17 51
4	19 54	19 52	19 50	19 47	19 46	19 44	19 42	19 40	19 39	19 38	19 36	19 35	19 34
5	20 46	20 49	20 52	20 55	20 57	20 59	21 2	21 5	21 6	21 8	21 10	21 11	21 13
6	21 37	21 45	21 53	22 2	22 7	22 12	22 19	22 28	22 32	22 36	22 40	22 46	22 52
7	22 29	22 41	22 53	23 7	23 14	23 24	23 35	23 49	23 55	....	....	....	....
8	23 22	23 37	23 53	....	....	....	....	....	....	0 2	0 10	0 18	0 28
9	....	....	....	0 12	0 22	0 34	0 49	1 7	1 16	1 25	1 36	1 48	2 3
10	0 15	0 33	0 52	1 13	1 26	1 41	1 58	2 20	2 31	2 42	2 56	3 12	3 30
11	1 9	1 28	1 48	2 12	2 26	2 42	3 1	3 26	3 37	3 50	4 6	4 24	4 46
12	2 2	2 22	2 42	3 6	3 21	3 37	3 56	4 21	4 33	4 46	5 1	5 19	5 42
13	2 54	3 13	3 32	3 55	4 9	4 24	4 42	5 5	5 16	5 28	5 42	5 58	6 18
14	3 44	4 1	4 18	4 38	4 50	5 4	5 20	5 40	5 49	5 59	6 11	6 24	6 40
15	4 31	4 45	5 0	5 17	5 27	5 38	5 51	6 7	6 14	6 22	6 32	6 42	6 54
16	5 16	5 27	5 38	5 51	5 59	6 7	6 17	6 29	6 35	6 41	6 48	6 55	7 4

LOCAL ASTRONOMICAL MEAN TIME OF MOONRISE, MERIDIAN OF GREENWICH, 1917.

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For other longitudes and for southern latitudes see page 42.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Aug. 16	17 38	17 28	17 19	17 7	17 1	16 54	16 45	16 34	16 30	16 24	16 18	16 11	16 3
17	18 19	18 14	18 8	18 1	17 57	17 52	17 47	17 41	17 38	17 34	17 31	17 27	17 23
18	19 0	18 58	18 56	18 53	18 52	18 50	18 49	18 46	18 46	18 44	18 43	18 42	18 40
19	19 40	19 42	19 44	19 46	19 47	19 48	19 51	19 52	19 53	19 54	19 55	19 56	19 58
20	20 21	20 26	20 32	20 39	20 42	20 47	20 52	20 58	21 1	21 4	21 8	21 12	21 16
21	21 3	21 12	21 22	21 33	21 39	21 47	21 55	22 6	22 11	22 16	22 22	22 29	22 36
22	21 48	22 0	22 14	22 29	22 38	22 48	23 0	23 15	23 22	23 29	23 38	23 48	23 59
23	22 35	22 51	23 8	23 27	23 38	23 51	....	....	....	....	....	....	....
24	23 27	23 45	....	....	....	....	0 6	0 25	0 34	0 44	0 56	1 9	1 24
25	....	....	0 4	0 26	0 39	0 54	1 12	1 35	1 45	1 57	2 12	2 28	2 48
26	0 22	0 41	1 2	1 26	1 40	1 56	2 16	2 40	2 52	3 5	3 21	3 40	4 2
27	1 20	1 39	2 0	2 23	2 38	2 54	3 13	3 37	3 49	4 2	4 18	4 36	4 58
28	2 19	2 37	2 56	3 18	3 31	3 46	4 3	4 25	4 35	4 47	5 0	5 16	5 34
29	3 18	3 33	3 50	4 8	4 19	4 31	4 46	5 3	5 11	5 20	5 30	5 42	5 56
30	4 16	4 27	4 39	4 53	5 1	5 10	5 20	5 33	5 39	5 45	5 52	6 0	6 9
31	5 12	5 19	5 26	5 34	5 39	5 45	5 51	5 58	6 2	6 5	6 9	6 14	6 19
Sept. 1	6 6	6 8	6 11	6 13	6 15	6 16	6 18	6 21	6 22	6 23	6 24	6 25	6 27
2	7 0	6 57	6 54	6 51	6 49	6 47	6 45	6 42	6 41	6 39	6 38	6 36	6 34
3	7 53	7 46	7 38	7 29	7 24	7 18	7 12	7 4	7 0	6 57	6 52	6 48	6 42
4	8 46	8 35	8 23	8 9	8 1	7 52	7 41	7 28	7 22	7 16	7 9	7 1	6 52
5	9 41	9 26	9 10	8 52	8 41	8 29	8 15	7 57	7 49	7 40	7 30	7 18	7 5
6	10 36	10 18	10 0	9 38	9 25	9 11	8 54	8 33	8 23	8 12	7 59	7 44	7 26
7	11 31	11 12	10 52	10 28	10 14	9 58	9 40	9 16	9 5	8 52	8 37	8 20	7 59
8	12 25	12 6	11 45	11 21	11 7	10 51	10 32	10 8	9 56	9 43	9 28	9 10	8 48
9	13 17	12 58	12 39	12 17	12 4	11 48	11 30	11 8	10 57	10 45	10 31	10 14	9 55
10	14 6	13 50	13 32	13 12	13 1	12 48	12 32	12 12	12 3	11 52	11 41	11 27	11 11
11	14 52	14 39	14 24	14 8	13 58	13 48	13 34	13 19	13 11	13 3	12 54	12 43	12 30
12	15 36	15 26	15 15	15 3	14 55	14 47	14 38	14 26	14 20	14 14	14 7	14 0	13 51
13	16 18	16 12	16 4	15 56	15 51	15 46	15 39	15 32	15 28	15 25	15 20	15 15	15 10
14	16 59	16 56	16 53	16 49	16 47	16 44	16 41	16 38	16 36	16 34	16 32	16 30	16 28
15	17 40	17 40	17 41	17 41	17 42	17 42	17 43	17 43	17 44	17 44	17 44	17 45	17 45
16	18 20	18 25	18 29	18 34	18 37	18 41	18 45	18 49	18 52	18 54	18 57	19 0	19 3
17	19 2	19 10	19 19	19 28	19 34	19 40	19 48	19 57	20 1	20 5	20 10	20 16	20 23
18	19 46	19 58	20 10	20 24	20 32	20 41	20 52	21 5	21 11	21 18	21 26	21 35	21 44
19	20 33	20 47	21 3	21 21	21 31	21 43	21 57	22 15	22 23	22 32	22 43	22 54	23 8
20	21 23	21 40	21 58	22 19	22 32	22 46	23 3	23 24	23 34	23 45	23 58	....	....
21	22 16	22 34	22 54	23 18	23 31	23 47	....	....	....	....	....	0 14	0 32
22	23 11	23 30	23 51	....	....	....	0 6	0 30	0 41	0 54	1 9	1 26	1 48
23	....	....	....	0 14	0 29	0 45	1 4	1 23	1 40	1 53	2 9	2 27	2 49
24	0 8	0 26	0 46	1 9	1 22	1 37	1 55	2 18	2 29	2 41	2 55	3 11	3 31
25	1 5	1 21	1 39	1 58	2 10	2 24	2 39	2 53	3 7	3 17	3 29	3 42	3 57
26	2 2	2 14	2 28	2 44	2 53	3 4	3 16	3 30	3 37	3 45	3 53	4 3	4·14
27	2 56	3 5	3 15	3 26	3 32	3 39	3 48	3 57	4 2	4 7	4 12	4 18	4 25
28	3 50	3 55	4 0	4 5	4 8	4 12	4 15	4 20	4 23	4 25	4 28	4 31	4 34
29	4 43	4 43	4 43	4 43	4 43	4 43	4 42	4 42	4 42	4 42	4 42	4 42	4 42
30	5 37	5 32	5 27	5 21	5 17	5 14	5 9	5 4	5 2	4 59	4 56	4 53	4 50
Oct. 1	6 31	6 22	6 12	6 0	5 54	5 46	5 38	5 28	5 23	5 18	5 13	5 6	4 59

LOCAL ASTRONOMICAL MEAN TIME OF MOONSET, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

To obtain standard time, see directions on page 8.
For other longitudes and for southern latitudes see page 42.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Aug. 16	5 16	5 27	5 38	5 51	5 59	6 7	6 17	6 29	6 35	6 41	6 48	6 55	7 4
17	5 58	6 6	6 13	6 22	6 27	6 33	6 40	6 48	6 52	6 55	7 0	7 5	7 10
18	6 39	6 43	6 47	6 52	6 54	6 57	7 0	7 5	7 6	7 8	7 10	7 13	7 16
19	7 19	7 20	7 20	7 20	7 20	7 20	7 20	7 20	7 20	7 20	7 20	7 20	7 21
20	8 0	7 56	7 52	7 48	7 46	7 43	7 40	7 36	7 34	7 32	7 30	7 28	7 25
21	8 41	8 34	8 26	8 18	8 13	8 7	8 0	7 52	7 49	7 45	7 41	7 35	7 30
22	9 24	9 14	9 2	8 49	8 42	8 33	8 23	8 11	8 6	8 0	7 53	7 46	7 37
23	10 10	9 56	9 42	9 25	9 15	9 3	8 50	8 34	8 27	8 18	8 9	7 59	7 47
24	11 0	10 43	10 26	10 5	9 53	9 39	9 23	9 3	8 54	8 43	8 31	8 18	8 2
25	11 53	11 34	11 14	10 51	10 38	10 22	10 4	9 41	9 30	9 17	9 3	8 46	8 26
26	12 49	12 30	12 9	11 45	11 31	11 14	10 55	10 30	10 18	10 5	9 49	9 30	9 8
27	13 48	13 29	13 9	12 46	12 32	12 16	11 57	11 33	11 22	11 8	10 53	10 35	10 14
28	14 47	14 30	14 13	13 52	13 40	13 26	13 9	12 48	12 38	12 27	12 15	12 0	11 42
29	15 46	15 32	15 18	15 1	14 52	14 41	14 28	14 11	14 4	13 55	13 46	13 35	13 22
30	16 43	16 34	16 24	16 12	16 6	15 58	15 50	15 39	15 34	15 28	15 22	15 15	15 7
31	17 38	17 33	17 28	17 23	17 20	17 16	17 12	17 6	17 4	17 1	16 58	16 55	16 51
Sept. 1	18 32	18 32	18 32	18 32	18 33	18 33	18 33	18 33	18 34	18 34	18 34	18 34	18 34
2	19 25	19 30	19 35	19 42	19 45	19 49	19 54	19 59	20 2	20 5	20 8	20 12	20 16
3	20 18	20 28	20 38	20 50	20 56	21 4	21 13	21 24	21 29	21 35	21 41	21 48	21 56
4	21 12	21 26	21 40	21 57	22 6	22 17	22 31	22 46	22 54	23 2	23 12	23 23	23 35
5	22 7	22 24	22 42	23 2	23 14	23 28	23 44	....	....	....	....	....	....
6	23 2	23 21	23 40	....	....	....	....	0 4	0 14	0 25	0 37	0 52	1 9
7	23 57	....	....	0 4	0 17	0 33	0 51	1 15	1 26	1 38	1 53	2 10	2 31
8	....	0 16	0 37	1 1	1 15	1 31	1 50	2 15	2 26	2 40	2 55	3 13	3 35
9	0 50	1 9	1 29	1 52	2 6	2 21	2 40	3 3	3 14	3 26	3 41	3 58	4 18
10	1 41	1 58	2 16	2 37	2 50	3 4	3 20	3 41	3 50	4 1	4 14	4 28	4 45
11	2 29	2 44	2 59	3 17	3 28	3 40	3 54	4 11	4 19	4 28	4 37	4 49	5 2
12	3 14	3 26	3 38	3 53	4 1	4 10	4 21	4 34	4 40	4 47	4 55	5 3	5 12
13	3 57	4 6	4 14	4 25	4 31	4 38	4 45	4 54	4 59	5 3	5 8	5 14	5 20
14	4 39	4 44	4 49	4 55	4 58	5 2	5 6	5 12	5 14	5 17	5 20	5 23	5 26
15	5 19	5 20	5 22	5 23	5 24	5 25	5 26	5 28	5 28	5 29	5 30	5 31	5 32
16	6 0	5 57	5 55	5 52	5 50	5 48	5 46	5 44	5 42	5 41	5 40	5 38	5 37
17	6 41	6 35	6 28	6 21	6 17	6 12	6 7	6 0	5 58	5 54	5 50	5 46	5 42
18	7 24	7 14	7 4	6 52	6 46	6 38	6 29	6 19	6 14	6 9	6 3	5 56	5 49
19	8 9	7 56	7 42	7 26	7 17	7 7	6 55	6 40	6 34	6 26	6 18	6 8	5 58
20	8 57	8 41	8 24	8 5	7 54	7 41	7 26	7 7	6 59	6 49	6 38	6 26	6 11
21	9 48	9 30	9 11	8 49	8 36	8 21	8 4	7 42	7 31	7 20	7 6	6 51	6 32
22	10 42	10 23	10 2	9 39	9 25	9 9	8 50	8 26	8 15	8 2	7 47	7 29	7 7
23	11 38	11 19	10 59	10 35	10 21	10 6	9 46	9 22	9 11	8 58	8 42	8 24	8 2
24	12 35	12 18	11 59	11 37	11 24	11 10	10 52	10 30	10 20	10 8	9 54	9 39	9 19
25	13 32	13 17	13 1	12 43	12 32	12 20	12 5	11 47	11 39	11 29	11 18	11 6	10 52
26	14 28	14 16	14 4	13 51	13 43	13 34	13 23	13 10	13 3	12 57	12 49	12 40	12 31
27	15 22	15 15	15 8	14 59	14 54	14 49	14 42	14 34	14 31	14 27	14 22	14 17	14 11
28	16 15	16 13	16 11	16 8	16 6	16 4	16 2	16 0	15 58	15 57	15 56	15 54	15 52
29	17 8	17 11	17 14	17 17	17 18	17 20	17 23	17 26	17 27	17 28	17 30	17 32	17 34
30	18 2	18 9	18 17	18 26	18 31	18 36	18 43	18 51	18 55	18 59	19 4	19 9	19 15
Oct. 1	18 57	19 8	19 20	19 35	19 43	19 52	20 3	20 16	20 23	20 30	20 38	20 46	20 56

TABLE III.

LOCAL ASTRONOMICAL MEAN TIME OF MOONRISE, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

To obtain standard time, see directions on page 8.

For other longitudes and for southern latitudes see page 42.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Oct. 1	6 31	6 22	6 12	6 0	5 54	5 46	5 38	5 28	5 23	5 18	5 13	5 6	4 59
2	7 26	7 13	6 59	6 43	6 33	6 23	6 10	5 55	5 48	5 41	5 32	5 23	5 12
3	8 22	8 6	7 49	7 29	7 17	7 4	6 48	6 29	6 20	6 10	5 58	5 45	5 30
4	9 19	9 1	8 42	8 19	8 6	7 50	7 32	7 10	6 59	6 47	6 33	6 17	5 58
5	10 16	9 56	9 36	9 13	8 59	8 43	8 24	8 0	7 49	7 36	7 21	7 4	6 42
6	11 9	10 51	10 31	10 8	9 55	9 40	9 22	8 59	8 48	8 35	8 21	8 4	7 44
7	12 1	11 44	11 26	11 5	10 53	10 40	10 23	10 2	9 53	9 42	9 29	9 15	8 58
8	12 49	12 34	12 19	12 2	11 51	11 40	11 26	11 9	11 1	10 52	10 42	10 30	10 17
9	13 34	13 22	13 10	12 56	12 49	12 40	12 29	12 16	12 10	12 3	11 55	11 47	11 37
10	14 16	14 8	14 0	13 50	13 45	13 38	13 31	13 22	13 18	13 14	13 9	13 3	12 56
11	14 58	14 53	14 48	14 43	14 40	14 37	14 33	14 28	14 26	14 23	14 21	14 17	14 14
12	15 38	15 37	15 37	15 36	15 35	15 35	15 34	15 33	15 33	15 33	15 32	15 32	15 32
13	16 19	16 22	16 25	16 28	16 31	16 33	16 36	16 39	16 41	16 42	16 44	16 46	16 49
14	17 1	17 7	17 14	17 22	17 27	17 32	17 39	17 46	17 50	17 54	17 58	18 2	18 8
15	17 44	17 55	18 6	18 18	18 25	18 33	18 43	18 55	19 0	19 6	19 13	19 21	19 29
16	18 30	18 43	18 58	19 15	19 25	19 36	19 49	20 5	20 12	20 21	20 30	20 41	20 54
17	19 20	19 36	19 54	20 14	20 25	20 39	20 55	21 14	21 24	21 34	21 46	22 0	22 17
18	20 12	20 30	20 50	21 12	21 26	21 41	21 59	22 22	22 32	22 45	22 59	23 16	23 36
19	21 7	21 26	21 46	22 10	22 24	22 40	22 59	23 23	23 34	23 47	....	....	....
20	22 3	22 21	22 41	23 4	23 18	23 33	23 52	....	....	....	0 2	0 20	0 42
21	22 59	23 16	23 34	23 54	....	....	....	0 14	0 25	0 38	0 52	1 9	1 28
22	23 54	....	....	....	0 6	0 20	0 36	0 57	1 6	1 17	1 29	1 43	1 59
23	....	0 8	0 23	0 40	0 50	1 1	1 15	1 31	1 38	1 46	1 56	2 6	2 19
24	0 48	0 58	1 9	1 22	1 29	1 37	1 47	1 58	2 4	2 10	2 16	2 23	2 31
25	1 40	1 46	1 53	2 0	2 4	2 10	2 15	2 22	2 25	2 28	2 32	2 37	2 41
26	2 31	2 33	2 35	2 37	2 38	2 40	2 42	2 44	2 44	2 46	2 46	2 48	2 49
27	3 22	3 20	3 17	3 14	3 12	3 10	3 7	3 4	3 4	3 2	3 1	2 59	2 57
28	4 15	4 8	4 0	3 52	3 47	3 41	3 35	3 27	3 24	3 20	3 16	3 11	3 6
29	5 9	4 58	4 46	4 32	4 24	4 15	4 5	3 53	3 47	3 41	3 34	3 26	3 17
30	6 5	5 50	5 35	5 17	5 6	4 54	4 40	4 23	4 15	4 6	3 57	3 45	3 32
31	7 3	6 46	6 27	6 6	5 53	5 39	5 22	5 1	4 51	4 40	4 28	4 13	3 56
Nov. 1	8 1	7 42	7 22	6 59	6 45	6 30	6 11	5 48	5 37	5 24	5 10	4 53	4 33
2	8 57	8 38	8 18	7 55	7 42	7 26	7 8	6 44	6 33	6 20	6 6	5 49	5 27
3	9 51	9 33	9 15	8 53	8 41	8 26	8 9	7 48	7 38	7 26	7 13	6 58	6 39
4	10 41	10 26	10 10	9 51	9 40	9 28	9 13	8 55	8 46	8 37	8 26	8 13	7 59
5	11 28	11 16	11 2	10 48	10 39	10 29	10 17	10 3	9 56	9 48	9 40	9 30	9 20
6	12 12	12 3	11 53	11 42	11 36	11 29	11 20	11 10	11 5	11 0	10 54	10 48	10 40
7	12 54	12 48	12 42	12 36	12 32	12 27	12 22	12 16	12 13	12 10	12 6	12 2	11 58
8	13 35	13 33	13 30	13 28	13 27	13 25	13 24	13 21	13 20	13 19	13 18	13 17	13 15
9	14 15	14 17	14 18	14 21	14 22	14 23	14 24	14 26	14 27	14 28	14 29	14 30	14 32
10	14 56	15 2	15 7	15 14	15 18	15 22	15 27	15 33	15 36	15 39	15 42	15 46	15 50
11	15 40	15 48	15 58	16 9	16 15	16 22	16 31	16 41	16 46	16 51	16 57	17 4	17 11
12	16 25	16 37	16 51	17 6	17 14	17 24	17 36	17 51	17 58	18 5	18 13	18 23	18 34
13	17 14	17 29	17 46	18 4	18 15	18 28	18 43	19 2	19 10	19 20	19 31	19 44	19 59
14	18 6	18 24	18 42	19 4	19 17	19 32	19 49	20 11	20 21	20 33	20 47	21 2	21 21
15	19 1	19 20	19 40	20 3	20 17	20 32	20 52	21 15	21 26	21 39	21 54	22 12	22 33
16	19 58	20 16	20 36	21 0	21 13	21 29	21 48	22 11	22 22	22 35	22 49	23 6	23 27

LOCAL ASTRONOMICAL MEAN TIME OF MOONSET, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

To obtain standard time, see directions on page 8.

For other longitudes and for southern latitudes see page 42.

Date.	Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
		h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Oct.	1	18 57	19 8	19 20	19 35	19 43	19 52	20 3	20 16	20 23	20 30	20 38	20 46	20 56
	2	19 53	20 8	20 24	20 43	20 54	21 6	21 21	21 39	21 47	21 57	22 8	22 20	22 35
	3	20 50	21 7	21 26	21 48	22 1	22 16	22 33	22 55	23 5	23 17	23 31	23 46	....
	4	21 46	22 5	22 26	22 49	23 3	23 19	23 38	....	....	....	....	....	0 5
	5	22 42	23 1	23 21	23 44	23 58	....	....	0 1	0 13	0 26	0 41	0 58	1 20
	6	23 34	23 52	....	....	....	0 14	0 32	0 56	1 7	1 20	1 34	1 51	2 12
	7	....	....	0 11	0 33	0 45	1 0	1 17	1 38	1 49	2 0	2 13	2 28	2 46
	8	0 24	0 40	0 56	1 15	1 26	1 39	1 54	2 12	2 20	2 29	2 40	2 52	3 6
	9	1 11	1 24	1 37	1 52	2 1	2 12	2 23	2 38	2 44	2 52	3 0	3 9	3 20
	10	1 55	2 4	2 14	2 26	2 32	2 40	2 49	2 59	3 4	3 9	3 15	3 22	3 29
	11	2 37	2 43	2 49	2 56	3 1	3 5	3 11	3 17	3 20	3 24	3 27	3 31	3 36
	12	3 17	3 20	3 22	3 26	3 27	3 29	3 32	3 34	3 35	3 37	3 38	3 40	3 42
	13	3 58	3 57	3 56	3 54	3 53	3 52	3 51	3 50	3 49	3 49	3 48	3 48	3 47
	14	4 39	4 34	4 29	4 23	4 20	4 16	4 12	4 7	4 5	4 2	3 59	3 56	3 53
	15	5 22	5 13	5 4	4 54	4 49	4 42	4 34	4 25	4 21	4 16	4 11	4 6	3 59
	16	6 6	5 55	5 42	5 28	5 20	5 10	4 59	4 46	4 40	4 33	4 26	4 17	4 8
	17	6 54	6 39	6 24	6 6	5 55	5 43	5 29	5 12	5 4	4 55	4 45	4 34	4 20
	18	7 45	7 28	7 9	6 48	6 36	6 22	6 5	5 44	5 34	5 23	5 11	4 56	4 39
	19	8 38	8 20	8 0	7 37	7 23	7 8	6 49	6 26	6 15	6 2	5 48	5 31	5 10
	20	9 34	9 15	8 54	8 31	8 17	8 1	7 42	7 18	7 7	6 54	6 39	6 21	5 59
	21	10 30	10 12	9 53	9 31	9 18	9 3	8 44	8 22	8 11	7 59	7 45	7 29	7 9
	22	11 26	11 10	10 53	10 34	10 22	10 9	9 54	9 35	9 26	9 15	9 4	8 51	8 35
	23	12 20	12 7	11 54	11 39	11 30	11 20	11 8	10 53	10 46	10 38	10 30	10 20	10 9
	24	13 12	13 4	12 55	12 44	12 38	12 32	12 23	12 14	12 9	12 4	11 58	11 52	11 45
	25	14 4	14 0	13 55	13 50	13 47	13 44	13 40	13 36	13 33	13 31	13 28	13 25	13 22
	26	14 55	14 56	14 56	14 57	14 57	14 57	14 57	14 58	14 58	14 58	14 58	14 58	14 59
	27	15 47	15 52	15 57	16 4	16 7	16 11	16 16	16 21	16 24	16 27	16 30	16 33	16 37
	28	16 39	16 50	17 0	17 11	17 18	17 25	17 34	17 45	17 50	17 55	18 2	18 8	18 16
	29	17 36	17 49	18 3	18 20	18 29	18 40	18 53	19 8	19 16	19 24	19 33	19 44	19 56
	30	18 33	18 49	19 7	19 27	19 39	19 52	20 8	20 28	20 38	20 48	21 1	21 15	21 31
	31	19 31	19 49	20 9	20 31	20 44	21 0	21 18	21 41	21 52	22 4	22 18	22 35	22 55
Nov.	1	20 28	20 47	21 7	21 30	21 44	22 0	22 19	22 42	22 54	23 6	23 21	23 38	....
	2	21 24	21 42	22 1	22 23	22 36	22 51	23 9	23 31	23 42	23 54	....	....	0 0
	3	22 18	22 32	22 49	23 9	23 21	23 34	23 50	....	....	....	0 7	0 23	0 42
	4	23 6	23 18	23 33	23 49	23 59	....	....	0 9	0 18	0 28	0 40	0 53	1 8
	5	23 50	....	....	....	....	0 10	0 23	0 39	0 46	0 54	1 3	1 13	1 25
	6	....	0 0	0 12	0 25	0 32	0 40	0 50	1 2	1 7	1 13	1 20	1 27	1 36
	7	0 33	0 40	0 47	0 56	1 2	1 7	1 14	1 22	1 25	1 29	1 34	1 38	1 44
	8	1 14	1 18	1 22	1 26	1 29	1 32	1 35	1 39	1 41	1 43	1 45	1 48	1 50
	9	1 54	1 54	1 55	1 55	1 55	1 55	1 55	1 55	1 56	1 56	1 56	1 56	1 56
	10	2 35	2 32	2 28	2 24	2 21	2 19	2 16	2 12	2 10	2 8	2 6	2 4	2 1
	11	3 17	3 10	3 3	2 54	2 49	2 44	2 37	2 30	2 26	2 22	2 18	2 13	2 8
	12	4 1	3 51	3 40	3 27	3 20	3 11	3 1	2 50	2 44	2 38	2 32	2 24	2 16
	13	4 48	4 35	4 20	4 3	3 54	3 42	3 30	3 14	3 6	2 58	2 49	2 39	2 27
	14	5 39	5 22	5 5	4 45	4 33	4 19	4 4	3 44	3 35	3 25	3 13	3 0	2 44
	15	6 32	6 14	5 55	5 32	5 19	5 4	4 46	4 24	4 13	4 1	3 47	3 31	3 12
	16	7 28	7 9	6 49	6 26	6 12	5 56	5 37	5 14	5 2	4 49	4 34	4 17	3 55

TABLE III.

LOCAL ASTRONOMICAL MEAN TIME OF MOONRISE, MERIDIAN OF GREENWICH, 1917.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

To obtain standard time, see directions on page 8.

For other longitudes and for southern latitudes see page 42.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Nov. 16	19 58	20 16	20 36	21 0	21 13	21 29	21 48	22 11	22 22	22 35	22 49	23 6	23 27
17	20 55	21 12	21 30	21 52	22 4	22 19	22 36	22 56	23 6	23 18	23 30	23 45	....
18	21 50	22 5	22 21	22 39	22 49	23 2	23 16	23 33	23 40	23 50	....	....	0 2
19	22 44	22 55	23 8	23 21	23 29	23 38	23 49	....	....	....	0 0	0 11	0 24
20	23 36	23 43	23 51	....	....	....	....	0 2	0 8	0 14	0 21	0 29	0 38
21	....	....	....	0 0	0 5	0 11	0 18	0 26	0 30	0 34	0 38	0 44	0 49
22	0 26	0 29	0 33	0 36	0 39	0 41	0 44	0 48	0 49	0 51	0 53	0 55	0 58
23	1 16	1 14	1 13	1 12	1 11	1 10	1 9	1 8	1 8	1 7	1 6	1 6	1 5
24	2 6	2 0	1 55	1 48	1 44	1 40	1 35	1 29	1 27	1 24	1 21	1 17	1 13
25	2 58	2 48	2 38	2 26	2 19	2 12	2 3	1 53	1 48	1 43	1 37	1 30	1 23
26	3 51	3 38	3 24	3 8	2 58	2 47	2 35	2 20	2 13	2 5	1 56	1 47	1 36
27	4 47	4 31	4 14	3 54	3 42	3 29	3 13	2 54	2 45	2 35	2 23	2 10	1 55
28	5 45	5 26	5 7	4 45	4 32	4 16	3 59	3 36	3 26	3 14	3 0	2 45	2 26
29	6 42	6 23	6 3	5 40	5 26	5 11	4 52	4 29	4 18	4 5	3 50	3 33	3 12
30	7 38	7 20	7 0	6 38	6 25	6 10	5 52	5 30	5 19	5 7	4 53	4 37	4 17
Dec. 1	8 30	8 14	7 57	7 37	7 26	7 12	6 56	6 36	6 27	6 17	6 5	5 51	5 35
2	9 20	9 6	8 52	8 35	8 26	8 14	8 1	7 46	7 39	7 30	7 20	7 10	6 57
3	10 6	9 55	9 44	9 31	9 24	9 16	9 6	8 54	8 49	8 42	8 36	8 28	8 19
4	10 48	10 42	10 34	10 26	10 21	10 15	10 9	10 1	9 58	9 54	9 49	9 44	9 39
5	11 30	11 26	11 23	11 19	11 16	11 14	11 11	11 7	11 5	11 3	11 1	10 59	10 56
6	12 10	12 11	12 11	12 11	12 11	12 12	12 12	12 12	12 12	12 12	12 13	12 13	12 13
7	12 51	12 55	12 59	13 4	13 7	13 10	13 13	13 17	13 20	13 22	13 24	13 27	13 30
8	13 33	13 40	13 48	13 57	14 2	14 9	14 16	14 24	14 28	14 32	14 37	14 43	14 49
9	14 17	14 28	14 40	14 53	15 1	15 10	15 20	15 33	15 39	15 45	15 53	16 1	16 10
10	15 4	15 18	15 33	15 51	16 1	16 12	16 26	16 43	16 51	17 0	17 10	17 21	17 34
11	15 55	16 12	16 30	16 50	17 2	17 16	17 33	17 53	18 3	18 14	18 26	18 41	18 58
12	16 50	17 8	17 28	17 50	18 4	18 19	18 38	19 1	19 12	19 25	19 39	19 56	20 17
13	17 47	18 6	18 26	18 49	19 3	19 19	19 38	20 1	20 13	20 26	20 40	20 58	21 19
14	18 45	19 3	19 22	19 44	19 57	20 12	20 30	20 52	21 2	21 14	21 28	21 43	22 2
15	19 43	19 59	20 15	20 35	20 46	20 59	21 14	21 33	21 41	21 51	22 2	22 15	22 29
16	20 39	20 51	21 5	21 20	21 29	21 39	21 51	22 5	22 11	22 18	22 27	22 36	22 46
17	21 32	21 41	21 50	22 1	22 7	22 14	22 22	22 31	22 35	22 40	22 46	22 52	22 58
18	22 23	22 28	22 33	22 38	22 41	22 45	22 49	22 54	22 56	22 58	23 1	23 4	23 7
19	23 13	23 13	23 14	23 14	23 14	23 14	23 14	23 14	23 14	23 14	23 15	23 15	23 15
20	....	23 59	23 54	23 49	23 46	23 43	23 39	23 35	23 33	23 31	23 28	23 26	23 23
21	0 3	....	....	....	....	....	....	23 57	23 53	23 48	23 43	23 38	23 32
22	0 53	0 45	0 36	0 26	0 20	0 13	0 6	....	....	....	....	23 52	23 43
23	1 45	1 32	1 20	1 5	0 56	0 47	0 35	0 22	0 16	0 9	0 1	....	23 59
24	2 38	2 23	2 7	1 48	1 37	1 25	1 10	0 52	0 44	0 35	0 24	0 13	....
25	3 34	3 16	2 57	2 36	2 23	2 9	1 52	1 30	1 20	1 9	0 56	0 41	0 24
26	4 30	4 11	3 51	3 28	3 15	2 59	2 41	2 18	2 7	1 54	1 40	1 23	1 2
27	5 26	5 7	4 48	4 25	4 11	3 56	3 37	3 14	3 3	2 51	2 36	2 20	1 59
28	6 19	6 2	5 44	5 23	5 11	4 57	4 40	4 19	4 9	3 57	3 45	3 30	3 12
29	7 10	6 56	6 40	6 22	6 11	5 59	5 45	5 27	5 19	5 10	4 59	4 47	4 33
30	7 58	7 46	7 34	7 19	7 11	7 2	6 50	6 37	6 30	6 23	6 15	6 6	5 56
31	8 43	8 34	8 25	8 15	8 9	8 2	7 54	7 45	7 40	7 36	7 30	7 24	7 17
32	9 25	9 20	9 15	9 9	9 6	9 2	8 57	8 52	8 50	8 47	8 44	8 40	8 36

LOCAL ASTRONOMICAL MEAN TIME OF MOONSET, MERIDIAN OF GREENWICH, 1917.

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For other longitudes and for southern latitudes see page 42.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Nov. 16	7 28	7 9	6 49	6 26	6 12	5 56	5 37	5 14	5 2	4 49	4 34	4 17	3 55
17	8 26	8 7	7 47	7 25	7 12	6 56	6 38	6 15	6 4	5 52	5 37	5 20	5 0
18	9 22	9 5	8 48	8 28	8 16	8 2	7 46	7 26	7 16	7 6	6 54	6 40	6 23
19	10 16	10 3	9 48	9 32	9 23	9 12	8 59	8 43	8 36	8 27	8 18	8 7	7 55
20	11 9	10 59	10 49	10 37	10 30	10 23	10 14	10 2	9 57	9 51	9 45	9 38	9 30
21	12 0	11 54	11 48	11 42	11 38	11 33	11 28	11 22	11 19	11 16	11 12	11 8	11 4
22	12 50	12 48	12 47	12 46	12 45	12 44	12 43	12 42	12 41	12 40	12 40	12 39	12 38
23	13 39	13 42	13 46	13 50	13 53	13 55	13 58	14 2	14 3	14 6	14 7	14 10	14 12
24	14 30	14 38	14 46	14 55	15 1	15 7	15 14	15 23	15 27	15 31	15 36	15 41	15 48
25	15 23	15 35	15 47	16 1	16 10	16 19	16 30	16 43	16 50	16 57	17 5	17 14	17 24
26	16 18	16 33	16 49	17 8	17 18	17 31	17 46	18 4	18 12	18 22	18 33	18 45	19 0
27	17 15	17 32	17 51	18 13	18 25	18 40	18 57	19 19	19 29	19 41	19 54	20 10	20 29
28	18 12	18 31	18 51	19 14	19 28	19 44	20 2	20 26	20 37	20 50	21 4	21 21	21 43
29	19 9	19 28	19 48	20 10	20 24	20 39	20 58	21 21	21 32	21 44	21 58	22 15	22 35
30	20 4	20 21	20 39	21 0	21 12	21 26	21 43	22 4	22 13	22 24	22 37	22 51	23 8
Dec. 1	20 55	21 10	21 25	21 43	21 54	22 6	22 20	22 37	22 45	22 54	23 4	23 15	23 28
2	21 42	21 54	22 7	22 21	22 30	22 39	22 50	23 3	23 10	23 16	23 24	23 32	23 42
3	22 27	22 35	22 44	22 55	23 1	23 8	23 15	23 25	23 29	23 34	23 39	23 45	23 51
4	23 9	23 14	23 19	23 26	23 29	23 33	23 38	23 43	23 46	23 48	23 52	23 55	23 59
5	23 50	23 51	23 53	23 55	23 56	23 57	23 58	....	....	....	....	....	....
6	....	....	....	....	....	....	....	0 0	0 1	0 2	0 2	0 4	0 5
7	0 30	0 28	0 26	0 23	0 22	0 20	0 18	0 16	0 15	0 14	0 13	0 11	0 10
8	1 11	1 6	1 0	0 53	0 49	0 44	0 39	0 33	0 31	0 28	0 24	0 20	0 16
9	1 54	1 45	1 35	1 24	1 18	1 11	1 2	0 52	0 48	0 42	0 37	0 31	0 24
10	2 39	2 27	2 14	1 59	1 50	1 40	1 28	1 14	1 8	1 1	0 52	0 44	0 33
11	3 28	3 13	2 57	2 38	2 27	2 14	2 0	1 42	1 33	1 24	1 13	1 2	0 48
12	4 21	4 3	3 45	3 23	3 10	2 56	2 39	2 17	2 7	1 56	1 43	1 28	1 10
13	5 17	4 58	4 38	4 15	4 1	3 45	3 27	3 3	2 52	2 39	2 25	2 7	1 47
14	6 15	5 56	5 36	5 13	4 59	4 44	4 25	4 1	3 50	3 37	3 22	3 5	2 44
15	7 13	6 56	6 37	6 16	6 4	5 50	5 32	5 11	5 1	4 50	4 37	4 21	4 3
16	8 10	7 55	7 40	7 22	7 12	7 0	6 46	6 29	6 20	6 11	6 1	5 49	5 35
17	9 4	8 54	8 42	8 29	8 21	8 12	8 2	7 49	7 43	7 37	7 30	7 21	7 12
18	9 57	9 50	9 43	9 35	9 30	9 24	9 18	9 10	9 7	9 3	8 59	8 54	8 48
19	10 47	10 45	10 42	10 39	10 38	10 36	10 34	10 31	10 30	10 28	10 27	10 25	10 23
20	11 37	11 39	11 41	11 44	11 45	11 46	11 48	11 51	11 52	11 53	11 54	11 55	11 57
21	12 26	12 33	12 40	12 47	12 52	12 57	13 3	13 10	13 13	13 17	13 21	13 25	13 30
22	13 17	13 28	13 39	13 52	13 59	14 7	14 17	14 29	14 35	14 41	14 48	14 56	15 4
23	14 10	14 24	14 39	14 56	15 6	15 17	15 31	15 48	15 55	16 4	16 14	16 25	16 38
24	15 5	15 22	15 40	16 0	16 12	16 26	16 43	17 3	17 13	17 24	17 36	17 51	18 8
25	16 1	16 19	16 39	17 2	17 15	17 30	17 49	18 12	18 23	18 35	18 50	19 6	19 27
26	16 57	17 16	17 36	17 59	18 13	18 29	18 47	19 10	19 22	19 34	19 49	20 6	20 27
27	17 52	18 10	18 29	18 51	19 4	19 19	19 37	19 58	20 9	20 20	20 34	20 49	21 7
28	18 45	19 1	19 18	19 37	19 49	20 2	20 17	20 36	20 44	20 54	21 5	21 18	21 33
29	19 34	19 47	20 1	20 17	20 27	20 37	20 50	21 4	21 12	21 19	21 28	21 38	21 48
30	20 20	20 30	20 41	20 53	21 0	21 8	21 17	21 28	21 33	21 39	21 45	21 52	21 59
31	21 4	21 10	21 17	21 25	21 30	21 35	21 40	21 48	21 51	21 54	21 58	22 3	22 8
32	21 45	21 48	21 51	21 55	21 57	21 59	22 2	22 5	22 7	22 8	22 10	22 12	22 14

FOR NORTHERN STATIONS NOT ON THE MERIDIAN OF GREENWICH, AND FOR SOUTHERN STATIONS.

For northern stations not on the meridian of Greenwich.—For longitudes twelve hours or less west from Greenwich, obtain the data for the given latitude from Table III for the given date and for the date following; for longitudes twelve hours or less east from Greenwich, obtain the data for the given latitude from Table III for the given date and for the date preceding. Subtract the time on the earlier date from the time on the later and multiply the difference by the twenty-fourth part of the longitude in hours and decimals of an hour, positive if west, negative if east. Apply the product as a correction to the time on the given date.

For southern stations.—The instant of moonrise or moonset for any station south of the equator is that of moonset or moonrise, respectively, at a place of the same latitude north of the equator whose longitude is twelve hours different from that of the southern station.

If the southern station be twelve hours or less west from Greenwich and the phenomenon at that station occurs between noon and midnight, the local astronomical day will be the same at the southern and northern stations. If, however, the phenomenon at the southern station occurs between midnight and noon, the local astronomical day at the northern station will be one day later than at the southern.

If the southern station be twelve hours or less east from Greenwich and the phenomenon at that station occurs between noon and midnight, the local astronomical day at the northern station will be one less than at the southern station. If, however, the phenomenon occurs between midnight and noon, the local astronomical day will be the same at the two stations.

Having thus determined the true astronomical day at the northern station, compute by the rule for northern latitudes. For the desired local time of moonrise at the southern station change the time of moonset at the northern station twelve hours. For the desired local time of moonset at the southern station change the time of moonrise at the northern station twelve hours.

Example.—December 10, 1917, civil date, find the time of moonrise and moonset in longitude $4^h\ 43^m$ west from Greenwich and in latitude 33° 30′ south.

The longitude of the northern station is $7^h.3$ east from Greenwich and its latitude is 33°.5 N. Upon inspection of Table III it is seen that the astronomical day at the southern station is December 9 for moonrise and December 10 for moonset, the former phenomenon occurring between midnight and noon, the latter between noon and midnight. For the northern station, in accordance with the precepts given above, both phenomena are to be computed for December 10.

At northern station—

	Moonrise. d h m	Moonset. d h m
Table III, Lat. +33°.5	Dec. 9 14 59	Dec. 9 1 20
Table III, Lat. +33°.5	10 15 58	10 1 53
Difference	59	33
Product of Diff. by $-\frac{7.3}{24}$	−18	−10
Local astronomical mean time	15 40	1 43

At southern station—

	Moonset.	Moonrise.
Local astronomical mean time	3 40	13 43
Civil time	Dec. 10 3 40 P.M.	Dec. 10 1 43 A.M.

1918.

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, subtract 12 hours, mark the result A. M., and add one to the day.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunrise in southern latitudes see page 60.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Jan. 0	18 0	18 17	18 35	18 56	19 8	19 22	19 38	19 59	20 8	20 19	20 32	20 46	21 3
1	18 0	18 17	18 35	18 56	19 8	19 22	19 39	19 59	20 8	20 19	20 32	20 46	21 3
2	18 1	18 18	18 36	18 56	19 8	19 22	19 39	19 59	20 8	20 19	20 31	20 45	21 2
3	18 1	18 18	18 36	18 57	19 9	19 22	19 39	19 59	20 8	20 19	20 31	20 45	21 1
4	18 1	18 18	18 36	18 57	19 9	19 22	19 38	19 58	20 8	20 18	20 30	20 44	21 1
5	18 2	18 19	18 36	18 57	19 9	19 22	19 38	19 58	20 7	20 18	20 30	20 44	21 0
6	18 2	18 19	18 37	18 57	19 9	19 22	19 38	19 58	20 7	20 18	20 29	20 43	20 59
7	18 3	18 19	18 37	18 57	19 9	19 22	19 38	19 58	20 7	20 17	20 29	20 42	20 58
8	18 3	18 20	18 37	18 57	19 9	19 22	19 38	19 57	20 6	20 16	20 28	20 41	20 57
9	18 4	18 20	18 37	18 57	19 9	19 22	19 38	19 56	20 6	20 16	20 27	20 40	20 56
10	18 4	18 20	18 38	18 57	19 9	19 22	19 37	19 56	20 5	20 15	20 26	20 40	20 55
11	18 4	18 20	18 38	18 57	19 8	19 22	19 37	19 56	20 4	20 14	20 26	20 38	20 53
12	18 5	18 21	18 38	18 57	19 8	19 21	19 36	19 55	20 4	20 14	20 25	20 37	20 52
13	18 5	18 21	18 38	18 57	19 8	19 21	19 36	19 54	20 3	20 13	20 24	20 36	20 51
14	18 6	18 21	18 38	18 57	19 8	19 21	19 36	19 54	20 2	20 12	20 23	20 35	20 49
15	18 6	18 22	18 38	18 57	19 8	19 20	19 35	19 53	20 1	20 11	20 22	20 34	20 48
16	18 6	18 22	18 38	18 57	19 8	19 20	19 34	19 52	20 0	20 10	20 20	20 32	20 46
17	18 7	18 22	18 38	18 56	19 7	19 19	19 34	19 51	20 0	20 9	20 19	20 31	20 45
18	18 7	18 22	18 38	18 56	19 7	19 19	19 33	19 50	19 58	20 7	20 18	20 29	20 43
19	18 7	18 22	18 38	18 56	19 6	19 18	19 32	19 49	19 58	20 6	20 16	20 28	20 41
20	18 8	18 22	18 38	18 56	19 6	19 18	19 32	19 48	19 56	20 5	20 15	20 26	20 39
21	18 8	18 23	18 38	18 56	19 6	19 17	19 31	19 47	19 55	20 4	20 14	20 25	20 38
22	18 8	18 23	18 38	18 55	19 5	19 17	19 30	19 46	19 54	20 2	20 12	20 23	20 36
23	18 8	18 23	18 38	18 55	19 4	19 16	19 29	19 45	19 53	20 1	20 10	20 21	20 34
24	18 9	18 23	18 38	18 54	19 4	19 15	19 28	19 44	19 52	20 0	20 9	20 19	20 32
25	18 9	18 23	18 37	18 54	19 4	19 14	19 27	19 43	19 50	19 58	20 7	20 18	20 30
26	18 9	18 23	18 37	18 54	19 3	19 14	19 26	19 42	19 49	19 57	20 6	20 16	20 27
27	18 9	18 23	18 37	18 53	19 2	19 13	19 25	19 40	19 48	19 55	20 4	20 14	20 25
28	18 10	18 23	18 37	18 53	19 2	19 12	19 24	19 39	19 46	19 54	20 2	20 12	20 23
29	18 10	18 23	18 36	18 52	19 1	19 11	19 23	19 38	19 45	19 52	20 0	20 10	20 21
30	18 10	18 23	18 36	18 52	19 0	19 10	19 22	19 36	19 43	19 50	19 59	20 8	20 18
31	18 10	18 23	18 36	18 51	19 0	19 10	19 21	19 35	19 42	19 49	19 57	20 6	20 16
Feb. 1	18 10	18 22	18 36	18 50	18 59	19 9	19 20	19 34	19 40	19 47	19 55	20 4	20 14
2	18 10	18 22	18 35	18 50	18 58	19 8	19 19	19 32	19 38	19 45	19 53	20 2	20 11
3	18 10	18 22	18 35	18 49	18 57	19 7	19 18	19 31	19 37	19 44	19 51	20 0	20 9
4	18 10	18 22	18 34	18 49	18 56	19 6	19 16	19 29	19 35	19 42	19 49	19 57	20 7
5	18 11	18 22	18 34	18 48	18 56	19 5	19 15	19 28	19 33	19 40	19 47	19 55	20 4
6	18 11	18 22	18 34	18 47	18 55	19 4	19 14	19 26	19 32	19 38	19 45	19 53	20 2
7	18 11	18 22	18 33	18 46	18 54	19 2	19 12	19 24	19 30	19 36	19 43	19 50	19 59
8	18 11	18 21	18 33	18 46	18 53	19 1	19 11	19 23	19 28	19 34	19 41	19 48	19 56
9	18 11	18 21	18 32	18 45	18 52	19 0	19 10	19 21	19 26	19 32	19 39	19 46	19 54
10	18 11	18 21	18 32	18 44	18 51	18 59	19 8	19 20	19 24	19 30	19 36	19 44	19 51
11	18 11	18 21	18 31	18 43	18 50	18 58	19 7	19 18	19 23	19 28	19 34	19 41	19 49
12	18 11	18 20	18 31	18 42	18 49	18 57	19 5	19 16	19 21	19 26	19 32	19 39	19 46
13	18 11	18 20	18 30	18 42	18 48	18 55	19 4	19 14	19 19	19 24	19 30	19 36	19 43
14	18 11	18 20	18 30	18 41	18 47	18 54	19 2	19 12	19 17	19 22	19 28	19 34	19 41
15	18 11	18 20	18 29	18 40	18 46	18 53	19 1	19 11	19 15	19 20	19 25	19 31	19 38

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, write P. M. after the astronomical time.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunset in southern latitudes see page 60.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Jan. 1	6 7	5 50	5 32	5 11	4 59	4 45	4 29	4 8	3 59	3 48	3 36	3 21	3 4
2	6 8	5 51	5 32	5 12	5 0	4 46	4 30	4 9	4 0	3 49	3 37	3 22	3 6
3	6 8	5 51	5 33	5 12	5 0	4 47	4 30	4 10	4 1	3 50	3 38	3 24	3 7
4	6 9	5 52	5 34	5 13	5 1	4 48	4 32	4 12	4 2	3 51	3 39	3 25	3 9
5	6 9	5 52	5 34	5 14	5 2	4 48	4 32	4 12	4 3	3 53	3 41	3 27	3 10
6	6 10	5 53	5 35	5 15	5 3	4 49	4 33	4 14	4 4	3 54	3 42	3 28	3 12
7	6 10	5 53	5 36	5 15	5 4	4 50	4 34	4 15	4 6	3 55	3 44	3 30	3 14
8	6 10	5 54	5 36	5 16	5 4	4 51	4 36	4 16	4 7	3 57	3 45	3 32	3 15
9	6 11	5 54	5 37	5 17	5 5	4 52	4 37	4 17	4 8	3 58	3 47	3 33	3 18
10	6 11	5 55	5 38	5 18	5 6	4 53	4 38	4 19	4 10	4 0	3 48	3 35	3 20
11	6 12	5 55	5 38	5 19	5 7	4 54	4 39	4 20	4 11	4 1	3 50	3 37	3 22
12	6 12	5 56	5 39	5 19	5 8	4 55	4 40	4 21	4 12	4 3	3 52	3 39	3 24
13	6 12	5 56	5 40	5 20	5 9	4 56	4 41	4 23	4 14	4 4	3 53	3 41	3 26
14	6 13	5 57	5 40	5 21	5 10	4 57	4 42	4 24	4 16	4 6	3 55	3 43	3 28
15	6 13	5 58	5 41	5 22	5 11	4 59	4 44	4 26	4 17	4 8	3 57	3 45	3 30
16	6 13	5 58	5 42	5 23	5 12	5 0	4 45	4 27	4 19	4 9	3 59	3 47	3 33
17	6 14	5 58	5 42	5 24	5 13	5 1	4 46	4 29	4 20	4 11	4 1	3 49	3 35
18	6 14	5 59	5 43	5 25	5 14	5 2	4 48	4 30	4 22	4 13	4 2	3 51	3 37
19	6 14	5 59	5 44	5 25	5 15	5 3	4 49	4 32	4 24	4 15	4 4	3 53	3 40
20	6 15	6 0	5 44	5 26	5 16	5 4	4 50	4 33	4 25	4 16	4 6	3 55	3 42
21	6 15	6 0	5 45	5 27	5 17	5 5	4 52	4 35	4 27	4 18	4 8	3 57	3 44
22	6 15	6 1	5 45	5 28	5 18	5 6	4 53	4 36	4 29	4 20	4 10	4 0	3 47
23	6 15	6 1	5 46	5 29	5 19	5 8	4 54	4 38	4 30	4 22	4 12	4 2	3 49
24	6 16	6 2	5 47	5 29	5 20	5 9	4 56	4 40	4 32	4 24	4 15	4 4	3 52
25	6 16	6 2	5 47	5 31	5 21	5 10	4 57	4 41	4 34	4 26	4 17	4 6	3 54
26	6 16	6 2	5 48	5 32	5 22	5 11	4 58	4 43	4 36	4 28	4 19	4 8	3 57
27	6 16	6 3	5 49	5 32	5 23	5 12	5 0	4 45	4 38	4 30	4 21	4 11	3 59
28	6 17	6 3	5 49	5 33	5 24	5 14	5 1	4 46	4 39	4 32	4 23	4 13	4 2
29	6 17	6 4	5 50	5 34	5 25	5 15	5 3	4 48	4 41	4 34	4 25	4 16	4 4
30	6 17	6 4	5 50	5 35	5 26	5 16	5 4	4 50	4 43	4 36	4 27	4 18	4 7
31	6 17	6 4	5 51	5 36	5 27	5 17	5 5	4 51	4 45	4 38	4 29	4 20	4 10
Feb. 1	6 17	6 5	5 52	5 37	5 28	5 18	5 7	4 53	4 47	4 40	4 32	4 23	4 12
2	6 17	6 5	5 52	5 38	5 29	5 20	5 8	4 55	4 48	4 42	4 34	4 25	4 15
3	6 18	6 6	5 53	5 38	5 30	5 21	5 10	4 56	4 50	4 44	4 36	4 27	4 18
4	6 18	6 6	5 53	5 39	5 31	5 22	5 11	4 58	4 52	4 46	4 38	4 30	4 20
5	6 18	6 6	5 54	5 40	5 32	5 23	5 12	5 0	4 54	4 48	4 40	4 32	4 23
6	6 18	6 6	5 54	5 41	5 33	5 24	5 14	5 2	4 56	4 50	4 42	4 34	4 26
7	6 18	6 7	5 55	5 42	5 34	5 26	5 15	5 3	4 58	4 52	4 45	4 37	4 28
8	6 18	6 7	5 56	5 42	5 35	5 27	5 17	5 5	5 0	4 54	4 47	4 39	4 31
9	6 18	6 7	5 56	5 43	5 36	5 28	5 18	5 7	5 2	4 56	4 49	4 42	4 33
10	6 18	6 8	5 56	5 44	5 37	5 29	5 20	5 8	5 3	4 58	4 51	4 44	4 36
11	6 18	6 8	5 57	5 45	5 38	5 30	5 21	5 10	5 5	5 0	4 53	4 46	4 39
12	6 18	6 8	5 58	5 46	5 39	5 32	5 23	5 12	5 7	5 2	4 56	4 49	4 41
13	6 18	6 8	5 58	5 46	5 40	5 33	5 24	5 14	5 9	5 4	4 58	4 51	4 44
14	6 18	6 8	5 59	5 47	5 41	5 34	5 25	5 16	5 11	5 6	5 0	4 54	4 47
15	6 18	6 9	5 59	5 48	5 42	5 35	5 27	5 17	5 13	5 8	5 2	4 56	4 49
16	6 18	6 9	6 0	5 49	5 43	5 36	5 28	5 19	5 14	5 10	5 4	4 58	4 52

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, subtract 12 hours, mark the result A. M., and add one to the day.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunrise in southern latitudes see page 60.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Feb. 15	18 11	18 20	18 29	18 40	18 46	18 53	19 1	19 11	19 15	19 20	19 25	19 31	19 38
16	18 11	18 19	18 29	18 39	18 45	18 52	18 59	19 9	19 13	19 18	19 23	19 29	19 35
17	18 11	18 19	18 28	18 38	18 44	18 50	18 58	19 7	19 11	19 16	19 21	19 26	19 32
18	18 11	18 19	18 27	18 37	18 43	18 49	18 56	19 5	19 9	19 13	19 18	19 24	19 30
19	18 10	18 18	18 27	18 36	18 42	18 48	18 55	19 3	19 7	19 11	19 16	19 21	19 27
20	18 10	18 18	18 26	18 35	18 40	18 46	18 53	19 1	19 5	19 9	19 14	19 19	19 24
21	18 10	18 18	18 25	18 34	18 39	18 45	18 51	18 59	19 3	19 7	19 11	19 16	19 21
22	18 10	18 17	18 25	18 33	18 38	18 44	18 50	18 57	19 1	19 4	19 9	19 13	19 18
23	18 10	18 17	18 24	18 32	18 37	18 42	18 48	18 55	18 59	19 2	19 6	19 11	19 16
24	18 10	18 16	18 24	18 31	18 36	18 41	18 46	18 53	18 56	19 0	19 4	19 8	19 13
25	18 10	18 16	18 23	18 30	18 34	18 39	18 45	18 51	18 54	18 58	19 1	19 6	19 10
26	18 10	18 16	18 22	18 29	18 33	18 38	18 43	18 49	18 52	18 55	18 59	19 3	19 7
27	18 9	18 15	18 21	18 28	18 32	18 36	18 41	18 47	18 50	18 53	18 56	19 0	19 4
28	18 9	18 15	18 21	18 27	18 31	18 35	18 40	18 45	18 48	18 51	18 54	18 57	19 1
Mar. 1	18 9	18 14	18 20	18 26	18 29	18 33	18 38	18 43	18 46	18 48	18 51	18 55	18 58
2	18 9	18 14	18 19	18 25	18 28	18 32	18 36	18 41	18 43	18 46	18 49	18 52	18 55
3	18 9	18 13	18 18	18 24	18 27	18 30	18 34	18 39	18 41	18 44	18 46	18 49	18 52
4	18 8	18 13	18 18	18 23	18 26	18 29	18 33	18 37	18 39	18 41	18 44	18 46	18 49
5	18 8	18 12	18 17	18 22	18 24	18 27	18 31	18 35	18 37	18 39	18 41	18 44	18 46
6	18 8	18 12	18 16	18 20	18 23	18 26	18 29	18 33	18 34	18 36	18 39	18 41	18 44
7	18 8	18 11	18 15	18 19	18 22	18 24	18 27	18 31	18 32	18 34	18 36	18 38	18 40
8	18 8	18 11	18 14	18 18	18 20	18 23	18 25	18 29	18 30	18 32	18 33	18 35	18 38
9	18 7	18 10	18 14	18 17	18 19	18 21	18 24	18 26	18 28	18 29	18 31	18 33	18 35
10	18 7	18 10	18 13	18 16	18 17	18 20	18 22	18 24	18 25	18 27	18 28	18 30	18 32
11	18 7	18 9	18 12	18 15	18 16	18 18	18 20	18 22	18 23	18 24	18 26	18 27	18 29
12	18 6	18 9	18 11	18 14	18 15	18 16	18 18	18 20	18 21	18 22	18 23	18 24	18 26
13	18 6	18 8	18 10	18 12	18 13	18 15	18 16	18 18	18 19	18 20	18 20	18 21	18 23
14	18 6	18 8	18 9	18 11	18 12	18 13	18 14	18 16	18 16	18 17	18 18	18 19	18 20
15	18 6	18 7	18 8	18 10	18 11	18 12	18 12	18 14	18 14	18 15	18 15	18 16	18 17
16	18 5	18 6	18 8	18 9	18 9	18 10	18 11	18 12	18 12	18 12	18 13	18 13	18 14
17	18 5	18 6	18 7	18 8	18 8	18 8	18 9	18 9	18 9	18 10	18 10	18 10	18 10
18	18 5	18 5	18 6	18 6	18 6	18 7	18 7	18 7	18 7	18 7	18 7	18 7	18 8
19	18 4	18 5	18 5	18 5	18 5	18 5	18 5	18 5	18 5	18 5	18 5	18 4	18 4
20	18 4	18 4	18 4	18 4	18 4	18 4	18 3	18 3	18 2	18 2	18 2	18 2	18 2
21	18 4	18 4	18 3	18 3	18 2	18 2	18 1	18 1	18 0	18 0	17 59	17 59	17 58
22	18 4	18 3	18 2	18 1	18 1	18 0	17 59	17 58	17 58	17 57	17 57	17 56	17 55
23	18 3	18 2	18 2	18 0	18 0	17 59	17 58	17 56	17 56	17 55	17 54	17 53	17 52
24	18 3	18 2	18 1	17 59	17 58	17 57	17 56	17 54	17 53	17 52	17 52	17 50	17 49
25	18 3	18 1	18 0	17 58	17 57	17 55	17 54	17 52	17 51	17 50	17 49	17 48	17 46
26	18 2	18 1	17 59	17 56	17 55	17 54	17 52	17 50	17 48	17 47	17 46	17 45	17 43
27	18 2	18 0	17 58	17 55	17 54	17 52	17 50	17 47	17 46	17 45	17 43	17 42	17 40
28	18 2	18 0	17 57	17 54	17 52	17 50	17 48	17 45	17 44	17 42	17 41	17 39	17 37
29	18 1	17 59	17 56	17 53	17 51	17 49	17 46	17 43	17 42	17 40	17 38	17 36	17 34
30	18 1	17 58	17 55	17 52	17 50	17 47	17 44	17 41	17 39	17 38	17 36	17 33	17 31
31	18 1	17 58	17 54	17 50	17 48	17 46	17 42	17 39	17 37	17 35	17 33	17 31	17 28
Apr. 1	18 0	17 57	17 54	17 49	17 47	17 44	17 41	17 37	17 35	17 33	17 30	17 28	17 25
2	18 0	17 57	17 53	17 48	17 45	17 42	17 39	17 34	17 32	17 30	17 28	17 25	17 22

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, write P. M. after the astronomical time.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunset in southern latitudes see page 60.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Feb. 16	6 18	6 9	6 0	5 49	5 43	5 36	5 28	5 19	5 14	5 10	5 4	4 58	4 52
17	6 18	6 9	6 0	5 50	5 44	5 37	5 30	5 21	5 16	5 12	5 7	5 1	4 54
18	6 18	6 9	6 0	5 50	5 45	5 38	5 31	5 22	5 18	5 14	5 9	5 3	4 57
19	6 17	6 9	6 1	5 51	5 46	5 40	5 32	5 24	5 20	5 16	5 11	5 6	5 0
20	6 17	6 10	6 1	5 52	5 47	5 41	5 34	5 26	5 22	5 18	5 13	5 8	5 2
21	6 17	6 10	6 2	5 53	5 48	5 42	5 35	5 28	5 24	5 20	5 15	5 10	5 5
22	6 17	6 10	6 2	5 54	5 49	5 43	5 37	5 29	5 26	5 22	5 18	5 13	5 8
23	6 17	6 10	6 3	5 54	5 50	5 44	5 38	5 31	5 27	5 24	5 20	5 15	5 10
24	6 17	6 10	6 3	5 55	5 50	5 45	5 39	5 32	5 29	5 26	5 22	5 17	5 12
25	6 17	6 10	6 3	5 56	5 51	5 47	5 41	5 34	5 31	5 28	5 24	5 20	5 15
26	6 16	6 10	6 4	5 56	5 52	5 48	5 42	5 36	5 33	5 30	5 26	5 22	5 18
27	6 16	6 10	6 4	5 57	5 53	5 49	5 44	5 38	5 35	5 32	5 28	5 24	5 20
28	6 16	6 10	6 4	5 58	5 54	5 50	5 45	5 39	5 36	5 34	5 30	5 27	5 23
Mar. 1	6 16	6 10	6 5	5 59	5 55	5 51	5 46	5 41	5 38	5 36	5 32	5 29	5 25
2	6 16	6 10	6 5	5 59	5 56	5 52	5 48	5 42	5 40	5 38	5 35	5 31	5 28
3	6 15	6 10	6 6	6 0	5 57	5 53	5 49	5 44	5 42	5 39	5 37	5 34	5 30
4	6 15	6 11	6 6	6 1	5 58	5 54	5 50	5 46	5 44	5 41	5 39	5 36	5 33
5	6 15	6 11	6 6	6 1	5 58	5 55	5 52	5 47	5 45	5 43	5 41	5 38	5 35
6	6 15	6 11	6 7	6 2	5 59	5 56	5 53	5 49	5 47	5 45	5 43	5 41	5 38
7	6 15	6 11	6 7	6 3	6 0	5 58	5 54	5 51	5 49	5 47	5 45	5 43	5 40
8	6 14	6 11	6 7	6 3	6 1	5 58	5 56	5 52	5 51	5 49	5 47	5 45	5 43
9	6 14	6 11	6 8	6 4	6 2	6 0	5 57	5 54	5 52	5 51	5 49	5 47	5 46
10	6 14	6 11	6 8	6 5	6 3	6 1	5 58	5 56	5 54	5 53	5 51	5 50	5 48
11	6 14	6 11	6 8	6 5	6 4	6 2	6 0	5 57	5 56	5 55	5 54	5 52	5 50
12	6 13	6 11	6 9	6 6	6 4	6 3	6 1	5 59	5 58	5 57	5 56	5 54	5 53
13	6 13	6 11	6 9	6 6	6 5	6 4	6 2	6 0	6 0	5 59	5 58	5 57	5 55
14	6 13	6 11	6 9	6 7	6 6	6 5	6 4	6 2	6 1	6 1	6 0	5 59	5 58
15	6 12	6 11	6 10	6 8	6 7	6 6	6 5	6 4	6 3	6 2	6 2	6 1	6 0
16	6 12	6 11	6 10	6 8	6 8	6 7	6 6	6 5	6 5	6 4	6 4	6 3	6 3
17	6 12	6 11	6 10	6 9	6 9	6 8	6 8	6 7	6 7	6 6	6 6	6 6	6 5
18	6 12	6 11	6 10	6 10	6 9	6 9	6 9	6 8	6 8	6 8	6 8	6 8	6 8
19	6 11	6 11	6 11	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10	6 10
20	6 11	6 11	6 11	6 11	6 11	6 11	6 11	6 12	6 12	6 12	6 12	6 12	6 12
21	6 11	6 11	6 11	6 12	6 12	6 12	6 13	6 13	6 14	6 14	6 14	6 14	6 15
22	6 10	6 11	6 12	6 12	6 13	6 13	6 14	6 15	6 15	6 16	6 16	6 17	6 17
23	6 10	6 11	6 12	6 13	6 13	6 14	6 15	6 16	6 17	6 18	6 18	6 19	6 20
24	6 10	6 11	6 12	6 13	6 14	6 15	6 16	6 18	6 19	6 19	6 20	6 21	6 22
25	6 10	6 11	6 12	6 14	6 15	6 16	6 18	6 20	6 20	6 21	6 22	6 23	6 25
26	6 9	6 11	6 12	6 15	6 16	6 17	6 19	6 21	6 22	6 23	6 24	6 26	6 27
27	6 9	6 11	6 13	6 16	6 17	6 18	6 20	6 23	6 24	6 25	6 26	6 28	6 29
28	6 9	6 11	6 13	6 16	6 17	6 19	6 22	6 24	6 25	6 27	6 28	6 30	6 32
29	6 8	6 11	6 13	6 16	6 18	6 20	6 23	6 26	6 27	6 29	6 30	6 32	6 34
30	6 8	6 11	6 14	6 17	6 19	6 21	6 24	6 27	6 29	6 31	6 32	6 34	6 37
31	6 8	6 10	6 14	6 18	6 20	6 22	6 25	6 29	6 30	6 32	6 34	6 37	6 39
Apr. 1	6 7	6 10	6 14	6 18	6 20	6 23	6 26	6 30	6 32	6 34	6 36	6 39	6 42
2	6 7	6 10	6 14	6 19	6 21	6 24	6 28	6 32	6 34	6 36	6 39	6 41	6 44
3	6 7	6 10	6 15	6 19	6 22	6 25	6 29	6 34	6 36	6 38	6 41	6 43	6 46

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, subtract 12 hours, mark the result A. M., and add one to the day.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunrise in southern latitudes see page 60.

Date. \ Lat.		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
		h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Apr.	1	18 0	17 57	17 54	17 49	17 47	17 44	17 41	17 37	17 35	17 33	17 30	17 28	17 25
	2	18 0	17 57	17 53	17 48	17 45	17 42	17 39	17 34	17 32	17 30	17 28	17 25	17 22
	3	18 0	17 56	17 52	17 47	17 44	17 41	17 37	17 32	17 30	17 28	17 25	17 22	17 19
	4	18 0	17 55	17 51	17 46	17 43	17 39	17 35	17 30	17 28	17 25	17 22	17 19	17 16
	5	17 59	17 55	17 50	17 44	17 41	17 38	17 33	17 28	17 26	17 23	17 20	17 17	17 13
	6	17 59	17 54	17 49	17 44	17 40	17 36	17 31	17 26	17 23	17 20	17 17	17 14	17 10
	7	17 59	17 54	17 48	17 42	17 39	17 34	17 29	17 24	17 21	17 18	17 15	17 11	17 7
	8	17 58	17 53	17 48	17 41	17 37	17 33	17 28	17 22	17 19	17 16	17 12	17 8	17 4
	9	17 58	17 53	17 47	17 40	17 36	17 31	17 26	17 20	17 16	17 13	17 10	17 5	17 2
	10	17 58	17 52	17 46	17 39	17 34	17 30	17 24	17 17	17 14	17 11	17 7	17 3	16 58
	11	17 58	17 52	17 45	17 38	17 33	17 28	17 22	17 15	17 12	17 8	17 4	17 0	16 55
	12	17 57	17 51	17 44	17 36	17 32	17 27	17 20	17 13	17 10	17 6	17 2	16 57	16 52
	13	17 57	17 50	17 44	17 35	17 30	17 25	17 19	17 11	17 7	17 4	16 59	16 54	16 49
	14	17 57	17 50	17 43	17 34	17 29	17 24	17 17	17 9	17 5	17 1	16 57	16 52	16 46
	15	17 57	17 50	17 42	17 33	17 28	17 22	17 15	17 7	17 3	16 59	16 54	16 49	16 43
	16	17 56	17 49	17 41	17 32	17 27	17 21	17 13	17 5	17 1	16 57	16 52	16 47	16 40
	17	17 56	17 49	17 40	17 31	17 25	17 19	17 12	17 3	16 59	16 54	16 49	16 44	16 37
	18	17 56	17 48	17 40	17 30	17 24	17 18	17 10	17 1	16 56	16 52	16 47	16 41	16 34
	19	17 56	17 48	17 39	17 29	17 23	17 16	17 8	16 59	16 54	16 50	16 44	16 38	16 31
	20	17 55	17 47	17 38	17 28	17 22	17 15	17 7	16 57	16 52	16 47	16 42	16 36	16 28
	21	17 55	17 47	17 37	17 27	17 20	17 13	17 5	16 55	16 50	16 45	16 39	16 33	16 25
	22	17 55	17 46	17 37	17 26	17 19	17 12	17 3	16 53	16 48	16 43	16 37	16 30	16 22
	23	17 55	17 46	17 36	17 25	17 18	17 10	17 2	16 51	16 46	16 40	16 34	16 28	16 20
	24	17 55	17 45	17 35	17 24	17 17	17 9	17 0	16 49	16 44	16 38	16 32	16 25	16 17
	25	17 54	17 45	17 34	17 23	17 16	17 8	16 58	16 47	16 42	16 36	16 30	16 22	16 14
	26	17 54	17 44	17 34	17 22	17 14	17 6	16 57	16 45	16 40	16 34	16 27	16 20	16 11
	27	17 54	17 44	17 33	17 21	17 13	17 5	16 55	16 44	16 38	16 32	16 25	16 17	16 8
	28	17 54	17 44	17 33	17 20	17 12	17 4	16 54	16 42	16 36	16 30	16 22	16 15	16 6
	29	17 54	17 43	17 32	17 19	17 11	17 2	16 52	16 40	16 34	16 27	16 20	16 12	16 3
	30	17 54	17 43	17 31	17 18	17 10	17 1	16 51	16 38	16 32	16 25	16 18	16 10	16 0
May	1	17 54	17 43	17 31	17 17	17 9	17 0	16 49	16 36	16 30	16 23	16 16	16 7	15 57
	2	17 53	17 42	17 30	17 16	17 8	16 59	16 48	16 34	16 28	16 21	16 13	16 5	15 55
	3	17 53	17 42	17 30	17 15	17 7	16 57	16 46	16 33	16 26	16 19	16 11	16 2	15 52
	4	17 53	17 42	17 29	17 14	17 6	16 56	16 45	16 31	16 24	16 17	16 9	16 0	15 49
	5	17 53	17 41	17 28	17 14	17 5	16 55	16 43	16 29	16 22	16 15	16 7	15 58	15 47
	6	17 53	17 41	17 28	17 13	17 4	16 54	16 42	16 28	16 21	16 13	16 5	15 55	15 44
	7	17 53	17 41	17 27	17 12	17 3	16 53	16 41	16 26	16 19	16 11	16 3	15 53	15 41
	8	17 53	17 40	17 27	17 11	17 2	16 52	16 39	16 24	16 17	16 9	16 0	15 50	15 39
	9	17 53	17 40	17 26	17 10	17 1	16 51	16 38	16 23	16 16	16 7	15 58	15 48	15 36
	10	17 53	17 40	17 26	17 10	17 0	16 50	16 37	16 21	16 14	16 6	15 56	15 46	15 34
	11	17 53	17 40	17 25	17 9	16 59	16 48	16 36	16 20	16 12	16 4	15 54	15 44	15 31
	12	17 53	17 39	17 25	17 8	16 58	16 48	16 34	16 18	16 10	16 2	15 52	15 42	15 29
	13	17 53	17 39	17 25	17 8	16 58	16 46	16 33	16 17	16 9	16 0	15 51	15 39	15 26
	14	17 53	17 39	17 24	17 7	16 57	16 46	16 32	16 15	16 7	15 58	15 49	15 37	15 24
	15	17 53	17 39	17 24	17 6	16 56	16 44	16 31	16 14	16 6	15 57	15 47	15 35	15 22
	16	17 53	17 39	17 23	17 6	16 56	16 44	16 30	16 12	16 4	15 55	15 45	15 33	15 20
	17	17 53	17 38	17 23	17 5	16 55	16 43	16 29	16 11	16 3	15 54	15 43	15 31	15 17

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1918.

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For sunset in southern latitudes see page 60.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Apr. 2	6 7	6 10	6 14	6 19	6 21	6 24	6 28	6 32	6 34	6 36	6 39	6 41	6 44
3	6 7	6 10	6 15	6 19	6 22	6 25	6 29	6 34	6 36	6 38	6 41	6 43	6 46
4	6 7	6 10	6 15	6 20	6 23	6 26	6 30	6 35	6 37	6 40	6 43	6 46	6 49
5	6 6	6 10	6 15	6 21	6 24	6 27	6 32	6 37	6 39	6 42	6 45	6 48	6 51
6	6 6	6 10	6 15	6 21	6 24	6 28	6 33	6 38	6 41	6 44	6 47	6 50	6 54
7	6 6	6 10	6 16	6 22	6 25	6 29	6 34	6 40	6 42	6 46	6 49	6 52	6 56
8	6 5	6 10	6 16	6 22	6 26	6 30	6 35	6 41	6 44	6 47	6 51	6 54	6 59
9	6 5	6 10	6 16	6 23	6 27	6 31	6 37	6 43	6 46	6 49	6 53	6 57	7 1
10	6 5	6 10	6 16	6 24	6 28	6 32	6 38	6 45	6 48	6 51	6 55	6 59	7 4
11	6 5	6 10	6 17	6 24	6 28	6 33	6 39	6 46	6 49	6 53	6 57	7 1	7 6
12	6 4	6 10	6 17	6 25	6 29	6 34	6 40	6 48	6 51	6 55	6 59	7 3	7 8
13	6 4	6 10	6 17	6 25	6 30	6 35	6 42	6 49	6 53	6 56	7 1	7 6	7 11
14	6 4	6 10	6 18	6 26	6 31	6 36	6 43	6 51	6 54	6 58	7 3	7 8	7 13
15	6 4	6 10	6 18	6 27	6 32	6 38	6 44	6 52	6 56	7 0	7 5	7 10	7 16
16	6 3	6 10	6 18	6 27	6 32	6 38	6 46	6 54	6 58	7 2	7 7	7 12	7 18
17	6 3	6 10	6 19	6 28	6 33	6 40	6 47	6 56	7 0	7 4	7 9	7 14	7 21
18	6 3	6 10	6 19	6 28	6 34	6 40	6 48	6 57	7 1	7 6	7 11	7 17	7 23
19	6 3	6 10	6 19	6 29	6 35	6 42	6 49	6 59	7 3	7 8	7 13	7 19	7 26
20	6 2	6 11	6 20	6 30	6 36	6 42	6 50	7 0	7 5	7 10	7 15	7 21	7 28
21	6 2	6 11	6 20	6 30	6 36	6 44	6 52	7 2	7 6	7 11	7 17	7 23	7 31
22	6 2	6 11	6 20	6 31	6 37	6 44	6 53	7 3	7 8	7 13	7 19	7 26	7 33
23	6 2	6 11	6 20	6 32	6 38	6 46	6 54	7 5	7 10	7 15	7 21	7 28	7 36
24	6 2	6 11	6 21	6 32	6 39	6 46	6 56	7 6	7 11	7 17	7 23	7 30	7 38
25	6 2	6 11	6 21	6 33	6 40	6 48	6 57	7 8	7 13	7 19	7 25	7 32	7 40
26	6 1	6 11	6 21	6 34	6 40	6 49	6 58	7 10	7 15	7 21	7 27	7 35	7 43
27	6 1	6 11	6 22	6 34	6 41	6 50	6 59	7 11	7 16	7 23	7 29	7 37	7 45
28	6 1	6 11	6 22	6 35	6 42	6 51	7 1	7 13	7 18	7 24	7 31	7 39	7 48
29	6 1	6 11	6 22	6 35	6 43	6 52	7 2	7 14	7 20	7 26	7 33	7 41	7 50
30	6 1	6 11	6 23	6 36	6 44	6 53	7 3	7 16	7 22	7 28	7 35	7 44	7 53
May 1	6 1	6 11	6 23	6 37	6 45	6 54	7 4	7 17	7 23	7 30	7 37	7 46	7 55
2	6 0	6 12	6 23	6 37	6 45	6 55	7 6	7 19	7 25	7 32	7 39	7 48	7 58
3	6 0	6 12	6 24	6 38	6 46	6 56	7 7	7 20	7 26	7 34	7 41	7 50	8 0
4	6 0	6 12	6 24	6 39	6 47	6 57	7 8	7 22	7 28	7 36	7 44	7 52	8 3
5	6 0	6 12	6 25	6 39	6 48	6 58	7 9	7 23	7 30	7 37	7 45	7 55	8 5
6	6 0	6 12	6 25	6 40	6 49	6 59	7 10	7 25	7 32	7 39	7 48	7 57	8 8
7	6 0	6 12	6 25	6 41	6 50	7 0	7 12	7 26	7 33	7 41	7 49	7 59	8 10
8	6 0	6 12	6 26	6 41	6 50	7 1	7 13	7 28	7 35	7 43	7 51	8 1	8 13
9	6 0	6 12	6 26	6 42	6 51	7 2	7 14	7 29	7 36	7 44	7 53	8 3	8 15
10	6 0	6 13	6 27	6 43	6 52	7 3	7 15	7 31	7 38	7 46	7 55	8 6	8 18
11	6 0	6 13	6 27	6 43	6 53	7 4	7 16	7 32	7 40	7 48	7 57	8 8	8 20
12	6 0	6 13	6 27	6 44	6 54	7 4	7 18	7 34	7 41	7 50	7 59	8 10	8 22
13	6 0	6 13	6 28	6 44	6 54	7 6	7 19	7 35	7 43	7 51	8 1	8 12	8 25
14	6 0	6 13	6 28	6 45	6 55	7 6	7 20	7 37	7 44	7 53	8 3	8 14	8 27
15	6 0	6 14	6 28	6 46	6 56	7 8	7 21	7 38	7 46	7 55	8 5	8 16	8 30
16	6 0	6 14	6 29	6 46	6 57	7 8	7 22	7 39	7 48	7 56	8 7	8 18	8 32
17	6 0	6 14	6 29	6 47	6 57	7 9	7 24	7 41	7 49	7 58	8 8	8 20	8 34
18	6 0	6 14	6 30	6 48	6 58	7 10	7 25	7 42	7 51	8 0	8 10	8 22	8 37

70331°—1917——4

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, subtract 12 hours, mark the result A. M., and add one to the day.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunrise in southern latitudes see page 60.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
May 17	17 53	17 38	17 23	17 5	16 55	16 43	16 29	16 11	16 3	15 54	15 43	15 31	15 17
18	17 53	17 38	17 23	17 5	16 54	16 42	16 28	16 10	16 1	15 52	15 42	15 29	15 15
19	17 53	17 38	17 22	17 4	16 53	16 41	16 26	16 9	16 0	15 50	15 40	15 27	15 12
20	17 53	17 38	17 22	17 4	16 53	16 40	16 26	16 7	15 59	15 49	15 38	15 25	15 11
21	17 53	17 38	17 22	17 3	16 52	16 40	16 25	16 6	15 57	15 48	15 36	15 24	15 8
22	17 53	17 38	17 22	17 2	16 52	16 39	16 24	16 5	15 56	15 46	15 35	15 22	15 6
23	17 53	17 38	17 21	17 2	16 51	16 38	16 23	16 4	15 55	15 45	15 33	15 20	15 4
24	17 53	17 38	17 21	17 2	16 50	16 37	16 22	16 3	15 54	15 44	15 32	15 18	15 2
25	17 53	17 38	17 21	17 1	16 50	16 37	16 21	16 2	15 52	15 42	15 30	15 17	15 0
26	17 53	17 38	17 21	17 1	16 49	16 36	16 20	16 1	15 51	15 41	15 29	15 15	14 59
27	17 53	17 38	17 20	17 0	16 49	16 36	16 20	16 0	15 50	15 40	15 28	15 14	14 57
28	17 53	17 37	17 20	17 0	16 48	16 35	16 19	15 59	15 49	15 38	15 26	15 12	14 55
29	17 54	17 37	17 20	17 0	16 48	16 34	16 18	15 58	15 48	15 38	15 25	15 10	14 53
30	17 54	17 38	17 20	17 0	16 48	16 34	16 17	15 57	15 47	15 36	15 24	15 9	14 52
31	17 54	17 38	17 20	16 59	16 47	16 33	16 17	15 56	15 46	15 35	15 22	15 8	14 50
June 1	17 54	17 38	17 20	16 59	16 47	16 33	16 16	15 56	15 46	15 34	15 22	15 7	14 49
2	17 54	17 38	17 20	16 59	16 47	16 33	16 16	15 55	15 45	15 33	15 20	15 5	14 47
3	17 54	17 38	17 20	16 59	16 46	16 32	16 15	15 54	15 44	15 33	15 20	15 4	14 46
4	17 54	17 38	17 20	16 58	16 46	16 32	16 15	15 54	15 43	15 32	15 19	15 3	14 45
5	17 55	17 38	17 20	16 58	16 46	16 32	16 14	15 53	15 43	15 31	15 18	15 2	14 44
6	17 55	17 38	17 20	16 58	16 46	16 31	16 14	15 52	15 42	15 30	15 17	15 1	14 42
7	17 55	17 38	17 20	16 58	16 46	16 31	16 14	15 52	15 42	15 30	15 16	15 0	14 41
8	17 55	17 38	17 20	16 58	16 46	16 31	16 13	15 52	15 41	15 29	15 16	15 0	14 40
9	17 56	17 38	17 20	16 58	16 45	16 31	16 13	15 51	15 41	15 29	15 15	14 59	14 39
10	17 56	17 38	17 20	16 58	16 45	16 30	16 13	15 51	15 40	15 28	15 14	14 58	14 38
11	17 56	17 38	17 20	16 58	16 45	16 30	16 13	15 51	15 40	15 28	15 14	14 58	14 38
12	17 56	17 39	17 20	16 58	16 45	16 30	16 13	15 50	15 40	15 28	15 14	14 57	14 37
13	17 56	17 39	17 20	16 58	16 45	16 30	16 13	15 50	15 40	15 27	15 13	14 57	14 37
14	17 56	17 39	17 20	16 58	16 45	16 30	16 12	15 50	15 39	15 27	15 13	14 56	14 36
15	17 57	17 39	17 20	16 58	16 45	16 30	16 12	15 50	15 39	15 27	15 13	14 56	14 36
16	17 57	17 39	17 20	16 58	16 45	16 30	16 12	15 50	15 39	15 27	15 13	14 56	14 35
17	17 57	17 40	17 20	16 59	16 45	16 30	16 12	15 50	15 39	15 27	15 12	14 56	14 35
18	17 57	17 40	17 21	16 59	16 46	16 30	16 13	15 50	15 39	15 27	15 12	14 56	14 35
19	17 58	17 40	17 21	16 59	16 46	16 31	16 13	15 50	15 39	15 27	15 13	14 56	14 35
20	17 58	17 40	17 21	16 59	16 46	16 31	16 13	15 50	15 39	15 27	15 13	14 56	14 35
21	17 58	17 40	17 21	16 59	16 46	16 31	16 13	15 50	15 39	15 27	15 13	14 56	14 35
22	17 58	17 41	17 22	17 0	16 46	16 31	16 13	15 51	15 40	15 27	15 13	14 56	14 36
23	17 58	17 41	17 22	17 0	16 47	16 32	16 14	15 51	15 40	15 28	15 13	14 56	14 36
24	17 59	17 41	17 22	17 0	16 47	16 32	16 14	15 51	15 40	15 28	15 14	14 57	14 36
25	17 59	17 41	17 22	17 0	16 47	16 32	16 14	15 52	15 41	15 28	15 14	14 57	14 37
26	17 59	17 42	17 23	17 0	16 48	16 33	16 15	15 52	15 41	15 29	15 15	14 58	14 38
27	17 59	17 42	17 23	17 1	16 48	16 33	16 15	15 52	15 42	15 29	15 15	14 59	14 38
28	17 59	17 42	17 23	17 1	16 48	16 33	16 15	15 53	15 42	15 30	15 16	14 59	14 39
29	18 0	17 42	17 23	17 2	16 49	16 34	16 16	15 54	15 43	15 31	15 17	15 0	14 40
30	18 0	17 42	17 24	17 2	16 49	16 34	16 16	15 54	15 43	15 31	15 17	15 1	14 41
July 1	18 0	17 43	17 24	17 2	16 49	16 35	16 17	15 55	15 44	15 32	15 18	15 2	14 42
2	18 0	17 43	17 24	17 3	16 50	16 35	16 18	15 55	15 45	15 33	15 19	15 3	14 43

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, write P. M. after the astronomical time.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunset in southern latitudes see page 60.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
May 18	6 0	6 14	6 30	6 48	6 58	7 10	7 25	7 42	7 51	8 0	8 10	8 22	8 37
19	6 0	6 14	6 30	6 48	6 59	7 11	7 26	7 44	7 52	8 1	8 12	8 24	8 39
20	6 0	6 15	6 30	6 49	7 0	7 12	7 27	7 45	7 54	8 3	8 14	8 26	8 41
21	6 0	6 15	6 31	6 50	7 0	7 13	7 28	7 46	7 55	8 5	8 16	8 28	8 43
22	6 0	6 15	6 31	6 50	7 1	7 14	7 29	7 47	7 56	8 6	8 17	8 30	8 46
23	6 0	6 15	6 32	6 51	7 2	7 15	7 30	7 49	7 58	8 8	8 19	8 32	8 48
24	6 0	6 16	6 32	6 51	7 3	7 16	7 31	7 50	7 59	8 9	8 21	8 34	8 50
25	6 0	6 16	6 32	6 52	7 3	7 16	7 32	7 51	8 0	8 11	8 22	8 36	8 52
26	6 0	6 16	6 33	6 52	7 4	7 17	7 33	7 52	8 2	8 12	8 24	8 38	8 54
27	6 0	6 16	6 33	6 53	7 5	7 18	7 34	7 54	8 3	8 14	8 26	8 40	8 56
28	6 1	6 17	6 34	6 54	7 5	7 19	7 35	7 55	8 4	8 15	8 27	8 42	8 58
29	6 1	6 17	6 34	6 54	7 6	7 20	7 36	7 56	8 6	8 16	8 29	8 43	9 0
30	6 1	6 17	6 35	6 55	7 7	7 20	7 37	7 57	8 7	8 18	8 30	8 45	9 2
31	6 1	6 17	6 35	6 55	7 7	7 21	7 38	7 58	8 8	8 19	8 32	8 46	9 4
June 1	6 1	6 18	6 35	6 56	7 8	7 22	7 38	7 59	8 9	8 20	8 33	8 48	9 6
2	6 1	6 18	6 36	6 56	7 8	7 23	7 39	8 0	8 10	8 21	8 34	8 49	9 8
3	6 2	6 18	6 36	6 57	7 9	7 23	7 40	8 1	8 11	8 23	8 36	8 51	9 9
4	6 2	6 18	6 36	6 58	7 10	7 24	7 41	8 2	8 12	8 24	8 37	8 52	9 11
5	6 2	6 19	6 37	6 58	7 10	7 25	7 42	8 3	8 13	8 25	8 38	8 54	9 12
6	6 2	6 19	6 37	6 58	7 11	7 25	7 42	8 4	8 14	8 26	8 39	8 55	9 14
7	6 2	6 19	6 38	6 59	7 11	7 26	7 43	8 5	8 15	8 27	8 40	8 56	9 15
8	6 2	6 20	6 38	6 59	7 12	7 27	7 44	8 6	8 16	8 28	8 42	8 58	9 17
9	6 3	6 20	6 38	7 0	7 12	7 27	7 45	8 6	8 17	8 29	8 43	8 59	9 18
10	6 3	6 20	6 39	7 0	7 13	7 28	7 45	8 7	8 18	8 30	8 44	9 0	9 19
11	6 3	6 20	6 39	7 1	7 13	7 28	7 46	8 8	8 19	8 30	8 44	9 1	9 20
12	6 3	6 20	6 39	7 1	7 14	7 29	7 46	8 9	8 19	8 31	8 45	9 2	9 22
13	6 3	6 21	6 40	7 1	7 14	7 29	7 47	8 9	8 20	8 32	8 46	9 3	9 23
14	6 4	6 21	6 40	7 2	7 15	7 30	7 47	8 10	8 21	8 33	8 47	9 4	9 24
15	6 4	6 21	6 40	7 2	7 15	7 30	7 48	8 10	8 21	8 33	8 48	9 4	9 24
16	6 4	6 22	6 40	7 2	7 16	7 30	7 48	8 11	8 22	8 34	8 48	9 5	9 25
17	6 4	6 22	6 41	7 3	7 16	7 31	7 49	8 11	8 22	8 34	8 49	9 6	9 26
18	6 4	6 22	6 41	7 3	7 16	7 31	7 49	8 12	8 23	8 35	8 49	9 6	9 26
19	6 5	6 22	6 41	7 3	7 16	7 32	7 50	8 12	8 23	8 35	8 50	9 6	9 27
20	6 5	6 22	6 41	7 4	7 17	7 32	7 50	8 12	8 23	8 36	8 50	9 7	9 27
21	6 5	6 23	6 42	7 4	7 17	7 32	7 50	8 13	8 24	8 36	8 50	9 7	9 28
22	6 5	6 23	6 42	7 4	7 17	7 32	7 50	8 13	8 24	8 36	8 50	9 7	9 28
23	6 6	6 23	6 42	7 4	7 17	7 32	7 50	8 13	8 24	8 36	8 51	9 7	9 28
24	6 6	6 23	6 42	7 4	7 17	7 32	7 50	8 13	8 24	8 36	8 51	9 7	9 28
25	6 6	6 24	6 42	7 5	7 18	7 33	7 51	8 13	8 24	8 36	8 51	9 8	9 28
26	6 6	6 24	6 43	7 5	7 18	7 33	7 51	8 13	8 24	8 36	8 51	9 7	9 28
27	6 6	6 24	6 43	7 5	7 18	7 33	7 51	8 13	8 24	8 36	8 50	9 7	9 28
28	6 7	6 24	6 43	7 5	7 18	7 33	7 51	8 13	8 24	8 36	8 50	9 7	9 27
29	6 7	6 24	6 43	7 5	7 18	7 33	7 50	8 13	8 24	8 36	8 50	9 7	9 27
30	6 7	6 24	6 43	7 5	7 18	7 33	7 50	8 13	8 24	8 36	8 50	9 6	9 26
July 1	6 7	6 25	6 43	7 5	7 18	7 33	7 50	8 13	8 23	8 35	8 49	9 6	9 26
2	6 7	6 25	6 43	7 5	7 18	7 33	7 50	8 12	8 23	8 35	8 49	9 5	9 25
3	6 8	6 25	6 43	7 5	7 18	7 32	7 50	8 12	8 22	8 34	8 48	9 4	9 24

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, subtract 12 hours, mark the result A. M., and add one to the day.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunrise in southern latitudes see page 60.

Date. \ Lat.		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
		h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
July	1	18 0	17 43	17 24	17 2	16 49	16 35	16 17	15 55	15 44	15 32	15 18	15 2	14 42
	2	18 0	17 43	17 24	17 3	16 50	16 35	16 18	15 55	15 45	15 33	15 19	15 3	14 43
	3	18 0	17 43	17 25	17 3	16 50	16 36	16 18	15 56	15 46	15 34	15 20	15 4	14 44
	4	18 0	17 43	17 25	17 3	16 51	16 36	16 19	15 57	15 46	15 34	15 21	15 5	14 45
	5	18 1	17 44	17 25	17 4	16 51	16 37	16 19	15 58	15 47	15 36	15 22	15 6	14 47
	6	18 1	17 44	17 26	17 4	16 52	16 37	16 20	15 58	15 48	15 36	15 23	15 7	14 48
	7	18 1	17 44	17 26	17 5	16 52	16 38	16 21	15 59	15 49	15 38	15 24	15 9	14 50
	8	18 1	17 44	17 26	17 5	16 53	16 39	16 22	16 0	15 50	15 38	15 25	15 10	14 51
	9	18 1	17 45	17 27	17 6	16 54	16 39	16 22	16 1	15 51	15 40	15 26	15 11	14 53
	10	18 2	17 45	17 27	17 6	16 54	16 40	16 23	16 2	15 52	15 41	15 28	15 13	14 54
	11	18 2	17 45	17 27	17 7	16 55	16 41	16 24	16 3	15 53	15 42	15 29	15 14	14 56
	12	18 2	17 45	17 28	17 7	16 55	16 41	16 25	16 4	15 54	15 43	15 30	15 16	14 58
	13	18 2	17 46	17 28	17 8	16 56	16 42	16 26	16 5	15 55	15 44	15 32	15 17	15 0
	14	18 2	17 46	17 29	17 8	16 56	16 43	16 26	16 6	15 57	15 46	15 33	15 19	15 2
	15	18 2	17 46	17 29	17 9	16 57	16 44	16 27	16 7	15 58	15 47	15 35	15 20	15 4
	16	18 2	17 46	17 29	17 10	16 58	16 44	16 28	16 8	15 59	15 48	15 36	15 22	15 5
	17	18 2	17 47	17 30	17 10	16 58	16 45	16 29	16 10	16 0	15 50	15 38	15 24	15 7
	18	18 2	17 47	17 30	17 11	16 59	16 46	16 30	16 11	16 2	15 51	15 39	15 26	15 9
	19	18 2	17 47	17 30	17 11	17 0	16 47	16 31	16 12	16 3	15 53	15 41	15 28	15 12
	20	18 3	17 47	17 31	17 12	17 0	16 48	16 32	16 13	16 4	15 54	15 43	15 29	15 14
	21	18 3	17 48	17 31	17 12	17 1	16 48	16 33	16 14	16 6	15 56	15 44	15 31	15 16
	22	18 3	17 48	17 32	17 13	17 2	16 49	16 34	16 16	16 7	15 57	15 46	15 33	15 18
	23	18 3	17 48	17 32	17 13	17 2	16 50	16 35	16 17	16 8	15 59	15 48	15 35	15 20
	24	18 3	17 48	17 32	17 14	17 3	16 51	16 36	16 18	16 10	16 0	15 49	15 37	15 22
	25	18 3	17 48	17 33	17 15	17 4	16 52	16 37	16 20	16 11	16 2	15 51	15 39	15 24
	26	18 3	17 48	17 33	17 15	17 5	16 53	16 38	16 21	16 12	16 3	15 53	15 41	15 27
	27	18 3	17 49	17 33	17 16	17 6	16 54	16 40	16 22	16 14	16 5	15 54	15 43	15 29
	28	18 3	17 49	17 34	17 16	17 6	16 54	16 41	16 24	16 16	16 7	15 56	15 45	15 31
	29	18 3	17 49	17 34	17 17	17 7	16 55	16 42	16 25	16 17	16 8	15 58	15 47	15 34
	30	18 3	17 49	17 34	17 18	17 8	16 56	16 43	16 26	16 19	16 10	16 0	15 49	15 36
	31	18 3	17 49	17 35	17 18	17 9	16 57	16 44	16 28	16 20	16 12	16 2	15 51	15 38
Aug.	1	18 3	17 50	17 35	17 19	17 9	16 58	16 45	16 29	16 22	16 13	16 4	15 53	15 41
	2	18 3	17 50	17 36	17 20	17 10	16 59	16 46	16 31	16 23	16 15	16 6	15 55	15 43
	3	18 3	17 50	17 36	17 20	17 11	17 0	16 47	16 32	16 25	16 17	16 7	15 57	15 45
	4	18 2	17 50	17 36	17 21	17 11	17 1	16 49	16 33	16 26	16 18	16 9	15 59	15 48
	5	18 2	17 50	17 36	17 21	17 12	17 2	16 50	16 35	16 28	16 20	16 11	16 2	15 50
	6	18 2	17 50	17 37	17 22	17 13	17 3	16 51	16 36	16 30	16 22	16 13	16 4	15 53
	7	18 2	17 50	17 37	17 22	17 14	17 4	16 52	16 38	16 31	16 24	16 15	16 6	15 55
	8	18 2	17 50	17 38	17 23	17 14	17 5	16 53	16 39	16 33	16 25	16 17	16 8	15 58
	9	18 2	17 50	17 38	17 24	17 15	17 6	16 54	16 41	16 34	16 27	16 19	16 10	16 0
	10	18 2	17 50	17 38	17 24	17 16	17 7	16 56	16 42	16 36	16 29	16 21	16 12	16 2
	11	18 2	17 51	17 39	17 25	17 17	17 8	16 57	16 44	16 38	16 31	16 23	16 15	16 5
	12	18 2	17 51	17 39	17 25	17 18	17 8	16 58	16 45	16 39	16 32	16 25	16 17	16 7
	13	18 1	17 51	17 39	17 26	17 18	17 10	16 59	16 46	16 41	16 34	16 27	16 19	16 10
	14	18 1	17 51	17 40	17 27	17 19	17 10	17 0	16 48	16 42	16 36	16 29	16 21	16 12
	15	18 1	17 51	17 40	17 27	17 20	17 11	17 2	16 50	16 44	16 38	16 31	16 23	16 14
	16	18 1	17 51	17 40	17 28	17 21	17 12	17 3	16 51	16 46	16 40	16 33	16 25	16 17

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, write P. M. after the astronomical time.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunset in southern latitudes see page 60.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
July 2	6 7	6 25	6 43	7 5	7 18	7 33	7 50	8 12	8 23	8 35	8 49	9 5	9 25
3	6 8	6 25	6 43	7 5	7 18	7 32	7 50	8 12	8 22	8 34	8 48	9 4	9 24
4	6 8	6 25	6 43	7 5	7 18	7 32	7 50	8 12	8 22	8 34	8 48	9 4	9 23
5	6 8	6 25	6 43	7 5	7 18	7 32	7 49	8 12	8 22	8 34	8 47	9 3	9 22
6	6 8	6 25	6 43	7 5	7 17	7 32	7 49	8 11	8 21	8 32	8 46	9 2	9 21
7	6 8	6 25	6 43	7 5	7 17	7 32	7 49	8 10	8 20	8 32	8 46	9 1	9 20
8	6 8	6 25	6 43	7 4	7 17	7 31	7 48	8 10	8 20	8 32	8 45	9 0	9 19
9	6 8	6 25	6 43	7 4	7 17	7 31	7 48	8 9	8 19	8 31	8 44	8 59	9 18
10	6 9	6 25	6 43	7 4	7 16	7 30	7 47	8 8	8 18	8 30	8 43	8 58	9 16
11	6 9	6 25	6 43	7 4	7 16	7 30	7 47	8 8	8 18	8 29	8 42	8 57	9 15
12	6 9	6 25	6 43	7 4	7 16	7 30	7 46	8 7	8 17	8 28	8 41	8 56	9 14
13	6 9	6 25	6 43	7 3	7 15	7 29	7 46	8 6	8 16	8 27	8 40	8 54	9 12
14	6 9	6 25	6 43	7 3	7 15	7 29	7 45	8 5	8 15	8 26	8 39	8 53	9 11
15	6 9	6 25	6 43	7 3	7 15	7 28	7 44	8 5	8 14	8 25	8 37	8 52	9 9
16	6 9	6 25	6 42	7 2	7 14	7 28	7 44	8 4	8 13	8 24	8 36	8 50	9 7
17	6 9	6 25	6 42	7 2	7 14	7 27	7 43	8 3	8 12	8 23	8 35	8 49	9 5
18	6 10	6 25	6 42	7 2	7 13	7 26	7 42	8 2	8 11	8 22	8 33	8 47	9 3
19	6 10	6 25	6 42	7 1	7 13	7 26	7 41	8 1	8 10	8 20	8 32	8 45	9 2
20	6 10	6 25	6 42	7 1	7 12	7 25	7 40	8 0	8 9	8 19	8 30	8 44	9 0
21	6 10	6 25	6 41	7 0	7 12	7 24	7 40	7 58	8 7	8 18	8 29	8 42	8 58
22	6 10	6 25	6 41	7 0	7 11	7 24	7 39	7 57	8 6	8 16	8 27	8 40	8 56
23	6 10	6 25	6 41	6 59	7 10	7 23	7 38	7 56	8 5	8 15	8 26	8 38	8 54
24	6 10	6 24	6 40	6 59	7 10	7 22	7 37	7 55	8 4	8 13	8 24	8 37	8 51
25	6 10	6 24	6 40	6 58	7 9	7 21	7 36	7 54	8 2	8 12	8 22	8 35	8 49
26	6 10	6 24	6 40	6 58	7 8	7 20	7 35	7 52	8 1	8 10	8 21	8 33	8 47
27	6 10	6 24	6 39	6 57	7 8	7 19	7 34	7 51	7 59	8 8	8 19	8 31	8 45
28	6 10	6 24	6 39	6 56	7 7	7 18	7 32	7 50	7 58	8 7	8 17	8 29	8 42
29	6 10	6 24	6 39	6 56	7 6	7 18	7 31	7 48	7 56	8 5	8 15	8 27	8 40
30	6 10	6 23	6 38	6 55	7 5	7 17	7 30	7 47	7 55	8 3	8 13	8 24	8 38
31	6 10	6 23	6 38	6 54	7 4	7 16	7 29	7 45	7 53	8 2	8 11	8 22	8 35
Aug. 1	6 10	6 23	6 37	6 54	7 4	7 14	7 28	7 44	7 51	8 0	8 9	8 20	8 33
2	6 9	6 22	6 37	6 53	7 3	7 14	7 26	7 42	7 50	7 58	8 7	8 18	8 30
3	6 9	6 22	6 36	6 52	7 2	7 12	7 25	7 41	7 48	7 56	8 5	8 16	8 28
4	6 9	6 22	6 36	6 52	7 1	7 11	7 24	7 39	7 46	7 54	8 3	8 14	8 25
5	6 9	6 22	6 35	6 51	7 0	7 10	7 22	7 38	7 45	7 52	8 1	8 11	8 23
6	6 9	6 22	6 35	6 50	6 59	7 9	7 21	7 36	7 43	7 50	7 59	8 9	8 20
7	6 9	6 21	6 34	6 49	6 58	7 8	7 20	7 34	7 41	7 48	7 57	8 6	8 17
8	6 9	6 21	6 34	6 48	6 57	7 7	7 18	7 32	7 39	7 46	7 55	8 4	8 15
9	6 9	6 20	6 33	6 47	6 56	7 6	7 17	7 31	7 37	7 44	7 52	8 2	8 12
10	6 9	6 20	6 32	6 46	6 55	7 4	7 15	7 29	7 35	7 42	7 50	7 59	8 9
11	6 8	6 20	6 32	6 46	6 54	7 3	7 14	7 27	7 33	7 40	7 48	7 57	8 7
12	6 8	6 19	6 31	6 45	6 53	7 2	7 12	7 25	7 32	7 38	7 46	7 54	8 4
13	6 8	6 19	6 30	6 44	6 52	7 0	7 11	7 24	7 30	7 36	7 44	7 52	8 1
14	6 8	6 18	6 30	6 43	6 50	6 59	7 9	7 22	7 28	7 34	7 41	7 49	7 58
15	6 8	6 18	6 29	6 42	6 49	6 58	7 8	7 20	7 26	7 32	7 39	7 47	7 56
16	6 8	6 18	6 28	6 41	6 48	6 56	7 6	7 18	7 24	7 30	7 37	7 44	7 53
17	6 7	6 17	6 28	6 40	6 47	6 55	7 5	7 16	7 22	7 28	7 34	7 42	7 50

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, subtract 12 hours, mark the result A. M., and add one to the day.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunrise in southern latitudes see page 60.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Aug. 16	18 1	17 51	17 40	17 28	17 21	17 12	17 3	16 51	16 46	16 40	16 33	16 25	16 17
17	18 1	17 51	17 41	17 28	17 21	17 13	17 4	16 52	16 47	16 41	16 35	16 27	16 19
18	18 0	17 51	17 41	17 29	17 22	17 14	17 5	16 54	16 49	16 43	16 37	16 30	16 22
19	18 0	17 51	17 41	17 30	17 23	17 15	17 6	16 56	16 50	16 45	16 39	16 32	16 24
20	18 0	17 51	17 41	17 30	17 24	17 16	17 8	16 57	16 52	16 47	16 41	16 34	16 26
21	18 0	17 51	17 42	17 31	17 24	17 17	17 9	16 58	16 54	16 48	16 43	16 36	16 29
22	17 59	17 51	17 42	17 31	17 25	17 18	17 10	17 0	16 55	16 50	16 44	16 38	16 31
23	17 59	17 51	17 42	17 32	17 26	17 19	17 11	17 1	16 57	16 52	16 46	16 40	16 34
24	17 59	17 51	17 42	17 32	17 27	17 20	17 12	17 3	16 59	16 54	16 48	16 42	16 36
25	17 58	17 51	17 43	17 33	17 27	17 21	17 14	17 4	17 0	16 56	16 50	16 45	16 38
26	17 58	17 51	17 43	17 34	17 28	17 22	17 15	17 6	17 2	16 57	16 52	16 47	16 41
27	17 58	17 51	17 43	17 34	17 29	17 23	17 16	17 7	17 4	16 59	16 54	16 49	16 43
28	17 58	17 51	17 43	17 35	17 30	17 24	17 17	17 9	17 5	17 1	16 56	16 51	16 45
29	17 57	17 51	17 44	17 35	17 30	17 25	17 18	17 10	17 7	17 3	16 58	16 53	16 48
30	17 57	17 51	17 44	17 36	17 31	17 26	17 19	17 12	17 8	17 4	17 0	16 55	16 50
31	17 57	17 51	17 44	17 36	17 32	17 27	17 21	17 13	17 10	17 6	17 2	16 58	16 53
Sept. 1	17 56	17 51	17 44	17 37	17 32	17 28	17 22	17 15	17 12	17 8	17 4	17 0	16 55
2	17 56	17 51	17 44	17 37	17 33	17 28	17 23	17 16	17 13	17 10	17 6	17 2	16 57
3	17 56	17 51	17 45	17 38	17 34	17 29	17 24	17 18	17 15	17 12	17 8	17 4	17 0
4	17 56	17 50	17 45	17 38	17 35	17 30	17 25	17 19	17 16	17 13	17 10	17 6	17 2
5	17 55	17 50	17 45	17 39	17 36	17 31	17 27	17 21	17 18	17 15	17 12	17 8	17 4
6	17 55	17 50	17 45	17 40	17 36	17 32	17 28	17 22	17 20	17 17	17 14	17 10	17 7
7	17 55	17 50	17 46	17 40	17 37	17 33	17 29	17 24	17 22	17 19	17 16	17 13	17 9
8	17 54	17 50	17 46	17 41	17 38	17 34	17 30	17 25	17 23	17 21	17 18	17 15	17 12
9	17 54	17 50	17 46	17 41	17 38	17 35	17 31	17 27	17 25	17 22	17 20	17 17	17 14
10	17 54	17 50	17 46	17 42	17 39	17 36	17 33	17 28	17 26	17 24	17 22	17 19	17 16
11	17 53	17 50	17 46	17 42	17 40	17 37	17 34	17 30	17 28	17 26	17 24	17 21	17 18
12	17 53	17 50	17 47	17 43	17 41	17 38	17 35	17 31	17 30	17 28	17 26	17 23	17 21
13	17 53	17 50	17 47	17 43	17 41	17 39	17 36	17 33	17 31	17 30	17 28	17 26	17 23
14	17 52	17 50	17 47	17 44	17 42	17 40	17 37	17 34	17 33	17 31	17 30	17 28	17 26
15	17 52	17 50	17 47	17 44	17 43	17 41	17 39	17 36	17 35	17 33	17 32	17 30	17 28
16	17 52	17 50	17 48	17 45	17 44	17 42	17 40	17 37	17 36	17 35	17 34	17 32	17 30
17	17 51	17 50	17 48	17 46	17 44	17 43	17 41	17 39	17 38	17 37	17 36	17 34	17 33
18	17 51	17 50	17 48	17 46	17 45	17 44	17 42	17 40	17 40	17 38	17 38	17 36	17 35
19	17 50	17 49	17 48	17 47	17 46	17 45	17 43	17 42	17 41	17 40	17 39	17 38	17 37
20	17 50	17 49	17 48	17 47	17 46	17 46	17 45	17 43	17 43	17 42	17 41	17 40	17 40
21	17 50	17 49	17 49	17 48	17 47	17 46	17 46	17 45	17 44	17 44	17 43	17 43	17 42
22	17 49	17 49	17 49	17 48	17 48	17 48	17 47	17 46	17 46	17 46	17 45	17 45	17 44
23	17 49	17 49	17 49	17 49	17 49	17 48	17 48	17 48	17 48	17 47	17 47	17 47	17 47
24	17 49	17 49	17 49	17 49	17 49	17 49	17 49	17 49	17 49	17 49	17 49	17 49	17 49
25	17 48	17 49	17 50	17 50	17 50	17 50	17 51	17 51	17 51	17 51	17 51	17 51	17 51
26	17 48	17 49	17 50	17 50	17 51	17 51	17 52	17 52	17 53	17 53	17 53	17 53	17 54
27	17 48	17 49	17 50	17 51	17 52	17 52	17 53	17 54	17 54	17 55	17 55	17 56	17 56
28	17 47	17 49	17 50	17 52	17 52	17 53	17 54	17 55	17 56	17 56	17 57	17 58	17 58
29	17 47	17 49	17 50	17 52	17 53	17 54	17 56	17 57	17 58	17 58	17 59	18 0	18 1
30	17 47	17 49	17 51	17 53	17 54	17 55	17 57	17 58	17 59	18 0	18 1	18 2	18 3
Oct. 1	17 46	17 49	17 51	17 53	17 55	17 56	17 58	18 0	18 1	18 2	18 3	18 4	18 6

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, write P. M. after the astronomical time.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunset in southern latitudes see page 60.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Aug. 17	6 7	6 17	6 28	6 40	6 47	6 55	7 5	7 16	7 22	7 28	7 34	7 42	7 50
18	6 7	6 17	6 27	6 39	6 46	6 54	7 3	7 14	7 20	7 25	7 32	7 39	7 47
19	6 7	6 16	6 26	6 38	6 45	6 52	7 1	7 12	7 18	7 23	7 29	7 36	7 44
20	6 7	6 16	6 26	6 37	6 44	6 51	7 0	7 10	7 15	7 21	7 27	7 34	7 42
21	6 6	6 15	6 25	6 36	6 42	6 50	6 58	7 8	7 13	7 18	7 24	7 31	7 39
22	6 6	6 15	6 24	6 35	6 41	6 48	6 56	7 6	7 11	7 16	7 22	7 28	7 36
23	6 6	6 14	6 23	6 34	6 40	6 47	6 55	7 4	7 9	7 14	7 20	7 26	7 33
24	6 6	6 14	6 22	6 32	6 38	6 45	6 53	7 2	7 7	7 12	7 17	7 23	7 30
25	6 6	6 13	6 22	6 31	6 37	6 44	6 51	7 0	7 5	7 9	7 15	7 20	7 27
26	6 5	6 13	6 21	6 30	6 36	6 42	6 50	6 58	7 2	7 7	7 12	7 18	7 24
27	6 5	6 12	6 20	6 29	6 35	6 41	6 48	6 56	7 0	7 5	7 10	7 15	7 21
28	6 5	6 12	6 19	6 28	6 33	6 39	6 46	6 54	6 58	7 2	7 7	7 12	7 18
29	6 4	6 11	6 18	6 27	6 32	6 38	6 44	6 52	6 56	7 0	7 5	7 10	7 15
30	6 4	6 10	6 18	6 26	6 31	6 36	6 42	6 50	6 54	6 58	7 2	7 7	7 12
31	6 4	6 10	6 17	6 25	6 29	6 34	6 41	6 48	6 52	6 55	6 59	7 4	7 9
Sept. 1	6 3	6 9	6 16	6 23	6 28	6 33	6 39	6 46	6 49	6 53	6 57	7 1	7 6
2	6 3	6 9	6 15	6 22	6 26	6 31	6 37	6 44	6 47	6 50	6 54	6 58	7 3
3	6 3	6 8	6 14	6 21	6 25	6 30	6 35	6 42	6 45	6 48	6 52	6 56	7 0
4	6 2	6 8	6 13	6 20	6 24	6 28	6 33	6 40	6 42	6 46	6 49	6 53	6 57
5	6 2	6 7	6 12	6 19	6 22	6 27	6 32	6 37	6 40	6 43	6 46	6 50	6 54
6	6 2	6 6	6 12	6 17	6 21	6 25	6 30	6 35	6 38	6 41	6 44	6 47	6 51
7	6 1	6 6	6 11	6 16	6 20	6 23	6 28	6 33	6 36	6 38	6 41	6 45	6 48
8	6 1	6 5	6 10	6 15	6 18	6 22	6 26	6 31	6 33	6 36	6 39	6 42	6 45
9	6 1	6 5	6 9	6 14	6 17	6 20	6 24	6 29	6 31	6 33	6 36	6 39	6 42
10	6 0	6 4	6 8	6 12	6 15	6 18	6 22	6 26	6 28	6 31	6 33	6 36	6 39
11	6 0	6 4	6 7	6 11	6 14	6 17	6 20	6 24	6 26	6 28	6 31	6 33	6 36
12	6 0	6 3	6 6	6 10	6 12	6 15	6 18	6 22	6 24	6 26	6 28	6 30	6 33
13	5 59	6 2	6 5	6 9	6 11	6 14	6 16	6 20	6 22	6 23	6 25	6 28	6 30
14	5 59	6 2	6 4	6 8	6 10	6 12	6 15	6 18	6 19	6 21	6 23	6 25	6 27
15	5 59	6 1	6 3	6 6	6 8	6 10	6 13	6 16	6 17	6 18	6 20	6 22	6 24
16	5 59	6 0	6 2	6 5	6 7	6 9	6 11	6 13	6 15	6 16	6 17	6 19	6 21
17	5 58	6 0	6 2	6 4	6 5	6 7	6 9	6 11	6 12	6 13	6 15	6 16	6 18
18	5 58	5 59	6 1	6 3	6 4	6 5	6 7	6 9	6 10	6 11	6 12	6 13	6 15
19	5 57	5 58	6 0	6 1	6 2	6 4	6 5	6 7	6 8	6 8	6 9	6 10	6 12
20	5 57	5 58	5 59	6 0	6 1	6 2	6 3	6 4	6 5	6 6	6 7	6 8	6 9
21	5 56	5 57	5 58	5 59	6 0	6 0	6 1	6 2	6 3	6 3	6 4	6 5	6 6
22	5 56	5 56	5 57	5 58	5 58	5 59	5 59	6 0	6 0	6 1	6 1	6 2	6 2
23	5 56	5 56	5 56	5 56	5 57	5 57	5 57	5 58	5 58	5 58	5 59	5 59	5 59
24	5 56	5 55	5 55	5 55	5 55	5 55	5 56	5 56	5 56	5 56	5 56	5 56	5 56
25	5 55	5 55	5 54	5 54	5 54	5 54	5 54	5 54	5 54	5 53	5 53	5 53	5 53
26	5 55	5 54	5 53	5 53	5 52	5 52	5 52	5 51	5 51	5 51	5 51	5 51	5 50
27	5 54	5 53	5 52	5 51	5 51	5 50	5 50	5 49	5 49	5 48	5 48	5 48	5 47
28	5 54	5 53	5 52	5 50	5 50	5 49	5 48	5 47	5 46	5 46	5 45	5 45	5 44
29	5 54	5 52	5 51	5 49	5 48	5 47	5 46	5 45	5 44	5 43	5 43	5 42	5 41
30	5 54	5 52	5 50	5 48	5 47	5 45	5 44	5 42	5 42	5 41	5 40	5 39	5 38
Oct. 1	5 53	5 51	5 49	5 47	5 45	5 44	5 42	5 40	5 40	5 39	5 38	5 36	5 35
2	5 53	5 50	5 48	5 45	5 44	5 42	5 40	5 38	5 37	5 36	5 35	5 34	5 32

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, subtract 12 hours, mark the result A. M., and add one to the day.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunrise in southern latitudes see page 60.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Oct. 1	17 46	17 49	17 51	17 53	17 55	17 56	17 58	18 0	18 1	18 2	18 3	18 4	18 6
2	17 46	17 49	17 51	17 54	17 56	17 57	17 59	18 2	18 3	18 4	18 5	18 6	18 8
3	17 46	17 49	17 51	17 54	17 56	17 58	18 0	18 3	18 4	18 6	18 7	18 9	18 10
4	17 46	17 49	17 52	17 55	17 57	17 59	18 2	18 5	18 6	18 8	18 9	18 11	18 13
5	17 45	17 48	17 52	17 56	17 58	18 0	18 3	18 6	18 8	18 9	18 11	18 13	18 15
6	17 45	17 49	17 52	17 56	17 59	18 1	18 4	18 8	18 9	18 11	18 13	18 15	18 18
7	17 44	17 48	17 52	17 57	18 0	18 2	18 6	18 9	18 11	18 13	18 15	18 17	18 20
8	17 44	17 48	17 53	17 58	18 0	18 3	18 7	18 11	18 13	18 15	18 17	18 20	18 22
9	17 44	17 48	17 53	17 58	18 1	18 4	18 8	18 12	18 14	18 17	18 19	18 22	18 25
10	17 44	17 48	17 53	17 59	18 2	18 5	18 9	18 14	18 16	18 19	18 21	18 24	18 27
11	17 44	17 48	17 54	17 59	18 3	18 6	18 11	18 16	18 18	18 20	18 23	18 26	18 30
12	17 43	17 48	17 54	18 0	18 4	18 7	18 12	18 17	18 20	18 22	18 25	18 28	18 32
13	17 43	17 48	17 54	18 1	18 4	18 8	18 13	18 19	18 21	18 24	18 27	18 31	18 35
14	17 43	17 48	17 54	18 1	18 5	18 10	18 14	18 20	18 23	18 26	18 29	18 33	18 37
15	17 42	17 49	17 55	18 2	18 6	18 10	18 16	18 22	18 25	18 28	18 31	18 35	18 40
16	17 42	17 49	17 55	18 3	18 7	18 12	18 17	18 24	18 27	18 30	18 33	18 38	18 42
17	17 42	17 49	17 56	18 3	18 8	18 13	18 18	18 25	18 28	18 32	18 36	18 40	18 44
18	17 42	17 49	17 56	18 4	18 9	18 14	18 20	18 27	18 30	18 34	18 38	18 42	18 47
19	17 42	17 49	17 56	18 4	18 9	18 15	18 21	18 28	18 32	18 36	18 40	18 44	18 50
20	17 42	17 49	17 57	18 5	18 10	18 16	18 22	18 30	18 34	18 38	18 42	18 47	18 52
21	17 41	17 49	17 57	18 6	18 11	18 17	18 24	18 32	18 35	18 39	18 44	18 49	18 54
22	17 41	17 49	17 57	18 7	18 12	18 18	18 25	18 33	18 37	18 41	18 46	18 51	18 57
23	17 41	17 49	17 58	18 7	18 13	18 19	18 26	18 35	18 39	18 43	18 48	18 54	19 0
24	17 41	17 49	17 58	18 8	18 14	18 20	18 28	18 37	18 41	18 45	18 50	18 56	19 2
25	17 41	17 50	17 59	18 9	18 15	18 21	18 29	18 38	18 42	18 47	18 52	18 58	19 5
26	17 41	17 50	17 59	18 10	18 16	18 22	18 30	18 40	18 44	18 49	18 54	19 0	19 7
27	17 41	17 50	17 59	18 10	18 17	18 24	18 32	18 42	18 46	18 51	18 57	19 3	19 10
28	17 40	17 50	18 0	18 11	18 18	18 25	18 33	18 43	18 48	18 53	18 59	19 5	19 12
29	17 40	17 50	18 0	18 12	18 18	18 26	18 35	18 45	18 50	18 55	19 1	19 7	19 15
30	17 40	17 50	18 1	18 12	18 19	18 27	18 36	18 46	18 51	18 57	19 3	19 10	19 17
31	17 40	17 50	18 1	18 13	18 20	18 28	18 37	18 48	18 53	18 59	19 5	19 12	19 20
Nov. 1	17 40	17 51	18 2	18 14	18 21	18 29	18 39	18 50	18 55	19 1	19 7	19 14	19 22
2	17 40	17 51	18 2	18 15	18 22	18 30	18 40	18 52	18 57	19 3	19 9	19 17	19 25
3	17 40	17 51	18 3	18 16	18 23	18 32	18 41	18 53	18 59	19 5	19 11	19 19	19 28
4	17 40	17 51	18 3	18 16	18 24	18 33	18 43	18 55	19 0	19 7	19 14	19 21	19 30
5	17 40	17 52	18 4	18 17	18 25	18 34	18 44	18 56	19 2	19 9	19 16	19 24	19 33
6	17 40	17 52	18 4	18 18	18 26	18 35	18 46	18 58	19 4	19 11	19 18	19 26	19 35
7	17 40	17 52	18 5	18 19	18 27	18 36	18 47	19 0	19 6	19 13	19 20	19 28	19 38
8	17 40	17 52	18 5	18 20	18 28	18 37	18 48	19 2	19 8	19 14	19 22	19 31	19 40
9	17 41	17 53	18 6	18 20	18 29	18 38	18 50	19 3	19 10	19 16	19 24	19 33	19 43
10	17 41	17 53	18 6	18 21	18 30	18 40	18 51	19 5	19 11	19 18	19 26	19 35	19 46
11	17 41	17 53	18 7	18 22	18 31	18 41	18 52	19 6	19 13	19 20	19 28	19 38	19 48
12	17 41	17 54	18 7	18 23	18 32	18 42	18 54	19 8	19 15	19 22	19 30	19 40	19 51
13	17 41	17 54	18 8	18 24	18 33	18 43	18 55	19 10	19 17	19 24	19 33	19 42	19 53
14	17 41	17 54	18 9	18 25	18 34	18 44	18 57	19 11	19 18	19 26	19 35	19 45	19 56
15	17 41	17 55	18 9	18 25	18 35	18 45	18 58	19 13	19 20	19 28	19 37	19 47	19 58
16	17 42	17 55	18 10	18 26	18 36	18 47	18 59	19 15	19 22	19 30	19 39	19 49	20 1

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1918.

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To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunset in southern latitudes see page 60.

Date. \ Lat.		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
		h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Oct.	2	5 53	5 50	5 48	5 45	5 44	5 42	5 40	5 38	5 37	5 36	5 35	5 34	5 32
	3	5 52	5 50	5 47	5 44	5 42	5 41	5 38	5 36	5 35	5 34	5 32	5 31	5 29
	4	5 52	5 49	5 46	5 43	5 41	5 39	5 37	5 34	5 33	5 31	5 30	5 28	5 26
	5	5 52	5 49	5 45	5 42	5 40	5 37	5 35	5 32	5 30	5 29	5 27	5 25	5 23
	6	5 52	5 48	5 44	5 41	5 38	5 36	5 33	5 30	5 28	5 26	5 24	5 22	5 20
	7	5 51	5 48	5 44	5 39	5 37	5 34	5 31	5 27	5 26	5 24	5 22	5 20	5 17
	8	5 51	5 47	5 43	5 38	5 36	5 33	5 29	5 25	5 24	5 21	5 19	5 17	5 14
	9	5 51	5 46	5 42	5 37	5 34	5 31	5 28	5 23	5 22	5 19	5 17	5 14	5 11
	10	5 50	5 46	5 41	5 36	5 33	5 30	5 26	5 21	5 19	5 17	5 14	5 11	5 8
	11	5 50	5 45	5 40	5 35	5 32	5 28	5 24	5 19	5 17	5 14	5 12	5 9	5 5
	12	5 50	5 45	5 40	5 34	5 30	5 26	5 22	5 17	5 14	5 12	5 9	5 6	5 2
	13	5 50	5 44	5 39	5 32	5 29	5 25	5 20	5 15	5 12	5 10	5 7	5 3	5 0
	14	5 49	5 44	5 38	5 31	5 28	5 23	5 18	5 13	5 10	5 7	5 4	5 0	4 56
	15	5 49	5 43	5 37	5 30	5 26	5 22	5 17	5 11	5 8	5 5	5 2	4 58	4 54
	16	5 49	5 43	5 36	5 29	5 25	5 20	5 15	5 9	5 6	5 2	4 59	4 55	4 51
	17	5 49	5 42	5 36	5 28	5 24	5 19	5 13	5 7	5 4	5 0	4 56	4 52	4 48
	18	5 49	5 42	5 35	5 27	5 23	5 17	5 12	5 5	5 1	4 58	4 54	4 50	4 45
	19	5 48	5 42	5 34	5 26	5 21	5 16	5 10	5 3	4 59	4 56	4 52	4 47	4 42
	20	5 48	5 41	5 34	5 25	5 20	5 14	5 8	5 1	4 57	4 53	4 49	4 44	4 39
	21	5 48	5 41	5 33	5 24	5 19	5 13	5 6	4 59	4 55	4 51	4 47	4 42	4 36
	22	5 48	5 40	5 32	5 23	5 18	5 12	5 5	4 57	4 53	4 49	4 44	4 39	4 34
	23	5 48	5 40	5 31	5 22	5 16	5 10	5 3	4 55	4 51	4 46	4 42	4 36	4 31
	24	5 48	5 39	5 31	5 21	5 15	5 9	5 2	4 53	4 49	4 44	4 40	4 34	4 28
	25	5 48	5 39	5 30	5 20	5 14	5 8	5 0	4 51	4 47	4 42	4 37	4 31	4 25
	26	5 47	5 39	5 29	5 19	5 13	5 6	4 58	4 49	4 45	4 40	4 35	4 29	4 22
	27	5 47	5 38	5 29	5 18	5 12	5 5	4 57	4 47	4 43	4 38	4 32	4 26	4 20
	28	5 47	5 38	5 28	5 17	5 11	5 4	4 55	4 45	4 41	4 36	4 30	4 24	4 17
	29	5 47	5 38	5 28	5 16	5 10	5 2	4 54	4 44	4 39	4 34	4 28	4 22	4 14
	30	5 47	5 37	5 27	5 15	5 9	5 1	4 52	4 42	4 37	4 32	4 26	4 19	4 12
	31	5 47	5 37	5 27	5 14	5 8	5 0	4 51	4 40	4 35	4 30	4 23	4 17	4 9
Nov.	1	5 47	5 37	5 26	5 14	5 7	4 59	4 50	4 38	4 33	4 28	4 21	4 14	4 6
	2	5 47	5 37	5 26	5 13	5 6	4 58	4 48	4 37	4 31	4 26	4 19	4 12	4 4
	3	5 47	5 36	5 25	5 12	5 5	4 56	4 47	4 35	4 30	4 24	4 17	4 10	4 1
	4	5 47	5 36	5 25	5 11	5 4	4 55	4 45	4 33	4 28	4 22	4 15	4 7	3 58
	5	5 47	5 36	5 24	5 11	5 3	4 54	4 44	4 32	4 26	4 20	4 13	4 5	3 56
	6	5 47	5 36	5 24	5 10	5 2	4 53	4 43	4 30	4 24	4 18	4 11	4 3	3 53
	7	5 47	5 36	5 23	5 9	5 1	4 52	4 41	4 28	4 23	4 16	4 9	4 0	3 51
	8	5 47	5 35	5 23	5 8	5 0	4 51	4 40	4 27	4 21	4 14	4 7	3 58	3 48
	9	5 47	5 35	5 22	5 8	5 0	4 50	4 39	4 25	4 19	4 12	4 5	3 56	3 46
	10	5 48	5 35	5 22	5 7	4 59	4 49	4 38	4 24	4 18	4 11	4 3	3 54	3 44
	11	5 48	5 35	5 22	5 7	4 58	4 48	4 36	4 22	4 16	4 9	4 1	3 52	3 41
	12	5 48	5 35	5 21	5 6	4 57	4 47	4 35	4 21	4 14	4 7	3 59	3 50	3 39
	13	5 48	5 35	5 21	5 6	4 56	4 46	4 34	4 20	4 13	4 6	3 57	3 48	3 37
	14	5 48	5 35	5 21	5 5	4 56	4 45	4 33	4 18	4 11	4 4	3 55	3 47	3 34
	15	5 48	5 35	5 20	5 4	4 55	4 44	4 32	4 17	4 10	4 2	3 54	3 44	3 32
	16	5 48	5 35	5 20	5 4	4 55	4 44	4 31	4 16	4 9	4 1	3 52	3 42	3 30
	17	5 48	5 35	5 20	5 3	4 54	4 43	4 30	4 14	4 7	3 59	3 50	3 40	3 28

LOCAL ASTRONOMICAL MEAN TIME OF SUNRISE, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, subtract 12 hours, mark the result A. M., and add one to the day.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunrise in southern latitudes see page 60.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Nov. 16	17 42	17 55	18 10	18 26	18 36	18 47	18 59	19 15	19 22	19 30	19 39	19 49	20 1
17	17 42	17 56	18 10	18 27	18 37	18 48	19 1	19 16	19 24	19 32	19 41	19 51	20 3
18	17 42	17 56	18 11	18 28	18 38	18 49	19 2	19 18	19 25	19 34	19 43	19 54	20 6
19	17 42	17 56	18 12	18 29	18 39	18 50	19 3	19 20	19 27	19 36	19 45	19 56	20 8
20	17 42	17 57	18 12	18 30	18 40	18 51	19 4	19 21	19 29	19 37	19 47	19 58	20 11
21	17 42	17 57	18 13	18 30	18 40	18 52	19 6	19 22	19 30	19 39	19 49	20 0	20 13
22	17 43	17 58	18 13	18 31	18 42	18 53	19 7	19 24	19 32	19 41	19 51	20 2	20 15
23	17 43	17 58	18 14	18 32	18 42	18 54	19 8	19 26	19 34	19 43	19 53	20 4	20 18
24	17 43	17 59	18 15	18 33	18 44	18 56	19 10	19 27	19 35	19 44	19 55	20 6	20 20
25	17 44	17 59	18 15	18 34	18 44	18 56	19 11	19 29	19 37	19 46	19 56	20 8	20 22
26	17 44	18 0	18 16	18 34	18 45	18 58	19 12	19 30	19 38	19 48	19 58	20 10	20 25
27	17 44	18 0	18 16	18 35	18 46	18 59	19 14	19 32	19 40	19 50	20 0	20 12	20 27
28	17 44	18 0	18 17	18 36	18 47	19 0	19 15	19 33	19 42	19 51	20 2	20 14	20 29
29	17 45	18 1	18 18	18 37	18 48	19 1	19 16	19 34	19 43	19 53	20 4	20 16	20 31
30	17 45	18 1	18 18	18 38	18 49	19 2	19 17	19 36	19 44	19 54	20 5	20 18	20 33
Dec. 1	17 46	18 2	18 19	18 39	18 50	19 3	19 18	19 37	19 46	19 56	20 7	20 20	20 35
2	17 46	18 2	18 20	18 39	18 51	19 4	19 19	19 38	19 47	19 57	20 9	20 22	20 37
3	17 46	18 3	18 20	18 40	18 52	19 5	19 20	19 40	19 49	19 59	20 10	20 24	20 39
4	17 47	18 3	18 21	18 41	18 52	19 6	19 22	19 41	19 50	20 0	20 12	20 25	20 41
5	17 47	18 4	18 22	18 42	18 53	19 7	19 23	19 42	19 51	20 2	20 13	20 27	20 43
6	17 48	18 4	18 22	18 42	18 54	19 8	19 24	19 43	19 53	20 3	20 15	20 29	20 45
7	17 48	18 5	18 23	18 43	18 55	19 9	19 25	19 44	19 54	20 4	20 16	20 30	20 46
8	17 49	18 6	18 23	18 44	18 56	19 10	19 26	19 46	19 55	20 6	20 18	20 32	20 48
9	17 49	18 6	18 24	18 45	18 57	19 10	19 27	19 47	19 56	20 7	20 19	20 33	20 50
10	17 49	18 6	18 25	18 45	18 57	19 11	19 28	19 48	19 57	20 8	20 20	20 34	20 51
11	17 50	18 7	18 25	18 46	18 58	19 12	19 28	19 49	19 58	20 9	20 21	20 36	20 52
12	17 50	18 8	18 26	18 47	18 59	19 13	19 29	19 50	19 59	20 10	20 23	20 37	20 54
13	17 51	18 8	18 26	18 47	19 0	19 14	19 30	19 50	20 0	20 11	20 24	20 38	20 55
14	17 51	18 9	18 27	18 48	19 0	19 14	19 31	19 51	20 1	20 12	20 25	20 39	20 56
15	17 52	18 9	18 28	18 49	19 1	19 15	19 32	19 52	20 2	20 13	20 26	20 40	20 57
16	17 52	18 10	18 28	18 49	19 2	19 16	19 32	19 53	20 3	20 14	20 26	20 41	20 58
17	17 53	18 10	18 29	18 50	19 2	19 16	19 33	19 54	20 4	20 15	20 27	20 42	21 0
18	17 53	18 11	18 29	18 50	19 3	19 17	19 34	19 54	20 4	20 15	20 28	20 43	21 0
19	17 54	18 11	18 30	18 51	19 3	19 17	19 34	19 55	20 5	20 16	20 29	20 44	21 1
20	17 54	18 12	18 30	18 52	19 4	19 18	19 35	19 56	20 6	20 17	20 30	20 44	21 2
21	17 55	18 12	18 31	18 52	19 4	19 18	19 35	19 56	20 6	20 17	20 30	20 45	21 2
22	17 55	18 13	18 31	18 52	19 5	19 19	19 36	19 57	20 7	20 18	20 30	20 45	21 3
23	17 56	18 13	18 32	18 53	19 5	19 20	19 36	19 57	20 7	20 18	20 31	20 46	21 3
24	17 56	18 14	18 32	18 53	19 6	19 20	19 37	19 58	20 8	20 19	20 31	20 46	21 4
25	17 57	18 14	18 32	18 54	19 6	19 20	19 37	19 58	20 8	20 19	20 32	20 46	21 4
26	17 57	18 14	18 33	18 54	19 7	19 21	19 38	19 58	20 8	20 19	20 32	20 47	21 4
27	17 58	18 15	18 33	18 55	19 7	19 21	19 38	19 58	20 8	20 19	20 32	20 47	21 4
28	17 58	18 15	18 34	18 55	19 7	19 21	19 38	19 59	20 9	20 20	20 32	20 47	21 4
29	17 59	18 16	18 34	18 55	19 8	19 22	19 38	19 59	20 9	20 20	20 32	20 47	21 4
30	17 59	18 16	18 35	18 56	19 8	19 22	19 38	19 59	20 9	20 20	20 32	20 46	21 4
31	17 59	18 17	18 35	18 56	19 8	19 22	19 38	19 59	20 8	20 19	20 32	20 46	21 3

LOCAL ASTRONOMICAL MEAN TIME OF SUNSET, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, write P. M. after the astronomical time.

To obtain the standard time at any station, increase the local time by the number of minutes the station is west of the standard meridian, or decrease the local time by the number of minutes the station is east of the standard meridian.

For sunset in southern latitudes see page 60.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Nov. 17	5 48	5 35	5 20	5 3	4 54	4 43	4 30	4 14	4 7	3 59	3 50	3 40	3 28
18	5 49	5 35	5 20	5 3	4 53	4 42	4 29	4 13	4 6	3 58	3 48	3 38	3 26
19	5 49	5 35	5 20	5 3	4 53	4 42	4 28	4 12	4 5	3 56	3 47	3 36	3 24
20	5 49	5 35	5 20	5 2	4 52	4 41	4 27	4 11	4 3	3 55	3 45	3 34	3 22
21	5 49	5 35	5 19	5 2	4 52	4 40	4 26	4 10	4 2	3 54	3 44	3 33	3 20
22	5 50	5 35	5 19	5 2	4 51	4 40	4 26	4 9	4 1	3 52	3 42	3 31	3 18
23	5 50	5 35	5 19	5 1	4 51	4 39	4 25	4 8	4 0	3 51	3 41	3 30	3 16
24	5 50	5 35	5 19	5 1	4 50	4 38	4 24	4 7	3 59	3 50	3 40	3 28	3 14
25	5 51	5 35	5 19	5 1	4 50	4 38	4 24	4 6	3 58	3 49	3 38	3 26	3 12
26	5 51	5 36	5 19	5 1	4 50	4 38	4 23	4 5	3 57	3 48	3 37	3 25	3 11
27	5 51	5 36	5 19	5 0	4 50	4 37	4 22	4 4	3 56	3 47	3 36	3 24	3 10
28	5 52	5 36	5 19	5 0	4 49	4 37	4 22	4 4	3 55	3 46	3 35	3 22	3 8
29	5 52	5 36	5 19	5 0	4 49	4 36	4 21	4 3	3 54	3 45	3 34	3 21	3 6
30	5 52	5 36	5 19	5 0	4 49	4 36	4 21	4 2	3 54	3 44	3 33	3 20	3 5
Dec. 1	5 53	5 36	5 19	5 0	4 49	4 36	4 20	4 2	3 53	3 43	3 32	3 19	3 4
2	5 53	5 37	5 20	5 0	4 48	4 35	4 20	4 1	3 52	3 42	3 31	3 18	3 2
3	5 53	5 37	5 20	5 0	4 48	4 35	4 20	4 1	3 52	3 41	3 30	3 17	3 1
4	5 54	5 37	5 20	5 0	4 48	4 35	4 19	4 0	3 51	3 41	3 29	3 16	3 0
5	5 54	5 38	5 20	5 0	4 48	4 35	4 19	4 0	3 50	3 40	3 28	3 15	2 59
6	5 55	5 38	5 20	5 0	4 48	4 35	4 19	3 59	3 50	3 40	3 28	3 14	2 58
7	5 55	5 38	5 20	5 0	4 48	4 35	4 19	3 59	3 50	3 39	3 27	3 14	2 57
8	5 55	5 38	5 21	5 0	4 48	4 35	4 18	3 59	3 49	3 39	3 27	3 13	2 56
9	5 56	5 39	5 21	5 0	4 48	4 35	4 18	3 58	3 49	3 38	3 26	3 12	2 56
10	5 56	5 39	5 21	5 1	4 49	4 35	4 18	3 58	3 49	3 38	3 26	3 12	2 55
11	5 57	5 40	5 22	5 1	4 49	4 35	4 18	3 58	3 49	3 38	3 26	3 11	2 54
12	5 57	5 40	5 22	5 1	4 49	4 35	4 18	3 58	3 48	3 38	3 25	3 11	2 54
13	5 58	5 40	5 22	5 1	4 49	4 35	4 18	3 58	3 48	3 38	3 25	3 11	2 54
14	5 58	5 41	5 23	5 2	4 49	4 35	4 19	3 58	3 48	3 38	3 25	3 10	2 53
15	5 59	5 41	5 23	5 2	4 50	4 36	4 19	3 58	3 48	3 38	3 25	3 10	2 53
16	5 59	5 42	5 23	5 2	4 50	4 36	4 19	3 58	3 49	3 38	3 25	3 10	2 53
17	6 0	5 42	5 24	5 3	4 50	4 36	4 19	3 59	3 49	3 38	3 25	3 10	2 53
18	6 0	5 43	5 24	5 3	4 51	4 36	4 20	3 59	3 49	3 38	3 25	3 10	2 53
19	6 1	5 43	5 25	5 3	4 51	4 37	4 20	3 59	3 49	3 38	3 26	3 11	2 53
20	6 1	5 44	5 25	5 4	4 52	4 37	4 20	4 0	3 50	3 39	3 26	3 11	2 54
21	6 2	5 44	5 26	5 4	4 52	4 38	4 21	4 0	3 50	3 39	3 26	3 12	2 54
22	6 2	5 45	5 26	5 5	4 52	4 38	4 21	4 1	3 51	3 40	3 27	3 12	2 54
23	6 3	5 45	5 27	5 5	4 53	4 39	4 22	4 1	3 51	3 40	3 27	3 12	2 55
24	6 3	5 46	5 27	5 6	4 54	4 39	4 22	4 2	3 52	3 41	3 28	3 13	2 56
25	6 4	5 46	5 28	5 6	4 54	4 40	4 23	4 2	3 52	3 41	3 29	3 14	2 56
26	6 4	5 47	5 28	5 7	4 55	4 40	4 24	4 3	3 53	3 42	3 29	3 15	2 57
27	6 4	5 47	5 29	5 8	4 55	4 41	4 24	4 4	3 54	3 43	3 30	3 15	2 58
28	6 5	5 48	5 29	5 8	4 56	4 42	4 25	4 4	3 55	3 44	3 31	3 16	2 59
29	6 6	5 48	5 30	5 9	4 56	4 42	4 26	4 5	3 56	3 44	3 32	3 17	3 0
30	6 6	5 49	5 30	5 9	4 57	4 43	4 27	4 6	3 56	3 45	3 33	3 18	3 1
31	6 7	5 49	5 31	5 10	4 58	4 44	4 27	4 7	3 58	3 46	3 34	3 20	3 2
32	6 7	5 50	5 32	5 11	4 59	4 45	4 28	4 8	3 58	3 48	3 35	3 21	3 4

SUNRISE AND SUNSET FOR SOUTHERN LATITUDES, 1918.

In the case of a southern latitude the time of sunrise or sunset is taken from Table IV, with the corresponding northern latitude, not for the given date but for a date about six months earlier or later, which is to be found in the following table. The time taken from Table IV, whether of sunrise or of sunset, must be corrected by the quantity given in Table V on the same line with the given date.

Example.—May 10, 1918, civil date, in latitude −38°, required the time of sunrise and sunset.

The astronomical date is May 9 for sunrise and May 10 for sunset; Table V gives November 11 and 12 as the corresponding dates, northern latitude, while the correction is +12^m in each case.

	Sunrise. d h m		Sunset. d h m	
Table IV, Lat. +38°	Nov. 11 18 37		Nov. 12 4 51	
Table V	May 9 + 12		May 10 + 12	
Local astronomical mean time . .	May 9 18 49		May 10 5 3	
Civil time	May 10 6 49	A. M.	May 10 5 3	P. M.

Given Date.	Corresponding Date, Northern Latitude.	Correction.	Given Date.	Corresponding Date, Northern Latitude.	Correction.	Given Date.	Corresponding Date, Northern Latitude.	Correction.	Given Date.	Corresponding Date, Northern Latitude.	Correction.
		m			m			m			m
Jan. 0	July 2	−1	Feb. 5	Aug. 9	+ 9	Mar. 13	Sept. 15	+14	Apr. 18	Oct. 21	+15
1	3	0	6	10	9	14	16	14	19	22	15
2	4	0	7	11	9	15	17	15	20	23	14
3	5	0	8	12	9	16	18	15	21	24	14
4	6	+1	9	13	10	17	19	15	22	25	14
5	7	+1	10	14	+10	18	20	+15	23	26	+14
6	8	1	11	15	10	19	21	15	24	27	14
7	9	1	12	16	10	20	22	15	25	28	14
8	10	2	13	17	10	21	23	15	26	29	14
9	11	2	14	18	11	22	24	15	27	30	14
10	12	+2	15	19	+11	23	25	+15	28	31	+14
11	13	3	16	20	11	24	26	15	29	Nov. 1	14
12	14	3	17	21	11	25	27	15	30	2	14
13	15	3	18	23	11	26	28	15	May 1	3	13
14	16	3	19	24	12	27	29	15	2	4	13
15	18	+4	20	25	+12	28	30	+15	3	5	+13
16	19	4	21	26	12	29	Oct. 2	15	4	6	13
17	20	4	22	27	12	30	3	16	5	7	13
18	21	4	23	28	12	31	4	16	6	8	13
19	22	5	24	29	12	Apr. 1	5	16	7	9	13
20	23	+5	25	30	+13	2	6	+16	8	10	+12
21	24	5	26	31	13	3	7	15	9	11	12
22	25	5	27	Sept. 1	13	4	8	15	10	12	12
23	26	6	28	2	13	5	9	15	11	13	12
24	27	6	Mar. 1	3	13	6	10	15	12	14	12
25	28	+6	2	4	+13	7	10	+15	13	15	+12
26	29	6	3	5	13	8	11	15	14	16	11
27	30	7	4	6	14	9	12	15	15	16	11
28	31	7	5	7	14	10	13	15	16	17	11
29	Aug. 1	7	6	8	14	11	14	•15	17	18	11
30	2	+7	7	9	+14	12	15	+15	18	19	+11
31	4	8	8	10	14	13	16	15	19	20	11
Feb. 1	5	8	9	11	14	14	17	15	20	21	10
2	6	8	10	12	14	15	18	15	21	22	10
3	7	8	11	13	14	16	19	15	22	23	10
4	8	+9	12	14	+14	17	20	+15	23	24	+10

SUNRISE AND SUNSET FOR SOUTHERN LATITUDES, 1918.

Given Date.	Corresponding Date, Northern Latitude.	Correction.	Given Date.	Corresponding Date, Northern Latitude.	Correction.	Given Date.	Corresponding Date, Northern Latitude.	Correction.	Given Date.	Corresponding Date, Northern Latitude.	Correction.
		m			m			m			m
May 24	Nov. 25	+10	July 19	Jan. 16	− 4	Sept. 13	Mar. 11	−14	Nov. 8	May 6	−13
25	26	9	20	17	4	14	12	14	9	7	13
26	27	9	21	18	4	15	13	14	10	8	12
27	28	9	22	19	5	16	14	14	11	9	12
28	29	9	23	20	5	17	15	15	12	10	12
29	30	+ 8	24	21	− 5	18	16	−15	13	11	−12
30	Dec. 1	8	25	22	5	19	17	15	14	12	12
31	2	8	26	23	6	20	18	15	15	13	12
June 1	3	8	27	24	6	21	19	15	16	15	11
2	4	8	28	25	6	22	20	15	17	16	11
3	5	+ 7	29	26	− 6	23	21	−15	18	17	−11
4	5	7	30	27	7	24	22	15	19	18	11
5	6	7	31	28	7	25	23	15	20	19	11
6	7	7	Aug. 1	29	7	26	24	15	21	20	10
7	8	7	2	30	7	27	25	15	22	21	10
8	9	+ 6	3	30	− 7	28	26	−15	23	22	−10
9	10	6	4	31	8	29	27	15	24	23	10
10	11	6	5	Feb. 1	8	30	28	15	25	24	10
11	12	6	6	2	8	Oct. 1	29	15	26	25	9
12	13	5	7	3	8	2	29	15	27	26	9
13	14	+ 5	8	4	− 9	3	30	−16	28	27	− 9
14	15	5	9	5	9	4	31	16	29	28	9
15	16	4	10	6	9	5	Apr. 1	16	30	29	8
16	17	4	11	7	9	6	2	16	Dec. 1	30	8
17	18	4	12	8	9	7	3	15	2	31	8
18	19	+ 4	13	9	−10	8	4	−15	3	June 1	− 8
19	20	4	14	10	10	9	5	15	4	2	8
20	20	4	15	11	10	10	7	15	5	4	7
21	21	3	16	12	10	11	8	15	6	5	7
22	22	3	17	13	10	12	9	15	7	6	7
23	23	+ 3	18	14	−11	13	10	−15	8	7	− 7
24	24	2	19	15	11	14	11	15	9	8	6
25	25	2	20	16	11	15	12	15	10	9	6
26	26	2	21	17	11	16	13	15	11	10	6
27	27	2	22	18	11	17	14	15	12	11	6
28	28	+ 1	23	18	−11	18	15	−15	13	12	− 5
29	29	1	24	19	12	19	16	15	14	13	5
30	30	1	25	20	12	20	17	15	15	14	5
July 1	Dec. 31	1	26	21	12	21	18	15	16	15	4
2	Jan. 0	+ 1	27	22	12	22	19	15	17	16	4
3	1	0	28	23	−12	23	20	−14	18	17	− 4
4	2	0	29	24	12	24	21	14	19	18	4
5	3	0	30	25	13	25	22	14	20	19	4
6	4	− 1	31	26	13	26	23	14	21	21	3
7	5	1	Sept. 1	27	13	27	24	14	22	22	3
8	6	− 1	2	28	−13	28	25	−14	23	23	− 3
9	7	1	3	Mar. 1	13	29	26	14	24	24	2
10	8	2	4	2	13	30	27	14	25	25	2
11	9	2	5	3	13	31	28	14	26	26	2
12	10	2	6	4	14	Nov. 1	29	14	27	27	2
13	11	− 3	7	5	−14	2	30	−14	28	28	− 1
14	12	3	8	6	14	3	May 1	13	29	29	1
15	13	3	9	7	14	4	2	13	30	30	1
16	14	3	10	8	14	5	3	13	31	July 1	− 1
17	15	4	11	9	14	6	4	13	32	2	0
18	15	− 4	12	10	−14	7	5	−13			

LOCAL ASTRONOMICAL MEAN TIME OF MOONRISE, MERIDIAN OF GREENWICH, 1918.

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To obtain standard time, see directions on page 44.

For other longitudes and for southern latitudes see page 78.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Jan. 1	9 25	9 20	9 15	9 9	9 6	9 2	8 57	8 52	8 50	8 47	8 44	8 40	8 36
2	10 6	10 4	10 3	10 2	10 1	10 0	9 59	9 57	9 57	9 56	9 55	9 55	9 54
3	10 46	10 48	10 51	10 54	10 56	10 57	11 0	11 2	11 4	11 5	11 6	11 8	11 10
4	11 27	11 33	11 39	11 47	11 51	11 56	12 1	12 8	12 11	12 15	12 18	12 22	12 27
5	12 9	12 19	12 29	12 40	12 47	12 55	13 4	13 15	13 20	13 25	13 32	13 39	13 47
6	12 54	13 7	13 21	13 36	13 45	13 56	14 8	14 23	14 30	14 38	14 47	14 57	15 8
7	13 43	13 58	14 15	14 34	14 45	14 58	15 13	15 32	15 41	15 51	16 3	16 16	16 31
8	14 35	14 52	15 11	15 33	15 46	16 1	16 18	16 41	16 51	17 3	17 17	17 33	17 52
9	15 30	15 49	16 9	16 33	16 46	17 1	17 21	17 45	17 56	18 9	18 24	18 42	19 3
10	16 29	16 47	17 7	17 30	17 44	17 59	18 18	18 41	18 52	19 4	19 19	19 36	19 56
11	17 28	17 45	18 3	18 24	18 36	18 50	19 6	19 27	19 36	19 47	19 59	20 14	20 30
12	18 26	18 40	18 55	19 12	19 22	19 34	19 47	20 3	20 11	20 19	20 29	20 39	20 52
13	19 22	19 32	19 44	19 56	20 4	20 12	20 21	20 33	20 38	20 44	20 50	20 58	21 6
14	20 16	20 22	20 29	20 36	20 40	20 46	20 51	20 58	21 1	21 4	21 8	21 12	21 17
15	21 8	21 10	21 12	21 14	21 15	21 16	21 18	21 20	21 21	21 22	21 23	21 24	21 25
16	21 59	21 57	21 54	21 50	21 48	21 46	21 44	21 41	21 40	21 38	21 37	21 35	21 33
17	22 50	22 44	22 36	22 27	22 22	22 17	22 10	22 3	22 0	21 56	21 52	21 47	21 42
18	23 42	23 31	23 19	23 6	22 58	22 49	22 39	22 27	22 22	22 15	22 8	22 1	21 52
19	....	....	....	23 48	23 37	23 26	23 12	22 56	22 48	22 39	22 30	22 19	22 7
20	0 35	0 20	0 5	....	....	....	23 51	23 30	23 21	23 10	22 58	22 44	22 28
21	1 29	1 12	0 54	0 33	0 21	0 7	....	....	....	23 51	23 37	23 20	23 1
22	2 24	2 6	1 46	1 23	1 10	0 54	0 36	0 14	0 3	....	....	....	23 50
23	3 19	3 0	2 40	2 17	2 4	1 48	1 30	1 6	0 55	0 43	0 28	0 11	....
24	4 13	3 55	3 36	3 14	3 1	2 47	2 29	2 7	1 57	1 45	1 31	1 16	0 57
25	5 4	4 48	4 31	4 12	4 1	3 48	3 32	3 13	3 4	2 54	2 43	2 30	2 14
26	5 52	5 39	5 25	5 10	5 0	4 50	4 37	4 22	4 15	4 7	3 58	3 48	3 36
27	6 38	6 28	6 18	6 6	5 59	5 51	5 42	5 30	5 25	5 20	5 13	5 6	4 58
28	7 21	7 15	7 8	7 0	6 56	6 51	6 45	6 38	6 35	6 31	6 27	6 22	6 18
29	8 2	8 0	7 57	7 53	7 52	7 49	7 47	7 44	7 43	7 41	7 39	7 38	7 36
30	8 43	8 44	8 45	8 46	8 46	8 47	8 48	8 49	8 50	8 50	8 51	8 52	8 52
31	9 24	9 28	9 33	9 38	9 41	9 45	9 49	9 54	9 57	9 59	10 2	10 5	10 9
Feb. 1	10 5	10 13	10 21	10 31	10 37	10 43	10 51	11 0	11 4	11 9	11 14	11 20	11 26
2	10 48	11 0	11 12	11 25	11 34	11 43	11 54	12 7	12 13	12 20	12 27	12 36	12 46
3	11 34	11 48	12 4	12 21	12 31	12 43	12 57	13 14	13 22	13 31	13 42	13 53	14 7
4	12 23	12 40	12 58	13 18	13 30	13 44	14 1	14 21	14 31	14 42	14 55	15 10	15 27
5	13 16	13 34	13 54	14 16	14 30	14 45	15 3	15 26	15 37	15 50	16 4	16 21	16 41
6	14 11	14 30	14 50	15 13	15 27	15 43	16 2	16 25	16 36	16 49	17 4	17 21	17 42
7	15 9	15 27	15 46	16 8	16 21	16 36	16 54	17 15	17 26	17 37	17 51	18 6	18 25
8	16 7	16 23	16 40	16 59	17 10	17 23	17 38	17 57	18 5	18 15	18 26	18 38	18 53
9	17 5	17 17	17 30	17 46	17 54	18 4	18 16	18 30	18 36	18 44	18 52	19 1	19 11
10	18 1	18 9	18 18	18 28	18 34	18 41	18 49	18 58	19 2	19 7	19 12	19 18	19 24
11	18 55	18 59	19 3	19 8	19 11	19 14	19 18	19 22	19 24	19 26	19 29	19 31	19 34
12	19 49	19 48	19 47	19 46	19 46	19 46	19 45	19 44	19 44	19 44	19 43	19 43	19 43
13	20 42	20 37	20 31	20 25	20 21	20 17	20 12	20 7	20 4	20 2	19 59	19 55	19 52
14	21 35	21 26	21 16	21 4	20 58	20 50	20 42	20 31	20 26	20 21	20 16	20 9	20 2
15	22 29	22 16	22 2	21 46	21 37	21 26	21 14	20 59	20 52	20 44	20 36	20 26	20 16
16	23 24	23 8	22 51	22 32	22 20	22 7	21 51	21 33	21 24	21 14	21 3	20 50	20 35
17	....	....	23 43	23 21	23 8	22 53	22 35	22 14	22 3	21 51	21 38	21 22	21 4

LOCAL ASTRONOMICAL MEAN TIME OF MOONSET, MERIDIAN OF GREENWICH, 1918.

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For other longitudes and for southern latitudes see page 78.

Date. \ Lat.		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
		h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Jan.	0	21 4	21 10	21 17	21 25	21 30	21 35	21 40	21 48	21 51	21 54	21 58	22 3	22 8
	1	21 45	21 48	21 51	21 55	21 57	21 59	22 2	22 5	22 7	22 8	22 10	22 12	22 14
	2	22 26	22 25	22 24	22 24	22 23	22 23	22 22	22 21	22 21	22 21	22 20	22 20	22 20
	3	23 6	23 2	22 58	22 53	22 50	22 46	22 43	22 38	22 36	22 34	22 32	22 29	22 26
	4	23 47	23 40	23 32	23 22	23 17	23 11	23 4	22 56	22 52	22 48	22 43	22 38	22 32
	5	....	....	....	23 55	23 47	23 38	23 28	23 16	23 10	23 4	22 57	22 49	22 41
	6	0 31	0 20	0 8	....	....	....	23 56	23 40	23 33	23 24	23 15	23 4	22 52
	7	1 17	1 3	0 48	0 31	0 21	0 10	....	....	....	23 51	23 40	23 26	23 10
	8	2 7	1 51	1 33	1 13	1 1	0 47	0 31	0 11	0 2	....	....	23 57	23 38
	9	3 1	2 42	2 23	2 0	1 47	1 32	1 13	0 51	0 40	0 28	0 14	....	....
	10	3 58	3 39	3 19	2 56	2 42	2 26	2 7	1 43	1 32	1 19	1 4	0 46	0 25
	11	4 57	4 39	4 20	3 57	3 44	3 29	3 11	2 48	2 37	2 25	2 11	1 54	1 34
	12	5 56	5 40	5 23	5 3	4 52	4 39	4 24	4 4	3 54	3 44	3 32	3 19	3 3
	13	6 53	6 40	6 27	6 12	6 3	5 52	5 40	5 25	5 18	5 11	5 2	4 52	4 41
	14	7 48	7 40	7 30	7 20	7 14	7 7	6 59	6 50	6 45	6 40	6 34	6 28	6 21
	15	8 41	8 37	8 33	8 28	8 25	8 22	8 18	8 13	8 11	8 9	8 6	8 3	8 0
	16	9 32	9 33	9 34	9 34	9 35	9 35	9 35	9 36	9 36	9 36	9 37	9 37	9 38
	17	10 23	10 28	10 34	10 40	10 43	10 47	10 52	10 57	11 0	11 3	11 6	11 9	11 13
	18	11 14	11 24	11 34	11 45	11 51	11 59	12 7	12 18	12 23	12 28	12 34	12 41	12 48
	19	12 7	12 20	12 34	12 49	12 59	13 9	13 22	13 37	13 44	13 52	14 1	14 11	14 22
	20	13 0	13 16	13 34	13 53	14 5	14 18	14 33	14 53	15 2	15 12	15 24	15 37	15 53
	21	13 56	14 13	14 33	14 55	15 8	15 23	15 41	16 3	16 14	16 26	16 39	16 55	17 15
	22	14 51	15 10	15 30	15 53	16 6	16 22	16 41	17 4	17 15	17 28	17 43	18 0	18 21
	23	15 45	16 4	16 23	16 46	16 59	17 14	17 32	17 55	18 6	18 18	18 32	18 48	19 7
	24	16 38	16 55	17 12	17 33	17 45	17 59	18 15	18 35	18 44	18 55	19 7	19 21	19 37
	25	17 28	17 42	17 57	18 15	18 25	18 37	18 50	19 6	19 14	19 22	19 32	19 43	19 55
	26	18 15	18 26	18 38	18 52	19 0	19 9	19 19	19 32	19 38	19 44	19 51	19 59	20 8
	27	18 59	19 7	19 15	19 25	19 31	19 37	19 44	19 53	19 57	20 1	20 6	20 11	20 18
	28	19 41	19 46	19 51	19 56	19 59	20 2	20 6	20 11	20 13	20 16	20 18	20 21	20 24
	29	20 22	20 23	20 24	20 25	20 26	20 26	20 27	20 28	20 29	20 29	20 30	20 30	20 31
	30	21 3	21 0	20 57	20 54	20 52	20 50	20 48	20 45	20 43	20 42	20 40	20 38	20 36
	31	21 44	21 38	21 31	21 23	21 19	21 14	21 9	21 2	20 59	20 56	20 52	20 48	20 43
Feb.	1	22 26	22 16	22 6	21 54	21 48	21 40	21 31	21 21	21 16	21 11	21 5	20 58	20 51
	2	23 10	22 58	22 44	22 28	22 19	22 9	21 57	21 43	21 36	21 29	21 20	21 11	21 1
	3	23 57	23 42	23 26	23 7	22 56	22 43	22 28	22 10	22 2	21 52	21 41	21 29	21 15
	4	....	....	....	23 50	23 38	23 23	23 6	22 44	22 34	22 23	22 10	21 55	21 37
	5	0 48	0 31	0 12	....	....	....	23 52	23 29	23 18	23 6	22 51	22 34	22 13
	6	1 42	1 24	1 4	0 40	0 27	0 11	....	....	....	....	23 48	23 30	23 10
	7	2 39	2 20	2 0	1 37	1 24	1 8	0 49	0 26	0 15	0 2	....	....	....
	8	3 37	3 20	3 1	2 40	2 28	2 13	1 56	1 35	1 25	1 14	1 1	0 46	0 28
	9	4 35	4 20	4 5	3 47	3 37	3 25	3 11	2 54	2 46	2 36	2 26	2 14	2 1
	10	5 32	5 21	5 9	4 56	4 49	4 40	4 30	4 17	4 12	4 5	3 58	3 50	3 41
	11	6 27	6 20	6 14	6 6	6 2	5 56	5 50	5 43	5 40	5 36	5 32	5 28	5 22
	12	7 21	7 19	7 17	7 15	7 14	7 12	7 11	7 9	7 8	7 7	7 6	7 5	7 3
	13	8 14	8 17	8 20	8 24	8 26	8 28	8 31	8 34	8 36	8 37	8 39	8 41	8 43
	14	9 7	9 14	9 22	9 32	9 37	9 43	9 50	9 58	10 2	10 6	10 11	10 16	10 23
	15	10 1	10 12	10 25	10 39	10 47	10 56	11 7	11 20	11 27	11 34	11 42	11 50	12 0
	16	10 55	11 10	11 26	11 45	11 55	12 8	12 22	12 40	12 48	12 58	13 8	13 21	13 35

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Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Feb. 16	23 24	23 8	22 51	22 32	22 20	22 7	21 51	21 33	21 24	21 14	21 3	20 50	20 35
17	....	....	23 43	23 21	23 8	22 53	22 35	22 14	22 3	21 51	21 38	21 22	21 4
18	0 20	0 2	....	....	....	23 45	23 26	23 4	22 52	22 40	22 26	22 9	21 49
19	1 15	0 57	0 37	0 14	0 0	....	....	....	23 51	23 39	23 25	23 9	22 49
20	2 9	1 51	1 32	1 10	0 56	0 42	0 24	0 1	....	....	....	....	....
21	3 1	2 44	2 27	2 6	1 55	1 41	1 25	1 5	0 56	0 45	0 33	0 19	0 2
22	3 49	3 35	3 20	3 3	2 54	2 42	2 29	2 12	2 5	1 56	1 46	1 35	1 22
23	4 35	4 24	4 13	3 59	3 52	3 43	3 33	3 20	3 14	3 8	3 0	2 52	2 43
24	5 19	5 11	5 3	4 54	4 49	4 43	4 36	4 27	4 23	4 19	4 14	4 9	4 3
25	6 1	5 57	5 52	5 47	5 45	5 42	5 38	5 33	5 31	5 29	5 27	5 24	5 21
26	6 41	6 41	6 40	6 40	6 40	6 39	6 39	6 39	6 38	6 38	6 38	6 38	6 38
27	7 22	7 25	7 28	7 32	7 35	7 37	7 40	7 44	7 46	7 47	7 49	7 52	7 54
28	8 3	8 10	8 17	8 25	8 30	8 35	8 42	8 49	8 52	8 56	9 1	9 6	9 11
Mar. 1	8 46	8 56	9 6	9 19	9 26	9 34	9 44	9 55	10 0	10 6	10 13	10 20	10 29
2	9 30	9 43	9 57	10 13	10 22	10 33	10 46	11 1	11 8	11 17	11 26	11 36	11 48
3	10 17	10 33	10 50	11 9	11 20	11 33	11 49	12 8	12 17	12 27	12 38	12 52	13 7
4	11 7	11 25	11 44	12 5	12 18	12 33	12 50	13 12	13 22	13 34	13 48	14 4	14 22
5	12 0	12 18	12 38	13 1	13 14	13 30	13 48	14 12	14 23	14 35	14 50	15 7	15 27
6	12 55	13 13	13 33	13 55	14 8	14 24	14 42	15 4	15 15	15 27	15 41	15 57	16 17
7	13 51	14 8	14 25	14 46	14 58	15 12	15 28	15 48	15 58	16 8	16 20	16 34	16 50
8	14 47	15 1	15 16	15 34	15 43	15 55	16 8	16 24	16 32	16 40	16 50	17 0	17 13
9	15 43	15 53	16 5	16 17	16 25	16 33	16 43	16 55	17 0	17 6	17 13	17 20	17 28
10	16 38	16 44	16 51	16 58	17 3	17 8	17 14	17 20	17 24	17 27	17 31	17 35	17 40
11	17 32	17 34	17 36	17 38	17 39	17 40	17 42	17 44	17 45	17 46	17 47	17 48	17 50
12	18 26	18 23	18 20	18 17	18 15	18 13	18 10	18 7	18 6	18 5	18 3	18 1	17 59
13	19 21	19 13	19 6	18 57	18 52	18 46	18 40	18 32	18 28	18 24	18 20	18 15	18 10
14	20 16	20 5	19 53	19 39	19 31	19 22	19 12	18 59	18 53	18 47	18 40	18 32	18 23
15	21 14	20 59	20 43	20 25	20 14	20 2	19 48	19 31	19 23	19 14	19 5	18 54	18 40
16	22 11	21 54	21 36	21 15	21 2	20 48	20 32	20 11	20 1	19 50	19 38	19 24	19 7
17	23 8	22 50	22 30	22 8	21 55	21 39	21 21	20 59	20 48	20 36	20 22	20 6	19 47
18	....	23 46	23 26	23 4	22 51	22 36	22 18	21 55	21 45	21 33	21 18	21 2	20 43
19	0 4	....	....	....	23 49	23 36	23 19	22 58	22 49	22 38	22 25	22 11	21 54
20	0 57	0 40	0 22	0 1	....	....	....	....	23 57	23 48	23 37	23 25	23 12
21	1 47	1 32	1 16	0 59	0 48	0 36	0 22	0 5	....	....	....	....	....
22	2 34	2 22	2 9	1 55	1 46	1 37	1 26	1 12	1 6	0 59	0 51	0 42	0 32
23	3 18	3 9	3 0	2 50	2 43	2 37	2 29	2 19	2 14	2 10	2 4	1 58	1 51
24	4 0	3 55	3 49	3 43	3 39	3 35	3 30	3 25	3 22	3 19	3 16	3 13	3 8
25	4 41	4 39	4 37	4 36	4 34	4 33	4 32	4 30	4 29	4 28	4 28	4 26	4 25
26	5 21	5 23	5 25	5 28	5 29	5 31	5 32	5 35	5 36	5 37	5 38	5 40	5 41
27	6 2	6 8	6 14	6 20	6 24	6 28	6 34	6 40	6 43	6 46	6 50	6 53	6 58
28	6 44	6 53	7 3	7 14	7 20	7 27	7 36	7 46	7 50	7 56	8 2	8 8	8 16
29	7 28	7 40	7 53	8 8	8 17	8 26	8 38	8 52	8 59	9 6	9 14	9 24	9 34
30	8 15	8 29	8 45	9 3	9 14	9 26	9 40	9 58	10 7	10 16	10 27	10 39	10 53
31	9 3	9 20	9 38	9 59	10 11	10 25	10 42	11 3	11 13	11 24	11 36	11 51	12 9
Apr. 1	9 55	10 13	10 32	10 54	11 8	11 23	11 41	12 3	12 14	12 26	12 40	12 56	13 16
2	10 48	11 6	11 26	11 48	12 1	12 16	12 35	12 57	13 8	13 20	13 34	13 51	14 10
3	11 42	11 59	12 18	12 39	12 51	13 5	13 22	13 43	13 53	14 4	14 16	14 31	14 48

LOCAL ASTRONOMICAL MEAN TIME OF MOONSET, MERIDIAN OF GREENWICH, 1918.

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Date.	Lat. 0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Feb. 16	10 55	11 10	11 26	11 45	11 55	12 8	12 22	12 40	12 48	12 58	13 8	13 21	13 35
17	11 51	12 8	12 27	12 48	13 1	13 15	13 32	13 54	14 4	14 15	14 28	14 43	15 2
18	12 47	13 5	13 25	13 48	14 1	14 17	14 35	14 58	15 9	15 22	15 36	15 53	16 13
19	13 42	14 0	14 20	14 42	14 56	15 11	15 29	15 52	16 3	16 15	16 29	16 46	17 5
20	14 34	14 52	15 10	15 31	15 44	15 58	16 14	16 35	16 45	16 56	17 8	17 23	17 40
21	15 25	15 40	15 56	16 14	16 25	16 37	16 52	17 9	17 17	17 26	17 37	17 48	18 2
22	16 12	16 24	16 37	16 52	17 1	17 11	17 22	17 36	17 43	17 50	17 58	18 7	18 17
23	16 57	17 7	17 16	17 26	17 33	17 40	17 49	17 58	18 3	18 8	18 14	18 20	18 27
24	17 39	17 45	17 51	17 58	18 2	18 7	18 12	18 18	18 21	18 24	18 27	18 31	18 35
25	18 21	18 23	18 25	18 28	18 29	18 31	18 33	18 35	18 36	18 37	18 39	18 40	18 42
26	19 1	19 0	18 58	18 57	18 56	18 55	18 54	18 52	18 51	18 51	18 50	18 49	18 48
27	19 42	19 37	19 32	19 26	19 23	19 19	19 14	19 9	19 7	19 4	19 1	18 58	18 55
28	20 24	20 15	20 7	19 57	19 51	19 44	19 37	19 28	19 23	19 19	19 14	19 8	19 2
Mar. 1	21 7	20 56	20 43	20 30	20 21	20 12	20 1	19 49	19 43	19 36	19 29	19 20	19 11
2	21 53	21 38	21 23	21 6	20 55	20 44	20 30	20 14	20 6	19 57	19 48	19 37	19 24
3	22 41	22 24	22 7	21 46	21 34	21 21	21 5	20 45	20 36	20 25	20 13	20 0	19 44
4	23 32	23 14	22 55	22 32	22 20	22 4	21 46	21 24	21 14	21 2	20 48	20 32	20 12
5	....	....	23 48	23 25	23 11	22 56	22 37	22 14	22 3	21 50	21 36	21 19	20 58
6	0 26	0 8	....	....	....	23 55	23 38	23 16	23 5	22 53	22 39	22 23	22 4
7	1 22	1 4	0 45	0 23	0 10	....	....	....	....	....	23 56	23 43	23 27
8	2 18	2 2	1 45	1 26	1 15	1 2	0 46	0 27	0 18	0 8	....	....	....
9	3 14	3 1	2 48	2 32	2 23	2 13	2 1	1 46	1 39	1 31	1 22	1 12	1 1
10	4 9	4 0	3 51	3 40	3 34	3 27	3 19	3 9	3 4	2 59	2 54	2 47	2 40
11	5 3	4 59	4 54	4 49	4 46	4 43	4 39	4 34	4 32	4 29	4 27	4 24	4 20
12	5 57	5 58	5 58	5 59	5 59	5 59	6 0	6 0	6 0	6 1	6 1	6 1	6 1
13	6 52	6 57	7 2	7 9	7 12	7 16	7 21	7 26	7 29	7 32	7 35	7 39	7 43
14	7 47	7 56	8 7	8 18	8 25	8 33	8 41	8 52	8 58	9 3	9 9	9 16	9 24
15	8 43	8 57	9 11	9 28	9 37	9 48	10 1	10 16	10 24	10 32	10 42	10 52	11 4
16	9 41	9 57	10 15	10 35	10 46	11 0	11 16	11 36	11 45	11 56	12 8	12 22	12 38
17	10 39	10 57	11 16	11 38	11 51	12 6	12 24	12 46	12 57	13 9	13 23	13 39	13 58
18	11 35	11 54	12 14	12 36	12 50	13 5	13 23	13 46	13 56	14 9	14 23	14 39	14 59
19	12 30	12 47	13 6	13 28	13 40	13 55	14 12	14 33	14 43	14 54	15 8	15 22	15 40
20	13 21	13 37	13 54	14 13	14 24	14 37	14 52	15 10	15 19	15 28	15 39	15 52	16 6
21	14 10	14 23	14 37	14 53	15 2	15 13	15 25	15 40	15 46	15 54	16 3	16 12	16 23
22	14 55	15 5	15 16	15 28	15 35	15 43	15 52	16 4	16 9	16 14	16 20	16 28	16 35
23	15 38	15 45	15 52	16 0	16 5	16 10	16 17	16 24	16 27	16 31	16 35	16 39	16 44
24	16 20	16 23	16 27	16 31	16 33	16 35	16 38	16 42	16 44	16 46	16 47	16 50	16 52
25	17 0	17 0	17 0	17 0	17 0	17 0	16 59	16 59	16 59	16 59	16 58	16 58	16 53
26	17 41	17 37	17 33	17 29	17 26	17 24	17 20	17 16	17 14	17 12	17 10	17 8	17 5
27	18 23	18 16	18 8	17 59	17 54	17 49	17 42	17 34	17 31	17 27	17 23	17 18	17 12
28	19 6	18 55	18 44	18 32	18 24	18 16	18 6	17 55	17 50	17 44	17 37	17 30	17 22
29	19 50	19 37	19 23	19 7	18 57	18 47	18 34	18 19	18 12	18 4	17 55	17 45	17 34
30	20 38	20 22	20 6	19 46	19 35	19 22	19 7	18 48	18 40	18 30	18 19	18 6	17 51
31	21 28	21 11	20 52	20 30	20 18	20 3	19 46	19 25	19 14	19 3	18 50	18 35	18 17
Apr. 1	22 20	22 2	21 42	21 20	21 6	20 51	20 33	20 10	19 59	19 47	19 33	19 16	18 56
2	23 14	22 56	22 37	22 15	22 2	21 47	21 29	21 7	20 56	20 44	20 30	20 14	19 54
3	....	23 52	23 34	23 14	23 2	22 48	22 32	22 12	22 2	21 52	21 40	21 25	21 9

70331°—1917——5

LOCAL ASTRONOMICAL MEAN TIME OF MOONRISE, MERIDIAN OF GREENWICH, 1918.

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For other longitudes and for southern latitudes see page 78.

Date. \ Lat.		0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
		h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Apr.	1	9 55	10 13	10 32	10 54	11 8	11 23	11 41	12 3	12 14	12 26	12 40	12 56	13 16
	2	10 48	11 6	11 26	11 48	12 1	12 16	12 35	12 57	13 8	13 20	13 34	13 51	14 10
	3	11 42	11 59	12 18	12 39	12 51	13 5	13 22	13 43	13 53	14 4	14 16	14 31	14 48
	4	12 36	12 51	13 7	13 26	13 37	13 49	14 3	14 21	14 29	14 39	14 49	15 1	15 14
	5	13 30	13 42	13 55	14 10	14 18	14 28	14 39	14 52	14 59	15 6	15 13	15 22	15 32
	6	14 23	14 32	14 40	14 50	14 56	15 3	15 10	15 19	15 24	15 28	15 33	15 39	15 45
	7	15 16	15 20	15 24	15 29	15 32	15 35	15 39	15 43	15 45	15 48	15 50	15 53	15 56
	8	16 9	16 8	16 8	16 8	16 7	16 7	16 7	16 6	16 6	16 6	16 6	16 5	16 5
	9	17 3	16 58	16 53	16 47	16 43	16 40	16 35	16 30	16 28	16 25	16 22	16 19	16 16
	10	17 58	17 49	17 39	17 28	17 22	17 14	17 6	16 56	16 52	16 46	16 41	16 35	16 28
	11	18 56	18 43	18 29	18 13	18 4	17 53	17 41	17 26	17 20	17 12	17 4	16 54	16 44
	12	19 55	19 39	19 22	19 2	18 51	18 38	18 22	18 4	17 55	17 45	17 34	17 21	17 7
	13	20 54	20 36	20 18	19 56	19 43	19 28	19 11	18 50	18 39	18 28	18 15	18 0	17 42
	14	21 53	21 35	21 15	20 53	20 40	20 25	20 7	19 44	19 34	19 22	19 8	18 52	18 33
	15	22 49	22 31	22 13	21 52	21 39	21 25	21 8	20 47	20 37	20 26	20 13	19 58	19 40
	16	23 41	23 26	23 9	22 50	22 40	22 27	22 12	21 54	21 45	21 35	21 24	21 12	20 57
	17	....	....	....	23 48	23 39	23 29	23 17	23 2	22 55	22 48	22 39	22 29	22 18
	18	0 30	0 17	0 3	....	....	....	....	....	....	23 59	23 53	23 46	23 38
	19	1 15	1 6	0 55	0 44	0 37	0 30	0 21	0 10	0 5	....	....	....	....
	20	1 58	1 52	1 45	1 38	1 33	1 29	1 23	1 16	1 13	1 10	1 6	1 1	0 57
	21	2 39	2 37	2 34	2 30	2 29	2 26	2 24	2 21	2 20	2 18	2 17	2 15	2 13
	22	3 20	3 21	3 22	3 23	3 23	3 24	3 25	3 26	3 26	3 27	3 27	3 28	3 29
	23	4 1	4 5	4 10	4 15	4 18	4 22	4 26	4 30	4 33	4 35	4 38	4 41	4 45
	24	4 42	4 50	4 58	5 8	5 14	5 20	5 27	5 36	5 40	5 45	5 50	5 55	6 2
	25	5 26	5 37	5 49	6 2	6 10	6 19	6 30	6 42	6 48	6 55	7 2	7 11	7 20
	26	6 12	6 26	6 41	6 58	7 8	7 19	7 33	7 49	7 57	8 6	8 15	8 27	8 40
	27	7 0	7 17	7 34	7 54	8 6	8 19	8 35	8 55	9 4	9 15	9 27	9 41	9 57
	28	7 51	8 9	8 28	8 50	9 3	9 17	9 35	9 57	10 7	10 19	10 33	10 49	11 8
	29	8 44	9 2	9 22	9 44	9 57	10 12	10 30	10 53	11 4	11 16	11 30	11 46	12 5
	30	9 38	9 55	10 14	10 36	10 48	11 3	11 20	11 41	11 51	12 2	12 15	12 30	12 48
May	1	10 32	10 47	11 4	11 23	11 34	11 47	12 2	12 21	12 30	12 39	12 50	13 3	13 17
	2	11 24	11 37	11 51	12 7	12 16	12 27	12 39	12 54	13 0	13 8	13 17	13 26	13 37
	3	12 16	12 26	12 36	12 47	12 54	13 2	13 10	13 21	13 26	13 31	13 37	13 44	13 51
	4	13 7	13 13	13 19	13 26	13 29	13 34	13 39	13 45	13 48	13 51	13 55	13 58	14 2
	5	13 58	14 0	14 1	14 3	14 4	14 5	14 6	14 8	14 9	14 9	14 10	14 11	14 12
	6	14 50	14 46	14 44	14 40	14 38	14 36	14 33	14 30	14 29	14 27	14 26	14 24	14 22
	7	15 43	15 36	15 28	15 19	15 14	15 8	15 2	14 54	14 51	14 47	14 43	14 38	14 32
	8	16 38	16 27	16 15	16 2	15 54	15 45	15 34	15 22	15 16	15 10	15 3	14 55	14 47
	9	17 36	17 22	17 6	16 48	16 38	16 26	16 12	15 55	15 48	15 39	15 29	15 18	15 6
	10	18 36	18 19	18 1	17 40	17 28	17 14	16 57	16 37	16 28	16 17	16 5	15 51	15 34
	11	19 36	19 18	18 59	18 36	18 23	18 8	17 51	17 29	17 18	17 6	16 53	16 37	16 18
	12	20 34	20 17	19 58	19 36	19 23	19 9	18 51	18 29	18 19	18 7	17 54	17 38	17 20
	13	21 30	21 14	20 57	20 37	20 25	20 12	19 56	19 36	19 27	19 17	19 5	18 51	18 35
	14	22 22	22 8	21 53	21 36	21 27	21 16	21 2	20 46	20 39	20 30	20 21	20 10	19 57
	15	23 9	22 58	22 47	22 34	22 27	22 18	22 8	21 56	21 50	21 44	21 37	21 29	21 20
	16	23 54	23 47	23 39	23 30	23 25	23 19	23 12	23 4	23 0	22 56	22 51	22 46	22 40
	17	....	....	....	....	....	....	....	....	....	....	....	....	23 58
	18	0 36	0 32	0 28	0 23	0 21	0 18	0 14	0 10	0 8	0 6	0 4	0 1	....

LOCAL ASTRONOMICAL MEAN TIME OF MOONSET, MERIDIAN OF GREENWICH, 1918.

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Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Apr. 1	22 20	22 2	21 42	21 20	21 6	20 51	20 33	20 10	19 59	19 47	19 33	19 16	18 56
2	23 14	22 56	22 37	22 15	22 2	21 47	21 29	21 7	20 56	20 44	20 30	20 14	19 54
3	....	23 52	23 34	23 14	23 2	22 48	22 32	22 12	22 2	21 52	21 40	21 25	21 9
4	0 8	....	....	....	....	23 55	23 42	23 25	23 18	23 9	22 59	22 48	22 35
5	1 2	0 48	0 34	0 16	0 7	....	....	....	....	....	....	....	....
6	1 56	1 45	1 34	1 21	1 14	1 6	0 56	0 43	0 38	0 32	0 25	0 17	0 8
7	2 48	2 42	2 35	2 27	2 23	2 18	2 12	2 5	2 1	1 58	1 54	1 49	1 44
8	3 41	3 39	3 37	3 35	3 33	3 32	3 30	3 28	3 27	3 26	3 25	3 23	3 22
9	4 34	4 37	4 40	4 43	4 45	4 47	4 49	4 52	4 53	4 55	4 57	4 58	5 0
10	5 29	5 36	5 44	5 52	5 58	6 3	6 10	6 18	6 22	6 26	6 31	6 36	6 42
11	6 25	6 37	6 49	7 3	7 11	7 20	7 31	7 44	7 50	7 57	8 5	8 13	8 23
12	7 24	7 38	7 54	8 13	8 23	8 35	8 50	9 7	9 16	9 25	9 36	9 48	10 2
13	8 23	8 40	8 59	9 20	9 32	9 47	10 4	10 25	10 35	10 46	10 59	11 14	11 32
14	9 23	9 41	10 0	10 23	10 36	10 51	11 9	11 31	11 42	11 54	12 8	12 24	12 44
15	10 20	10 38	10 57	11 19	11 32	11 46	12 4	12 26	12 36	12 47	13 1	13 16	13 34
16	11 14	11 31	11 48	12 8	12 20	12 33	12 49	13 8	13 17	13 27	13 38	13 52	14 7
17	12 5	12 19	12 34	12 50	13 0	13 12	13 25	13 41	13 48	13 56	14 6	14 16	14 28
18	12 52	13 3	13 15	13 28	13 36	13 44	13 55	14 7	14 12	14 18	14 25	14 33	14 42
19	13 36	13 44	13 52	14 2	14 7	14 13	14 20	14 28	14 32	14 36	14 41	14 46	14 52
20	14 18	14 23	14 27	14 32	14 35	14 39	14 43	14 47	14 50	14 52	14 54	14 57	15 0
21	14 59	15 0	15 1	15 2	15 3	15 3	15 4	15 5	15 6	15 6	15 6	15 7	15 8
22	15 40	15 37	15 34	15 31	15 30	15 27	15 25	15 22	15 21	15 20	15 18	15 16	15 14
23	16 21	16 15	16 8	16 1	15 57	15 52	15 47	15 40	15 37	15 34	15 30	15 26	15 22
24	17 4	16 54	16 44	16 33	16 27	16 19	16 11	16 0	15 55	15 50	15 45	15 38	15 31
25	17 48	17 36	17 23	17 8	16 59	16 49	16 37	16 23	16 17	16 10	16 1	15 52	15 42
26	18 35	18 20	18 4	17 46	17 35	17 23	17 9	16 51	16 43	16 34	16 24	16 12	15 59
27	19 25	19 8	18 50	18 29	18 17	18 3	17 46	17 26	17 16	17 5	16 53	16 39	16 22
28	20 17	19 59	19 40	19 17	19 4	18 49	18 31	18 9	17 59	17 47	17 33	17 17	16 58
29	21 10	20 52	20 33	20 11	19 58	19 43	19 25	19 2	18 52	18 40	18 26	18 9	17 50
30	22 4	21 47	21 29	21 8	20 56	20 42	20 26	20 5	19 55	19 44	19 31	19 17	18 59
May 1	22 57	22 42	22 27	22 9	21 58	21 46	21 32	21 15	21 6	20 57	20 47	20 35	20 21
2	23 49	23 38	23 26	23 12	23 3	22 54	22 43	22 30	22 23	22 16	22 8	21 59	21 50
3	....	....	....	....	....	....	23 56	23 47	23 43	23 39	23 33	23 28	23 21
4	0 40	0 33	0 25	0 15	0 10	0 3	....	....	....	....	....	....	....
5	1 31	1 28	1 24	1 19	1 17	1 14	1 10	1 6	1 4	1 2	1 0	0 57	0 54
6	2 22	2 23	2 24	2 25	2 25	2 26	2 26	2 27	2 27	2 28	2 28	2 28	2 29
7	3 14	3 20	3 25	3 31	3 35	3 39	3 44	3 49	3 52	3 55	3 58	4 2	4 6
8	4 9	4 18	4 28	4 40	4 46	4 54	5 2	5 13	5 18	5 24	5 30	5 36	5 44
9	5 5	5 19	5 33	5 49	5 58	6 9	6 21	6 37	6 44	6 52	7 1	7 12	7 24
10	6 4	6 20	6 38	6 58	7 9	7 22	7 38	7 58	8 7	8 18	8 29	8 43	8 59
11	7 5	7 22	7 42	8 3	8 16	8 31	8 49	9 10	9 21	9 33	9 46	10 2	10 21
12	8 4	8 22	8 42	9 4	9 17	9 32	9 50	10 12	10 22	10 34	10 48	11 4	11 22
13	9 2	9 19	9 37	9 58	10 10	10 24	10 40	11 1	11 10	11 21	11 33	11 47	12 4
14	9 55	10 10	10 26	10 44	10 55	11 7	11 21	11 38	11 46	11 55	12 5	12 17	12 30
15	10 45	10 57	11 10	11 25	11 33	11 43	11 54	12 8	12 14	12 21	12 29	12 37	12 47
16	11 31	11 40	11 50	12 0	12 7	12 14	12 22	12 32	12 36	12 41	12 46	12 53	12 59
17	12 15	12 20	12 26	12 33	12 37	12 41	12 46	12 52	12 54	12 58	13 1	13 4	13 8
18	12 56	12 58	13 1	13 3	13 4	13 6	13 8	13 10	13 11	13 12	13 13	13 15	13 16

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Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
May 17	....	....	....	....	....	....	....	....	....	....	....	....	23 58
18	0 36	0 32	0 28	0 23	0 21	0 18	0 14	0 10	0 8	0 6	0 4	0 1	....
19	1 17	1 17	1 16	1 16	1 16	1 15	1 15	1 15	1 14	1 14	1 14	1 14	1 14
20	1 58	2 1	2 4	2 8	2 10	2 13	2 16	2 20	2 21	2 23	2 25	2 27	2 30
21	2 39	2 46	2 53	3 1	3 6	3 11	3 17	3 24	3 28	3 32	3 36	3 41	3 46
22	3 22	3 32	3 43	3 55	4 2	4 10	4 19	4 31	4 36	4 42	4 48	4 56	5 4
23	4 7	4 20	4 34	4 50	4 59	5 10	5 22	5 37	5 44	5 52	6 1	6 11	6 23
24	4 55	5 11	5 27	5 46	5 57	6 10	6 25	6 44	6 53	7 3	7 14	7 27	7 42
25	5 46	6 3	6 22	6 43	6 55	7 10	7 27	7 48	7 58	8 10	8 23	8 38	8 56
26	6 39	6 57	7 16	7 38	7 52	8 7	8 25	8 47	8 58	9 10	9 24	9 40	10 0
27	7 33	7 51	8 10	8 32	8 45	8 59	9 17	9 38	9 49	10 0	10 14	10 29	10 48
28	8 28	8 44	9 1	9 21	9 33	9 46	10 2	10 21	10 30	10 41	10 52	11 5	11 21
29	9 21	9 35	9 50	10 6	10 16	10 27	10 40	10 56	11 4	11 12	11 21	11 31	11 43
30	10 13	10 24	10 35	10 48	10 55	11 4	11 13	11 25	11 31	11 36	11 43	11 50	11 59
31	11 4	11 11	11 18	11 26	11 31	11 36	11 42	11 50	11 53	11 57	12 1	12 5	12 10
June 1	11 54	11 56	11 59	12 3	12 5	12 7	12 9	12 12	12 14	12 15	12 17	12 18	12 20
2	12 44	12 42	12 40	12 39	12 38	12 37	12 36	12 34	12 34	12 33	12 32	12 31	12 30
3	13 34	13 29	13 23	13 16	13 12	13 8	13 3	12 57	12 54	12 51	12 48	12 44	12 40
4	14 27	14 18	14 7	13 55	13 49	13 41	13 32	13 22	13 17	13 12	13 6	12 59	12 52
5	15 22	15 9	14 55	14 39	14 30	14 19	14 7	13 52	13 45	13 37	13 28	13 19	13 8
6	16 20	16 4	15 47	15 27	15 16	15 3	14 47	14 28	14 20	14 10	13 58	13 46	13 31
7	17 19	17 2	16 43	16 21	16 8	15 54	15 36	15 15	15 4	14 53	14 40	14 25	14 7
8	18 19	18 1	17 42	17 19	17 6	16 51	16 33	16 11	16 1	15 49	15 35	15 19	15 0
9	19 16	18 59	18 41	18 20	18 8	17 54	17 37	17 16	17 6	16 55	16 42	16 28	16 10
10	20 10	19 55	19 39	19 21	19 10	18 58	18 44	18 26	18 18	18 8	17 58	17 46	17 32
11	21 0	20 48	20 35	20 21	20 12	20 3	19 51	19 37	19 31	19 23	19 15	19 6	18 56
12	21 47	21 38	21 29	21 18	21 12	21 5	20 57	20 47	20 43	20 37	20 32	20 26	20 18
13	22 31	22 26	22 20	22 13	22 10	22 6	22 1	21 55	21 52	21 49	21 46	21 42	21 38
14	23 13	23 11	23 9	23 7	23 6	23 5	23 3	23 1	23 0	22 59	22 58	22 57	22 56
15	23 54	23 56	23 58	....	....	....	....	....	....	....	....	....	....
16	....	....	....	0 0	0 1	0 2	0 4	0 6	0 7	0 8	0 9	0 11	0 12
17	0 35	0 40	0 46	0 52	0 56	1 0	1 5	1 11	1 14	1 17	1 20	1 24	1 28
18	1 17	1 26	1 35	1 45	1 51	1 58	2 6	2 16	2 21	2 26	2 32	2 38	2 45
19	2 1	2 13	2 25	2 40	2 48	2 57	3 9	3 23	3 29	3 36	3 44	3 53	4 3
20	2 48	3 2	3 18	3 35	3 46	3 58	4 12	4 30	4 38	4 47	4 57	5 9	5 23
21	3 37	3 54	4 12	4 32	4 44	4 58	5 15	5 35	5 45	5 56	6 8	6 23	6 40
22	4 30	4 48	5 7	5 29	5 42	5 57	6 15	6 37	6 47	7 0	7 14	7 30	7 49
23	5 24	5 42	6 1	6 24	6 37	6 52	7 10	7 32	7 43	7 55	8 8	8 24	8 44
24	6 20	6 36	6 55	7 16	7 28	7 42	7 58	8 19	8 28	8 39	8 52	9 6	9 22
25	7 15	7 30	7 45	8 3	8 14	8 26	8 40	8 57	9 5	9 14	9 24	9 36	9 49
26	8 9	8 20	8 33	8 47	8 55	9 4	9 15	9 28	9 35	9 41	9 49	9 57	10 7
27	9 1	9 9	9 17	9 27	9 32	9 39	9 46	9 55	9 59	10 4	10 8	10 14	10 20
28	9 51	9 55	10 0	10 4	10 7	10 10	10 14	10 18	10 20	10 23	10 25	10 28	10 30
29	10 41	10 41	10 41	10 41	10 41	10 41	10 40	10 40	10 40	10 40	10 40	10 40	10 40
30	11 31	11 27	11 22	11 17	11 14	11 11	11 7	11 2	11 0	10 58	10 55	10 53	10 49
July 1	12 23	12 14	12 5	11 55	11 49	11 43	11 35	11 26	11 22	11 17	11 12	11 7	11 0
2	13 16	13 4	12 51	12 36	12 28	12 18	12 7	11 54	11 47	11 41	11 33	11 24	11 15

LOCAL ASTRONOMICAL MEAN TIME OF MOONSET, MERIDIAN OF GREENWICH, 1918.

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Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
May 17	12 15	12 20	12 26	12 33	12 37	12 41	12 46	12 52	12 54	12 58	13 1	13 4	13 8
18	12 56	12 58	13 1	13 3	13 4	13 6	13 8	13 10	13 11	13 12	13 13	13 15	13 16
19	13 37	13 36	13 34	13 32	13 31	13 30	13 29	13 27	13 26	13 26	13 25	13 24	13 23
20	14 18	14 13	14 8	14 2	13 59	13 55	13 50	13 45	13 43	13 40	13 37	13 34	13 31
21	15 0	14 52	14 43	14 33	14 28	14 21	14 13	14 4	14 0	13 56	13 51	13 45	13 39
22	15 44	15 32	15 20	15 7	14 59	14 50	14 39	14 26	14 20	14 14	14 7	13 59	13 50
23	16 30	16 16	16 1	15 44	15 34	15 22	15 9	14 53	14 45	14 36	14 27	14 16	14 4
24	17 19	17 3	16 46	16 26	16 14	16 0	15 45	15 25	15 16	15 6	14 54	14 40	14 25
25	18 11	17 54	17 34	17 13	17 0	16 45	16 28	16 6	15 56	15 44	15 30	15 15	14 56
26	19 5	18 47	18 28	18 5	17 52	17 37	17 19	16 56	16 46	16 34	16 20	16 3	15 44
27	19 59	19 42	19 24	19 2	18 50	18 36	18 18	17 57	17 47	17 35	17 22	17 7	16 49
28	20 54	20 38	20 22	20 3	19 52	19 39	19 24	19 6	18 57	18 47	18 36	18 23	18 8
29	21 46	21 34	21 21	21 6	20 56	20 46	20 34	20 20	20 13	20 6	19 57	19 47	19 36
30	22 38	22 29	22 19	22 8	22 2	21 55	21 47	21 36	21 32	21 26	21 21	21 14	21 7
31	23 28	23 23	23 18	23 12	23 8	23 4	23 0	22 54	22 52	22 49	22 46	22 42	22 38
June 1	....	....	....	....	....	....	....	....	....	....	....	....	....
2	0 17	0 17	0 16	0 15	0 15	0 14	0 13	0 12	0 12	0 12	0 11	0 10	0 10
3	1 8	1 11	1 15	1 19	1 22	1 24	1 28	1 32	1 33	1 36	1 38	1 40	1 43
4	1 59	2 7	2 15	2 25	2 30	2 36	2 44	2 52	2 57	3 1	3 6	3 12	3 18
5	2 53	3 5	3 17	3 32	3 40	3 49	4 0	4 14	4 20	4 27	4 35	4 44	4 54
6	3 50	4 4	4 20	4 39	4 49	5 2	5 16	5 34	5 42	5 52	6 3	6 15	6 29
7	4 48	5 5	5 24	5 45	5 57	6 11	6 28	6 50	6 59	7 11	7 24	7 38	7 56
8	5 48	6 6	6 25	6 48	7 1	7 16	7 34	7 56	8 7	8 19	8 32	8 48	9 8
9	6 46	7 4	7 23	7 45	7 58	8 12	8 29	8 51	9 1	9 12	9 25	9 40	9 58
10	7 42	7 58	8 15	8 35	8 46	8 59	9 15	9 34	9 42	9 52	10 3	10 16	10 31
11	8 35	8 48	9 2	9 19	9 28	9 39	9 52	10 7	10 14	10 22	10 31	10 40	10 52
12	9 23	9 34	9 44	9 57	10 4	10 13	10 22	10 33	10 39	10 44	10 50	10 58	11 6
13	10 9	10 16	10 23	10 31	10 36	10 42	10 48	10 55	10 59	11 2	11 7	11 11	11 16
14	10 52	10 55	10 59	11 3	11 5	11 8	11 11	11 15	11 16	11 18	11 20	11 22	11 25
15	11 33	11 33	11 33	11 33	11 33	11 33	11 32	11 32	11 32	11 32	11 32	11 32	11 32
16	12 14	12 10	12 6	12 2	12 0	11 57	11 54	11 50	11 48	11 46	11 44	11 42	11 40
17	12 55	12 48	12 41	12 33	12 28	12 22	12 16	12 8	12 5	12 1	11 57	11 52	11 47
18	13 38	13 28	13 17	13 5	12 58	12 50	12 41	12 30	12 24	12 18	12 12	12 5	11 57
19	14 23	14 10	13 56	13 40	13 31	13 21	13 8	12 53	12 47	12 39	12 30	12 21	12 10
20	15 11	14 56	14 39	14 20	14 9	13 56	13 41	13 23	13 14	13 5	12 54	12 42	12 27
21	16 2	15 45	15 26	15 5	14 52	14 38	14 21	14 0	13 50	13 39	13 26	13 11	12 54
22	16 56	16 38	16 18	15 56	15 43	15 28	15 10	14 47	14 36	14 24	14 10	13 54	13 35
23	17 51	17 33	17 14	16 52	16 39	16 24	16 7	15 45	15 34	15 22	15 9	14 53	14 34
24	18 46	18 30	18 13	17 53	17 41	17 28	17 12	16 52	16 43	16 32	16 21	16 7	15 51
25	19 41	19 27	19 13	18 56	18 47	18 36	18 22	18 6	17 59	17 50	17 41	17 30	17 18
26	20 34	20 24	20 13	20 0	19 53	19 45	19 35	19 24	19 18	19 12	19 6	18 58	18 49
27	21 25	21 19	21 12	21 5	21 0	20 56	20 50	20 43	20 39	20 36	20 32	20 27	20 22
28	22 15	22 13	22 11	22 10	22 7	22 6	22 4	22 2	22 0	21 59	21 58	21 56	21 55
29	23 5	23 7	23 10	23 12	23 14	23 16	23 18	23 20	23 22	23 23	23 24	23 26	23 28
30	23 56	....	....	....	....	....	....	....	....	....	....	....	....
July 1	....	0 2	0 9	0 17	0 21	0 27	0 33	0 40	0 43	0 47	0 51	0 56	1 1
2	0 48	0 58	1 9	1 22	1 29	1 38	1 48	1 59	2 5	2 11	2 18	2 26	2 35

TABLE VI.

LOCAL ASTRONOMICAL MEAN TIME OF MOONRISE, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

To obtain standard time, see directions on page 44.

For other longitudes and for southern latitudes see page 78.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
July 1	12 23	12 14	12 5	11 55	11 49	11 43	11 35	11 26	11 22	11 17	11 12	11 7	11 0
2	13 16	13 4	12 51	12 36	12 28	12 18	12 7	11 54	11 47	11 41	11 33	11 24	11 15
3	14 11	13 56	13 40	13 22	13 11	12 58	12 44	12 27	12 18	12 10	11 59	11 48	11 34
4	15 8	14 51	14 33	14 12	14 0	13 45	13 29	13 8	12 58	12 47	12 35	12 20	12 4
5	16 7	15 49	15 29	15 7	14 54	14 39	14 21	13 59	13 48	13 36	13 23	13 7	12 48
6	17 4	16 46	16 28	16 6	15 53	15 38	15 21	15 0	14 49	14 38	14 24	14 9	13 50
7	17 59	17 43	17 26	17 6	16 55	16 42	16 26	16 7	15 58	15 48	15 36	15 23	15 7
8	18 51	18 37	18 23	18 7	17 57	17 46	17 33	17 18	17 10	17 2	16 53	16 42	16 30
9	19 39	19 29	19 18	19 6	18 58	18 50	18 40	18 29	18 23	18 17	18 10	18 3	17 54
10	20 25	20 18	20 10	20 2	19 58	19 52	19 46	19 38	19 35	19 31	19 26	19 22	19 16
11	21 8	21 4	21 1	20 57	20 55	20 52	20 49	20 46	20 44	20 42	20 40	20 38	20 36
12	21 49	21 50	21 50	21 50	21 50	21 51	21 51	21 52	21 52	21 52	21 52	21 53	21 53
13	22 30	22 34	22 38	22 43	22 46	22 49	22 52	22 56	22 59	23 1	23 3	23 6	23 9
14	23 12	23 19	23 27	23 36	23 41	23 47	23 54	....	....	....	....	....	....
15	23 55	....	....	....	....	....	....	0 2	0 6	0 10	0 14	0 20	0 26
16	....	0 5	0 16	0 29	0 36	0 45	0 55	1 7	1 13	1 19	1 26	1 34	1 42
17	0 40	0 53	1 8	1 24	1 33	1 44	1 57	2 13	2 21	2 29	2 38	2 49	3 1
18	1 28	1 43	2 0	2 20	2 31	2 44	2 59	3 18	3 28	3 38	3 49	4 3	4 18
19	2 18	2 36	2 54	3 16	3 28	3 43	4 0	4 22	4 32	4 44	4 57	5 12	5 31
20	3 12	3 30	3 49	4 11	4 24	4 40	4 58	5 20	5 31	5 43	5 57	6 13	6 33
21	4 7	4 24	4 43	5 5	5 18	5 32	5 50	6 11	6 21	6 33	6 46	7 1	7 19
22	5 3	5 19	5 36	5 55	6 6	6 20	6 35	6 54	7 2	7 12	7 23	7 36	7 51
23	5 58	6 11	6 25	6 41	6 51	7 1	7 14	7 28	7 35	7 43	7 52	8 1	8 12
24	6 52	7 2	7 12	7 24	7 31	7 38	7 47	7 57	8 2	8 8	8 14	8 20	8 28
25	7 45	7 50	7 56	8 3	8 7	8 12	8 17	8 23	8 25	8 28	8 32	8 35	8 40
26	8 37	8 38	8 40	8 41	8 42	8 43	8 44	8 46	8 47	8 47	8 48	8 49	8 50
27	9 28	9 25	9 22	9 18	9 16	9 14	9 11	9 8	9 7	9 6	9 4	9 2	9 0
28	10 20	10 13	10 5	9 56	9 52	9 46	9 40	9 32	9 29	9 25	9 20	9 16	9 11
29	11 12	11 2	10 50	10 37	10 29	10 20	10 10	9 58	9 53	9 47	9 40	9 33	9 24
30	12 7	11 53	11 38	11 21	11 11	10 59	10 46	10 30	10 22	10 14	10 4	9 54	9 42
31	13 3	12 47	12 29	12 9	11 57	11 43	11 27	11 8	10 59	10 48	10 36	10 23	10 7
Aug. 1	14 0	13 42	13 23	13 2	12 49	12 34	12 16	11 55	11 44	11 33	11 19	11 4	10 45
2	14 57	14 39	14 20	13 58	13 45	13 30	13 12	12 50	12 40	12 28	12 15	11 59	11 40
3	15 52	15 35	15 17	14 57	14 45	14 31	14 15	13 55	13 45	13 34	13 22	13 8	12 51
4	16 44	16 29	16 14	15 56	15 46	15 34	15 20	15 3	14 55	14 46	14 36	14 24	14 11
5	17 33	17 22	17 9	16 55	16 47	16 38	16 27	16 13	16 7	16 0	15 52	15 44	15 34
6	18 19	18 11	18 2	17 52	17 46	17 40	17 32	17 23	17 19	17 14	17 8	17 3	16 56
7	19 3	18 59	18 54	18 48	18 44	18 41	18 36	18 31	18 29	18 26	18 23	18 20	18 16
8	19 45	19 44	19 43	19 42	19 41	19 40	19 39	19 38	19 37	19 36	19 36	19 35	19 34
9	20 27	20 29	20 32	20 34	20 36	20 38	20 40	20 43	20 45	20 46	20 47	20 49	20 51
10	21 8	21 14	21 20	21 27	21 31	21 36	21 41	21 48	21 51	21 54	21 58	22 2	22 7
11	21 50	21 59	22 9	22 20	22 26	22 34	22 42	22 53	22 58	23 3	23 9	23 16	23 23
12	22 34	22 46	22 59	23 14	23 22	23 32	23 44	23 58	....	....	....	....	....
13	23 20	23 35	23 50	....	....	....	....	....	0 5	0 12	0 20	0 30	0 40
14	....	....	....	0 8	0 19	0 31	0 45	1 3	1 11	1 21	1 31	1 43	1 57
15	0 8	0 25	0 43	1 3	1 15	1 29	1 46	2 6	2 16	2 27	2 39	2 54	3 11
16	1 0	1 17	1 36	1 58	2 11	2 26	2 44	3 6	3 16	3 28	3 42	3 58	4 17

LOCAL ASTRONOMICAL MEAN TIME OF MOONSET, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

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For other longitudes and for southern latitudes see page 78.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
July 1	....	0 2	0 9	0 17	0 21	0 27	0 33	0 40	0 43	0 47	0 51	0 56	1 1
2	0 48	0 58	1 9	1 22	1 29	1 38	1 48	1 59	2 5	2 11	2 18	2 26	2 35
3	1 42	1 56	2 11	2 28	2 37	2 49	3 2	3 18	3 26	3 34	3 44	3 55	4 8
4	2 38	2 55	3 12	3 33	3 44	3 58	4 14	4 34	4 43	4 54	5 6	5 20	5 37
5	3 36	3 54	4 13	4 35	4 48	5 3	5 21	5 43	5 53	6 5	6 19	6 34	6 53
6	4 34	4 52	5 11	5 34	5 47	6 2	6 19	6 41	6 52	7 3	7 17	7 33	7 51
7	5 31	5 48	6 6	6 26	6 38	6 52	7 8	7 28	7 38	7 48	8 1	8 14	8 31
8	6 24	6 39	6 55	7 12	7 23	7 35	7 48	8 5	8 13	8 22	8 32	8 43	8 56
9	7 15	7 26	7 39	7 53	8 1	8 11	8 22	8 35	8 41	8 47	8 55	9 3	9 12
10	8 2	8 10	8 19	8 29	8 35	8 42	8 50	8 59	9 3	9 8	9 13	9 18	9 25
11	8 46	8 51	8 56	9 2	9 6	9 9	9 14	9 19	9 22	9 24	9 28	9 30	9 34
12	9 28	9 29	9 31	9 33	9 34	9 35	9 36	9 38	9 38	9 39	9 40	9 41	9 42
13	10 9	10 7	10 5	10 3	10 1	10 0	9 58	9 56	9 54	9 53	9 52	9 51	9 49
14	10 50	10 45	10 39	10 33	10 29	10 25	10 20	10 14	10 11	10 8	10 5	10 1	9 57
15	11 33	11 24	11 15	11 4	10 58	10 51	10 43	10 33	10 29	10 24	10 19	10 13	10 6
16	12 16	12 5	11 52	11 38	11 29	11 20	11 9	10 56	10 50	10 43	10 35	10 27	10 17
17	13 3	12 48	12 33	12 15	12 5	11 53	11 39	11 22	11 14	11 6	10 56	10 45	10 32
18	13 52	13 35	13 18	12 57	12 45	12 32	12 15	11 56	11 46	11 36	11 24	11 10	10 54
19	14 44	14 26	14 7	13 45	13 32	13 17	12 59	12 37	12 27	12 15	12 2	11 46	11 27
20	15 38	15 20	15 1	14 38	14 26	14 10	13 52	13 30	13 19	13 7	12 53	12 37	12 18
21	16 34	16 17	15 59	15 38	15 25	15 11	14 54	14 34	14 24	14 12	14 0	13 45	13 27
22	17 30	17 15	16 59	16 41	16 30	16 18	16 4	15 46	15 37	15 28	15 17	15 5	14 51
23	18 24	18 13	18 0	17 46	17 38	17 28	17 17	17 4	16 57	16 50	16 42	16 34	16 23
24	19 18	19 10	19 2	18 52	18 47	18 40	18 33	18 24	18 20	18 16	18 10	18 5	17 58
25	20 10	20 6	20 2	19 58	19 56	19 53	19 49	19 45	19 43	19 41	19 39	19 37	19 34
26	21 1	21 2	21 3	21 4	21 4	21 5	21 6	21 6	21 7	21 7	21 8	21 8	21 9
27	21 52	21 57	22 3	22 9	22 13	22 17	22 22	22 27	22 30	22 33	22 36	22 40	22 44
28	22 44	22 54	23 4	23 15	23 21	23 28	23 37	23 48	23 52	23 58	....	....	....
29	23 38	23 51	....	....	....	....	....	....	....	....	0 4	0 10	0 18
30	....	....	0 5	0 20	0 30	0 40	0 52	1 7	1 14	1 22	1 31	1 41	1 52
31	0 34	0 49	1 6	1 25	1 37	1 49	2 5	2 24	2 32	2 43	2 54	3 7	3 22
Aug. 1	1 30	1 48	2 7	2 28	2 41	2 55	3 12	3 34	3 44	3 56	4 9	4 24	4 42
2	2 27	2 45	3 5	3 27	3 40	3 55	4 13	4 35	4 45	4 57	5 11	5 27	5 46
3	3 23	3 41	3 59	4 20	4 33	4 47	5 4	5 25	5 35	5 46	5 58	6 13	6 30
4	4 17	4 33	4 49	5 8	5 19	5 32	5 47	6 5	6 13	6 23	6 33	6 46	7 0
5	5 8	5 21	5 35	5 50	5 59	6 10	6 22	6 37	6 43	6 51	6 59	7 9	7 19
6	5 56	6 6	6 16	6 28	6 35	6 43	6 51	7 2	7 7	7 13	7 19	7 26	7 33
7	6 41	6 47	6 54	7 2	7 6	7 11	7 17	7 24	7 27	7 31	7 34	7 39	7 43
8	7 24	7 27	7 30	7 33	7 36	7 38	7 40	7 44	7 45	7 46	7 48	7 50	7 52
9	8 6	8 5	8 4	8 4	8 3	8 3	8 2	8 2	8 1	8 0	8 0	8 0	8 0
10	8 47	8 43	8 39	8 34	8 31	8 28	8 24	8 20	8 18	8 15	8 13	8 10	8 8
11	9 29	9 21	9 13	9 4	8 59	8 53	8 46	8 38	8 35	8 30	8 26	8 21	8 16
12	10 12	10 1	9 50	9 37	9 30	9 21	9 12	9 0	8 54	8 48	8 42	8 34	8 26
13	10 56	10 43	10 29	10 12	10 3	9 52	9 40	9 25	9 18	9 10	9 1	8 51	8 40
14	11 43	11 28	11 11	10 52	10 41	10 28	10 13	9 54	9 46	9 36	9 25	9 13	8 58
15	12 33	12 16	11 57	11 36	11 24	11 9	10 52	10 32	10 22	10 10	9 58	9 43	9 26
16	13 25	13 7	12 48	12 26	12 13	11 58	11 40	11 18	11 8	10 56	10 42	10 26	10 7

TABLE VI.

LOCAL ASTRONOMICAL MEAN TIME OF MOONRISE, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

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Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Aug. 16	1 0	1 17	1 36	1 58	2 11	2 26	2 44	3 6	3 16	3 28	3 42	3 58	4 17
17	1 53	2 11	2 30	2 52	3 5	3 20	3 38	3 59	4 10	4 22	4 35	4 51	5 10
18	2 48	3 5	3 22	3 43	3 55	4 9	4 25	4 45	4 55	5 5	5 17	5 31	5 48
19	3 43	3 58	4 13	4 31	4 41	4 53	5 7	5 24	5 31	5 40	5 50	6 1	6 14
20	4 38	4 50	5 2	5 16	5 24	5 33	5 43	5 56	6 2	6 8	6 16	6 24	6 33
21	5 32	5 40	5 48	5 57	6 2	6 8	6 15	6 23	6 27	6 31	6 36	6 41	6 47
22	6 26	6 29	6 33	6 37	6 39	6 42	6 45	6 48	6 50	6 52	6 53	6 56	6 58
23	7 19	7 18	7 16	7 15	7 14	7 14	7 13	7 12	7 11	7 11	7 10	7 10	7 9
24	8 12	8 7	8 1	7 54	7 50	7 46	7 42	7 36	7 33	7 30	7 27	7 24	7 20
25	9 6	8 57	8 47	8 35	8 29	8 21	8 13	8 2	7 57	7 52	7 47	7 40	7 33
26	10 2	9 49	9 35	9 19	9 10	8 59	8 47	8 32	8 26	8 18	8 10	8 0	7 50
27	10 59	10 43	10 26	10 7	9 56	9 42	9 27	9 9	9 0	8 51	8 40	8 27	8 13
28	11 56	11 39	11 20	10 58	10 46	10 32	10 15	9 54	9 44	9 32	9 20	9 5	8 48
29	12 53	12 35	12 16	11 54	11 41	11 26	11 9	10 47	10 37	10 25	10 11	9 56	9 37
30	13 48	13 31	13 12	12 52	12 40	12 26	12 9	11 48	11 39	11 27	11 15	11 0	10 43
31	14 40	14 25	14 9	13 50	13 40	13 27	13 13	12 55	12 46	12 37	12 26	12 14	12 0
Sept. 1	15 30	15 17	15 4	14 49	14 40	14 30	14 18	14 3	13 56	13 49	13 40	13 31	13 20
2	16 16	16 7	15 57	15 46	15 39	15 31	15 23	15 12	15 7	15 2	14 56	14 49	14 41
3	17 1	16 55	16 48	16 41	16 37	16 32	16 27	16 20	16 17	16 13	16 10	16 5	16 1
4	17 43	17 41	17 38	17 35	17 33	17 31	17 29	17 26	17 25	17 24	17 22	17 20	17 19
5	18 25	18 26	18 27	18 28	18 29	18 30	18 30	18 32	18 32	18 33	18 34	18 34	18 35
6	19 6	19 10	19 15	19 21	19 24	19 27	19 32	19 37	19 39	19 42	19 44	19 48	19 51
7	19 48	19 56	20 4	20 13	20 19	20 25	20 32	20 41	20 46	20 50	20 55	21 1	21 7
8	20 31	20 42	20 53	21 6	21 14	21 23	21 34	21 46	21 52	21-59	22 6	22 14	22 23
9	21 16	21 29	21 44	22 0	22 10	22 21	22 34	22 50	22 58	23 7	23 16	23 27	23 39
10	22 2	22 18	22 35	22 55	23 6	23 19	23 34	23 54	....	....	....	....	....
11	22 52	23 9	23 27	23 48	....	....	....	....	0 3	0 13	0 24	0 38	0 53
12	23 43	....	....	....	0 1	0 15	0 32	0 54	1 4	1 15	1 28	1 43	2 1
13	....	0 0	0 20	0 41	0 54	1 9	1 26	1 48	1 59	2 10	2 24	2 39	2 58
14	0 36	0 53	1 11	1 32	1 44	1 59	2 16	2 36	2 46	2 57	3 10	3 24	3 42
15	1 29	1 45	2 1	2 20	2 31	2 44	2 59	3 17	3 26	3 35	3 46	3 58	4 12
16	2 23	2 36	2 50	3 5	3 14	3 25	3 37	3 52	3 58	4 6	4 14	4 24	4 35
17	3 17	3 26	3 36	3 48	3 54	4 2	4 11	4 21	4 26	4 31	4 37	4 44	4 51
18	4 10	4 15	4 21	4 28	4 32	4 36	4 41	4 47	4 50	4 53	4 56	5 0	5 4
19	5 3	5 5	5 6	5 7	5 8	5 9	5 10	5 12	5 12	5 13	5 14	5 14	5 15
20	5 57	5 54	5 51	5 47	5 45	5 42	5 39	5 36	5 35	5 33	5 31	5 29	5 27
21	6 53	6 45	6 37	6 28	6 23	6 17	6 10	6 2	5 58	5 54	5 50	5 45	5 40
22	7 50	7 38	7 26	7 12	7 4	6 55	6 44	6 32	6 26	6 20	6 12	6 4	5 55
23	8 48	8 34	8 18	8 0	7 50	7 38	7 24	7 7	6 59	6 51	6 41	6 30	6 17
24	9 47	9 30	9 13	8 52	8 40	8 26	8 10	7 50	7 41	7 30	7 18	7 5	6 49
25	10 46	10 28	10 10	9 48	9 35	9 21	9 3	8 42	8 32	8 20	8 7	7 52	7 34
26	11 43	11 26	11 8	10 46	10 34	10 20	10 3	9 42	9 32	9 21	9 8	8 54	8 36
27	12 37	12 21	12 5	11 46	11 34	11 22	11 6	10 48	10 39	10 29	10 18	10 5	9 50
28	13 27	13 14	13 0	12 44	12 35	12 24	12 11	11 56	11 49	11 41	11 32	11 21	11 10
29	14 15	14 4	13 54	13 41	13 34	13 26	13 16	13 4	12 59	12 53	12 46	12 39	12 30
30	14 59	14 52	14 45	14 36	14 32	14 26	14 20	14 12	14 8	14 4	14 0	13 55	13 50
Oct. 1	15 42	15 38	15 35	15 30	15 28	15 25	15 22	15 18	15 16	15 14	15 12	15 10	15 7

LOCAL ASTRONOMICAL MEAN TIME OF MOONSET, MERIDIAN OF GREENWICH, 1918.

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For other longitudes and for southern latitudes see page 78.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Aug. 16	13 25	13 7	12 48	12 26	12 13	11 58	11 40	11 18	11 8	10 56	10 42	10 26	10 7
17	14 19	14 2	13 43	13 22	13 9	12 54	12 37	12 15	12 5	11 53	11 40	11 24	11 6
18	15 15	14 59	14 42	14 22	14 11	13 58	13 42	13 22	13 13	13 3	12 51	12 38	12 22
19	16 10	15 56	15 42	15 26	15 17	15 6	14 53	14 37	14 30	14 22	14 12	14 2	13 50
20	17 4	16 54	16 44	16 32	16 26	16 18	16 8	15 57	15 52	15 46	15 40	15 33	15 25
21	17 58	17 52	17 46	17 40	17 36	17 31	17 26	17 19	17 16	17 13	17 10	17 6	17 1
22	18 51	18 50	18 48	18 47	18 46	18 45	18 44	18 43	18 42	18 42	18 41	18 40	18 39
23	19 44	19 47	19 50	19 55	19 57	20 0	20 2	20 6	20 8	20 10	20 12	20 14	20 16
24	20 38	20 45	20 53	21 2	21 8	21 14	21 21	21 29	21 33	21 38	21 43	21 48	21 54
25	21 32	21 44	21 56	22 10	22 18	22 28	22 38	22 52	22 58	23 5	23 13	23 21	23 31
26	22 29	22 43	22 59	23 17	23 28	23 40	23 54	....	....	....	....	....	....
27	23 26	23 43	....	....	....	....	....	0 11	0 20	0 29	0 39	0 51	1 4
28	....	....	0 1	0 22	0 34	0 48	1 4	1 25	1 34	1 46	1 58	2 12	2 30
29	0 23	0 41	1 0	1 22	1 35	1 50	2 7	2 29	2 40	2 51	3 5	3 20	3 39
30	1 19	1 37	1 56	2 17	2 30	2 44	3 1	3 22	3 32	3 44	3 56	4 11	4 29
31	2 13	2 29	2 46	3 6	3 18	3 31	3 46	4 5	4 14	4 24	4 35	4 48	5 3
Sept. 1	3 4	3 18	3 33	3 50	3 59	4 10	4 23	4 39	4 46	4 54	5 4	5 14	5 26
2	3 52	4 3	4 15	4 28	4 36	4 44	4 54	5 6	5 12	5 18	5 25	5 32	5 41
3	4 38	4 46	4 53	5 3	5 8	5 14	5 21	5 29	5 33	5 37	5 42	5 47	5 53
4	5 21	5 26	5 30	5 35	5 38	5 41	5 45	5 50	5 52	5 54	5 56	5 59	6 2
5	6 3	6 4	6 5	6 6	6 6	6 7	6 7	6 8	6 8	6 9	6 9	6 10	6 10
6	6 45	6 42	6 39	6 36	6 34	6 32	6 29	6 26	6 25	6 24	6 22	6 20	6 18
7	7 26	7 20	7 14	7 6	7 2	6 57	6 52	6 45	6 42	6 39	6 35	6 31	6 26
8	8 9	7 59	7 49	7 38	7 32	7 24	7 16	7 6	7 1	6 56	6 50	6 43	6 36
9	8 52	8 40	8 27	8 12	8 4	7 54	7 42	7 29	7 22	7 15	7 7	6 58	6 48
10	9 38	9 24	9 8	8 50	8 40	8 28	8 14	7 56	7 49	7 40	7 30	7 19	7 5
11	10 26	10 10	9 52	9 32	9 20	9 6	8 50	8 30	8 21	8 11	7 59	7 45	7 29
12	11 16	10 59	10 40	10 18	10 6	9 51	9 34	9 12	9 2	8 51	8 37	8 22	8 4
13	12 8	11 51	11 32	11 10	10 57	10 43	10 25	10 4	9 53	9 42	9 28	9 13	8 54
14	13 1	12 45	12 27	12 7	11 55	11 41	11 25	11 4	10 55	10 44	10 31	10 17	10 0
15	13 55	13 41	13 25	13 7	12 57	12 45	12 31	12 14	12 6	11 56	11 46	11 34	11 21
16	14 49	14 37	14 25	14 11	14 3	13 54	13 43	13 29	13 23	13 16	13 8	13 0	12 50
17	15 42	15 34	15 26	15 17	15 11	15 5	14 58	14 49	14 45	14 40	14 35	14 30	14 23
18	16 35	16 32	16 28	16 24	16 21	16 19	16 15	16 12	16 9	16 8	16 6	16 3	16 0
19	17 29	17 30	17 31	17 32	17 33	17 33	17 34	17 35	17 36	17 36	17 37	17 37	17 38
20	18 23	18 29	18 34	18 41	18 45	18 49	18 54	19 0	19 3	19 6	19 10	19 14	19 18
21	19 19	19 29	19 39	19 51	19 58	20 6	20 15	20 26	20 31	20 36	20 43	20 50	20 58
22	20 17	20 31	20 45	21 1	21 10	21 21	21 34	21 50	21 57	22 5	22 14	22 25	22 37
23	21 16	21 32	21 49	22 9	22 20	22 33	22 49	23 8	23 17	23 28	23 39	23 53	....
24	22 15	22 33	22 52	23 13	23 26	23 40	23 57	....	....	....	....	....	0 8
25	23 14	23 31	23 50	....	....	....	....	0 18	0 28	0 40	0 53	1 8	1 26
26	....	....	....	0 11	0 24	0 39	0 56	1 17	1 27	1 38	1 51	2 6	2 24
27	0 9	0 26	0 43	1 3	1 15	1 28	1 44	2 4	2 13	2 23	2 34	2 48	3 3
28	1 2	1 16	1 31	1 49	1 59	2 10	2 24	2 41	2 48	2 57	3 6	3 17	3 30
29	1 51	2 2	2 15	2 29	2 37	2 46	2 57	3 10	3 16	3 23	3 30	3 38	3 48
30	2 37	2 45	2 54	3 4	3 10	3 17	3 25	3 34	3 38	3 43	3 48	3 54	4 0
Oct. 1	3 20	3 25	3 31	3 37	3 41	3 45	3 50	3 55	3 58	4 0	4 4	4 7	4 11

TABLE VI.

LOCAL ASTRONOMICAL MEAN TIME OF MOONRISE, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

To obtain standard time, see directions on page 44.

For other longitudes and for southern latitudes see page 78.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Oct. 1	15 42	15 38	15 35	15 30	15 28	15 25	15 22	15 18	15 16	15 14	15 12	15 10	15 7
2	16 24	16 23	16 23	16 23	16 23	16 23	16 23	16 23	16 23	16 23	16 23	16 23	16 23
3	17 5	17 8	17 12	17 16	17 18	17 21	17 24	17 28	17 30	17 31	17 34	17 36	17 39
4	17 46	17 53	18 0	18 8	18 13	18 18	18 25	18 32	18 36	18 40	18 44	18 49	18 54
5	18 29	18 39	18 50	19 1	19 8	19 16	19 26	19 37	19 42	19 48	19 54	20 2	20 10
6	19 13	19 26	19 39	19 55	20 4	20 14	20 26	20 41	20 48	20 56	21 5	21 15	21 26
7	20 0	20 14	20 30	20 49	21 0	21 12	21 26	21 45	21 53	22 3	22 13	22 26	22 40
8	20 48	21 4	21 22	21 42	21 54	22 8	22 25	22 45	22 55	23 5	23 18	23 32	23 49
9	21 38	21 55	22 14	22 35	22 48	23 2	23 19	23 41	23 51	....	....	....	....
10	22 29	22 46	23 4	23 26	23 38	23 52	....	....	....	0 3	0 16	0 31	0 49
11	23 21	23 37	23 54	....	....	....	0 9	0 30	0 40	0 51	1 4	1 19	1 36
12	....	....	....	0 13	0 25	0 38	0 54	1 12	1 21	1 31	1 43	1 56	2 11
13	0 12	0 26	0 41	0 58	1 8	1 19	1 32	1 48	1 56	2 4	2 13	2 24	2 36
14	1 4	1 15	1 27	1 40	1 48	1 56	2 7	2 19	2 24	2 30	2 38	2 45	2 54
15	1 56	2 3	2 11	2 20	2 25	2 31	2 37	2 45	2 49	2 53	2 57	3 2	3 8
16	2 48	2 51	2 54	2 58	3 1	3 4	3 6	3 10	3 12	3 14	3 16	3 18	3 20
17	3 40	3 39	3 38	3 37	3 36	3 36	3 35	3 34	3 34	3 33	3 33	3 32	3 31
18	4 34	4 29	4 24	4 17	4 14	4 10	4 5	4 0	3 57	3 54	3 51	3 48	3 44
19	5 31	5 22	5 12	5 0	4 54	4 46	4 38	4 28	4 23	4 18	4 12	4 6	3 59
20	6 30	6 17	6 3	5 47	5 38	5 27	5 15	5 0	4 54	4 46	4 38	4 29	4 18
21	7 30	7 15	6 58	6 39	6 28	6 15	6 0	5 41	5 33	5 23	5 12	5 0	4 45
22	8 32	8 15	7 56	7 35	7 23	7 8	6 52	6 31	6 21	6 10	5 58	5 43	5 26
23	9 32	9 14	8 56	8 35	8 22	8 8	7 51	7 30	7 20	7 9	6 56	6 41	6 23
24	10 29	10 13	9 56	9 36	9 24	9 11	8 55	8 36	8 27	8 16	8 4	7 51	7 35
25	11 22	11 8	10 53	10 36	10 26	10 15	10 2	9 45	9 38	9 29	9 19	9 8	8 56
26	12 11	12 0	11 48	11 35	11 27	11 18	11 8	10 55	10 49	10 42	10 35	10 27	10 17
27	12 57	12 49	12 41	12 31	12 26	12 20	12 12	12 4	11 59	11 55	11 50	11 44	11 38
28	13 41	13 36	13 31	13 26	13 23	13 19	13 15	13 10	13 8	13 5	13 2	12 59	12 56
29	14 23	14 22	14 20	14 19	14 18	14 17	14 16	14 15	14 15	14 14	14 14	14 13	14 12
30	15 4	15 6	15 9	15 11	15 13	15 15	15 17	15 20	15 21	15 22	15 24	15 26	15 27
31	15 45	15 51	15 57	16 4	16 8	16 12	16 18	16 24	16 27	16 30	16 34	16 38	16 42
Nov. 1	16 27	16 36	16 46	16 56	17 3	17 10	17 18	17 28	17 33	17 38	17 44	17 50	17 58
2	17 11	17 23	17 36	17 50	17 58	18 8	18 19	18 33	18 39	18 46	18 54	19 3	19 14
3	17 57	18 11	18 26	18 44	18 54	19 6	19 20	19 37	19 45	19 54	20 4	20 15	20 29
4	18 45	19 1	19 18	19 38	19 50	20 3	20 19	20 38	20 48	20 58	21 10	21 24	21 40
5	19 34	19 52	20 10	20 31	20 44	20 58	21 15	21 36	21 46	21 57	22 10	22 25	22 43
6	20 25	20 42	21 1	21 22	21 35	21 49	22 6	22 27	22 38	22 49	23 2	23 17	23 34
7	21 17	21 33	21 50	22 11	22 22	22 36	22 52	23 11	23 21	23 31	23 43	23 56	....
8	22 8	22 22	22 38	22 56	23 6	23 18	23 32	23 49	23 56	....	....	....	0 12
9	22 58	23 10	23 23	23 37	23 46	23 55	....	....	....	0 5	0 15	0 26	0 39
10	23 48	23 57	....	....	....	....	0 6	0 20	0 26	0 33	0 40	0 49	0 58
11	....	....	0 6	0 17	0 24	0 29	0 37	0 47	0 51	0 56	1 1	1 7	1 14
12	0 38	0 43	0 48	0 54	0 57	1 1	1 6	1 11	1 13	1 16	1 19	1 22	1 26
13	1 28	1 29	1 30	1 31	1 32	1 32	1 34	1 35	1 35	1 36	1 36	1 37	1 38
14	2 19	2 16	2 13	2 9	2 7	2 4	2 1	1 58	1 57	1 55	1 53	1 51	1 49
15	3 13	3 6	2 58	2 49	2 44	2 38	2 32	2 24	2 20	2 16	2 12	2 7	2 2
16	4 10	3 58	3 46	3 33	3 25	3 16	3 6	2 53	2 48	2 42	2 35	2 27	2 18

LOCAL ASTRONOMICAL MEAN TIME OF MOONSET, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

To obtain standard time, see directions on page 44.

For other longitudes and for southern latitudes see page 78.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Oct. 1	3 20	3 25	3 31	3 37	3 41	3 45	3 50	3 55	3 58	4 0	4 4	4 7	4 11
2	4 2	4 4	4 6	4 8	4 10	4 11	4 12	4 14	4 15	4 16	4 17	4 18	4 19
3	4 44	4 42	4 40	4 38	4 37	4 36	4 35	4 33	4 32	4 31	4 30	4 29	4 28
4	5 25	5 20	5 15	5 9	5 6	5 1	4 57	4 52	4 49	4 46	4 43	4 40	4 36
5	6 7	5 59	5 50	5 40	5 35	5 28	5 21	5 12	5 8	5 3	4 58	4 52	4 46
6	6 50	6 39	6 28	6 14	6 6	5 57	5 47	5 34	5 28	5 22	5 15	5 7	4 58
7	7 36	7 22	7 7	6 50	6 41	6 30	6 16	6 1	5 53	5 45	5 36	5 25	5 14
8	8 23	8 7	7 50	7 31	7 19	7 6	6 51	6 32	6 23	6 14	6 2	5 50	5 35
9	9 12	8 55	8 36	8 16	8 3	7 49	7 32	7 11	7 2	6 50	6 38	6 23	6 6
10	10 2	9 45	9 26	9 4	8 52	8 37	8 20	7 59	7 49	7 37	7 24	7 8	6 50
11	10 54	10 37	10 19	9 58	9 46	9 32	9 15	8 55	8 45	8 34	8 21	8 7	7 50
12	11 46	11 30	11 14	10 56	10 45	10 32	10 17	9 59	9 50	9 40	9 30	9 17	9 2
13	12 37	12 25	12 11	11 56	11 47	11 36	11 24	11 9	11 2	10 55	10 46	10 36	10 25
14	13 29	13 19	13 9	12 58	12 52	12 44	12 35	12 24	12 19	12 14	12 8	12 1	11 53
15	14 20	14 15	14 9	14 2	13 58	13 54	13 49	13 42	13 39	13 36	13 33	13 29	13 24
16	15 12	15 11	15 10	15 8	15 7	15 6	15 5	15 3	15 3	15 2	15 1	15 0	14 59
17	16 6	16 9	16 12	16 16	16 18	16 20	16 23	16 26	16 28	16 30	16 32	16 34	16 36
18	17 1	17 8	17 16	17 25	17 30	17 36	17 43	17 52	17 55	18 0	18 4	18 10	18 16
19	17 58	18 10	18 22	18 36	18 44	18 53	19 4	19 17	19 23	19 30	19 38	19 47	19 56
20	18 58	19 13	19 29	19 47	19 57	20 9	20 23	20 41	20 49	20 58	21 9	21 21	21 34
21	20 0	20 16	20 34	20 55	21 7	21 21	21 37	21 58	22 8	22 18	22 31	22 45	23 2
22	21 1	21 18	21 37	21 58	22 11	22 25	22 42	23 4	23 14	23 25	23 38	23 53	....
23	21 59	22 16	22 34	22 55	23 7	23 21	23 37	23 57	....	....	....	....	0 11
24	22 55	23 10	23 26	23 44	23 55	....	....	....	0 7	0 17	0 30	0 43	1 0
25	23 46	23 59	....	....	....	0 7	0 21	0 39	0 47	0 56	1 6	1 18	1 31
26	....	....	0 12	0 27	0 36	0 46	0 58	1 12	1 18	1 25	1 33	1 42	1 52
27	0 34	0 43	0 53	1 5	1 11	1 19	1 27	1 38	1 42	1 48	1 53	2 0	2 7
28	1 19	1 25	1 31	1 39	1 43	1 48	1 53	2 0	2 3	2 6	2 10	2 14	2 19
29	2 1	2 4	2 7	2 10	2 12	2 14	2 17	2 20	2 21	2 23	2 24	2 26	2 28
30	2 43	2 42	2 41	2 41	2 40	2 40	2 39	2 39	2 38	2 38	2 38	2 37	2 37
31	3 24	3 20	3 16	3 11	3 8	3 5	3 2	2 57	2 55	2 53	2 51	2 48	2 45
Nov. 1	4 6	3 58	3 51	3 42	3 37	3 32	3 25	3 17	3 14	3 10	3 5	3 0	2 55
2	4 49	4 38	4 28	4 15	4 8	4 0	3 50	3 39	3 34	3 28	3 21	3 14	3 6
3	5 33	5 20	5 7	4 51	4 42	4 31	4 19	4 4	3 57	3 50	3 41	3 32	3 21
4	6 20	6 5	5 49	5 30	5 19	5 7	4 52	4 35	4 26	4 17	4 6	3 55	3 41
5	7 9	6 52	6 34	6 14	6 2	5 48	5 32	5 12	5 2	4 52	4 40	4 26	4 9
6	7 59	7 42	7 23	7 2	6 49	6 35	6 18	5 56	5 46	5 35	5 22	5 7	4 49
7	8 50	8 33	8 15	7 54	7 42	7 28	7 11	6 50	6 40	6 29	6 16	6 1	5 44
8	9 41	9 26	9 9	8 50	8 38	8 26	8 10	7 51	7 42	7 32	7 21	7 8	6 52
9	10 32	10 19	10 4	9 48	9 38	9 28	9 14	8 58	8 51	8 43	8 33	8 23	8 10
10	11 22	11 12	11 1	10 48	10 40	10 32	10 22	10 10	10 4	9 58	9 51	9 43	9 34
11	12 12	12 5	11 58	11 49	11 44	11 39	11 32	11 24	11 20	11 17	11 12	11 7	11 1
12	13 2	12 59	12 55	12 52	12 50	12 47	12 44	12 41	12 39	12 38	12 36	12 33	12 31
13	13 52	13 53	13 54	13 56	13 56	13 57	13 58	13 59	14 0	14 0	14 1	14 2	14 3
14	14 44	14 50	14 55	15 2	15 6	15 10	15 14	15 20	15 23	15 26	15 29	15 33	15 37
15	15 39	15 48	15 59	16 10	16 17	16 24	16 33	16 44	16 49	16 54	17 0	17 7	17 15
16	16 37	16 50	17 4	17 20	17 29	17 40	17 52	18 8	18 15	18 23	18 32	18 42	18 54

LOCAL ASTRONOMICAL MEAN TIME OF MOONRISE, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

To obtain standard time, see directions on page 44.

For other longitudes and for southern latitudes see page 78.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Nov. 16	4 10	3 58	3 46	3 33	3 25	3 16	3 6	2 53	2 48	2 42	2 35	2 27	2 18
17	5 9	4 55	4 39	4 22	4 12	4 0	3 46	3 30	3 22	3 14	3 4	2 53	2 41
18	6 11	5 54	5 36	5 16	5 4	4 51	4 34	4 15	4 6	3 55	3 43	3 30	3 14
19	7 13	6 55	6 37	6 16	6 3	5 49	5 32	5 10	5 0	4 49	4 36	4 22	4 4
20	8 13	7 56	7 38	7 18	7 6	6 52	6 36	6 15	6 6	5 55	5 42	5 28	5 11
21	9 10	8 55	8 39	8 21	8 10	7 58	7 44	7 26	7 17	7 8	6 58	6 46	6 31
22	10 3	9 50	9 37	9 22	9 14	9 4	8 52	8 38	8 31	8 24	8 16	8 6	7 56
23	10 51	10 42	10 33	10 22	10 15	10 8	9 59	9 49	9 44	9 39	9 33	9 26	9 19
24	11 37	11 31	11 25	11 18	11 14	11 10	11 4	10 58	10 55	10 52	10 48	10 44	10 40
25	12 20	12 18	12 15	12 12	12 11	12 9	12 7	12 5	12 3	12 2	12 1	11 59	11 58
26	13 2	13 3	13 4	13 5	13 6	13 7	13 8	13 10	13 10	13 11	13 12	13 13	13 14
27	13 43	13 47	13 52	13 58	14 1	14 4	14 9	14 14	14 16	14 19	14 22	14 25	14 28
28	14 25	14 32	14 41	14 50	14 56	15 2	15 9	15 18	15 22	15 27	15 32	15 38	15 44
29	15 8	15 19	15 30	15 43	15 51	16 0	16 10	16 23	16 28	16 35	16 42	16 50	17 0
30	15 53	16 6	16 21	16 37	16 47	16 58	17 11	17 27	17 34	17 43	17 52	18 3	18 15
Dec. 1	16 40	16 56	17 12	17 32	17 43	17 56	18 11	18 30	18 39	18 49	19 0	19 13	19 28
2	17 30	17 47	18 5	18 26	18 38	18 52	19 9	19 30	19 39	19 50	20 3	20 18	20 35
3	18 21	18 38	18 57	19 18	19 31	19 45	20 2	20 24	20 34	20 45	20 58	21 13	21 31
4	19 13	19 30	19 48	20 8	20 20	20 34	20 50	21 11	21 20	21 31	21 43	21 57	22 14
5	20 5	20 20	20 36	20 55	21 6	21 18	21 33	21 50	21 58	22 8	22 18	22 30	22 44
6	20 56	21 8	21 22	21 38	21 47	21 57	22 9	22 23	22 30	22 37	22 46	22 55	23 6
7	21 46	21 55	22 6	22 17	22 24	22 32	22 40	22 51	22 56	23 2	23 7	23 14	23 22
8	22 35	22 41	22 47	22 55	22 59	23 4	23 9	23 16	23 19	23 22	23 26	23 30	23 35
9	23 23	23 26	23 28	23 31	23 32	23 34	23 36	23 39	23 40	23 41	23 42	23 44	23 46
10	....	....	....	....	....	....	....	....	....	....	23 59	23 58	23 56
11	0 12	0 11	0 9	0 7	0 6	0 4	0 3	0 1	0 1	0 0	....	....	....
12	1 3	0 57	0 52	0 44	0 40	0 36	0 31	0 25	0 22	0 19	0 16	0 12	0 8
13	1 56	1 47	1 36	1 25	1 18	1 11	1 2	0 52	0 47	0 42	0 36	0 29	0 22
14	2 52	2 39	2 26	2 10	2 0	1 50	1 38	1 23	1 17	1 9	1 1	0 51	0 41
15	3 51	3 36	3 19	3 0	2 49	2 36	2 21	2 3	1 54	1 44	1 34	1 21	1 7
16	4 52	4 35	4 17	3 56	3 43	3 29	3 13	2 52	2 42	2 31	2 19	2 5	1 48
17	5 54	5 36	5 18	4 57	4 44	4 30	4 13	3 52	3 42	3 31	3 18	3 3	2 46
18	6 53	6 37	6 20	6 0	5 48	5 35	5 20	5 0	4 51	4 41	4 29	4 16	4 0
19	7 49	7 35	7 21	7 4	6 54	6 43	6 30	6 14	6 6	5 58	5 48	5 37	5 25
20	8 41	8 30	8 18	8 6	7 58	7 50	7 39	7 27	7 22	7 15	7 8	7 0	6 51
21	9 29	9 21	9 14	9 5	9 0	8 54	8 47	8 39	8 35	8 31	8 26	8 21	8 15
22	10 14	10 10	10 6	10 1	9 59	9 56	9 52	9 48	9 46	9 44	9 42	9 39	9 36
23	10 57	10 56	10 56	10 56	10 56	10 56	10 55	10 55	10 55	10 55	10 55	10 55	10 55
24	11 39	11 42	11 45	11 49	11 51	11 54	11 57	12 1	12 2	12 4	12 6	12 8	12 11
25	12 20	12 27	12 34	12 42	12 46	12 52	12 58	13 5	13 9	13 13	13 17	13 21	13 27
26	13 3	13 13	13 23	13 35	13 42	13 50	13 59	14 10	14 15	14 21	14 27	14 34	14 42
27	13 47	14 0	14 13	14 28	14 37	14 47	14 59	15 14	15 21	15 28	15 37	15 46	15 58
28	14 34	14 48	15 4	15 22	15 33	15 45	16 0	16 18	16 26	16 35	16 46	16 58	17 12
29	15 22	15 39	15 56	16 17	16 28	16 42	16 58	17 18	17 28	17 39	17 51	18 5	18 22
30	16 13	16 30	16 49	17 10	17 23	17 37	17 54	18 16	18 26	18 37	18 50	19 5	19 23
31	17 5	17 22	17 41	18 2	18 14	18 28	18 45	19 6	19 16	19 27	19 40	19 54	20 11
32	17 58	18 14	18 31	18 50	19 2	19 15	19 30	19 49	19 58	20 8	20 19	20 32	20 46

LOCAL ASTRONOMICAL MEAN TIME OF MOONSET, MERIDIAN OF GREENWICH, 1918.

To obtain civil time, write P. M. after the astronomical time if it is less than twelve hours; if greater than twelve hours, subtract twelve hours from it, mark the result A. M., and add one to the day.

To obtain standard time, see directions on page 44.

For other longitudes and for southern latitudes see page 78.

Date. \ Lat.	0°	+10°	+20°	+30°	+35°	+40°	+45°	+50°	+52°	+54°	+56°	+58°	+60°
	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m	h m
Nov. 16	16 37	16 50	17 4	17 20	17 29	17 40	17 52	18 8	18 15	18 23	18 32	18 42	18 54
17	17 38	17 54	18 11	18 30	18 41	18 54	19 10	19 29	19 38	19 48	19 59	20 12	20 28
18	18 40	18 57	19 16	19 37	19 50	20 4	20 21	20 42	20 52	21 3	21 16	21 31	21 48
19	19 42	19 59	20 18	20 39	20 51	21 5	21 22	21 43	21 53	22 4	22 16	22 31	22 48
20	20 41	20 57	21 14	21 33	21 44	21 58	22 13	22 32	22 40	22 50	23 1	23 14	23 29
21	21 36	21 50	22 4	22 20	22 30	22 41	22 54	23 9	23 16	23 24	23 33	23 43	23 55
22	22 27	22 37	22 49	23 2	23 9	23 17	23 27	23 39	23 44	23 50	23 57	....	....
23	23 14	23 21	23 29	23 38	23 43	23 49	23 55	....	....	....	....	0 4	0 13
24	23 58	....	....	....	....	....	....	0 3	0 7	0 11	0 16	0 20	0 26
25	....	0 2	0 6	0 11	0 14	0 17	0 20	0 24	0 26	0 28	0 31	0 33	0 36
26	0 40	0 41	0 41	0 42	0 42	0 43	0 43	0 44	0 44	0 44	0 45	0 45	0 45
27	1 22	1 19	1 16	1 12	1 10	1 8	1 6	1 3	1 1	1 0	0 58	0 56	0 54
28	2 3	1 57	1 50	1 43	1 39	1 34	1 28	1 22	1 19	1 15	1 12	1 8	1 3
29	2 46	2 36	2 27	2 15	2 9	2 2	1 53	1 43	1 38	1 33	1 27	1 21	1 14
30	3 30	3 18	3 5	2 50	2 42	2 32	2 21	2 7	2 1	1 54	1 46	1 37	1 27
Dec. 1	4 16	4 1	3 46	3 28	3 18	3 6	2 52	2 36	2 28	2 19	2 9	1 58	1 45
2	5 4	4 48	4 31	4 11	3 59	3 46	3 30	3 10	3 1	2 51	2 40	2 26	2 10
3	5 55	5 37	5 19	4 58	4 45	4 31	4 14	3 53	3 43	3 32	3 19	3 4	2 46
4	6 46	6 29	6 11	5 49	5 37	5 23	5 6	4 44	4 34	4 23	4 10	3 55	3 37
5	7 38	7 22	7 5	6 45	6 33	6 20	6 4	5 44	5 35	5 24	5 12	4 59	4 42
6	8 30	8 15	8 0	7 43	7 33	7 21	7 7	6 50	6 42	6 34	6 24	6 12	5 59
7	9 20	9 9	8 56	8 42	8 34	8 25	8 14	8 1	7 55	7 48	7 40	7 32	7 22
8	10 9	10 1	9 53	9 43	9 37	9 31	9 23	9 14	9 10	9 5	9 0	8 54	8 47
9	10 58	10 54	10 49	10 44	10 41	10 37	10 34	10 29	10 26	10 24	10 21	10 18	10 15
10	11 47	11 46	11 46	11 46	11 45	11 45	11 45	11 44	11 44	11 44	11 44	11 43	11 43
11	12 36	12 40	12 44	12 48	12 51	12 54	12 57	13 1	13 3	13 6	13 8	13 10	13 13
12	13 28	13 36	13 44	13 53	13 59	14 5	14 12	14 21	14 25	14 29	14 34	14 40	14 46
13	14 22	14 34	14 46	15 0	15 8	15 17	15 28	15 41	15 48	15 54	16 2	16 11	16 21
14	15 20	15 34	15 50	16 8	16 18	16 30	16 44	17 2	17 10	17 19	17 29	17 41	17 54
15	16 20	16 37	16 54	17 15	17 27	17 41	17 57	18 17	18 27	18 38	18 50	19 4	19 21
16	17 22	17 39	17 58	18 19	18 32	18 46	19 4	19 24	19 34	19 46	19 58	20 13	20 31
17	18 22	18 39	18 57	19 17	19 29	19 43	19 59	20 19	20 29	20 39	20 51	21 5	21 21
18	19 20	19 35	19 51	20 9	20 20	20 32	20 46	21 3	21 11	21 20	21 30	21 41	21 55
19	20 14	20 26	20 39	20 54	21 2	21 12	21 23	21 37	21 43	21 50	21 58	22 7	22 16
20	21 4	21 13	21 23	21 33	21 40	21 47	21 55	22 4	22 9	22 14	22 19	22 26	22 32
21	21 51	21 56	22 2	22 9	22 12	22 17	22 22	22 28	22 30	22 33	22 36	22 40	22 44
22	22 35	22 37	22 39	22 41	22 43	22 44	22 46	22 48	22 49	22 50	22 51	22 52	22 54
23	23 17	23 16	23 14	23 12	23 11	23 10	23 9	23 7	23 6	23 6	23 5	23 4	23 3
24	23 59	23 54	23 49	23 43	23 40	23 36	23 32	23 26	23 24	23 22	23 18	23 15	23 12
25	....	....	....	....	....	....	23 56	23 47	23 43	23 38	23 33	23 28	23 22
26	0 41	0 33	0 25	0 15	0 9	0 3	....	....	....	23 58	23 50	23 43	23 34
27	1 25	1 14	1 2	0 49	0 41	0 32	0 22	0 9	0 4	....	....	....	23 50
28	2 10	1 56	1 42	1 25	1 16	1 4	0 52	0 36	0 29	0 21	0 12	0 1	....
29	2 57	2 42	2 25	2 6	1 54	1 42	1 27	1 8	1 0	0 50	0 39	0 26	0 12
30	3 47	3 30	3 12	2 51	2 39	2 24	2 8	1 48	1 38	1 27	1 14	1 0	0 43
31	4 38	4 21	4 2	3 41	3 28	3 14	2 57	2 36	2 26	2 14	2 1	1 46	1 28
32	5 31	5 14	4 56	4 36	4 24	4 10	3 53	3 33	3 23	3 12	3 0	2 45	2 28

FOR NORTHERN STATIONS NOT ON THE MERIDIAN OF GREENWICH AND FOR SOUTHERN STATIONS.

For northern stations not on the meridian of Greenwich.—For longitudes twelve hours or less west from Greenwich, obtain the data for the given latitude from Table VI for the given date and for the date following; for longitudes twelve hours or less east from Greenwich, obtain the data for the given latitude from Table VI for the given date and for the date preceding. Subtract the time on the earlier date from the time on the later and multiply the difference by the twenty-fourth part of the longitude in hours and decimals of an hour, positive if west, negative if east. Apply the product as a correction to the time on the given date.

For southern stations.—The instant of moonrise or moonset for any station south of the equator is that of moonset or moonrise, respectively, at a place of the same latitude north of the equator whose longitude is twelve hours different from that of the southern station.

If the southern station be twelve hours or less west from Greenwich, and the phenomenon at that station occurs between noon and midnight, the local astronomical day will be the same at the southern and northern stations. If, however, the phenomenon at the southern station occurs between midnight and noon, the local astronomical day at the northern station will be one day later than at the southern.

If the southern station be twelve hours or less east from Greenwich and the phenomenon at that station occurs between noon and midnight, the local astronomical day at the northern station will be one less than at the southern station. If, however, the phenomenon occurs between midnight and noon, the local astronomical day will be the same at the two stations.

Having thus determined the true astronomical day at the northern station, compute by the rule for northern latitudes. For the desired local time of moonrise at the southern station change the time of moonset at the northern station twelve hours. For the desired local time of moonset at the southern station change the time of moonrise at the northern station twelve hours.

Example.—December 20, 1918, civil date, find the time of moonrise and moonset in longitude $4^h\ 43^m$ west from Greenwich and in latitude 33° 30′ south.

The longitude of the northern station is $7^h.3$ east from Greenwich and its latitude is 33°.5 N. Upon inspection of Table VI it is seen that the astronomical day at the southern station is December 20 for moonrise and December 19 for moonset, the former phenomenon occurring between noon and midnight, the latter between midnight and noon. For the northern station, in accordance with the precepts given above, both phenomena are to be computed for December 20.

At northern station—

	Moonrise. d h m	Moonset. d h m
Table VI, Lat. +33°.5	Dec. 19 6 57	Dec. 19 21 0
Table VI, Lat. +33°.5	20 8 0	20 21 38
Difference	63	38
Product of Diff. by $-\frac{7.3}{24}$ . . .	−19	−12
Local astronomical mean time . .	7 41	21 26

At southern station—

	Moonset.	Moonrise.
Local astronomical mean time . .	19 41	9 26
Civil time	Dec. 20 7 41 A. M.	Dec. 20 9 26 P. M.

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