

TABLES 2 and 3
DEPRESSION OF SUN
AT VARIOUS HEIGHTS

Day	January		February		March		April		May		June		Height	TABLE 2 AT SUNRISE AND SUNSET		TABLE 3 AT CIVIL TWILIGHT	
	Mer. Pass.	Dec	Mer. Pass.	Dec	Mer. Pass.	Dec	Mer. Pass.	Dec	Mer. Pass.	Dec	Mer. Pass.	Dec		Depression	Diff. from 0°	Depression	Diff. from 0°
	12 ^h _m		12 ^h _m		12 ^h _m		12 ^h _m		12 ^h _m		12 ^h _m						
1	+04 S	23.0	+14 S	16.9	+12 S	7.4	+04 N	4.7	−03 N	15.2	−02 N	22.1					
2	+04	22.9	+14	16.7	+12	7.0	+03	5.1	−03	15.5	−02	22.3					
3	+05	22.8	+14	16.4	+12	6.6	+03	5.5	−03	15.8	−02	22.4					
4	+05	22.7	+14	16.1	+12	6.2	+03	5.9	−03	16.1	−02	22.5					
5	+06	22.6	+14	15.8	+11	5.8	+03	6.3	−03	16.4	−01	22.6					
6	+06 S	22.4	+14 S	15.5	+11 S	5.5	+02 N	6.7	−03 N	16.7	−01 N	22.7					
7	+06	22.3	+14	15.1	+11	5.1	+02	7.0	−03	17.0	−01	22.8					
8	+07	22.2	+14	14.8	+11	4.7	+02	7.4	−04	17.2	−01	22.9					
9	+07	22.0	+14	14.5	+10	4.3	+01	7.8	−04	17.5	−01	23.0					
10	+08	21.9	+14	14.2	+10	3.9	+01	8.1	−04	17.8	00	23.1					
11	+08 S	21.7	+14 S	13.8	+10 S	3.5	+01 N	8.5	−04 N	18.0	00 N	23.1	1 000	1.5	0.7	6.0	5.2
12	+08	21.6	+14	13.5	+10	3.1	+01	8.9	−04	18.3	00	23.2	2 000	1.7	0.9	6.1	5.3
13	+09	21.4	+14	13.2	+09	2.7	00	9.2	−04	18.5	00	23.2	3 000	1.9	1.1	6.1	5.3
14	+09	21.2	+14	12.8	+09	2.3	00	9.6	−04	18.8	00	23.3	4 000	2.1	1.3	6.1	5.3
15	+09	21.0	+14	12.5	+09	1.9	00	10.0	−04	19.0	+01	23.3	5 000	2.2	1.4	6.2	5.4
16	+10 S	20.8	+14 S	12.1	+09 S	1.5	00 N	10.3	−04 N	19.2	+01 N	23.4	6 000	2.4	1.6	6.2	5.4
17	+10	20.6	+14	11.8	+08	1.1	−01	10.7	−04	19.4	+01	23.4	7 000	2.5	1.7	6.2	5.4
18	+10	20.4	+14	11.4	+08	0.7	−01	11.0	−04	19.7	+01	23.4	8 000	2.6	1.8	6.3	5.5
19	+11	20.2	+14	11.1	+08 S	0.3	−01	11.4	−04	19.9	+01	23.4	9 000	2.7	1.9	6.3	5.5
20	+11	20.0	+14	10.7	+07 N	0.0	−01	11.7	−03	20.1	+02	23.4	10 000	2.8	2.0	6.3	5.5
21	+11 S	19.8	+14 S	10.4	+07 N	0.4	−01 N	12.0	−03 N	20.3	+02 N	23.4					
22	+12	19.6	+13	10.0	+07	0.8	−02	12.4	−03	20.5	+02	23.4	15 000	3.2	2.4	6.5	5.7
23	+12	19.3	+13	9.6	+06	1.2	−02	12.7	−03	20.7	+02	23.4	20 000	3.6	2.8	6.6	5.8
24	+12	19.1	+13	9.3	+06	1.6	−02	13.0	−03	20.9	+03	23.4	25 000	3.9	3.1	6.8	6.0
25	+12	18.8	+13	8.9	+06	2.0	−02	13.4	−03	21.0	+03	23.4	30 000	4.2	3.4	6.9	6.1
													35 000	4.4	3.6	7.1	6.3
26	+13 S	18.6	+13 S	8.5	+06 N	2.4	−02 N	13.7	−03 N	21.2	+03 N	23.3					
27	+13	18.3	+13	8.1	+05	2.8	−02	14.0	−03	21.4	+03	23.3	40 000	4.7	3.9	7.2	6.4
28	+13	18.1	+12 S	7.8	+05	3.2	−03	14.3	−03	21.5	+03	23.3	45 000	4.9	4.1	7.3	6.5
29	+13	17.8			+05	3.6	−03	14.6	−03	21.7	+04	23.2	50 000	5.1	4.3	7.5	6.7
30	+13	17.5			+04	4.0	−03 N	14.9	−02	21.9	+04 N	23.1	55 000	5.3	4.5	7.6	6.8
31	+13 S	17.2			+04 N	4.4			−02	22.0			60 000	5.5	4.7	7.7	6.9

Example. To find the times of sunrise and sunset on 2025 April 18 in latitude N 65° 17', longitude W 35° 15', at a height of 37 000 feet. From Table 1, Dec = N 11° 0'; Table 2, Depression diff. from 0° 8' = 3° 7'.

	Sunrise	Sunset
	^h ^m	^h ^m
Page 14, N 65° 17'	04 12	19 49
Page 63, Lat 66°, Dec 11° (same); diff. in HA from depression 0° to 3:7	—45	+45
LMT	03 27	20 34
Longitude W 35° 15'	2 21	2 21
UT	05 48	22 55

TABLE 1 MERIDIAN PASSAGE AND DECLINATION OF THE SUN AT 12 ^h UT												TABLES 2 and 3 DEPRESSION OF SUN AT VARIOUS HEIGHTS					
D a y	July		August		September		October		November		December		Height	TABLE 2 AT SUNRISE AND SUNSET		TABLE 3 AT CIVIL TWILIGHT	
	Mer. Pass.	Dec	Mer. Pass.	Dec	Mer. Pass.	Dec	Mer. Pass.	Dec	Mer. Pass.	Dec	Mer. Pass.	Dec		Depression	Diff. from 0°8	Depression	Diff. from 0°8
	12 ^h m °		12 ^h m °		12 ^h m °		12 ^h m °		12 ^h m °		12 ^h m °						
1	+04 N 23.1		+06 N 17.9		00 N 8.1		−10 S 3.4		−16 S 14.6		−11 S 21.9						
2	+04 23.0		+06 17.6		00 7.7		−11 3.8		−16 14.9		−11 22.0						
3	+04 22.9		+06 17.4		−01 7.3		−11 4.2		−16 15.2		−10 22.2						
4	+05 22.8		+06 17.1		−01 7.0		−11 4.6		−16 15.5		−10 22.3						
5	+05 22.7		+06 16.8		−01 6.6		−12 4.9		−16 15.8		−09 22.4						
6	+05 N 22.6		+06 N 16.5		−02 N 6.2		−12 S 5.3		−16 S 16.1		−09 S 22.6						
7	+05 22.5		+06 16.3		−02 5.9		−12 5.7		−16 16.4		−08 22.7						
8	+05 22.4		+06 16.0		−02 5.5		−13 6.1		−16 16.7		−08 22.8						
9	+05 22.3		+05 15.7		−03 5.1		−13 6.5		−16 17.0		−08 22.9						
10	+05 22.2		+05 15.4		−03 4.7		−13 6.8		−16 17.3		−07 23.0						
11	+06 N 22.0		+05 N 15.1		−03 N 4.3		−13 S 7.2		−16 S 17.6		−07 S 23.0		1 000	1.5	0.7	6.0	5.2
12	+06 21.9		+05 14.8		−04 4.0		−14 7.6		−16 17.8		−06 23.1		2 000	1.7	0.9	6.1	5.3
13	+06 21.7		+05 14.5		−04 3.6		−14 8.0		−16 18.1		−06 23.2		3 000	1.9	1.1	6.1	5.3
14	+06 21.6		+05 14.2		−05 3.2		−14 8.3		−16 18.4		−05 23.2		4 000	2.1	1.3	6.1	5.3
15	+06 21.4		+04 13.9		−05 2.8		−14 8.7		−15 18.6		−05 23.3		5 000	2.2	1.4	6.2	5.4
16	+06 N 21.3		+04 N 13.6		−05 N 2.4		−14 S 9.1		−15 S 18.9		−04 S 23.3		6 000	2.4	1.6	6.2	5.4
17	+06 21.1		+04 13.2		−06 2.0		−15 9.4		−15 19.1		−04 23.4		7 000	2.5	1.7	6.2	5.4
18	+06 20.9		+04 12.9		−06 1.7		−15 9.8		−15 19.3		−03 23.4		8 000	2.6	1.8	6.3	5.5
19	+06 20.7		+04 12.6		−06 1.3		−15 10.2		−15 19.6		−03 23.4		9 000	2.7	1.9	6.3	5.5
20	+06 20.6		+03 12.3		−07 0.9		−15 10.5		−14 19.8		−02 23.4		10 000	2.8	2.0	6.3	5.5
21	+06 N 20.4		+03 N 11.9		−07 N 0.5		−15 S 10.9		−14 S 20.0		−02 S 23.4		15 000	3.2	2.4	6.5	5.7
22	+07 20.2		+03 11.6		−07 N 0.1		−16 11.2		−14 20.2		−01 23.4		20 000	3.6	2.8	6.6	5.8
23	+07 20.0		+03 11.3		−08 S 0.3		−16 11.6		−14 20.5		−01 23.4		25 000	3.9	3.1	6.8	6.0
24	+07 19.7		+02 10.9		−08 0.7		−16 11.9		−13 20.7		00 23.4		30 000	4.2	3.4	6.9	6.1
25	+07 19.5		+02 10.6		−08 1.1		−16 12.3		−13 20.8		00 23.4		35 000	4.4	3.6	7.1	6.3
26	+07 N 19.3		+02 N 10.2		−09 S 1.5		−16 S 12.6		−13 S 21.0		+01 S 23.3		40 000	4.7	3.9	7.2	6.4
27	+07 19.1		+01 9.9		−09 1.8		−16 13.0		−12 21.2		+01 23.3		45 000	4.9	4.1	7.3	6.5
28	+07 18.9		+01 9.5		−09 2.2		−16 13.3		−12 21.4		+02 23.3		50 000	5.1	4.3	7.5	6.7
29	+07 18.6		+01 9.2		−10 2.6		−16 13.6		−12 21.6		+02 23.2		55 000	5.3	4.5	7.6	6.8
30	+06 18.4		+01 8.8		−10 S 3.0		−16 14.0		−11 S 21.7		+03 23.1		60 000	5.5	4.7	7.7	6.9
31	+06 N 18.1		00 N 8.4				−16 S 14.3				+03 S 23.1						

An example of the use of the above tables is given on page A151.